Reconnecting the Urban Web:

Chicago's Failed Olympic Hope

A Thesis Presented for the

Master of Architecture

Degree

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Eric Archer

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Dedication

To Sarah, who had to put up with me before graduate school, and somehow sticking with me through that as well.

To my parents – Mike and Becky – for instilling in me a strong ethic and drive for excellence, and for supporting me throughout this endeavor in more ways than one.

To Aunt Cheryl and Uncle Mark who made transitioning from graduate school to the real world financially possible.

And to Geneva's cats, who provided moments of blissful sanity throughout three years of trials and tribulations.

Acknowledgments

Without the assistance, dedication, questioning, doubt, and threats from my committee, this would not have been possible. Thank you to Tricia Stuth, James Rose, and Valerie Friedmann for always supporting my efforts, challenging my methods, and pushing me to narrow my focus. I couldn't have asked for better.

I want to thank Skidmore, Owings, & Merrill's Chicago office for being so willing in providing information and sharing their Olympic Bid document without hesitation when they had no obligation to help.

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Abstract

'Towers in the park,' a destructive urbanistic typology that gained notoriety with idealistic projects by Le Corbusier, are prevalent in American cities. This architectural and urban concept consists of mono-functional high-rise towers, typically residential, placed on a superblock of unprogrammed over-scaled greenspace. The original intention was to create order within the city and provide plenty of landscaping and urban space for the city's occupants. Noble in goals, these mega-towers have been chastised for their lack of character, inappropriate scale, and the inability to create vibrant public space that promote interaction and community by creating an over concentration of segregated nodes without adequate or engaging connections for the public.

As one of these cities that used this typology for its low-income housing projects, Chicago faces many physically segregative issues in its south-side neighborhoods. One such site, Prairie Shores in the Douglas neighborhood, is physically separated from an affluent neighborhood to the west, downtown to the north, and Lake Michigan to the east. Focusing on the physical segregation – as opposed to the racial, economic, and social segregation – this project attempts to reconnect disparate parts of the

neighborhood in order to make it a more inclusive part of the city's urban fabric.

Major urban interventions, such as the one being proposed, are very unlikely due to the immense political, economic, and social barriers that occurs in such a large project. Occasionally an event occurs which allows or even promotes urban interventions at a large scale. This proposal uses one of these events – the Olympics – to investigate the opportunities and issues that come with such a massive infrastructural, social, economic, and urban project. Applying these and other findings to the proposed and rejected Chicago 2016 Olympic Village in Prairie Shores, the proposal seeks to rethink urban and architectural morphologies to better integrate transportation infrastructure, ecology, and public space.

"Make no little plans. They have no magic to stir men's blood and probably themselves will not be realized. Make big plans; aim high in hope and work, remembering that a noble, logical diagram once recorded will never die, but long after we are gone will be a living thing, asserting itself with ever-growing insistency."

Daniel Burnham

Table of Contents

List of Figures

List of Attachments

1a_Olympic Images.pdf

1b_City Chicago.pdf

2a_Diagrams Existing.pdf

2b_Neighborhood Douglas.pdf

2c_Diagrams Proposed.pdf

3a_Urban Morphologies.pdf

3b_Site Images.pdf

3c_Site Prairie Shores.pdf

3d_Site Diagrams.pdf

4a_Architectural Morphologies.pdf

4b_Urban Imaginary.pdf

4c_Section Gateway School.pdf

4d_Section EcoPark.pdf

4e_Section Cultural Anchor.pdf

SOM_01_Metro Plan.pdf

SOM_02_Park Plan.pdf

SOM_03_Olympic Village.pdf

part 1 change in the city

chapter 1 Catalytic Events

Cities are enormously complex, consisting of various physical, social, and economic layers that accrue over time through differing sets of motivations. Occasionally, there are major urban interventions that try to unify the collage. These urban projects are not always beneficial to the populace. They usually require a major event to help stimulate the process – population explosion, abnormal economic increase, dictatorships, destructive wars – but sometimes other catalytic events can spur urban development.

In urban development schemes, there are complex social investigations that take place. Modernism re-examined many social ideas, attempting to create a better quality of life within the city. Based on many social, economic, and political factors of the time, certain needs were supported while others were ignored or overlooked. The disregard of these social needs was not always out of malice, but sometimes out of necessity or ignorance. While this naïveity led to many social and economic issues in the future, the thoughtful design of the city was progressing forward. Le Corbusier's modernist city schemes attempted to solve the issue of the disorganized, cluttered, and dirty city, but they actually promoted the segregation of people in the urban environment. Recognizing these

lasting physical and social effects, many architects – like Morphosis and Michael Maltzan – seek to repair the damage to cities affected by this modernist notion by rethinking public space and architecture. To go even more in depth, there are new ideas in landscape architecture and urban integration that help to re-evaluate social needs of the city by diversifying program, integrating urban and ecological processes, and creating a different kind of public space as well.

Taking these concepts and using them as a lens to study a major catalytic opportunity, I investigate one such urban event – the Olympics – and apply lessons from one of its successful host cities as well as the urban intervention strategies from Morphosis, Maltzan, and landscape urbanism to a modern urbanist site on the south side of Chicago.

part 2 public architecture + spatial investment

chapter 2 Le Corbusier + Modern Urbanism

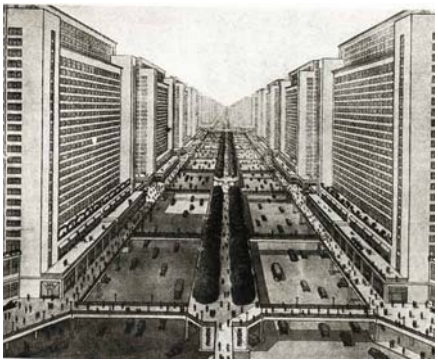

Figure 01 – Villa Radieuse.
Urban proposal by Le Corbusier, 1930.

In reference to the full pedestrian tower array: "A common technique of modernist planning has been to separate functions as a means of resolving conflicts – for instance, suppressing the presence of the car in order to create a pedestrian landscape. This strategy of separation continues to produce sterile environments."

Linda Pollak[1]

A prominent figure in modern architectural history, Le Corbusier (Charles-Edouard Jeanneret) held strong beliefs about urban design and produced a few theoretical urban design projects in the 1920s about organizing and cleaning up cities of their chaos through segregating program, function, transportation, etc., and promoted these ideas to the public. As evident by his drawings [Figure 01], the projects were avant-garde – pushing the envelope in terms of realism and feasibility – focusing on a consistent language of architecture promoting density and order within the city. In his 1925 Plan Voisin concept [Figure 02], he proposed building an array of skyscrapers in the middle of Paris at the expense of an entire neighborhood of vibrant commercial and residential interactions. His foci were well-intentioned – re-creating green spaces within the messy urban fabric of a dense city, creating an integrated web of transportation lines, and defining safe passages for pedestrian traffic separate from high-speed traffic

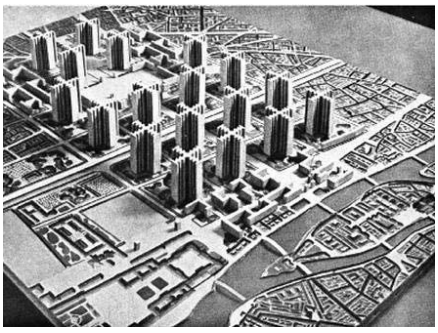

Figure 02 – Plan Voisin.
Urban proposal by Le Corbusier, 1925.

1 Pollak 2006, 133

infrastructure. Not without consequence, however. Attempting to create efficiency, cleanliness, and order, Le Corbusier wanted to tidy up Paris by separating differing functions from each other in homogeneous 'monofunctional megatowers[2],' providing ample public green space and parks between the towers, and submerging transportation infrastructure below the public pedestrian realm. These ideas led to functional segregation, unprogrammed and overscaled lawns, and transportation barriers that divided neighborhoods from each other. While Europe hesitated to implement Le Corbusier's theory, the concept was embraced by American planners for many reasons: typical cities were left dirty and unmaintained during the second world war promoting a hunger for new modern construction, the auto industry was rapidly expanding and grasping a strong hold on policy-makers leading to car-centric development, the construction of superhighways were creating jobs and high-value properties, and the expansion of big-business and the invention of Louis Sullivan's office tower typology in the 1890s allowed maximum floor area with minimal property acquisition[3]. This approach took hold during the height of the International Style throughout many American cities mostly for

2 Kunstler and Salingaros 2001
3 Kunstler 1993, 78

residential purposes, especially in public housing. The perception was that these park-surrounded towers would combine the urban with the rural, reconnecting the residents to the land – something important to the American people. The reality of this urban dream proved to be detrimental to cities for a number of reasons: the segregation of people due to monoculture programming, superscaled buildings and landscapes, and a placelessness due to undefined spaces[4].

Figure 03 – Segregation.
Robert Taylor Homes and Dan Ryan Expressway in Chicago.

First, this urban theory promotes the segregation [Figure 03] of people, not just from one another but from nature, society, and infrastructure. People get isolated from each other, lacking immediate interactive zones of cross-movement that are afforded by mixed-use street-front zones. Without destination nodes afforded by mixed use areas, there is no reason to be walking around the neighborhood, and without pedestrian traffic, we lose what makes great cities: community. Community can not exist without socialization. Despite being set within a "park," most of the occupants of these modernist

4 Authors Note: There was and is significant segregation of people due to racial, social, and economic status which is one of the worst issues with this urban typology. While this has very direct implications on any project dealing with this urban philosophy and specifically my chosen site, I am intentionally choosing to look at segregation in terms of activity within the city, neighborhood connectivity, and relationship to outdoor spaces. While racial and socio-economical issues were present in my considerations during this research and proposal, there is too much information and too many implications for me to include them in the scope of this project.

Figure 04 – Over-Scaled.
Robert Taylor Homes in Chicago.

Figure 05 – Placelessness.
Robert Taylor Homes in Chicago, 1965.

high-rise buildings lose the connection with the outdoor environment due to limited contact with the ground, and the overabundance of unprogrammed and widespread green space remove the interaction from groups of the public. This isn't helped when what was intended to be green space is actually used for parking lots – a common occurrence. With Le Corbusier's ideas of separated transportation methods, barriers are formed with high-volume and high-speed traffic, which further segregates neighborhoods and regions of the city. Second, the extreme scale [Figure 04] of the tower, the expansive space surrounding it, and the transportation networks produce an agoraphobic atmosphere at an inconsistent density, lacking any real active connective tissue vital for pedestrian movement throughout the city. Finally, this creates a sense of placelessness [Figure 05] among the tower array further repelling the pedestrian from these spaces which leads to a lack of activity among the public[5]. The repetitive array of buildings gives no opportunity to create city due to the geometric rigidity. Grouped with segregation and scale, this placelessness leads to a lack of meaningful nodal destinations and therefore no activity among the neighborhood. These ideas were especially prevalent in public housing projects

5 Kunstler and Salingaros 2001

in the United States, further demeaning an already impoverished community.

The city needs to have multiple connections to a variety of nodes with a system of hierarchy. This urban form is described by Nikos Salingaros as the urban web. Salingaros argues that a healthy city needs to have a variety of pathways and to avoid an over concentration of nodes which can be seen in Le Corbusier's plan. These overly dense single-zoned towers create a mathematical singularity where segregation occurs and dissolves the urban web, leading to the aforementioned issues. Creating a variety of programs that interweave initiates the connective process. "Dysfunctional cities concentrate nodes of the same type, whereas functional cities concentrate coupled pairs of contrasting nodes[6]." Mixed use neighborhoods re-establish these localized networks and promote social interactions. Along with mixed-use neighborhoods, avoiding vertical homogeneity and designing low-rise buildings increases outdoor public interface, allowing more accessible green spaces to residents. This also allows the opportunity for more human-scaled outdoor spaces; when streets are fronted by low-rise buildings and rows of trees, the

6 Salingaros 1998

Figure 06 – Outdoor Room.
Main Street, Greenville, SC

spatial effect of an 'outdoor room' is created [Figure 06]. With more intimate and comfortable outdoor spaces, pedestrian activity increases leading to a healthy city. The mixed-use method also creates more character for the city than mono-functional buildings. With a variety of architecture providing various programs and serving differing needs, memorable spaces are created within the city. Destination nodes are integral to the urban web and indispensable to city life; with mono-functional program, destination points do not occur which destroys the activity of the city.

While there are many issues associated with Le Corbusier's urban theory, the concepts had benevolent intentions behind them. Trying to provide ample public space, Le Corbusier created density

by housing people in vertical towers. Even though it was unsuccessful due to its extreme agoraphobic nature, the civic-minded design intentionally provided shared public space for all. The issue that arises is that there was a lack of thoughtful design applied to these landscapes; this led them to be unused due to their massive scale, lack of programmatic variety and monofunctional use, unconnected edges, and lack of destination. Le Corbusier was also interested in integrating transportation infrastructure and utilities into the urban realm, even though the effect actually created barriers in the city and disrupted natural traffic flows creating congestion. He was concerned about separating speeds of traffic, not only trying to encourage fast-paced movement, but also to protect the pedestrian zones. Separating traffic flows into different areas of the city is not the answer, however – this promotes segregation as mentioned before.

Le Corbusier was interested in technology and industry and was trying to create efficiency and accessibility by bringing these aspects to the forefront of design and integrating them into cohesive city design. Despite the major issues in his ideas, the intention of creating spaces for the public realm is what our society needs to strive for. Being critical

of Le Corbusier's theory, there are many architects and urban thinkers who try to fix the issues in his process. Whether it is being critical of the verticality of the architecture, the integration of transportation infrastructure, or the concept of public space and landscape, these designers approach urban design in a much more humanistic and thoughtful way.

chapter 3 Michael Maltzan + Horizontal "Towers"

"My greatest crime was the construction of high-rise buildings. The most successful cities of the past were those where people and buildings were in a certain balance with nature. But high-rise buildings work against nature, or, in modem terms, against the environment. High-rise buildings work against man himself, because they isolate him from others, and this isolation is an important factor in the rising crime rate. Children suffer even more because they lose their direct contacts with nature, and with other children. High-rise buildings work against society because they prevent the units of social importance -- the family ... the neighborhood, etc. – from functioning as naturally and as normally as before. High-rise buildings work against networks of transportation, communication, and of utilities, since they lead to higher densities, to overloaded roads, to more extensive water supply systems -- and, more importantly, because they form vertical networks which create many additional problems -- crime being just one of them."

Constantine Doxiades[1]

Michael Maltzan, a Los Angeles based architect who designs many transitional housing apartment buildings for the formerly homeless population, evolved Le Corbusier's concept of urban design, correcting many of the problems that arise from the tower array. Maltzan noticed that many of the connective tissues of the city promoted a series of parallel yet disconnected group activities – such as the personal freeway commute or the trip to the beach – creating individualizing and divisive activity as opposed to overlapping, interactive, and cross-dimensional activity[2]. In order to reconnect people in similar or differing paths of diverse activities, Maltzan creates nodes of various activity that overlap

1 as quoted in Kunstler and Salingaros 2001
2 Maltzan 2013

Figure 07 – Street-Front.
One Santa Fe by Michael Maltzan Architecture.

Figure 08 – Linear Context.
One Santa Fe by Michael Maltzan Architecture.

Figure 09 – Human-Scaled Spaces.
One Santa Fe by Michael Maltzan Architecture.

each other. One Santa Fe [Figure 07], a mixed-use project built in 2014 and located near downtown Los Angeles, is a continuous 1,500 feet long six-story complex that contains commercial space on the ground floor and housing above with various spaces between the two buildings that allow access to the light rail station behind the building. The extreme length of the building responds to the horizontality of the general urban context of Los Angeles, the adapted warehouse building of the neighboring Southern California Institute of Architecture, the abundant rail lines just behind the site, and the urban canyon of the Los Angeles River just beyond that [Figure 08]. Considering the density created and the formal expression of the building, this project can be thought of as a 'horizontal tower.' By laying the tower horizontally, Maltzan provides an activated streetscape with a variety of commercial and civic functions engaging the pedestrian, as well as allowing more economical light-frame construction due to its lower height. While this does not initially sound any different than other low-rise street-front buildings, Maltzan creates a unique unified facade [Figure 09] to create individual identity within the community. Reacting to its context by occupying the entire site rather than being object-oriented towers situated on a small

Figure 10 – Interactive Void Spaces. One Santa Fe by Michael Maltzan Architecture.

percentage of the land allows this linear horizontal identity to occur. This creates a more dynamic and human-scaled space than the repetitive array of over-scaled equal-height towers.

The most important aspect of this design typology is the specific shifting of solids and carving of voids to create the public spaces [Figure 10]. Instead of restricting public access to street-facing storefronts only, Maltzan creates spaces carved within the footprint of the building, infusing interactive spaces within the property. Specifically in the case of One Santa Fe, connecting the pedestrian with the public transit lines creates one of these diverse activities and pathways that create interactions with the residents and patrons of the site, something seen as being inherent to a functional city[3].

Figure 11 – Double-Level Public Space. Star Apartments by Michael Maltzan Architecture.

The Star Apartments [Figure 11], also located in Los Angeles and completed in 2013 by Maltzan, keep the low-rise typology due to surrounding context, the programmatic needs, as well as cost limitations but treat public space in a slightly different manner. Unlike One Santa Fe, the Star Apartments do not have to connect to transit lines and since they occupy a typical

3 Salingaros 1998

Figure 12 – Overlapping Spaces. Star Apartments by Michael Maltzan Architecture.

square-shaped block with no directional cross-axis, the public space is not dependent on being located on the ground level except for the connection to the retail spaces. Overlapping the public-based program into two levels creates the necessary amount of retail and civic space as well as providing communal outdoor public space that interacts with these community places [Figure 12]. The majority of the public space occurs on the roof of the ground floor retail, occupying an outdoor space between retail and residential. While this provides a good solution to a small site footprint and gives the residents a very nice outdoor plaza space otherwise unattainable, it seems difficult to imagine members of the public searching out or ascending stairs onto the roof of this commercial storefront. Significant wayfinding or previous knowledge would be required as vertical or multi-layered public space is not a prevalent feature in cities. The ability to physically unite the street level with the shared space above would greatly enhance the quality and connectivity of the plaza.

This horizontal residential typology benefits the public in multiple ways that high-rise towers cannot. The most directly influential to the occupant is the more immediate access to outdoors; less vertical

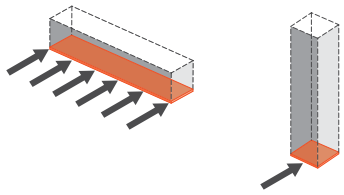

Figure 13 – Public Interface.
Idea argued by Michael Maltzan.

travel, more opportunity for openings to balconies or for ventilation, and a more grounded view of the landscape. There are also more points of ingress/egress which relieves the building of a single compressed node of travel, helping to equalize the density and provide much more public interface [Figure 13]. This lesser reliance on vertical conveying systems also relieves stress on the building utilities including the electricity to power these systems, plumbing pumps, and forced air conditioning. Another benefit that can cut down on energy consumption of the building is in the construction system – being a low-rise building, it would not be limited to using a steel structure. As mentioned before, it also helps the exterior spaces, not just the interior.

These low-rise mixed-use examples do not necessarily always create the monumental architectural expression of a tower, but they do treat the public realm in an inclusive and interactive way. The engagement of public activities in and around the building create the overlapping activities that Kunstler states is necessary for active cityscapes[4]. There are times, however, where building vertically is still the best or only option.

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4 Kunstler and Salingaros 2001

chapter 4 Morphosis + Vertical Public Space

"Lineal buildings offer a cohesive living environment with social interactions and urban connectivity that traditional towers cannot offer with their limited interaction with the streetscape. Each bar building, in contrast, has an extended interface with the streetscape, strengthening the urban connective tissue horizontally. Horizontality maximizes the opportunities of connecting and interrelating, all while allowing differences to coexist and proliferate."

Thom Mayne[1]

Thom Mayne of the Los Angeles based firm Morphosis considers architecture and urban space to be inseparable, both communicating and interacting with each other for the good of the public. Mayne states that buildings are no longer autonomous but rather part of the connective fabric of the city to reinforce and support social and cultural interactions[2]. Considering these social opportunities in a similar way to Maltzan's integration of public space into the architecture itself yet occasionally going one step further, Morphosis infuses the interiors of their projects with an abundance of public space in order to reconnect to the city spaces. Certain requirements of their public projects have required more vertically-oriented buildings which demand a different programmatic development. Accordingly, Morphosis brings the public space inward and upward as opposed to creating horizontal connections to the surrounding context. However, when the context allows it, Morphosis

1 Mayne and Allen 2011, 127
2 Mayne 2005

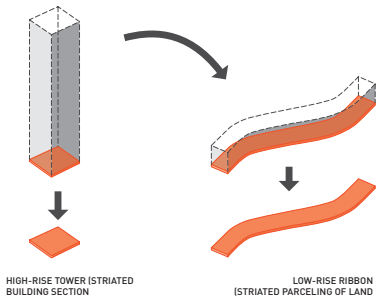

Figure 14 – Public Interface + Density. Idea advocated by Morphosis + Michael Maltzan.

argues the same idea as Maltzan – horizontal buildings increase the public interface[3] [Figure 14]. In both concepts, the land and the building become usable and actively produce spatial relationships that accommodate and enhance human activity and interaction. They further enhance public space by delaminating the ground plane which allows the space between the different layers of earth become occupiable. This effect is achieved by continuing the building skin throughout the site, yet giving it a distinctive function in relationship to the ground plane. While it may not be as explicit as continuing the ground material up over the building – a method discussed later – it hints at this idea. This allows the building skin to serve as an entrance, an outdoor canopy, or as an exterior room definer. No longer is the building an object separate from the site, but part of it. In this way, the building and the landscape become one, blurring the boundaries between figure and ground, public and private, horizontality and verticality.

In one of their more notable vertical buildings – the Federal Courthouse in San Francisco completed in 2007 – Morphosis expresses this investment into public gathering spaces by bringing the public space

3 Mayne and Allen 2011, 127

Figure 15 – Facade Creates Spaces. U.S. Federal Courthouse in San Francisco by Morphosis.

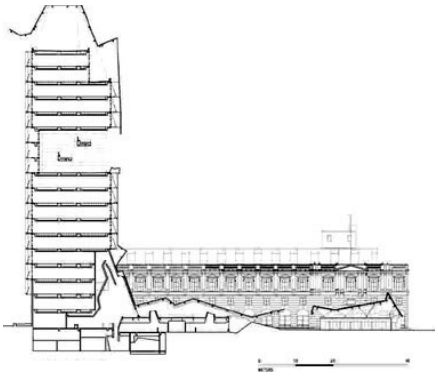

Figure 16 – Vertical Public Spaces. U.S. Federal Courthouse by Morphosis; section drawing showing public plaza carved into the tower.

upward into the building [Figure 15]. This example, along with the 2005 Cal Trans building in Los Angeles, serves as a strong example of their idea of public space and public funding. As a governmental building funded by public tax money, this project technically belongs to the public. Under this premise, Morphosis infuses public space not just into the building but all throughout it, creating a public outdoor deck, a daycare center, a gym, and other amenities on floors interspersed throughout the building. In order to create obvious visual connections to these spaces, Morphosis makes a monumental lobby atrium, considered by New York Times architectural critic Nicolai Ouroussoff as a "social mixing chamber[4]," that despite being within standard security checkpoints, promotes the interaction between the public and the employees all around the daily activities of the courthouse, allowing the public to traverse upward into these public zones [Figure 17]. Turning a typically banal government office building into a gathering zone for society creates a more dynamic city, a return on public investment, and promotes ideas of a transparent government. One issue that arises from this design is how to make the space provided throughout the building apparent to the public.

4 Ouroussoff 2007

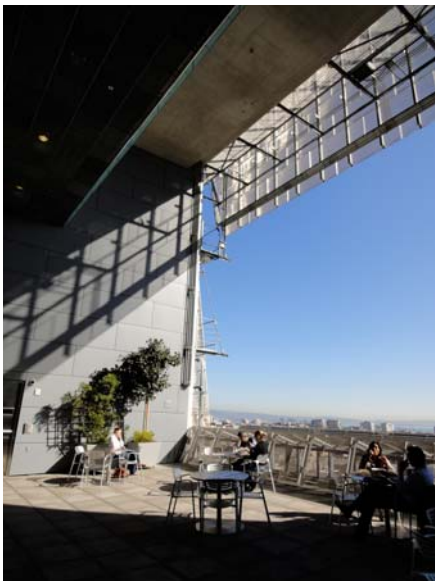

Figure 17 – Elevated Public Plaza. U.S. Federal Courthouse by Morphosis.

Buildings with dedicated interior public space is not very common in our culture, and almost never is it beyond the ground floor. This is where Morphosis' design philosophy has issues – unknown public space vertically through a building combats the idea of it being public. If the public is unaware of its existence, how can it truly promote social mixing? There is always the simplest method of using signage and advertising, but I believe the better solution would be through unifying visual cues connecting the inside to the outside, creating horizontal continuities of space, and through the much less achievable social culture of having public spaces in public buildings as the norm. Creating these visual cues and continuities of space could theoretically eventually lead to a culture of having truly public buildings, which is what I believe Thom Mayne is working to achieve through his design practice.

Figure 18 – Public Slice in Facade. The Cooper Union's Art, Architecture, and Engineering Building, 41 Cooper Square by Morphosis.

Even in their private commissions, Morphosis bring the public realm into their buildings in a very ceremonial and interactive fashion. The Cooper Union is a university located in New York City, and they asked Morphosis to design 41 Cooper Square, a new art, architecture, and engineering building [Figure 18] that was completed in 2009. Intended to foster

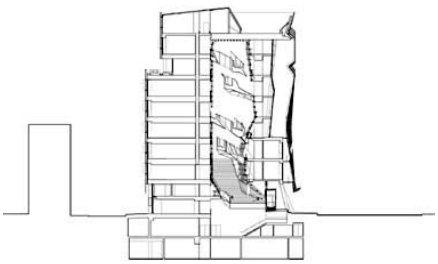

Figure 19 – Vertical Social Interaction. Section drawing; 41 Cooper Square by Morphosis.

cross-disciplinary communication and interaction, the main design feature is a massive central staircase that promotes social and intellectual exchange and connects numerous social zones interspersed throughout the building and ending in a large student lounge that overlooks the city. This mixture of amenities that are spread throughout bring vibrancy to the building as opposed to the idea of programmatic separation and delineation. Not just trying to cater to students, Morphosis opens the building to the public through visual transparency and public spaces such as a gallery and auditorium that connect the building to the public culturally, socially, and physically.

However, their most successful integration of public space and building occurs at the University of Cincinnati campus. Being directed by the Hargreaves Associates campus master plan, Morphosis' Recreation Center, completed in 2005, effectively weaves together pedestrian avenues, campus buildings, and the football stadium into a seamless public thoroughfare. In this case, the submerged stadium – a typically over-scaled object building surrounded by a desert of parking – was a massive structure that became an integrated part of the landscape in one of the most populated parts

Figure 20 – Integrated Building. University of Cincinnati Athletic Center & Football Stadium.

Figure 21 – Open and Desirable Circulation. University of Cincinnati Athletic Center.

of campus. The pedestrian walk wraps around the upper-most seats of the stadium [Figure 20], creating a "free-zone" – whether or not the university lets it remain this way – that allows the stadium to be visibly open at all times. People can move freely in and around the stadium when it is not being used, allowing it to become what seems to be the world's largest amphitheater. Practically, the stadium field is likely kept secure but the uniquely open nature suggests otherwise. The density surrounding the stadium creates a background element to constant pedestrian activity and the curvilinear form directs desirable circulation throughout the entire area. These architectural edges help to define pathways throughout the campus, as supported by Nikos Salingaros' theory of the urban web:

> "A path through a uniform area is ambiguous, because it divides the area into similar components on either side; it could just as well be placed anywhere inside that area... A path succeeds only if it coincides with the boundary of an area such as the edge of a building[5]."

As opposed to the 'ambiguous' open spaces for pedestrian movement that exists in Le Corbusier's plans, the pedestrian zones of this campus reinforce

5 Salingaros 1998

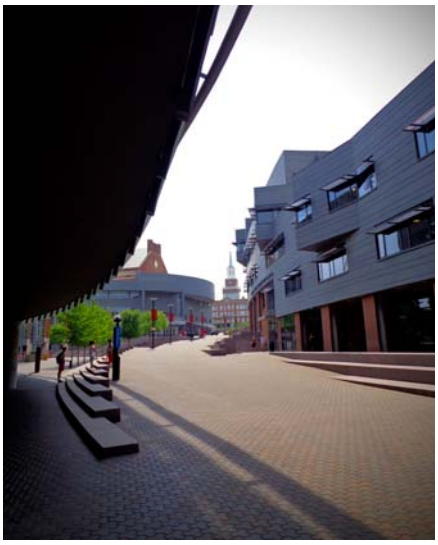

Figure 22 – Buildings to Accommodate Spaces.
University of Cincinnati Urban Mall. The cantilevered building on the top left is Morphosis' Athletic Center.

human-scaled movement and spaces. In this project, Thom Mayne considered the buildings as space definers as opposed to objects – "the buildings are just there to accommodate the space.[6]" Similar to the delaminating process mentioned for the Federal Courthouse, Morphosis thickens the ground plane creating a series of undulating 'mats' that are punctured to allow light into the lower levels of the building while creating unique focal points for the people occupying the street. This thickened mat creates transition points between lower elevation points to the south and the higher elevation to the north, allowing a continuous flow of circulation throughout this main avenue [Figure 22]. The building's proximal placement, effective network of circulation in, on, and around it, and the use of other buildings as edge conditions make this sports facility highly spatially efficient.

Critiques

In some situations with Morphosis, it seems like formal qualities override consideration for the public. The building at Cooper Union may have great social spaces inside, but the streetfront façade lacks any active interaction spaces. Despite the protected

6 Mayne 2012

sidewalk created by the offset of the building skin, making the space between the storefront glass and the angled concrete columns a somewhat unfriendly space to occupy. Formal language is an important factor in design, and that formal agenda sometimes overshadows the considerations in human comfort and occupation.

Formal expression has the opportunity to bring clarity to unique design choices as well. Morphosis does employ this concept at the U.S. Federal Courthouse, although not necessarily successfully. There are small 'barnacles' that push themselves outward from the building that define interior public gathering spaces. The exterior formal expression brings attention to these interior gathering spaces, but without prior knowledge of the spaces they remain obscure in their accessibility. With our society's lack of regard for public spaces in public buildings, Morphosis should have investigated how to make these places more obvious to the public since they are such an important part of the building.

Finally, in some projects such as the Cal-Trans building, the outdoor public space is slightly separated from the street by either façade elements or an

elevated plaza. This small but significant divider creates significant segregation between the building's public space and the urban space of the sidewalk.

Public Funds, Public Space, Public Buildings, Public Investment

Morphosis' emphasis on investing public funding used for civic buildings into accessible public space stem from their interest in the cultural, social, and temporal health of the city. He wants the building to no longer be autonomous, but to be connected to this city and this place at this time[7]; part of the connective fabric of the city socially, culturally, and recreationally as part of the landscape. It is Kunstler's suggestion of combining a wide range of activities and connections that create the vibrant urban setting Morphosis is working towards. Instead of following the modernist concept of programmatic separation resulting from the attempt to clean up and separate disparate movements, Morphosis – as well as other architects – tries to bring these variety of nodes and directions into a convergent web. This creates the best urban condition that many American cities lack and desperately need.

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7 Mayne 2005

chapter 5 Landscape Urbanism + an Integrated Site

"Architecture is no longer the primary element of urban order, increasingly urban order is given by a thin vegetal plane, increasingly landscape is the primary element of urban order."

Rem Koolhaas[1]

Another lens through which to view public space places the focus on landscape as opposed to architecture. According to Charles Jencks, modernist urbanism failed to produce a "meaningful" and "livable" public realm, unable to communicate with multiple audiences[2]. The rigidity of the spatial construct and lack of open and connected public space created sterile cities with no real spatial character. Charles Waldheim reacts to this treatment of the urban realm by changing the focus of programming from architecture to landscape, letting the exterior define the spaces within themselves as opposed to relying on the physical buildings for identity[3].

Constructed Ground

Linda Pollak takes it one step further, proposing an idea of 'constructed ground' – an idea that is intended to simultaneously address the concerns of architecture, landscape, and urbanism without any

1 Rem Koolhaas quoted in Waldheim 2006, 42
2 Charles Jencks quoted in Waldheim 2006 , 38
3 Waldheim 2006

Figure 23 – Constructed Ground. Seattle Art Museum by Weiss/Manfredi.

Figure 24 – Multi-Layered Space. Seattle Art Museum by Weiss/Manfredi.

having clear hierarchy over another. Traditionally, architecture is seen as the object within the landscape, a dichotomous view of design. Pollak suggests that designers need to consider ways in which design can "support and represent a multiplicity of spatial identity,[4]" discarding the typical 'figure/ground' relationship. Just like Morphosis' technique of delaminating the ground to create a continuous occupiable zone that connects the building and the landscape, there are methods within the realm of landscape urbanism of delaminating the ground to create multi-layered occupiable space, weaving land and building together [Figures 23 & 24]. Instead of using the building skin to create a covered space, the ground plane continues to be occupiable as it weaves in, around, and above the building. This does not blur the lines between architecture, landscape, and cities, but merges them together into one cohesive entity.

Infrastructure

"Infrastructure increasingly provides the public spaces of our cities, and the infrastructure of movement is an essential presence in the developed world. Whether for cars, bicycles, or people, it is the connection of elements to one another that is the foundation of urban and suburban life."

Elizabeth Mossop[5]

4 Pollak 2006, 128
5 Mossop 2006, 174

Figure 25 – Green Corridor and Highways. Buffalo Bayou, Houston.

Figure 26 – Playground and Highways. Underpass playground in Toronto.

In addition to architecture and landscape, Elizabeth Mossop expresses the need for designers to engage with the infrastructural landscape, specifically transportation systems [Figures 25 & 26]. Disregarding areas such as "mundane parking facilities, difficult spaces under elevated roads, complex transit interchanges, and landscapes generated by waste processes[6]" ignores the potential for these existing, publicly-owned spaces and further emphasizes divisions within the city, especially in the case of transportation infrastructure. Landscape architecture seeks to embrace the infrastructural context – or the "spaces in between" – to instill purpose, legibility, and cohesiveness into the landscape and urban environment[7]. Highways – particularly elevated or excavated – form the strongest barrier and disruption between the physical and social fabric of neighborhoods due to their singular function and massive scale which continues to expand due to the unstoppable rise in the automobile use. The United States in particular favors monofunctional transportation systems for their maximum efficiency, albeit only for short, inconsistent amounts of time. Between peak hours, systems like parking lots, transportation corridors, and transit hubs are left

6 Mossop 2006, 171
7 Hung 2013, 15

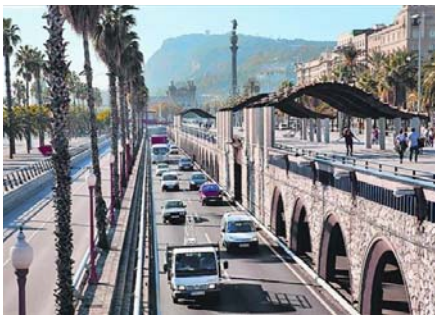


Figure 27 – Roads and Public Space. Varied infrastructural elevations allow viewable beachfront. Ronda Litoral, Barcelona.

Figure 28 – Multi-Layered Roadways. Public space over highway. Ronda Litoral, Barcelona.

Figure 29 – Bridge Connections. Ronda Litoral, Barcelona.

idle, creating voids and barriers in the city[8]. This large amount of public land needs to be used in a much more inclusive and diverse way: establishing connections rather than destroying them through programmed public spaces, supporting the need for not only fast-moving regional traffic but also slow-moving local traffic, and accommodating a variety of transportation methods.

> "Our cities need this kind of infrastructural approach that extends beyond perceived boundaries and connects various sites to other sites, people to places, communities to communities, people to people, nature to city, and city to nature.[9]"

One relevant example of integrated transportation infrastructure exists in Barcelona. The completion of the Cinturón (Spanish for 'belt') in 1992 that surrounds Ildefonso Cerdà's nineteenth century city was seen as a way to complete the city while diverting most automobile traffic away from the dense city center [Figures 27-29]. The improvements to the city included infrastructural upgrades to public and private transportation as well as essential utilities, but also included the creation of leisure and recreation

8 Hung 2013, 16
9 Hung 2013, 19

spaces, the building of cultural venues, and upgrading residential and commercial zones. What makes this example special – besides the fact that these improvements occurred under the auspices of a major city-wide infrastructural roadway project – is that these improvements occur within the typical right-of-way spaces of the roadway. This infusion of active public space within the traditional barrier of transportation infrastructure re-establishes connections between neighborhoods, creates new public venues/spaces, and promotes development of previously unused land. This project "constitute[s], programmatically and morphologically, a complete urbanism that produces new landscapes that are a hybrid of natural and man-made systems.[10]"

Ecology

Infrastructure doesn't just need an upgrade to the transportation methods and scales; the mono-functional use is an issue with our current design. We need to explore a multivalent strategy for integrating ecological and transportation networks since we have historically paved over the ecology in our city building; these typically hard, impervious, grey landscapes

10 Tatom 2006, 184

Figure 30 – Urban Ecology.
Ecology as an infrastructural system.

Figure 31 – Ecological Highways.
Transportation and ecology coexisting.

Figure 32 – Underpass Wetland.
Waller Creek in Austin, TX by Michael Van Valkenburgh Associates.

should also include soft, pervious green surfaces to mitigate infrastructural overloading and create new spaces for the social and mental health of the city. This multivalent strategy could include mixing transportation methods (both traditional vehicular and alternative public transit), integrating ecological corridors and conveyances, and injecting zones of public space. Stoss excels at infusing ecological landscapes within the city at a large scale [Figures 30 & 31].

Another landscape architecture firm that is working to appropriately merge ecology, infrastructure, and urban spaces is Michael Van Valkenburgh Associates. Their Waller Creek project in Austin, Texas [Figure 32] is an ecological system that celebrates culture and connects Austin's downtown core to the city's under-served east side. The remediation is focused on protecting against some of the current ecological problems with the creek – such as erosion, invasive species, and flash flooding – as well as the fact that it has been physically and culturally isolated from the city around it. To help mitigate destructive flooding, Van Valkenburgh creates a few wetland parks along the creek that slow stormwater and help it infiltrate back into the Edwards aquifer. These sites become

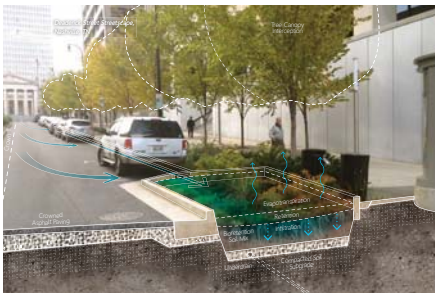


Figure 33 – Urban Stormwater. Alleviating stormwater runoff and infrastructural stress.

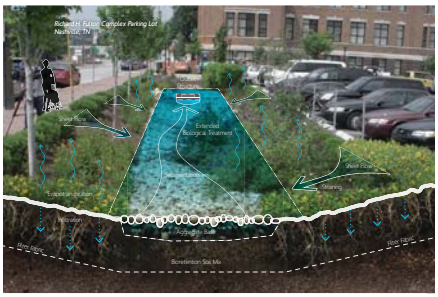


Figure 34 – Green Parking Infrastructure. Water infiltration and bioremediation.

city amenities that serve a social and cultural function as well. The parks become a social crossroads point between downtown and the east side, providing universal access and a symbolic place of connection between different social strata. The blending of these various functions and spaces creates a dynamic and functional landscape, reconnecting two disparate parts of the city divided by highway infrastructure, creating new spaces for social activity, and rebuilding the outdoor environment

Integrating ecological processes and infrastructure can lead to many solutions that improve our cities. Building wetlands or riparian zones, using bio-remediation, preserving tree canopies, and providing green spaces in urban zones help with many urban issues such as the heat island effect, air and water pollution, social isolation, physical barriers, and biological disruption. There has been a tendency in the past to over-engineer water control solutions by creating massive grey infrastructural works but the most effective solution is to merge the infrastructure with ecology as these green solutions are most effectively able to handle the infrastructural needs when implemented correctly. In this way, landscape is inseparable from transportation infrastructure.

Scale

"...projects for public spaces on disused sites that have been vacant for decades, whose failure can often be traced to the inability of a modernist master-planning framework to recognize the complexity of their position in between multiple scales of use and activity."

Linda Pollak[11]

Scale of environments has either a very beneficial or detrimental effect on occupants. The ability to shift scales or connect many scale levels unifies and diversifies a city and its spaces. Landscape urbanism makes this shift seamless. Making intimate spaces within the public realm is fairly common, but connecting these spaces to larger neighborhoods, city or even regional zones is much less commonly implemented. Being able to weave space throughout the building, site, and/or city makes this shift highly effective when it is all connected.

Figure 35 – Diverse Integrated Transportation Scales.
Public park, parking garage, and elevated traffic circle coexisting. Plaça del Glories Catalanes, circa 1992.

In Barcelona, the multilevel Plaça del Glories Catalanes [Figure 35] weaves cars and pedestrians together through a roadway interchange, parking garage, public landscape and playground. These four activities provide different scales in which the city operates – metropolitan level roadway traffic, neighborhood level parking, local public greenspace and a personal level playground. This uses a very

11 Pollak 2006, 130

small footprint of the city to bring together four separate functions, weaving them together and shielding them from each other where appropriate. This project also highlights the unification of transportation infrastructure and public space mentioned previously. Taking the fast traffic above the ground level, using the space below the structure for local vehicular function, and programming the space in between for more intimate public space helps to keep the city connected and more dynamic. However, due to the use of the parking garage as a shield for the park space within the elevated traffic circle, the greenspace becomes forgotten. The ground-level traffic circle further separates pedestrian traffic from the green space due to the way traffic circles are engineered to make cars move quickly through the intersection without slowing or stopping for the pedestrian. It is worth noting that Barcelona is currently holding architectural competitions to help solve these issues, and many proposals deal with re-establishing a rectangular grid in order to slow traffic at ground level or submerging the current ground-level traffic to allow pedestrian connections to exist. Due to the high-speed intersection that currently exists, the diverse programs do not interact as effectively as needed. The garage has since been demolished allowing

free movement for the pedestrian, but still lacks the necessary connective paths across the fast-moving roadway. There are good intentions and ideas, but the issues have not been fully solved yet.

A Way Forward

"...once married with architecture, mobility, and landscape, infrastructure can more meaningfully integrate territories, reduce marginalization and segregation, and stimulate new forms of interaction. It can then truly become 'landscape.'"

Kelly Shannon and Marcel Smets[12]

Landscape urbanism can solve many modernist urban failures through some of its unique ideas about equality among architecture, landscape, and urbanism. Projects using these ideas can create multi-functional zones of various movement that activate public space, they can integrate transportation infrastructure into the city more effectively by removing barriers instead of creating them, they can support natural ecological processes, and they can give a variety of scales to the city in a cohesive manner. Without over-reliance on buildings-as-objects to create prosperous urban environments, the successful integration of architecture and landscape into the urban fabric can create results that bring together the

12 Shannon 2010, 9

positives while correcting the shortcomings of each solution. This does not mean that buildings-as-objects have no place in the urban environment. Being able to create a distinct identity or hub of activity is certainly something that can create effective public spaces, but balancing the typological spectrum to include both equally will produce the most successful of urban spaces.

chapter 6 Lessons Learned

Morphosis, infusing public spaces within vertical program, tries to solve the modern urban dilemma of unprogrammed public places within a dense vertically-oriented building. However successful, our society lacks the precedent to expect accessible public spaces within buildings. Challenges exist with this method in terms of clarity and accessibility to the public. Maltzan supports clear outdoor space that weaves through building complexes, connecting civic needs to the public realm through private buildings. This more "horizontal tower" method activates public spaces by spreading density equally throughout the site but requires much more land to do so. One solution – vertical – creates publicly-oriented infill that is easier to build on an existing site but more challenging for accessibility while the other solution – horizontal – creates a more unified site but needs a much more intensive plan to be able to effectively unify the site in the intended way. There are benefits to both ideas, depending on the situation, which support the public realm. Sometimes implementation of both is necessary to create vertical density with horizontal activity. Finally, ideas of landscape urbanism take public space into new territory and promote multi-layered occupiable public space that merge architecture, landscape, and urbanism. As

we continue to build and expand our cities, public space should be the main factor in determining how we design the urban realm. That is not the only need, however. Especially in the United States where cars dominate our transportation networks, integrating those networks more effectively into our cities is a necessity. Landscape urbanism makes this possible and with this, ecological concerns are inescapable needs that should be incorporated also. This method of using major landscape infrastructural interventions seems the most intensive in terms of master planning, requiring more than just a small building site; it requires sites ranging from small neighborhoods to regional connections in order to create successful projects that blend infrastructure, public space, ecology and architecture together.

Only on rare occasions can an established city easily implement projects to this magnitude.

part 3 olympic catalyst

chapter 7 The Opportunity of Mega-Events

"... the effects of the legacy have many aspects and dimensions, ranging from the more commonly recognized aspects – architecture, urban planning, city marketing, sports infrastructures, economic and tourist development – to others ... such as production of ideas and cultural values, intercultural and non-exclusionary experiences ... popular memory, education, archives, collective effort and voluntarism, new sports practitioners, notoriety on a global scale, experience and know-how ..."

International Olympic Committee[1]

Cities are a complex and diverse living organism. They are built slowly upon history, adding many layers throughout time. Unfortunately, this means that mistakes in urban planning sometimes persist for decades, affecting everyone and everything around it. Some of the previously discussed ideas of large, horizontal 'mat' buildings or smaller-scale publicly oriented buildings are difficult to construct in the already planned and built-up dense urban core of most cities. Rarely is there enough available land, money, labor, or sheer will to provide sweeping changes to out-of-date or ineffectual urban tissue. In order to create these sweeping changes, there needs to be an event that provides all of these means with which to effect change.

Occasionally, such an opportunity arises that does give a city means for a greater ambition, providing broad and extensive changes with more thought towards

1 International Olympic Committee 2003, 492

Figure 36 – World's Fair.
1964 New York World's Fair Exposition.

integration of all aspects of urban infrastructure. These rare opportunities occur through 'mega-events' – exhibitions, sporting games, or other events staged at a local level with global attention that typically attract millions of tourists or visitors – such as World's Fairs, Olympic Games, or global exhibitions [Figure 36]. Generally funded by the host country/city or funds raised by the operating organization, these events likely require significant changes to the city in order to support the event operations and influx of millions of people that the city normally cannot sustain. These funds specified for urban upgrades give the city an opportunity to create a more focused and integrated urban plan that can actually be implemented to benefit the local people. The issue that often arises is whether these funds are used to appropriately repair the city for future generations or wasted for a temporary event.

Figure 37 – Duration.
Athens, 2004.

In the case of the Olympic games, many cities run into major issues with their urban upgrade budgets. This entire research endeavor began based on a photography project by Jon Pack and Gary Hustwit – The Olympic Cities Project[2]. What interested me in this project was the same as the source idea: the

2 Pack and Hustwit 2013

Figure 38 – Scale.
Beijing, 2008.

Figure 39 – Connectivity.
Barcelona, 1992.

urban legacy of these mega-events. The majority of the subject cities had decaying remnants of this event, lacking any real urban benefit. Sometimes, these remnants were actually hurting the city. I was able to start associating certain terms about the urban environment based on these images [Figures 37-39], including scale, duration, connectivity, and density. Most of these were negatively associated: *over*-scaled, *temporary* duration, *lack* of connectivity, and *concentrated* density. My project eventually moved almost exclusively to issues within the city, as discussed in the previous section. The Olympic games, however, provided a catalytic event with which to imagine a large-scale urban intervention. It also led me to a proposed project site in which to focus my research on urban spaces, transportation infrastructure, and ecology.

In this section, I am investigating three projects – two built, one unbuilt – to understand and critique methods of effectively repairing or improving the urban fabric based upon the Olympic Games. Initially I looked at these three sites at three different scales each: Metro area, Local site, and Architectural expression. This was beneficial because it made connections between different opportunities each city had such as the ability

to create new urban centers, the responsibility of creating new or connecting to existing transportation networks, and the use of the surrounding land as a spatial element as opposed to just the space around the buildings. These multi-scale aspects are important because they are directly influenced by public investment and what I am investigating in terms of public spaces and infrastructural connectivity. I also investigated each project and city based on a variety of factors – such as physical, cultural, economic, social, infrastructural, historic, and temporal characteristics – in order to provide some method of comparison and understanding. The simplest and most efficient way to analyze these three case studies is in sequential order, describing the scales and factors for each. This also happens to be the most boring and unclear way to present them. In order to give a basic understanding of event context, I will provide broad overviews of the two built projects but describe most of the specific details throughout the discussion of the unbuilt proposal as a comparison and framework in which to provide a deeper understanding of the failures and successes of the proposed project.

The three Summer Olympic projects of investigation all occur within a 25 year period: Barcelona in 1992,

Figure 40 – Unbuilt Olympics. Chicago 2016: Candidate City.

Atlanta in 1996 (both of which are built), and Chicago in 2016 – a proposed project that was not selected by the Olympic Commission [Figure 40]. Barcelona is almost universally seen as the exemplar for successful urban transformations based on an Olympic catalyst due to its strong and long-term strategic vision for the city, its urban design excellence, and its well-funded social programs[3]. Atlanta, the host city for the summer games taking place immediately following Barcelona, stands as an example for unsuccessful planning and missed opportunities since it had an economic/commercial focus rather than a public/social focus. Chicago, not being selected as a host city, does not and will not have the benefit of having post-event analysis or even design-based literature examining the successes and short-comings of the proposal. This is where I am applying my research of Barcelona and Atlanta in order to form a critique of the design. This becomes important because I am locating my project within one of the proposed sites of the Chicago event, arguing that although they had some of the same solutions as Barcelona, the design of this specific site is unsuccessful both standalone as well as contextually.

3 Coaffee 2011, 185

chapter 8 Barcelona + the Archetypal Model

"It is critical to understand that improving public spaces is relevant to solving social and economic problems."

Pasqual Maragall[1]

Figure 41 – Barcelona 1992.

Since 1960, cities have used the modern Olympic games for more than their intended purpose of marketing themselves to the world and started to use this event to stimulate urban change in a cohesive manner. Due to the high degree of public funding, many cities have planned beyond the impermanent event and made investments in their future, especially to necessary services such as transportation that benefit both the event visitors and the established residents. Barcelona's city officials recognized this opportunity early and were able to most successfully implement urban and infrastructural improvement. To them, the Olympics weren't seen as a sporting event; they were seen as a catalyst for urban rejuvenation and a way to improve quality of life for its citizens.

Barcelona's Olympic History

Despite the general recognition and subsequent successful repair of the damaged neighborhoods, I cannot ignore the preceding events that led to the Olympic proposal and event as they are important to

1 Monclús 2011, 274

Figure 42 – 1929 International Exposition. Global Expo located on Montjuïc Mountain.

Figure 43 – Pre-Olympic Waterfront.

the realization and success of the project. Barcelona had previously been the host to two international exhibitions: the Universal Exhibition of 1888 and the International Exposition of 1929. The Expo of 1929 was located in a region of the city that resisted further development due to mountainous physical geography [Figure 42]. This existing location and experience for mega-events, although occurring many years prior, gave the city valuable means with which to host a new event. Hoping to organize yet another one, the city planned and prepared from 1957 to 1973 for another exhibition in 1982 that would help resolve some urban problems including indemnification of the brown-field waterfront due to toxic industrial activities [Figure 43]. Although it was a speculative proposal, much of the public saw its potential to help repair the city. This city plan primed the public and future leaders for urban renewal. Due in part to political strife the plan was never fully realized; with the decline and eventual death of conservative dictator Francisco Franco, the socialist faction took hold of the local government and

Figure 44 – Methods for a New City. 'The Reconstruction of Barcelona' by Pasqual Maragall and Oriol Bohigas.

started a new plan – the General Metropolitan Plan of 1974 – which focused on the brown-field reclamation and implementation of green spaces and new road layouts that were initially researched in the Exhibition plan in the 60s. This plan realized the potential for reclaiming former industrial land located near the medieval city center and along the coastline and giving it new life as an urban center. As the democracy continued to grow, these urban renewal ideas became more achievable and supported by the government and the public. A local architect, Oriol Bohigas, with the support of the mayor, Pasqual Maragall, published "Reconstruction of Barcelona" [Figure 44] which helped to define the means and methods in which to create this new urban plan. The idea from this document that proved most successful to the urban transformation was "quality first, quantity after." In order to truly create successful rehabilitation, Bohigas stated that the city needed to hold small-scale interventions – high-quality urban reformations of minimal effort and cost – followed by large-scale strategic projects tying everything else together. This allowed instant and low-risk improvement of the city in preparation for larger and more expensive projects such as the industrial remediation and waterfront development. The smallest urban design intervention

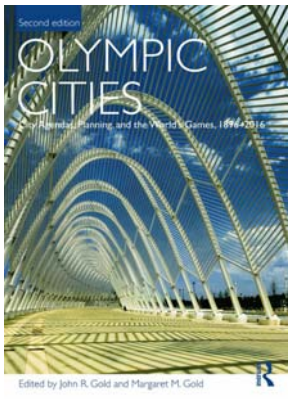


Figure 45 – Further Reading. 'Olympic Cities' by John and Margaret Gold.

speaks to city building at large; it defines both the process and the outcomes[2]. The larger projects became the genesis for the summer Olympic Games in 1992. For a more detailed historical account of the historical context leading up to the Olympic nomination, refer to John and Margaret Gold's book *Olympic Cities: City Agendas, Planning, and the World's Games, 1896-2016* [Figure 45].

Barcelona's Efforts

Barcelona determined their key criteria for site selection: to disperse venues throughout the city to allow equal opportunity and access of city residents for post-event use, to redefine and upgrade their transportation networks including hubs located near Olympic venues, and most importantly to reconnect the city to the waterfront which had been used as industrial land since the mid 19th century. The four sites they chose [Figure 46] were intended to be along the first periphery of the city – outside the main urban area but close enough to allow quick transportation with their upgraded network – in order to encourage controlled development, implement smart growth, and create new zones of centrality[3]. The four sites were:

2 Kahn 2005, 281
3 Monclús 2011, 280

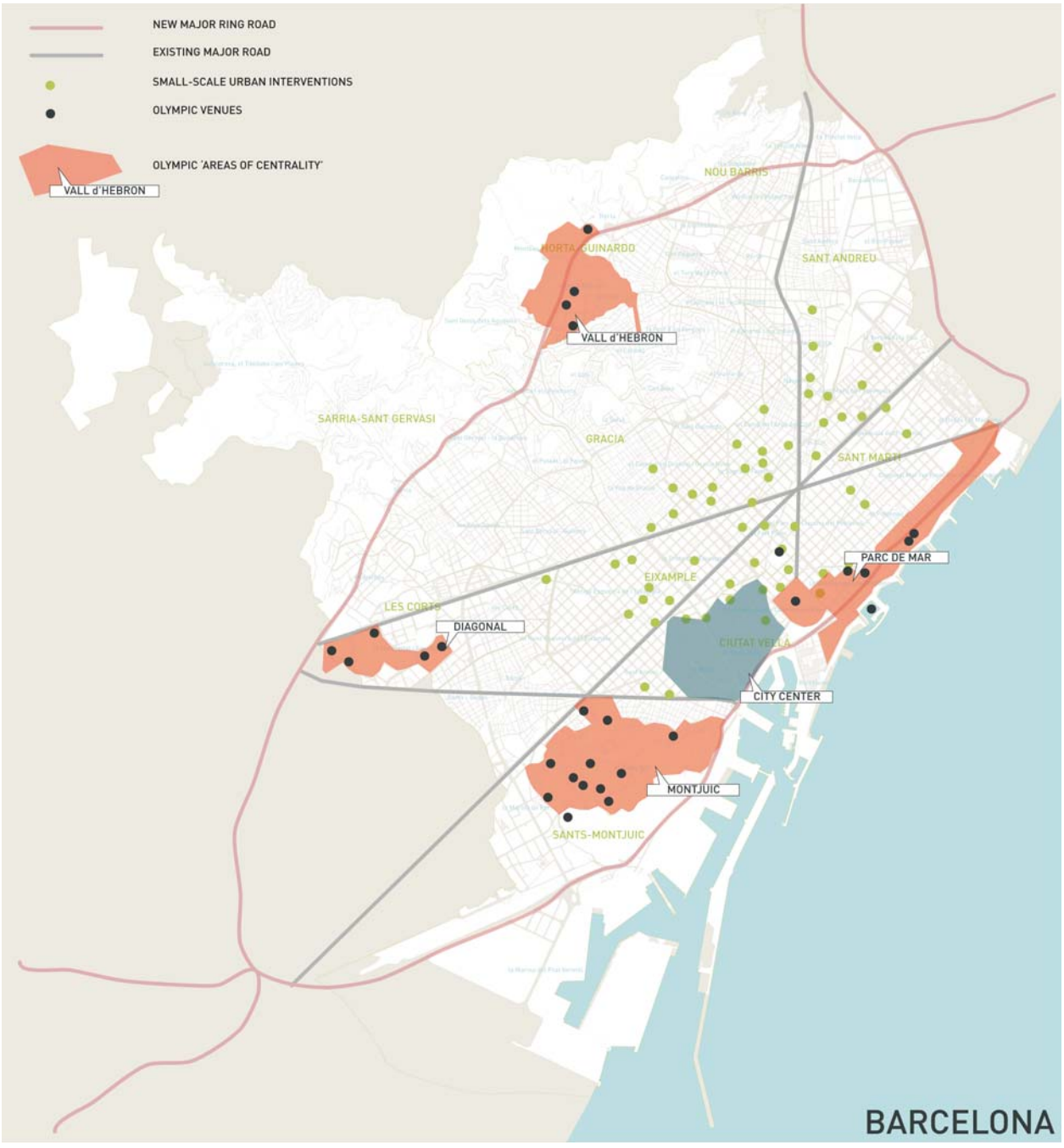


Figure 46 – Areas of Centrality and Olympic Venues.

Figure 47 – Montjuïc Mountain.

Montjuïc Mountain – site of previous exhibitions, topography discouraged traditional development but was prime for parks and greenspaces [Figure 47].

Valle de Hebron – already developed neighborhood of residential and commercial at the periphery of the city, plenty of local amenities that would benefit from sports venues [Figure 48].

Figure 48 – Valle de Hebron.

The Diagonal – cultural boulevard that connected back to the medieval town center, already a recognizable gathering place [Figure 49].

Parc de Mar – former industrial brown-field that divided the 19th century historic neighborhoods from the Mediterranean, focal point of the entire urban regeneration to 'turn Barcelona back to the sea' [Figures 50 & 51].

Figure 49 – The Diagonal.

The most significant development occurred at Parc de Mar, where deindustrialization provided an immense amount of land near the city center that was perfect for developing into sea side parks, housing, and commercial attractions. Around 100 hectares (250 acres) was redeveloped with the plan to create housing for up to 15,000 people post-event. Some important

Figure 50 – Parc de Mar.

Figure 51 – Waterfront, Pre- and Post-Olympics.

goals were achieved: new roadways, improved coastline and sanitary utility lines, removal/relocation of railway lines, local street grid and parks bridging over highway, new marina, parks/green corridor, new hotel, commercial, housing, and leisure facilities.
The overall goal for the site was to reroute, redevelop, and reconnect. Rerouting roadway and railway transportation lines that were creating barriers helped open the waterfront back to the city. Redeveloping deindustrialized land provided a new mixed-use cultural destination with amenities that were new to the city. Reconnecting these neighborhoods to the water created a new identity for the citizens that they have fully embraced in the decades following the event.

A potentially unanswerable question remains: is 100 years of political and cultural set-up required for this catalytic urban renewal to be a success to the degree Barcelona experienced?

chapter 9 Atlanta + the most Unsuccessful Olympics Ever

"Atlanta Olympic development has been criticised as 'the ruling regime taking advantage of the Olympics to mount an attack on the city's underclass.' ... the Olympics can project a positive global image by disguising rather than solving social problems.

Adrian Pitts and Hanwen Liao[1]

Figure 52 – Atlanta 1996.

Rem Koolhaas refers to Atlanta as a hub city due to its history as the railroad transportation 'gateway to the Atlantic[2]' instead of a destination city; a city on the move with no true center/locus/node. Instead of one center, it has many false centers (Downtown, Mid-town, Buckhead) all vying for notoriety and expanding the city uncontrollably; a city of fragments and autonomous particles free from contextuality [Figure 53]. The sprawling forested geography creates the best conditions for suburbanization – migrating away from the city into a more 'natural' setting – and in this goal it succeeds admirably, if that is something

1 Pitts and Liao 2009, 97
2 Koolhaas 2013, 23

Figure 53 – Atlanta Skyline.
A city with multiple 'centers.'

Figure 54 – Downtown Highways. Atlanta, GA.

one wishes to strive for. It has a heavy reliance on commercialism; many global mega-corporations make their home all throughout the city. Similar to many American cities, Atlanta is car-centric, lacking proper density for smart walkable development and causing the transportation infrastructure to mainly consist of highways crossing at the core of downtown [Figure 54].

Following the success of Los Angeles' commercialization of the Olympic budget in 1984, Atlanta took the same financial route due to its lack of adequate public and governmental monetary support. In terms of financing the games, the commercial partnerships that were sought out made the event possible. The urban legacy that remained for Atlanta however was a failure.

It was promised by the Corporation for Olympic Development in Atlanta (CODA) that fifteen impoverished districts would be upgraded to help combat poverty and urban decay. What actually happened was that poor communities were displaced so that newly developed (i.e. gentrified) housing could take its place and commercial zones in or around downtown were the focus as opposed to surrounding neighborhoods. While 11,000 new housing units were

built, 7,000 were destroyed to gain the land needed. With around 30,000 people being displaced and most of them financially unable to return, the housing development supported only one class of residents. Unlike Barcelona, where socialist ideas were helping to funnel public funds back into public projects, individualistic notions born of extreme capitalism in this corporate city created projects that only benefited the gentry and shareholders. This historic and cultural context is less than ideal for an urban renewal project at the Olympic scale. This comparison of Barcelona and Atlanta could represent a tendency of large-scale projects reflecting their parent culture; Barcelona having a more publicly-oriented development strategy which necessitates a focus on public need and Atlanta having a more economically-oriented one which promotes privatization. It was stated by Andrew Young of the ACOG (Atlanta Committee for the Olympic Games, a private organization that handled the planning for the 1996 games) that the games and the urban spaces developed as a result were "not a welfare program, they [were] a business venture[3]" and that if public interest was desired, tax funds should have been acquired. Needless to say, the International Olympic Committee (IOC) stated that the Olympic

3 Poynter 2009, 129; Gold and Gold 2008, 308

games would never again be given to a city that "has no significant public sector commitment, either in the form of a financial contribution or, at the very least, a guarantee to meet the necessary costs of organizing the games[4]." Public funding must be involved to create commitment to a unified investment in the public realm like in Barcelona and prevent private funding from creating a secretive profit-driven vision that has no accountability to the citizenry.

The initial goal of improving the lives of deprived inner-city residents – which sounds very much like Barcelona's goal of improving general quality of life – was a complete failure. Favoring or displacing certain races or classes of people destroys the entire notion of public space. Leaving the fate of the games' development to corporate business leaders' interests led to the failure of an egalitarian urban city. It is believed by many that the racial, physical, and economic divide that has defined Atlanta over the past century was reinforced by the games' private investment and planning[5].

The games did provide some success – if the economic and racial disparity caused by gentrification is

4 Poynter 2009, 128
5 Poynter 2009, 125

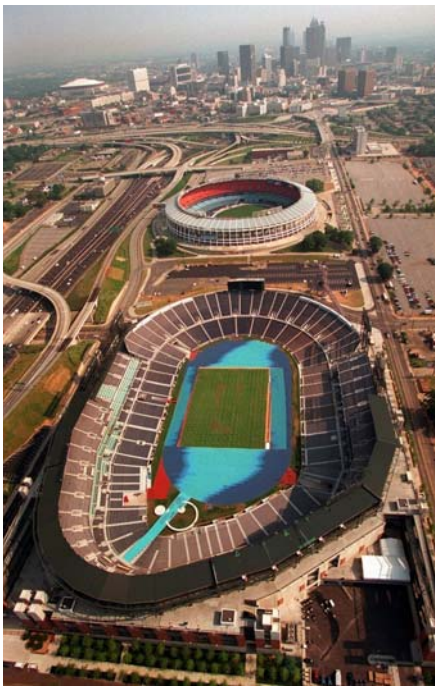


Figure 55 – Atlanta's Stadia.

temporarily overlooked – in the post-event venue occupation. Both stadiums [Figure 55] were bought by two of Atlanta's professional sports teams and are continuously used today. Major Olympic stadia are usually the most expensive to construct and maintain, and are also the most difficult to use after the games are over.

Another success is the successful foresight of the Olympic Village athletic housing. Atlanta used Georgia Tech's campus as their Olympic Village – trading facility upgrades for rental space – which alleviates the financial burden of constructing a new site. This is a great solution for both the games as well as for the university, allowing financial reprieve/gain, as well as taking advantage of many already in-place features needed for the athletic housing: dining halls, sports training facilities, shared housing, site security and entertainment. For a city with no public budget and no other option, this is a great solution. With goals to rejuvenate the urban fabric and redevelop areas of the city in order to raise quality of life, there is little benefit to avoid developing what is essentially a new unified neighborhood.

Barcelona's main interest in the 1992 Olympics was

not in planning a sports event, but rather in providing a catalyst for urban rejuvenation and improvement in order to improve the quality of life of its citizens. If this goal was always as prominent and as well understood as it was in the case of Barcelona, then I wouldn't need to critique Atlanta or Chicago's plan, because there would be few missteps in the urban planning of mega-events. Atlanta however proves that there are ulterior motives at play many times. One of their main foci was to make Atlanta more of a sports-event destination. While this makes sense for a sports-oriented mega-event, the urban restoration goals took a sidestep. Being entirely funded by the private sector, Atlanta's urban goals – whether originally intended or not – were to support the upper-middle class and rejuvenate and rebuild the downtown sector instead of surrounding neighborhoods. Despite the success of the sports-oriented goals and successful economic rejuvenation of downtown, the social fabric of the city took another big hit that is unacceptable for a civilized society.

chapter 10 Chicago + the Rejected Proposal

"[Daniel] Burnham believed in the balance of body, will and mind. He believed in harmony between land and water, between urban and natural, between practical and inspirational. He believed in making big plans and in striving to fulfill bold visions. He believed that beauty fosters virtue, improves society and promotes health. And he believed that a great city could bring the world together.

This is Chicago's inheritance. This is the vision we fulfill today.

Chicago aspires to bring the world together for a spectacular experience. We dream of athletic competition and celebration woven into an ideal setting amid a vast network of gardens and parks, beside the magnificent open waters of the lake, under the bright heights of the skyline."

Chicago 2016 Candidacy Package[1]

Figure 56 – Chicago 2016 Candidate City.

Chicago – a prominent American city defined by its financial, industrial, and technological advancement, diverse culture, and the combination of being a major transportation hub as well as a valued destination – sought to market their city to the world, applying for Olympic candidacy in 2016. The bid was unsuccessful, rejected by the International Olympic Committee in 2009. Officially, the proposal was denied due to the lack of fully-secured funding at the time of the bid. In my opinion, despite the noble goals and thoughtful application of financial responsibility and sustainability, the proposal had issues related to design on multiple levels (city, neighborhood, and site) that would not have improved the urban fabric of the city.

1 Chicago 2016 2009, 7

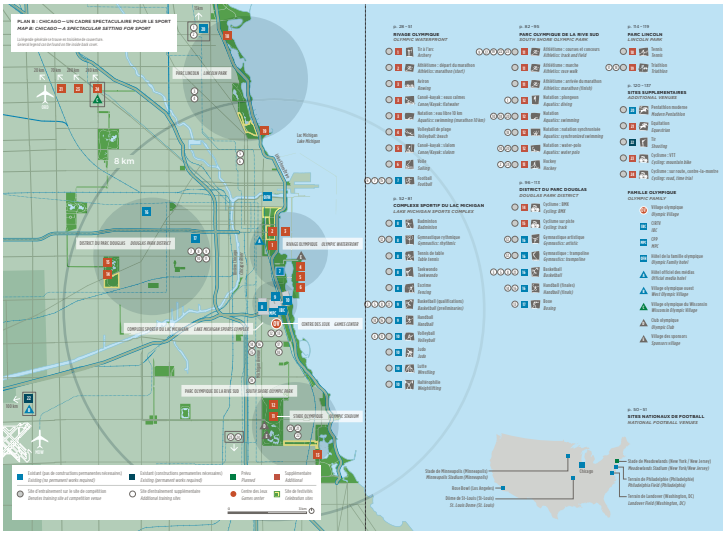


Figure 57 – Chicago 2016 Metropolitan Plan.
See attached file: SOM_01_Metro Plan.pdf

City: Chicago

The major locations for the Olympics ran from Lincoln Park – on the shore of Lake Michigan north of the city – down through Grant Park downtown, near Burnham Park south of the highway loop, finally ending in Washington Park just south of that with a few other venues spread throughout the city [Figure 57]. The use of public parks for event locations promotes the connection to the outdoors and public aspect of the games. This also creates opportunity to further connect the parks together into one unified open corridor that travels north-south throughout the city, a goal already being worked on by the city.

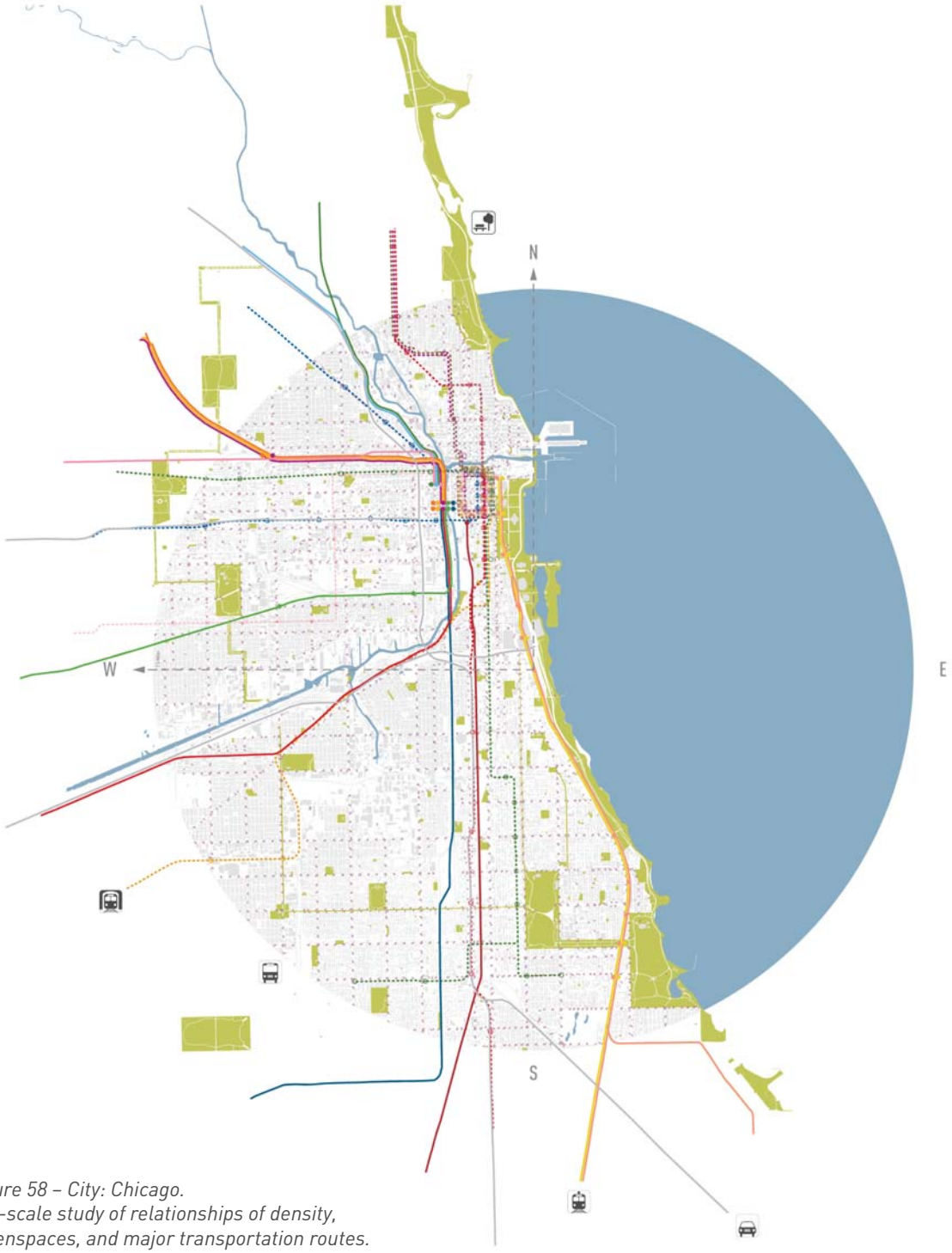
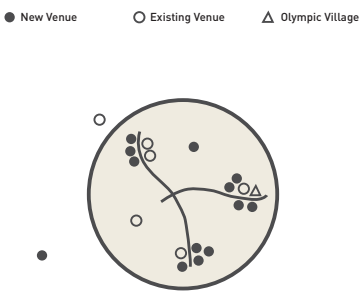
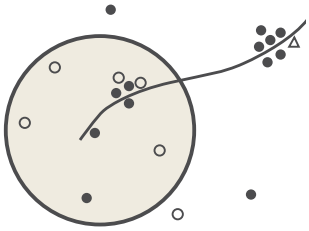


Figure 58 – City: Chicago.
City-scale study of relationships of density, greenspaces, and major transportation routes.
See attached file: 1b_City Chicago.pdf



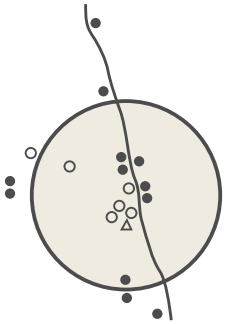
Inner-city poly-clustering
Barcelona (1992)

Figure 59 – Barcelona Venue Distribution.



Satellite clustering
Atlanta (1996)

Figure 60 – Atlanta Venue Distribution.



Inner-city mono-clustering
Chicago (2016 Candidate)

Figure 61 – Chicago Venue Distribution.

One issue that exists in Chicago's overall Olympic scheme is the over-concentration of venues downtown, which is good for cultural accessibility but bad for density of population due to the already busy downtown area. Comparing this scheme with those of Barcelona and Atlanta, we notice the flaws in this approach. Part of Barcelona's success lies in the distribution of new sports amenities among the city not just for post-event usage, but also to relieve transportation stress during the daily operation of the games [Figure 59]. Atlanta's centralized approach drew harsh criticism due to the major traffic congestion and infrastructural stress that occurred beyond that of the residents' normal congestion. Not only that, but the neighborhoods that were revitalized did not provide for the lower-income residents who were pushed out, leading to a downtown-oriented gentrified renovation [Figure 60]. Chicago lies somewhere in between these two, spreading some of the venues throughout the city. The error is the linearity of the proposal. The congestion would still occur since the linear organization of the sites promote transportation stress; everyone – athletes, workers, visitors, and existing daily traffic – will be using the same transportation lines during peak hours [Figure 61].

The intentions of Atlanta's site location was similar to Barcelona's – one site near the core of the city and the others as satellite locations. However, due to the smart use of existing sports venues located near the city center, the heart of the Olympic Games (and majority of events) occurred in an already dense region of the city. The active downtown area stressed transportation networks more than they could handle due to the everyday commuter use as well as the incursion of five million visitors to the city. This location of the sports events worked great in the legacy of the city as they are now used for many purposes such as professional sports team games, but proved disastrous during the Olympics themselves. In this case, I would say the cultural benefit outweighed the temporary negative infrastructural stress. Chicago potentially faces the same situation because the proposed location for the event core is located around Soldier Field and Northerly Island, just within the central downtown loop [Figure 62]. Chicago could potentially use their existing venues, but construction of any new large-scale stadia would not have any post-event occupant as Chicago's athletic venue needs are already met. Despite the city-scale analysis, re-evaluating the overall metropolitan scheme is not within my scope of research or proposal.

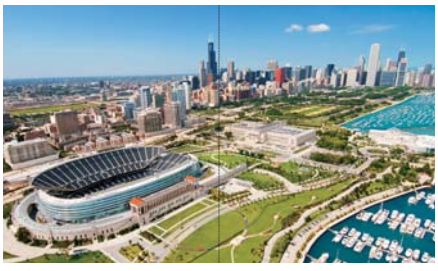


Figure 62 – Chicago Event Core.

Figure 63 – Neighborhood: Douglas.
Neighborhood-scale study of relationships of density, greenspaces, local road networks, major transportation routes, public services, and existing buildings. Proposed site (Chicago 2016 Olympic Village; Prairie Shores) highlighted in red. See attached file: 2b_Neighborhood Douglas.pdf

Figure 64 – Douglas.

Figure 65 – Prairie Shores.
Facing south. Note the five residential towers to the right, rail lines in the center, parking and Lake Shore Drive on the left.

Figure 66 – Remnant(s) of Michael Reese Hospital.
Note the rail lines, marshalling yard, and Lake Shore Drive acting as a barrier to the waterfront.

Neighborhood: Douglas

Chicago's Olympic Village, located in the Douglas neighborhood south of downtown [Figure 64], is sited on the land of the former Michael Reese Hospital that was masterplanned by Walter Gropius. The city purchased the property – part of a site named Prairie Shores [Figure 65] – from the bankrupt hospital with the intention to develop the property whether or not they acquired the Olympic bid. The historic hospital was demolished to much outrage from the historically-minded residents of the area, but the promise to help redevelop a blighted area helped quell the disdain for the demolition. Only one building was spared, a particularly un-noteworthy one, and the rest of the site was ready for development [Figure 66].

Similar to Barcelona, Chicago's Olympic Village is located near the waterfront, in close proximity to downtown. Judging by Barcelona's success, this seems like a reasonable location – a short distance from major cultural regions of the city, a focal point to direct the site towards (Lake Michigan), access to an extensive greenway corridor potential, and already robust transportation networks. When Chicago submitted their bid for the 2016 Olympics, they were

trying to follow some of the same guidelines as Barcelona in relationship to urban spaces: how to reconnect to the surrounding context. Specifically in reference to these Olympic Villages – Parc de Mar in Barcelona and Prairie Shores in Chicago – how could they remediate the site of deindustrialization or economic downturn, integrate but traverse existing infrastructural barriers, connect disparate and divided neighborhoods together, and turn the city back toward the separated waterfront? Luckily, Barcelona's work had many similarities to the issues that faced Chicago's site.

Figure 67 – Neighborhood Program.

Amenities – Barcelona achieved a dense, mixed-use development at Parc de Mar. Currently, Douglas is a mono-program neighborhood lacking physical density and programmatic variety, primarily consisting of housing and schools [Figure 67]. When comparing program and neighborhood amenities of Douglas to 'the Loop' in downtown Chicago [Figure 68], the disparity between the two neighborhoods is obvious. Both sites have similar physical areas and populations, but everything else – including access to food, cultural centers, transportation, and parks – favors downtown. This is fairly normal as I am comparing a city center and a residential neighborhood, but the proximity to downtown and the population density of Douglas suggests that this neighborhood is failing to meet some very important needs.

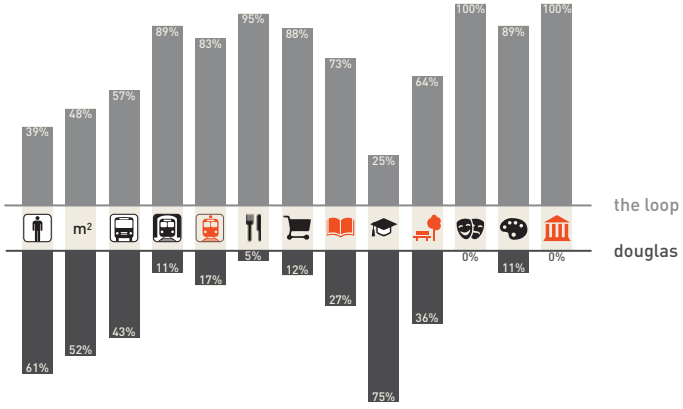


Figure 68 – Neighborhood Disparity.
The highlighted icons show certain features that specifically had to do with my project and potential catalytic programs.

Figure 69 – Dan Ryan Expressway.
12 lanes, 2 service roads, and 2 rail lines.

Figure 70 – Lake Shore Drive.

Transportation – The proximity of Prairie Shores to the downtown loop creates great opportunities for transportation connections and already has the basic infrastructural set up: the Dan Ryan Expressway (I-90) lies to the west [Figure 69], a commuter rail line (the Metra Electric Line) runs through the east side of the site, and Lake Shore Drive runs nearby between Prairie Shores and Lake Michigan [Figure 70]. Interstate 55 (Stevenson Expressway) runs east/west along the north side of the site near McCormick Place, connecting Dan Ryan and Lake Shore. These networks are primarily fast-moving arteries, transportationally connecting downtown with the south side. The problem is that these high-speed networks create barriers to local traffic and promote traffic singularities[2]. The

2 Salingaros 1998

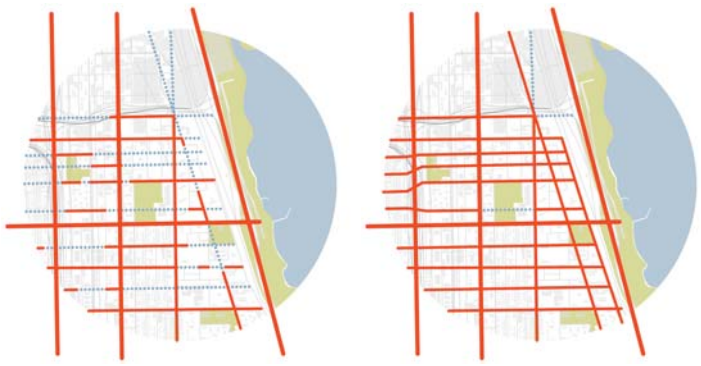


Figure 71 – Street Grid.
[1] – Existing grid that creates traffic singularities and [2] – proposed grid which reconnects neighborhoods and promotes local traffic.

Figure 72 – 27th Street Metra Stop.

predominant road network [Figure 71] consists of these north/south arteries that are meant to bypass this site while the east/west local roads are broken and disjointed, preventing most of the neighborhood from having road connections to the lake. In a city where the street grid is so widespread and dominant, it is interesting that it is so disconnected in this neighborhood. Reconnecting these local roads will help promote a variety of movement and establish contextual connections with nearby neighborhoods, public transit, and the lake-shore park.

Another issue with the transportation network is the lack of commuter rail stops. While there exists one transit stop in Prairie Shores [Figure 72], it was created to only serve the former hospital; it is

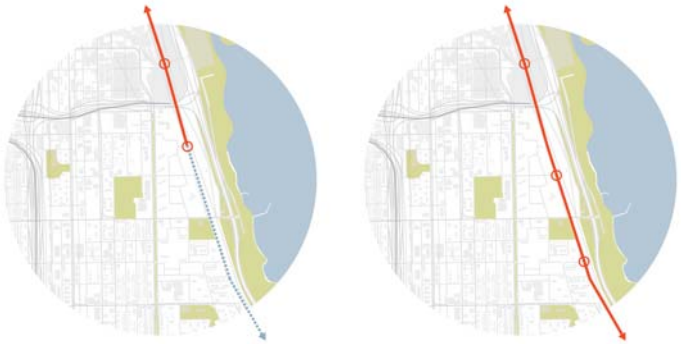


Figure 73 – Metra Stops.
[1] – Existing Metra stop at 27th Street and [2] – proposed relocation of Metra stop to 29th Street and 33rd Street

dislocated from any connecting roadway and placed away from all of the residential areas, disconnecting it from the entire neighborhood [Figure 73]. Moving the stop from 27th Street down to 29th Street places it on an axis that leads to the western parts of the neighborhood and potentially beyond, as long as the street grid is completed as mentioned before. In addition to the ill-conceived placement, the lack of stops for the next three miles displays the intentional disregard for the south-side neighborhood since the line continues for another seven miles. Not having stops for commuters doesn't make sense for a commuter train; why have public transit that doesn't serve the population? Another facet to the proposal is to create more stops along the line by adding stations about every half-mile – the average stop distance for the line in other neighborhoods – in order to encourage revitalization and reconnection for the south-side neighborhoods. With the street grid that exists, this actually places the stops in centrally located areas along major road connectors – perfect for encouraging growth and public transit usage.

Contextual Connections – This transportation infrastructure, as well as nearby architectural and urban constructs, creates barriers [Figure 74]

Figure 74 – Barriers.
Transportation infrastructure and poor architecture divide this neighborhood from the rest of the city.

Figure 75 – Urban Canyon.
Infrastructural barriers.

Figure 76 – Urban Abyss.
Architectural barrier to downtown.

Figure 77 – Urban Superblock.
Urban barrier with lack of connections across an expansive transportation wall – Robert Taylor Homes.

surrounding the neighborhood which divide it from its neighbors, downtown, and the lake. The highways to the west and north – I-90 and I-55 respectively – divide the Prairie Shores area from other neighborhoods such as Bridgeport to the west and the downtown loop to the north. The six-line railway, McCormick truck marshalling yard, and Lake Shore Drive create a 300-yard wide concrete canyon [Figure 75] sitting between the site and Lake Michigan, which is unnavigable by cross traffic except for one bridge on the south end which is more dedicated to cars than pedestrians. McCormick Place [Figure 76] – an event center on the north side of Prairie Shores that has a footprint of 120 acres – is a one-half mile wide by one-half mile deep urban abyss. Lacking everyday destination points on the campus and only allowing arterial traffic to pass through creates one of the biggest urban barriers of the city. And finally, the Corbusian 'towers-in-the-park' urban superblock housing that is still prevalent in this part of Chicago thickens the already mentioned I-90 barrier on the western end of the neighborhood. This superblock is one of the causes of the broken street grid. The majority of these housing projects that existed in this neighborhood [Figure 77] have been demolished in favor of smaller-scale housing which benefits the city as long as no one was displaced.

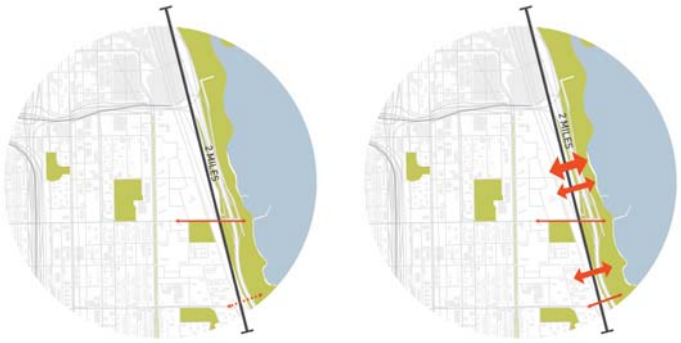


Figure 78 – Waterfront Connections.
[1] – Existing waterfront connections and [2] – a proposed multi-method series of bridges bringing the lake-front park into the site.

Waterfront – Access to the waterfront, especially to the pedestrian, is very minimal due to these barriers. There is only one vehicular bridge per mile connecting residential neighborhoods to the lakefront park for five miles throughout the south side. Mostly due to the interchange on the northeast end of the site, Prairie Shores suffers from this disconnection fairly heavily, only having one connection for a two-mile stretch [Figure 78]. Adding more vehicular bridges will not solve the problem as pedestrian traffic is more beneficial for the lake-front park. Adding a variety of connections – vehicular, pedestrian, bicycle – will strengthen the neighborhood's physical and social connection with the park, and therefore the rest of the city. Allowing multiple methods and locations of

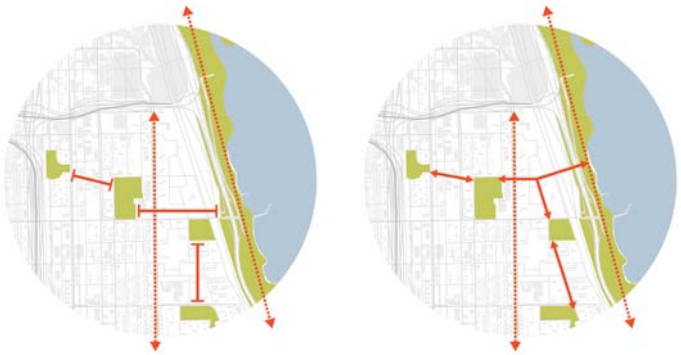


Figure 79 – Park Connections.
[1] – Existing series of parks and [2] – proposed network of parks.

traversal will give the neighborhood more access to existing local outdoor amenities.

There is also a need to connect the lake-front linear park system with local parks, creating a *network* of parks rather than the existing *series* of parks [Figure 79]. Most of these parks exist as part of school grounds and serve immediate neighbors of the school. Creating green corridors will give the residents more access to a variety of outdoor activities and destinations. Reconnecting the people to the waterfront and the greenspaces of the city is vital for this area of Chicago.

There is strong evidence that these isolation issues formed from political, economic, racial, and social

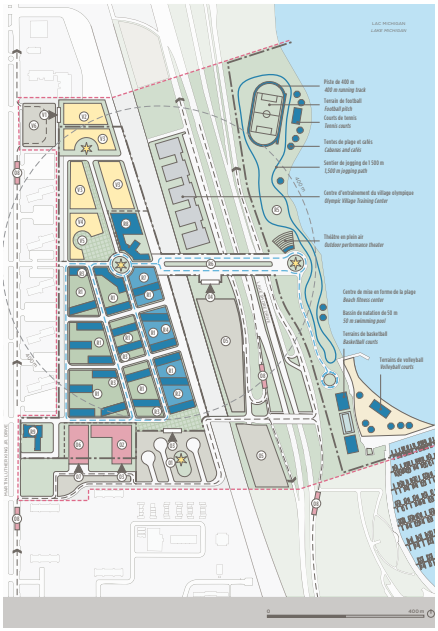


Figure 80 – Chicago 2016 Olympic Village. Not only does this plan fail to provide more connections to surrounding context, it actually adds more barriers. See attached file: SOM_03_Olympic Village.pdf

reasons. Due to the continued segregation and disregard of the neighborhood, there is a real need for improvement to the connective tissue surrounding this site. The many urban issues/opportunities that exist on this site convinced me to pursue further investigation and attempt to provide solutions based on ideas from Morphosis, Michael Maltzan, and Landscape Urbanism. The first step was to look at the Chicago 2016's Olympic Village proposal [Figure 80]. Using some of the urban investigations shown earlier, there are a few beneficial design solutions in this plan, but almost every good thing done has an equally detrimental aspect as well. While the street grid was restored, it was only restored on the interior portion of the site; none of the streets in this grid reach out to the surrounding neighborhood. In fact, 31st Street – one of the important connector streets bordering the south side of Prairie Shores – is actually partially removed, further disrupting connections to the lake and the neighborhood to the south. Without connections to the surrounding neighborhoods, this site potentially becomes an isolated development, promoting gentrification rather than neighborhood revitalization. The Metra commuter line seems to have been completely disregarded as well. In other design proposals by the same architectural firm, the entire

south side has been reconnected to the Metra line as proposed earlier in this chapter. This plan, however, shows no sign of implementation here. Finally, despite having no reference to the neighborhood parks, the connection to the lake seems successful: a pedestrian bridge is added on the axis of 29th Street, connecting the neighborhood directly. However, the car-centric 31st Street bridge is completely disconnected from the grid and therefore limits access to Lake Shore and the park by vehicle. There is not multi-modal traversal across Lake Shore Drive or the rail lines. The marshalling yard remains, albeit with one architectural addition, but the pedestrian bridge to the lake becomes a 300-yard long featureless trek.

Figure 81 – Olympic Village Towers. Once the event is over and this space isn't as populated as shown, the over-scaled space will be hostile to pedestrian traffic and urban occupation.

Architecturally, the Olympic Village site proposes a modernist array of residential towers with a few low slab commercial buildings attempting to connect them together in some areas [Figure 80]. The result is the same Corbusian 'tower-in-the-park' morphology that already exists in the neighborhood with a strong programmatic separation, further disconnecting the occupants from the city and each other. As discussed earlier, this will do nothing to help solve the issues with this neighborhood. A new urban and architectural investigation needs to occur.

This entire investigation was an attempt to understand the physical properties of the site; as mentioned before, the direct social and economic qualities of the site were too wide to truly include in this endeavor. Understanding all of the architectural, urbanist, ecological, and infrastructural issues existing within this site and the Olympic proposal helped me to devise a new methodology in which to propose an alternate solution. The following chapters highlight my response to this investigation, using the lens of Michael Maltzan, Morphosis, and landscape urbansim to create a unified solution to this site, merging public space, ecology, and transportation infrastructure.

part 4 synthesis

chapter 11 The Counter-Proposal

After all of that Olympic investigation, I realized that Chicago – mostly the south-side neighborhood – was lucky to lose the bid; not because the site wouldn't benefit from a major event such as this, but mainly because the proposal for the Olympic Village didn't attempt resolve any of the issues the city claimed they wanted to address. If anything it further reinforced them. The biggest detriment to the plan was the lack of neighborhood connections. The major barriers that exist now were going to remain, but it also seemed like the only connection it had – to the south of the site – was being disrupted as well.

They screwed up. Not only did they lose the Olympic bid, but the site has been abandoned since the announcement that Rio de Janeiro would host the 2016 Olympics. The city purchased the property for $85 million with the intention of cleaning up the site and selling it to developers regardless of the mega-event's arrival. Figure 66 in the previous section shows its current state. Without the financial catalyst that the city was expecting, they couldn't afford to finish the clean-up and subsequent sale of the property.

At this point, my research has led me to a new realization: my proposal should not be about the 2016

Olympics or a different version of the Olympic Village proposal. Rather, how can the city – using lessons learned from Barcelona's successful rejuvenation of the city's public spaces, green spaces, and its infrastructure – take another catalyst and redevelop an empty site in a perpetually-ignored neighborhood?

Figure 82 – Lucas Museum.

The city already has many opportunities available to them that could help instigate the project. With the perceived failure of the Lucas Museum proposal [Figure 82] that was proposed just north of McCormick Place, such a large project could be re-imagined on this available site. This time, it could actually embrace public space and forge connections between the lake and the neighborhood instead of becoming another object-based monstrosity. This year, President Barack Obama and First Lady Michelle Obama announced their choice for the Obama Presidential Library location: Chicago's south side [Figure 83]. The two candidate sites that had publicly-shared proposals are located a couple of miles south of Prairie Shores, near the University of Chicago due to the potential research partnership. The problem is that both proposals potentially destroy historic parkland designed by Frederick Law Olmstead. Why couldn't the University of Chicago treat this as a satellite

Figure 83 – An Obama Library Proposal.

facility, locating it in an area that desperately needs this kind of development? Chicago is also actively pursuing high-profile tech companies to relocate their headquarters to the city. The city is considered the medical research capitol of the world, and are looking to continue the growth in that field. With a major company creating thousands of new jobs, a mixed-use development promoting public transit and walkability would be a major success for the city. Even in fields other than medical, imagine if a company such as Google or Facebook, with their insular desert cities in central and southern California, could bring their headquarters to Chicago and integrate their campus with the city and the parks system.

The possibility for greatness exists. The possibility for even more failure exists equally. Taking lessons from both Barcelona and Atlanta, integration in all aspects is needed: physical, social, racial, economic, infrastructural, natural, urban, and architectural. There are many aspects of this concept that could have been explored, and when this site does get redeveloped, *should* be explored. With limited time and only myself to do the exploration, I chose to investigate integration of certain facets of the city – in particular public space, ecology, and transportation.

My initial exploration consisted of diagramming the physical spaces of both the downtown loop and Prairie Shores in section [Figure 84]. The Loop consists of dense high-rise buildings, a moderate amount of transportation infrastructure, alternating zones of open green space and more roads, and finally a rigid edge to the waterfront. Prairie Shores surprisingly has a similar situation but with different densities. It has high-rise architecture on the west end of the site, but in this case it consists of an array of five residential towers – isolated and singular in nature – which are surrounded by surface parking lots. Further east,

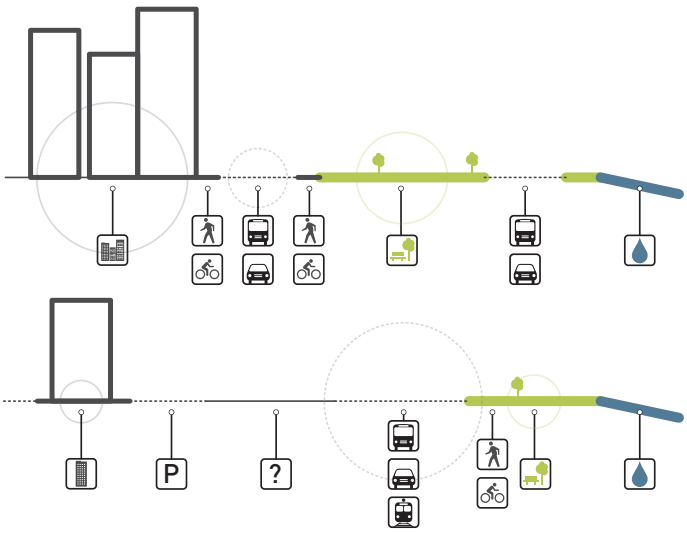


Figure 84 – Sectional Study.
When viewed sectionally, clear separation of transportation lines, parks, and architecture exists.

there is a large expansive unprogrammed space where the Michael Reese Hospital once stood. The biggest feature of this site at the moment is the previously mentioned urban canyon of the rail lines, marshalling yard, and Lake Shore Drive which serve transportation functions. On the other side of this urban wall is a decent amount of open green space and the lake. The clarity in which these elements are able to be viewed sectionally is part of the problem. It became obvious that this site has very strong surfaces and edges, albeit in all the wrong ways [Figure 85]. Currently, the entire site is one flat, empty surface with very hard edges between it and the park. If that notion were flipped – creating *meaningful* edges on the site and a surface over the transportational barriers – this site

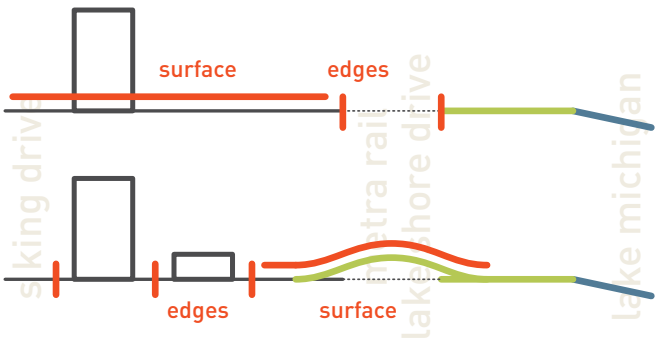


Figure 85 – Surfaces and Edges.
[1] – The application of surfaces and edges are not beneficial to the site or the residents. [2] – Flipping this creates meaningful space and connections to the surrounding context.

Figure 86 – Sectional Unity.
Merging architecture, transportation, and public/green spaces into one cohesive construct.

could reconnect to its context and create beneficial urban spaces for its residents.

Instead of ground-based discrete programmatic functions, these elements should be merged to create a single, cohesive construct that creates the bridging surface [Figure 86]. Now, instead of a transportation-based wall, an architecture is formed to create connections from the lake to the neighborhood using ideas of 'constructed ground' by Linda Pollak. Instead of vertical towers surrounded by landscape, the architecture can become the linkage that this site needs, while allowing greenspace to exist within it as well. This creates a primarily pedestrian and bicycle-based multi-modal traversal across the site, brings the city-wide park into the site connecting the local parks into part of a cohesive network, creates an architectural anchor landform building that could be used as a catalytic development tool (library or museum), and allows the existing transportation networks to continue to serve their function. It solves

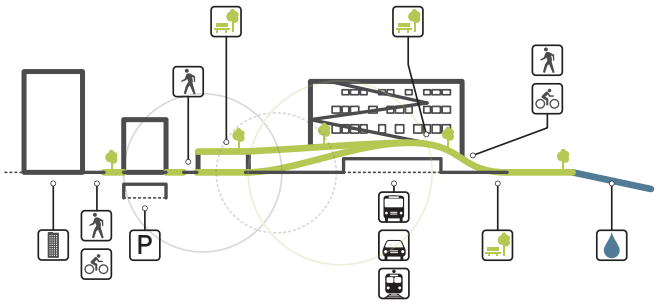


Figure 87 – Sectional Integration.
When viewed sectionally, all three aspects merge into one cohesive urban construct without segregation or delineation.

many of the issues that Morphosis, Michael Maltzan, and previously discussed landscape architects and urbanists have been investigating and working with.

Applying this to the previous sectional diagrams, the method of merging these elements could lead to something with multiple vertical layers, programmatic functions, scales of urban space, and architectural expressions [Figure 87]. This removes the hard edges of existing transportation lines, integrates public and green spaces within the city, and provides multiple means and methods of movement – especially pedestrian, bicycle, and public transit.

Part of the methodology in which I investigated the overall masterplanning of the site involved using some basic urban morphologies. While there are many more

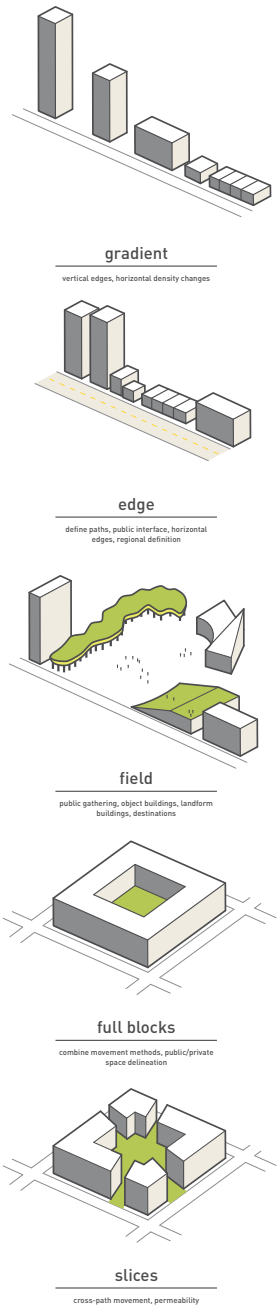


Figure 88 – Urban Morphologies.

that can and should be investigated, I limited this investigation to include the following: gradient, urban edges, urban fields, full blocks, and connective slices [Figure 88].

Urban Morphologies

The gradient is important due to the existing high-rise residential towers that exist sporadically throughout the low-rise neighborhood. This vertical disparity needs to gradually increase or decrease based on the nearby architectural context, relative nearby transportation speeds, and density needs. This gradient also applies to horizontal density – with the low-rise but dense housing in the surrounding areas, successfully merging with that urban fabric is necessary. Because of its current lack of them, urban edges will need to be implemented to create vibrant street-front pedestrian zones, thereby creating comfortable exterior spaces. This will increase the public interface, as promoted by Michael Maltzan. Boundaries and edges also naturally form effective and desirable pathways[1], so having destination-based edges will naturally reintroduce pedestrian traffic and lively streets. Occasionally with major destination points, large open gathering spaces are needed to

1 Salingaros 1998

allow outdoor events and gathering locations for the public. With the potential use of the Metra stop as a major gateway into and out of the site, an urban field would provide such a space. Coupled with a major cultural destination, this urban field could potentially define this newly revitalized neighborhood. Another urban tactic I investigated was trying to use larger building footprints in order to fill out the city blocks as much as possible. This allows for a clear delineation between the public street and the private courtyards; this isn't always desired and therefore not always implemented, but provides the opportunity nonetheless. More importantly, this method creates the urban edges already mentioned, bringing multiple modes of circulation together. But full block buildings alone don't promote pedestrian circulation as effectively without slices in the architectural footprint. This allows a variety of pathways, connections, and accessibility. In this way, differing modes of circulation can overlap in more dynamic and natural ways, not limited to the rigid street grid.

Masterplanning

These urban morphologies are very loosely applied to the masterplan [Figure 89]. Using this drawing to

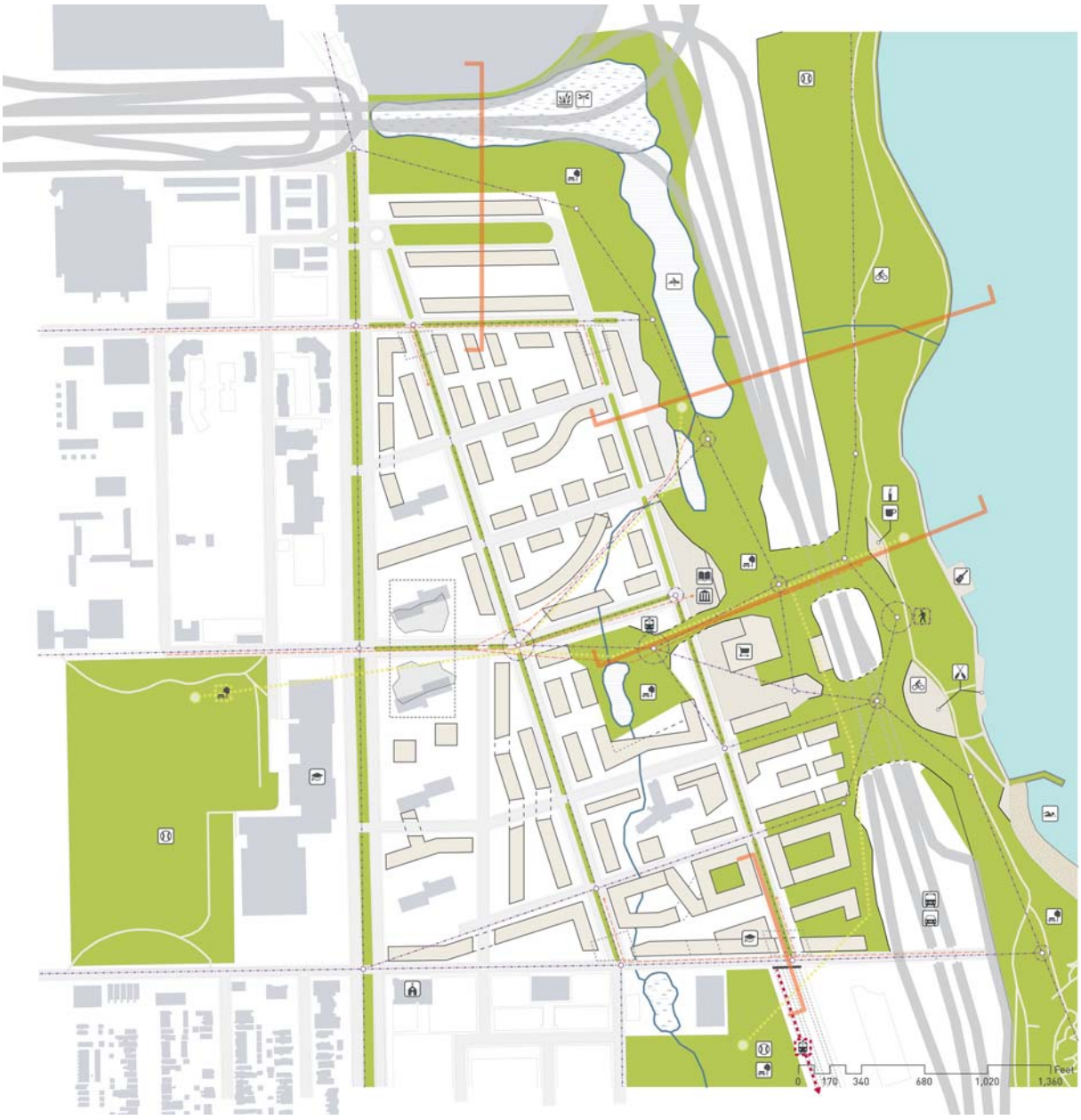


Figure 89 – Site: Prairie Shores.
It is important to understand that this is just one of an infinite number of ways that this site could exist using these morphologies. This plan is not focused on detail, as that was impossible in the limited amount of time. It was, however, used as a method for imagining potentials for the site, focusing in on a few key areas for more architectural investigation. See attached file: 3c_Site Prairie Shores.pdf

display some of the broader goals for the site, the first thing that is noticeable is the vast greenspace stretching throughout the site from the lakefront park. The bridging landform building becomes the location for the cultural catalyst, the new 29th Street Metra stop, and the urban field defining the heart of the site. This helps form a network hub between the metropolitan-scale lakefront park and the local neighborhood parks [Figure 90]. As a large hub for traffic, it becomes a significant gathering point and cross-axis for multiple methods of travel: pedestrian, bicycle, vehicular, and transit. The connectivity that it provides also creates a very diverse and complex urban pedestrian web [Figure 91] that takes advantage of the green corridor bridge, the unique shifted grid of the streets, and the major focal nodes of the site. Restoring some of the major street gridlines provides some connectivity to nearby parts of the neighborhood, but implementing the edges creates much-needed street frontage that allows retail and commercial ventures to emerge [Figure 92]. These linear zones intersect and help define the major public gathering zone as well. Finally, some of the grid connections and architectural moves help create major site gateways, giving it identity, monumentality, and clarity of spaces [Figure 93].

Figure 90 – Park Network.
Connection of local parks to linear lake-front park system.

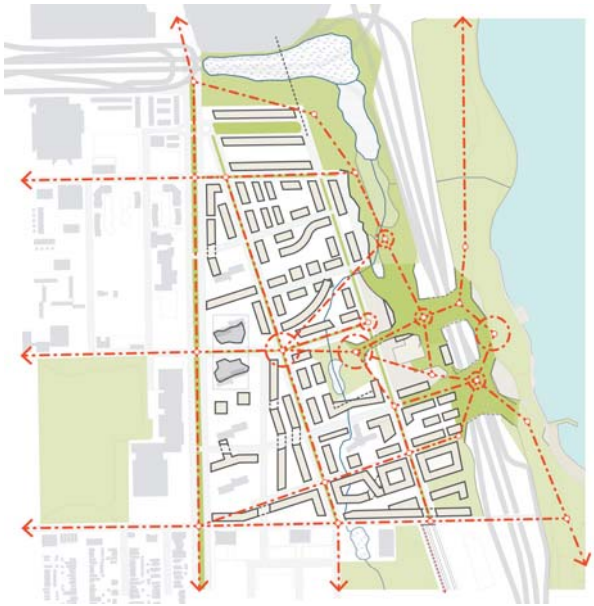


Figure 91 – Pedestrian Web.
Various nodes of destination and the complex pedestrian web connecting them. Reactivates local connections.

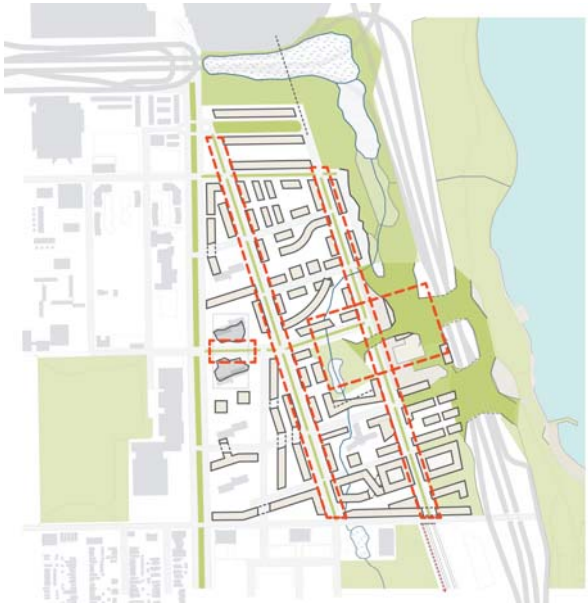
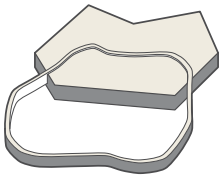


Figure 92 – Public Spaces.
Urban and architectural edges defining public spaces.

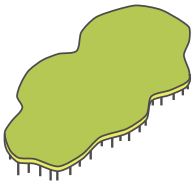
Figure 93 – Gateway Paths.
Entrances and directionality to major destinations.



unique form

culture, recreation

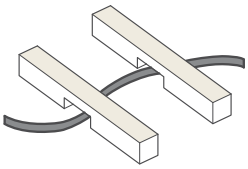
sports arenas, concert halls, cultural anchors



low amoebic volume

isolation, boundaries

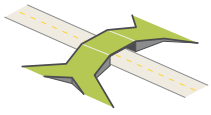
ecology, landscaping, public spaces



passages: solid or void

connections, linkages

viewscapes, public/private outdoor spaces, ecology, traffic



variable ground plane

surface continuity, connector

public spaces, recreation

Figure 94 – Architectural Morphologies 01.

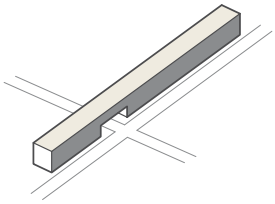
Architectural Morphologies

Influenced by Thom Mayne's investigation into morphological classification[2], I investigated a few sites in more architectural detail. The same disclaimer applies to the architectural morphologies as to the urban: there are plenty more that could and should be investigated, but based on my research on Le Corbusier, Michael Maltzan, Morphosis, and Landscape Urbanism, I chose a select few that I thought applied to this site specifically [Figures 94 & 95].

The 'unique form' of certain buildings allows a certain identity to form and allows large-scale or complex program to exist in an architecture representative of the function. It typically is an object-based building.

"Low amoebic volumes" are the outdoor variant of the unique form. While not dealing with interior program specifically, it can become an object within the landscape. Due to its form, its best use is in isolated areas, particularly as boundary conditions. The most common function would include ecological uses, public spaces, or general landscape features.

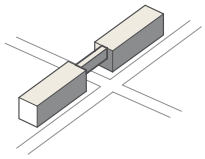
2 Mayne and Allen 2011, 94-95



long linear volume

gateways, public interface

housing, office, commercial



short linear volume

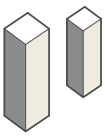
connectors, bridges

housing, office, institutional

large vertical volume

density, iconography

housing, hotel, office



small vertical volume

openness

loft housing, office

Figure 95 – Architectural Morphologies 02.

'Passages,' whether solid- or void-based, reinforce pathways and connections within and beyond the site by way of architectural form. These are the primary pedestrian-path generators.

The 'variable ground plane' is a very common occurrence in this proposal because this morphology allows the most integration potential; being able to bridge barriers, include ecological functions, and allows public space and architecture to co-exist give this the most flexibility.

Michael Maltzan's 'long linear volume' directly applies to this project due to the need for street edges and urban interface. Passages can be easily integrated with this form.

The 'short linear volume' is just a variation of the previous, using smaller, non-programmed bridges to connect buildings.

And finally the 'large vertical volume' and 'small vertical volume' make an appearance due to the surrounding context and potential need for commercial density. They work well near the arterial roadways and help with the vertical urban gradient.

Sectional Programming

In some areas of the site, the individual morphologies did not provide enough benefit for the need. Merging multiple strategies together obviously help solve multiple issues. The following three sites – notated by section lines on the masterplan drawing – use a hybrid of the aforementioned architectural morphologies and investigate a potential programmatic implementation. These drawings were created in section to show the multiple levels of infrastructure and public spaces that are being created and integrated.

The first site [Figure 96], located on the southern edge of the site fronting 31st Street, is a hybrid of the long linear volume and the void-based passageway.

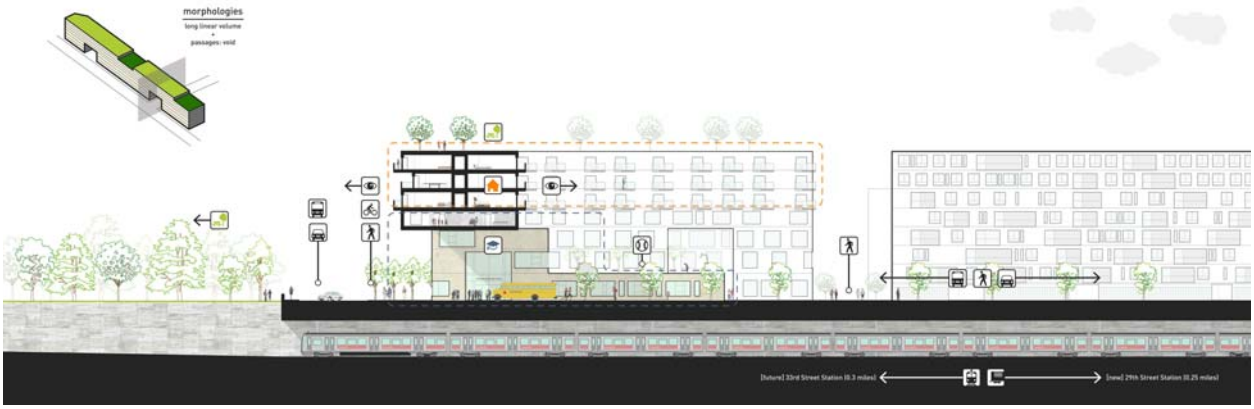


Figure 96 – Gateway School.
A mixed-use edge-forming building that includes an urban school, housing, and commercial spaces that creates a gateway connecting other neighborhoods to the central part of the site, including the cultural anchor and the transit stop. See attached file: 4c_Section Gateway School.pdf

The basis for this choice was its condition as a gateway building. It revitalizes 31st Street – a major vehicular pathway to and from Lake Shore Drive – into a more pedestrian-friendly street and provides openings for people, vehicles, and green space to pass through, connecting the park spaces of the nearby Lake Meadows development to the heart of Prairie Shores. Hoping to be mirrored on the southern side of the street, this gives the future potential for a very active commercial street. This mixed-use building provides housing above other program, such as retail and office. Matching Chicago's own interests, this building, as well as others in the proposal, has a green roof recreation space for the residential population, maximizing open green space as well as architectural density. The major program of the building is the addition of an architecturally urban school. The large passageway creates the potential for a major entryway, but the multiple level layering provides secured exterior spaces for playgrounds and greenspaces. The use of street-facing buildings and rows of urban trees helps to define the circulation through this void passage. Finally, the overlapping transportation networks provides diversity among the urban web, allowing multiple methods of transportation to exist.

The second site of architectural focus is less about buildings and more about the ecological landscape [Figure 97]. Trying to use a nearly useless part of the site would be a challenge architecturally. Ecologically, however, it is the perfect place to help remediate some environmental problems that have long been ignored, not just at this site, but in our country in general. Along the northern and northeast edge, there are barriers that if bypassed wouldn't lead anywhere of use. Instead of trying to purposelessly bypass these specific barriers, using the low amoebic volume as a isolator and more attractive barrier is beneficial. Instead of making this an inaccessible void, creating a large specialized park and an ecological repair zone as both a functional landscape and public amenity creates a more beneficial and long-lasting landscape.

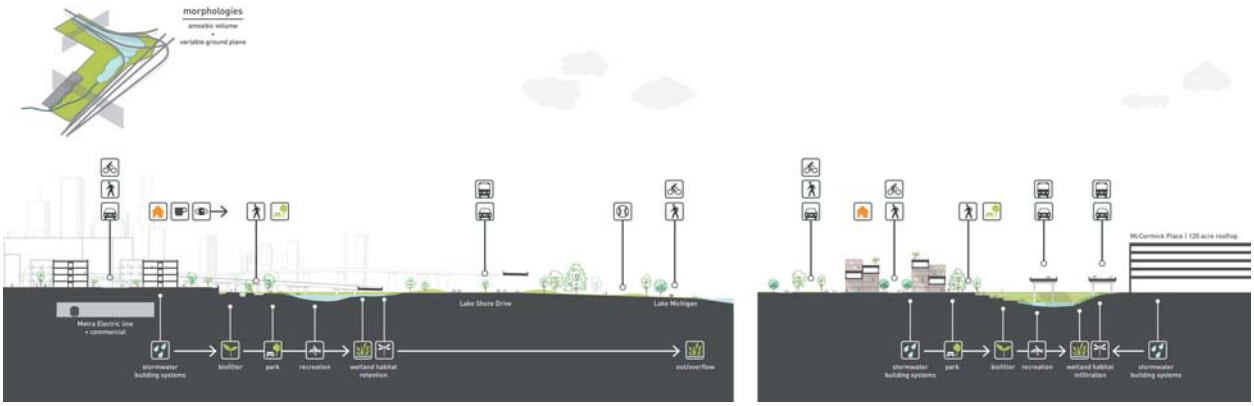


Figure 97 – Eco-Park.
A multi-functional public amenity – such as a botanic garden – and bioremediation zone – such as a wetland habitat. See attached file: 4d_Section EcoPark.pdf

The typical method of water control for Chicago is to dump everything into the storm drains. With such close proximity to the lake, why should any of the water on this site use the same burdensome method? Considering the 120-acre rooftop of McCormick and the expansive highway interchange network, there is a lot of runoff during storms. This park has the potential for retaining – slowing water before discharging it in the lake or keeping it on-site as an artificial wetland – and remediating water. Using it as a public amenity prevents it from being mono-functional and thereby inaccessible. The transportation infrastructure does not have to disrupt the park either, in fact the park should be directly integrated with it. The polluted highway runoff will benefit from the filtering effects of the landscaping. As a water-based landscape, the lower elevation means that the variable ground plane morphology will help connect the urban spaces with the landscape, especially due to its location with the third area of focus.

The final site of investigation [Figure 98] is the project's catalyst: the cultural anchor. Whatever various program may occur here, the morphology of the building should be the variable ground plane. This landform building is what creates the very

distinct and visible connection from the lake to the neighborhood. This is the hub of the pedestrian urban web. It allows multiple methods, directions, and levels of movement to coexist not only with each other, but with architecture, ecology and public space as well. It brings together many of the urban and architectural morphologies to create a variety of forms, spaces, and functions that serve the site, the neighborhood, and the city.

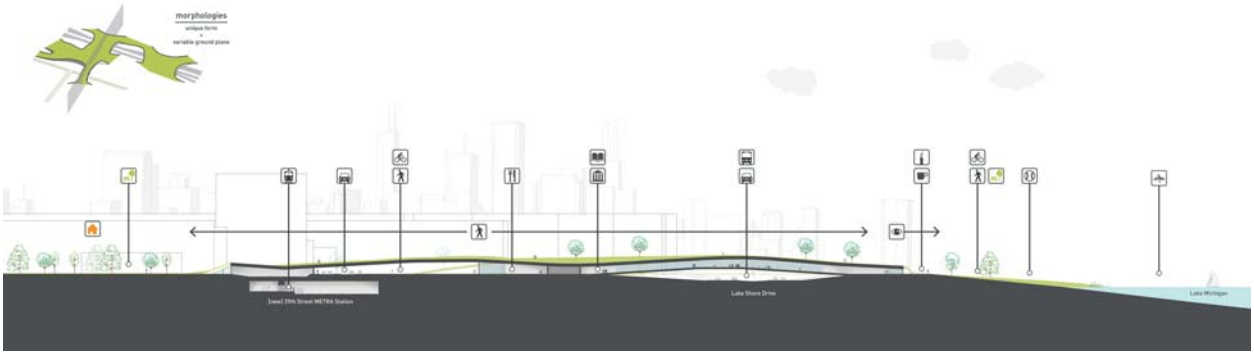


Figure 98 – Cultural Anchor.
The cultural landform building that bridges the concrete canyon that separates the neighborhood from Lake Michigan. Programs anticipated include the Lucas Museum, the Barack Obama Presidential Library, or the Chicago Food Museum. See attached file: 4e_Section Cultural Anchor.pdf

chapter 13 The Urban Imaginary

As Chicago moves forward with urban renewal plans, this system of development would help revitalize this area of the city should another catalytic event occur. The most important aspect of this methodology is the ability to integrate currently disparate aspects of the city: transportation, ecology, and public space. This new approach to the city could have great results in reconnecting regions of the city to each other and their environment. Hopefully the failure of the Olympic bid provided lessons for the future of Chicago's urban planning.

Figure 99 – The Urban Imaginary.
Hand drawing of what the site could look like using the urban and architectural morphologies investigated. See attached file: 4b_Urban Imaginary.pdf

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Vita

Eric Archer, known by many as 'Bud,' was born in Fort Worth, Texas, not realizing the influence this city would have in his educational career. Growing up next to the Kimbell Art Museum by Louis Kahn must have shown him the amazing impact that spaces, materials, and environment can have on people, because that exploration is what he eventually chose to pursue.

Choosing the school over the degree before fully realizing that impact, he received his Bachelors of Science in Interior Design from Abilene Christian University in 2009. Working in an architectural firm made him realize that his true passion was in architecture. Thanks to the inspiration from one of his professors, his next goal was to earn a degree in architecture in order to continue that career path.

After a few years in Austin, Texas, he moved to Knoxville, Tennessee, completing his Masters degree in Architecture at the University of Tennessee in 2015. Throughout his time there, he developed a multi-scalar interest: intimate design/build projects and immense urban interventions. After completing a design/build project in the summer, he would like to make another regional transition, hoping to pursue one or both of these interests throughout his career.