

FIELD CROSSINGS: hybridizing the urban park

1

Scott Marshall Cyphers

Bachelor of Science
University of Virginia, 1997

Submitted to the Department of Architecture in partial fulfillment of the requirements for the degree of Master of Architecture at the Massachusetts Institute of Technology, February 2003.

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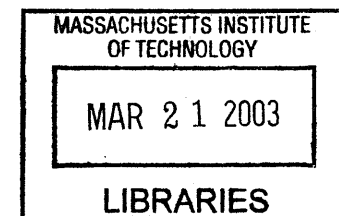
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FIELD CROSSINGS: **hybridizing the urban park**

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Abstract

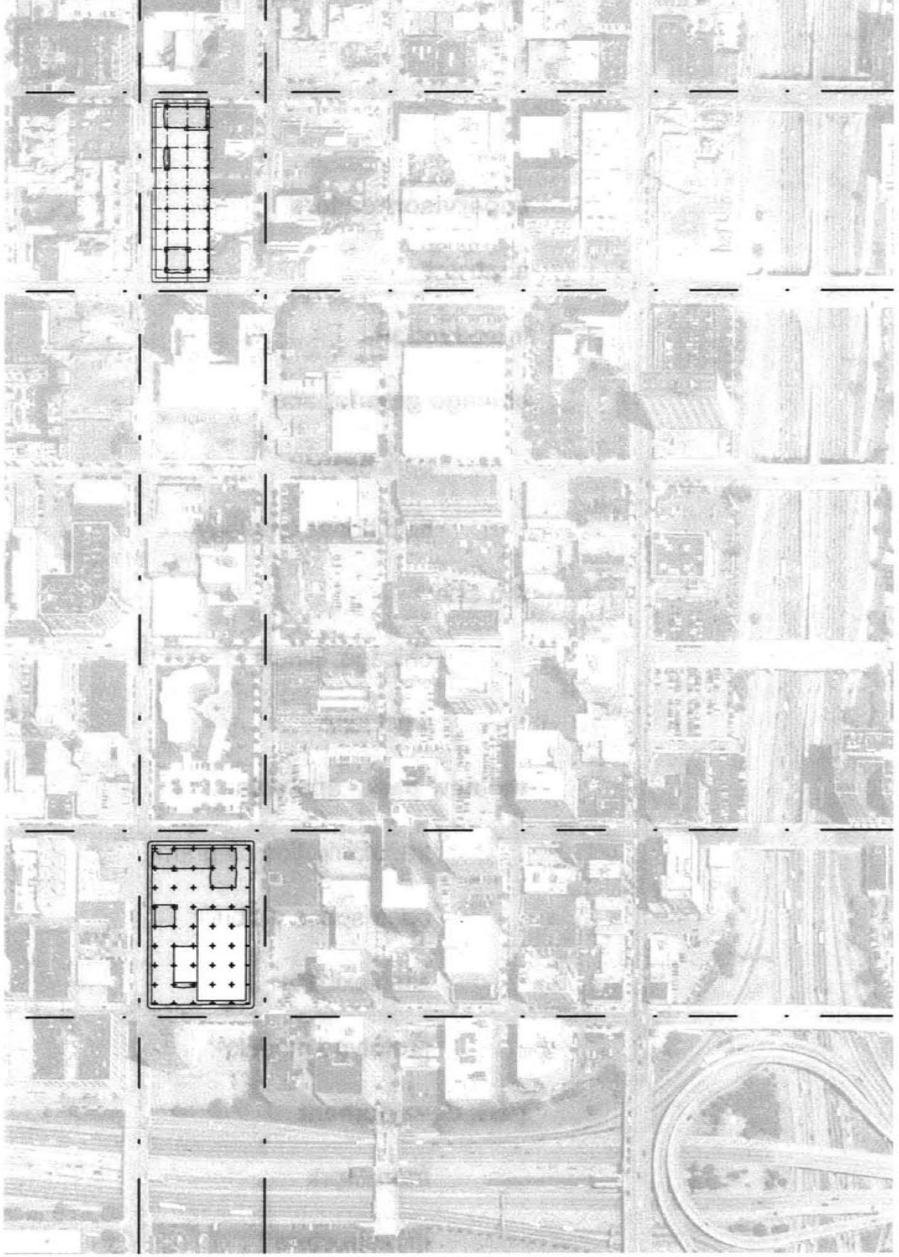
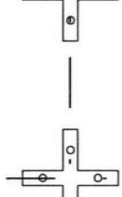
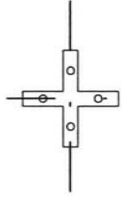
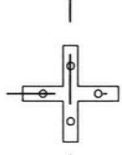
The growth and identity of urban open space is a vital issue facing our cities today. The development and revitalization of old industrial centers in the United States has prompted urban transformations in usage, densification and demographics. These shifting neighborhoods call for a reconsideration of the makeup and syntax of their associated green spaces. The design of this urban landscape is not currently positioned to take advantage of limited spatial opportunities while meeting increasingly diverse programmatic needs. Traditional park typologies must respond to contemporary forces, varying leisure practices and allow for new interactions with an evolving city.

This thesis posits a new model for parks and their architecture within changing urban neighborhoods. It explores how parks can accommodate these transformations through the topics of imbedded infrastructure, flexibility, prototyping and merging public and private usage. It seeks to create more humane and vital open spaces by adding functional and diversified occupations that respond to specific contextual requirements. This thesis looks to understand how both the landscape and its built architecture can work together to become a more viable model for the next century.

Thesis Supervisor: John E. Fernandez
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**for sarah -
thank you for your love, support and understanding**

FIELD CROSS-SECTIONS



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introduction:
the park in the contemporary city



Urban Parks and the Contemporary Condition

Parks and green space are fundamental components of today's urban cities. Their vast grass lawns, exciting play lots, tall trees, winding pathways and supporting buildings provide essential spaces for recreation, enjoyment and the pursuit of leisure. A wide variety of park types have emerged over the last century as the urban fabric has grown and evolved. Playgrounds, community gardens, vest-pocket lots, neighborhood parks, industrial parks, freeway green, lakefront parks, wetlands, greenbelts and forest preserves forge a complex and powerful relationship between man and nature.

This condition is particularly evident in Chicago, IL where parks are deeply imbedded in the urban framework. As the City grew up out of the Midwest prairie, parks developed hand in hand with innovative towers and urban structures. Architects such as Burnham, Jensen and Olmsted left a remarkable imprint on Chicago's legacy. Their meadows, woods, lagoons, field houses and swimming pools contributed to the City's motto, "Urbs in Horto – City in A Garden." The City has over 500 parks of different sizes, uses, and interactions with the surrounding environment. They wind their way from the North Side, through the congested Loop and into the South Side. Large expanses, such as Lincoln Park and Grant Park have carved out an extended spine along Lake Michigan. Many smaller neighborhood counterparts have emerged out of the city's strict grid as consistent and organizing aspects of the urban context.

For all of its rich history, Chicago still lags far behind other major cities in park space per resident. It ranks 18th out of 20 comparable cities.¹ The City's large built density has made new park acquisition and construction difficult. Its assets are insufficient to meet the needs of the large Chicagoland population today. Over 63% of its residents live in places where parks are either too crowded or too far away.²

City residents' needs for these amenities have also greatly transformed since the park system was established. These evolving uses and times have also had an effect upon park facilities and their structures. Over the past century, field houses, swimming centers, conservatories and locker rooms served many neighborhood requirements for recreation and leisure. Today's populace are asking these buildings to do much more. New programs include cultural centers, after school/day care facilities, parking, restaurants and community education. Neighborhoods are looking for parks and their buildings to serve as influential communal activators. They want these spaces to foster active neighborhood pride and identity, while responding to changing community needs and desires.

fig. 1 The Vic Opeka Garden in Chicago, IL is an example of a park in a dense urban neighborhood.

fig. 2 The Evergreen Playlot in Chicago illustrates the relationship of a mini-park with its adjoining context.

fig. 3 A parking lot in Chicago's West Loop is an opportunity for new open space design and development.



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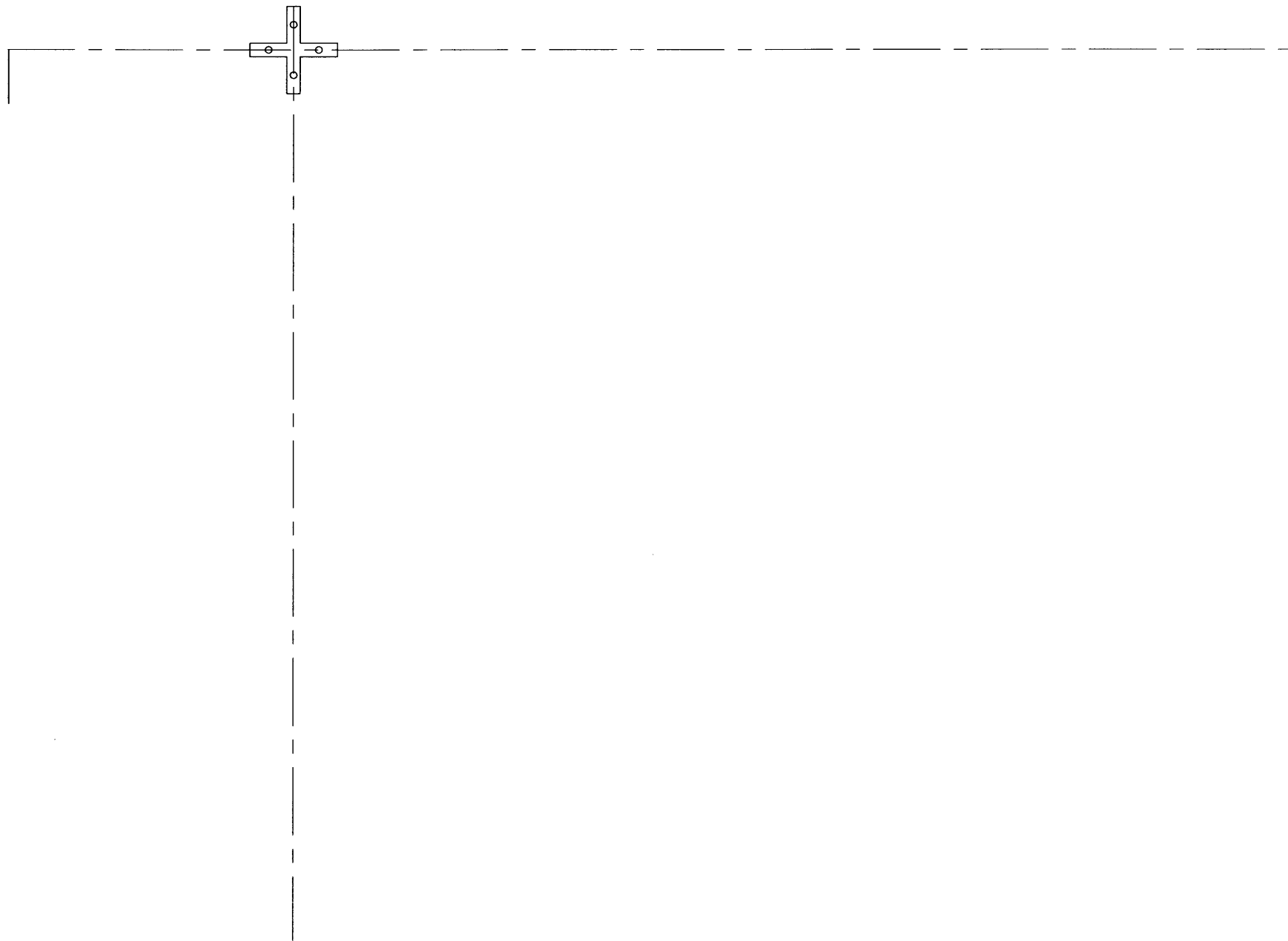


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chicago greenspace park evolution and development

13



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fig. 4 (previous page) Mark White Square's wading pool.

fig. 5 Plan of South Park by Olmsted and Vaux.

fig. 6 Aerial view of the World Columbian Exposition, designed by Burnham and Olmsted.

Historical Park Development

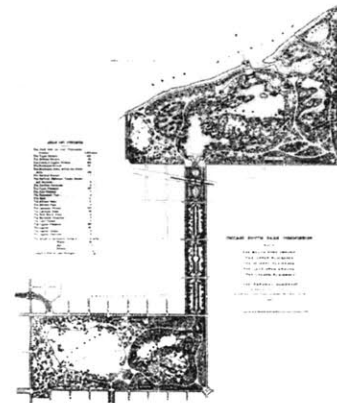
Chicago's complex history of park design and development has followed four main stages. Urbanist writer, "Galen Cranz identified four major periods in the development of the American park since the mid-nineteenth century: the pleasure ground, the reform park, the recreational facility, and the open space system."³

Pleasure Grounds (1850-1900)

Many Pleasure Gardens were built in Chicago during the late 1800s. Humboldt Park and Jackson Park are renowned examples of this type. These large expanses of green were designed to improve area property values, while adding visual respite to the density of the growing metropolis. The new parks were seen as serene places providing relief from the city din and an escape to the country. Park proponents felt the landscapes could help many of the problems of city life by adding light, fresh air, lakes and meadows.

Pleasure Grounds owed their typology to the Romantic manor parks of England and Europe. This Picturesque tradition idealized the wilderness and countryside. It fostered passive uses and spontaneous unstructured activities such as racing, horseback riding, walking, painting and rowing. Primary occupation occurred during the daylight due to the long work hours of industrial laborers.

The parks were typically sited on the City's fast developing edges and lakefront where large tracks of land were available. Many times parks were built on sites that were undesirable for other development because of sandy or swampy lots. Pleasure grounds sought to create a new series of landscape elements that would benefit the area, such as ponds or tree bosques. The architecture of the early Chicago parks was subordinate to the landscape, with low profile buildings designed to melt into the view.



5



6

fig. 7 Dvorak Park's field house and its adjoining ball courts.

fig. 8 The glass Garfield Park Conservatory by Jensen.

The Chicago Park System began in 1860 with the conversion of a cemetery into green space. With fears about health and sanitary conditions, the north cemetery, adjacent to Lake Michigan was transformed into what is today's Lincoln Park. Prominent landscape architects Olmsted and Vaux, and Jens Jensen had huge impacts on park design during the 1870s and 80s. They transformed the South and West Park Systems with designs for Washington, Jackson and Garfield parks. The World's Columbian Exhibition of 1893 marked a highpoint where millions of visitors flocked to Jackson Park to see the artificial city created by architect Daniel Burnham.

Reform Parks (1900-1930)

By 1900, new park designs were responding to different social forces and models. Progressive reform and organized activities were the dominant idea of the day. "The keynote approach of reform parks was to organize activity, since urban park planners now considered the masses incapable of undertaking their own recreations."⁴ Park planners saw this structured recreation as a social means to positively transform the lives of countless city factory workers. The parks were thought of as places to occupy the time away from the drudgeries of the workday. Efficiency was the watchword and utility, not beauty, was the overall goal.

"Reform Park" users were predominantly working men and children. Its programming was divided into categories such as physical, aesthetic, civic and social. Sport activities ranged from swimming, ice-skating, tennis and basketball. It was important to park advocates to provide for the children, and new "playgrounds" were built all over the City. Symmetrical layouts and hard paved surfaces characterized most of the design.

The earlier pleasure gardens occupied large sites that were sometimes far away from the working class. The 1920s reform parks were built within urban neighborhoods, close to families and park users. Adding

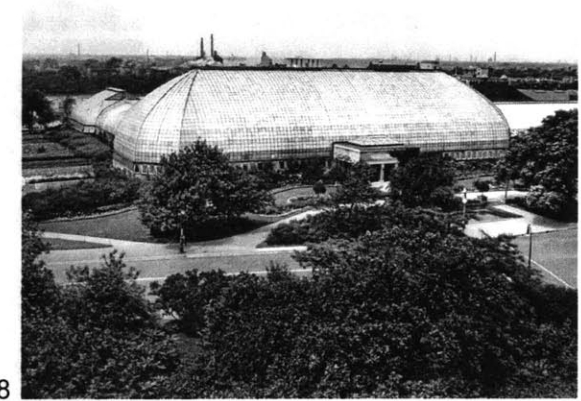


fig. 9 Swim meet at Harrsion Park field house.

fig. 10 Landfill growth of Lincoln Park.

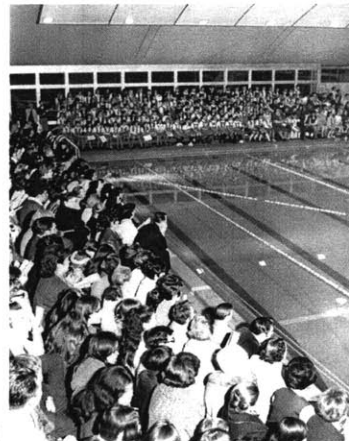
a park to an unused lot in a dense community became a sign of urban renewal to the City Beautiful Movement. The structures that sheltered the multitude of activities were known as field houses. These multiuse complexes incorporated neighborhood activities in addition to sports. Clubrooms were set up to accommodate community meetings, as well as year round social uses such as dances, libraries, and concerts.

Burnham, in collaboration with Olmsted, designed fourteen neighborhood parks in the South Side alone during the early 1900s. His 1909 plan of Chicago presented a linear lakefront park system connected to a series of boulevards. A highlight of this period was the construction of the glass and steel Garfield Park Conservatory. Public bathing was a major concern in Chicago during this era, and the City erected many public pools in its neighborhood parks. Also, Lincoln Park expanded when 275 acres of landfill were added to its length.

Recreation Facility (1930-1965)

During the late 1930's and after the Depression, Chicagoans abandoned the idea of the park as a driver of social reform. However, a new attitude about sporting and recreation took hold. "More and bigger"⁵ characterized many communities' thoughts towards parks and their programs. During this era, the social program was not tied so directly to the physical form. The new design ideal was the multiple use of the facility. The fields and their equipment were emphasized.

An expanse in park programming accompanied a gradual increase in leisure time. More planning went on at a larger city level, and promoted parks' positive influences on mental health. Also, recreation centers were built to accommodate teenager needs. This responded to residents' desires for recreational opportunities at all age levels. These facilities were forced to be versatile in order to lure users away from existing entertainment options. They competed with typical venues by sponsoring plays and live music.



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fig. 11 Summer basketball game at Sherman Park.

During the 1950s, the growing demand for new buildings brought forth a wave of new construction and the renovation of existing field houses. However, new park design was not prolific due to the war and the congested city fabric. School parks flourished, incorporating green space and play into unused lots. Standardization was a common design trend with municipal packages generated and applied without much regard to site.

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Burnham continued to develop the Chicago lakefront during the 1930s with the Century of Progress Fair as a highpoint. Later the WPA helped consolidate all of the disparate park commissions into the central Chicago Park District. WPA funds helped finance new programs and initiatives. After World War II, the CPD identified neighborhoods that had the greatest need for new facilities. It also worked with the Chicago Housing Authority to incorporate open space with low-income housing.

Open Space System (1965 and After)

Park development during this time is characterized by the open space concept. This theory combines different types of parks and open space into one larger system. Playgrounds, gardens, neighborhood parks, plazas, boulevards and forest preserves are brought together to form a unified approach to green space that has a vital role in the growth and health of the city. Definitions of leisure and recreation vary tremendously, and the open space concept allows for these differences.

This response was due, in part, to a large movement of the middle class from downtown to the suburbs. During the early 1970s city parks reached a low point. Many became unsafe and dangerous areas. Significantly less land was available for development, however parks continued to provide the counterpoint to urban densification. New ideas and innovations marked some park designs in the 1970s and early 80s. Activities continued to multiply even with proposals for typical non-park uses, such as movies.

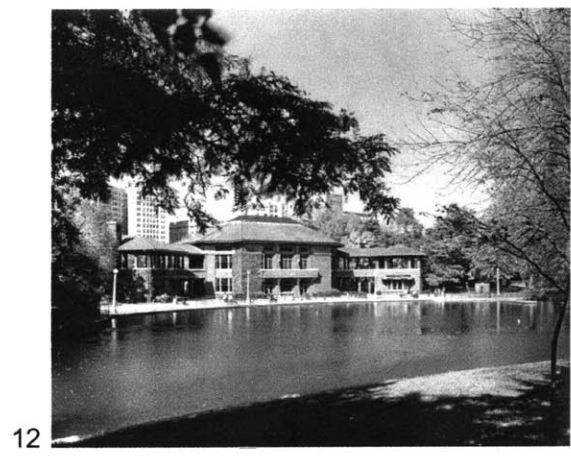


18 | fig. 12 Lincoln Park's, Cafe Bauer and pond after renovation.

fig. 13 The entry at Rainbow Beach's field house, by David Woodhouse, makes use of plexiglass shades.

Small bits and pieces of unused open space were developed due to intense competition for land. The mini or vest pocket park became a new model. "The new attitude toward streets, sidewalks, backyards, vacant lots, waterfronts, and rooftops involved them in park planning and ideology whether or not they were actually under the administrative control of the park departments."⁶

Chicago also experienced growth in its organized sports during the 1970s. The CPD hosted the first International Special Olympics at Soldier Field with the swimming trials at Portage Park. Later, an era of activism and involvement gripped the City as neighborhood residents banded together to form "Friends of the Parks." During the late 1980s, many of the older, dilapidated field houses were restored, such as Lincoln Park's Café Brauer.



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fig. 14 Open space goals outlined in *CitySpace* planning guide.

fig. 15 Model of Millennium Park Bandshell by Frank Gehry.

Current Chicago Plans and Futures

The future of the Chicago Park system holds much promise, however it faces many challenges. A lack of new, viable open space opportunities combined with deteriorating facilities keeps the CPD constantly active. The City acquired a powerful and staunch ally for the development of parks and open space with the election of Mayor Daley in 1989. Daley has guided the Park District to building numerous gardens, restoring many older park buildings and completely overhauling park maintenance and programming.

The School Park Program has expanded into the “Campus Park Program,” which today encompasses hundreds of school lots and green spaces. New field houses continue to add to the rich network of existing structures. In 1998 the innovative Rainbow Beach Field House by David Woodhouse was built to accolades.

Another important development is *CitySpace – An Open Space Plan for Chicago*, published in 1998. This planning outline was put together by the CPD in conjunction with many city agencies and community groups. Its goal is to establish planning guidelines that will provide a vision and advise the future growth of Chicago’s Park System. The plan covers a wide variety of open spaces including: neighborhood spaces, greenways, wetlands, lakefront, downtown district, municipal buildings and transportation and industrial corridors. *CitySpace* starts by defining Chicago’s open space needs and identifies places to grow. It concludes by proposing an implementation plan for new zoning and acquiring new lands.

Millennium Park is a current project that continues Chicago’s grand park tradition. The vast design calls for a complete redevelopment of the railway lines through Grant Park. “This new development will include a 1 million square foot area of gardens, sculptures, festival sites, underground parking, indoor auditorium for music and dance performances, and outdoor music pavilion designed by world renown architect, Frank Gehry.”⁷

Open Space Goals

1. By 2010, each community area in Chicago will have a minimum of two acres of public open space per 1,000 residents and all unserved areas will be eliminated.
2. By 2020, the entire city will have five acres of public open space per 1,000 residents.
3. By 2020, the city as a whole and its individual communities will achieve a balance of regional and local open space opportunities for all residents.

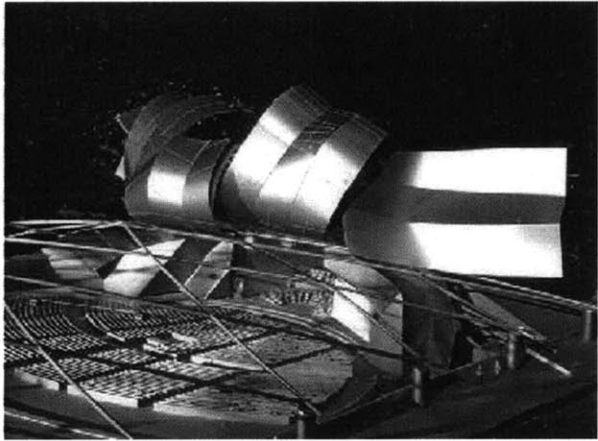


fig. 16 CitySpace open space classifications.

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CHICAGO PARK DISTRICT OPEN SPACE

| Type | Characteristics | Examples | Number | Percent* |
|--|--|---|------------|-------------|
| Magnet Park | 50+ acres, attracting large numbers of visitors from the entire metropolitan area | Burnham, Grant, Jackson and Lincoln parks | 5 | 38% |
| Citywide Park | 50+ acres, attracting visitors from the entire city | Douglas, Garfield, Humboldt, Marquette, and Washington parks | 10 | 25% |
| Regional Park | 15-50 acres, with indoor and outdoor recreational facilities serving a section of the city | Horner, Portage, Rogers and Welles parks | 46 | 16% |
| Community Park | 5-15 acres, with indoor and outdoor recreation facilities serving several neighborhoods | Amundsen, Crescent, Fuller, Hiawatha and Jefferson parks | 130 | 14% |
| Neighborhood Park | .5-5 acres, with outdoor and sometimes indoor recreation facilities serving a neighborhood | Cole, Dooley, Gross, Jonquil, Pietrowski and Seneca parks | 159 | 4% |
| Mini-Park | Less than 1 acre, playground | Baraga, Buckthorn, Harding, Nelson and Willow parks | 145 | .5% |
| Passive/Natural Area | Landscaped park without indoor or outdoor facilities for active recreation | Auburn, Sayre, Clark parks, River Esplanade and Washington Square | 41 | 2% |
| Unimproved | Sites for future park development | Chinatown Park and DuSable parks | 15 | .5% |
| Total Chicago Park District Parks/Open Spaces | | | 551 | 100% |

| Region | Acres ** | Percent of Parkland Acres |
|-----------------------------|--------------|---------------------------|
| Lakefront | 2,520 | 38% |
| North | 830 | 12% |
| Central | 1,078 | 16% |
| Southwest | 1,186 | 18% |
| South | 1,083 | 16% |
| Total Parkland Acres | 6,697 | 100% |

Source: Chicago Park District, Research and Planning Division, 1998.

* Percent of total (7,341) Chicago Park District acreage.

** Adjusted for non-park facilities.

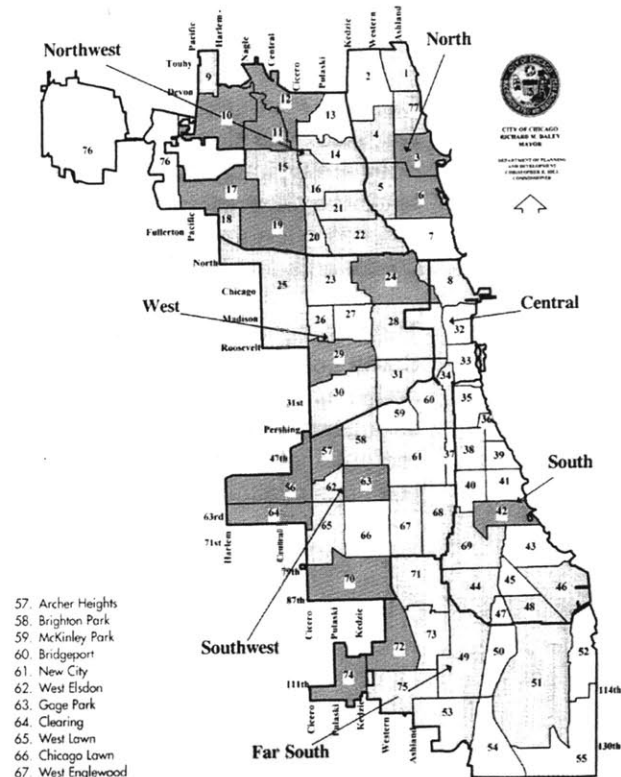
fig. 17 CitySpace open space need map digramming Chicago neighborhoods. The West Loop is a community in little parkland.

Map 2

OPEN SPACE NEED IN CHICAGO COMMUNITY AREAS

COMMUNITY AREAS

1. Rogers Park
2. West Ridge
3. Uptown
4. Lincoln Square
5. North Center
6. Lake View
7. Lincoln Park
8. Near North Side
9. Edison Park
10. Norwood Park
11. Jefferson Park
12. Forest Glen
13. North Park
14. Albany Park
15. Portage Park
16. Irving Park
17. Dunning
18. Montclare
19. Belmont Cragin
20. Hermosa
21. Avondale
22. Logan Square
23. Humboldt Park
24. West Town
25. Austin
26. West Garfield Park
27. East Garfield Park
28. Near West Side
29. North Lawndale
30. South Lawndale
31. Lower West Side
32. Loop
33. Near South Side
34. Armour Square
35. Douglas
36. Oakland
37. Fuller Park
38. Grand Boulevard
39. Kenwood
40. Washington Park
41. Hyde Park
42. Woodlawn
43. South Shore
44. Chatham
45. Avalon Park
46. South Chicago
47. Burnside
48. Calumet Heights
49. Roseland
50. Pullman
51. South Deering
52. East Side
53. West Pullman
54. Riverdale
55. Hegewisch
56. Garfield Ridge



57. Archer Heights
58. Brighton Park
59. McKinley Park
60. Bridgeport
61. New City
62. West Elsdon
63. Gage Park
64. Clearing
65. West Lawn
66. Chicago Lawn
67. West Englewood
68. Englewood
69. Greater Grand Crossing
70. Ashburn
71. Auburn Gresham
72. Beverly
73. Washington Heights
74. Mount Greenwood
75. Morgan Park
76. O'Hare
77. Edgewater

- Legend**
- Less than 2 acres per 1,000 residents
 - Community has sub-areas with no parkland within one mile
 - Community with at least 2 acres of parkland per 1,000 residents; no unserved areas

22 | fig. 18 Humboldt Park field house and skating rink by Jensen.

fig. 19 Entry of Portage Park field house by Hatzfeld.

Field House Design and Development

One of the primary architectural components of the twentieth-century park was the field house. Its origins came out of the 1930s reform movement and the intense desire for a versatile structure that housed sports and community related events. Chicago was the birthplace of these new buildings, which Galen Cranze analyzes:

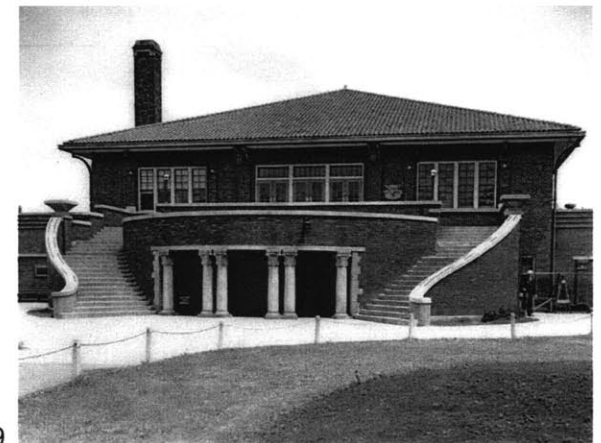
The Chicago Field House was heralded nationwide as a new type of park, one combining aesthetic features with facilities for a wide range of activities . . . The field house was typically located in the middle of one end of the park with the children's playgrounds flanking it symmetrically . . . The field house itself - the indoor plant - contained an assembly hall and stage, cloak rooms, club rooms, a refectory, a branch of the public library, indoor gymnasiums with separate locker rooms for men and women, and toilets with showers.⁸

Over the next seventy years the planning, design and construction of the Chicago Field House has changed very little. The structures vary from approximately 10 – 20 thousand square feet depending on site and program. They are typically situated on the park's edge or periphery. Common materials include painted concrete block, brick and glass exterior. This responds to the area's harsh climate and intense occupant use. The development process often involves an individual design for each site with aesthetics responding to established historical precedents and traditions. The CPD oversees all design, maintenance and expansion.

The field house was conceived to provide an intense and direct relationship with its surrounding neighborhood. Some continue to provide this vital link today. However, local sports leagues, day care centers, community action groups, performance clubs and education programs struggle to find a place within these historic structures. Field house design and implementation must respond to today's age of evolving cities and changing recreational practices. New relationships between the building, site and fabric must be posited so that these buildings continue to make a vital impact on city life.



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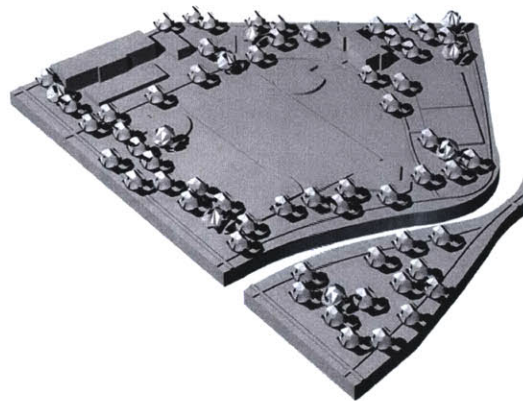
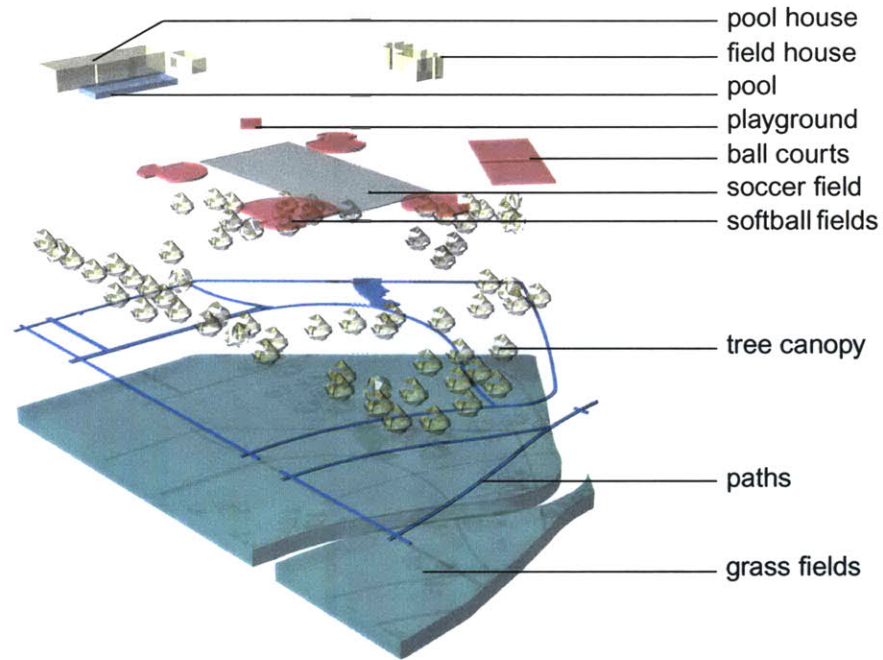


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chicago field house
typology and program

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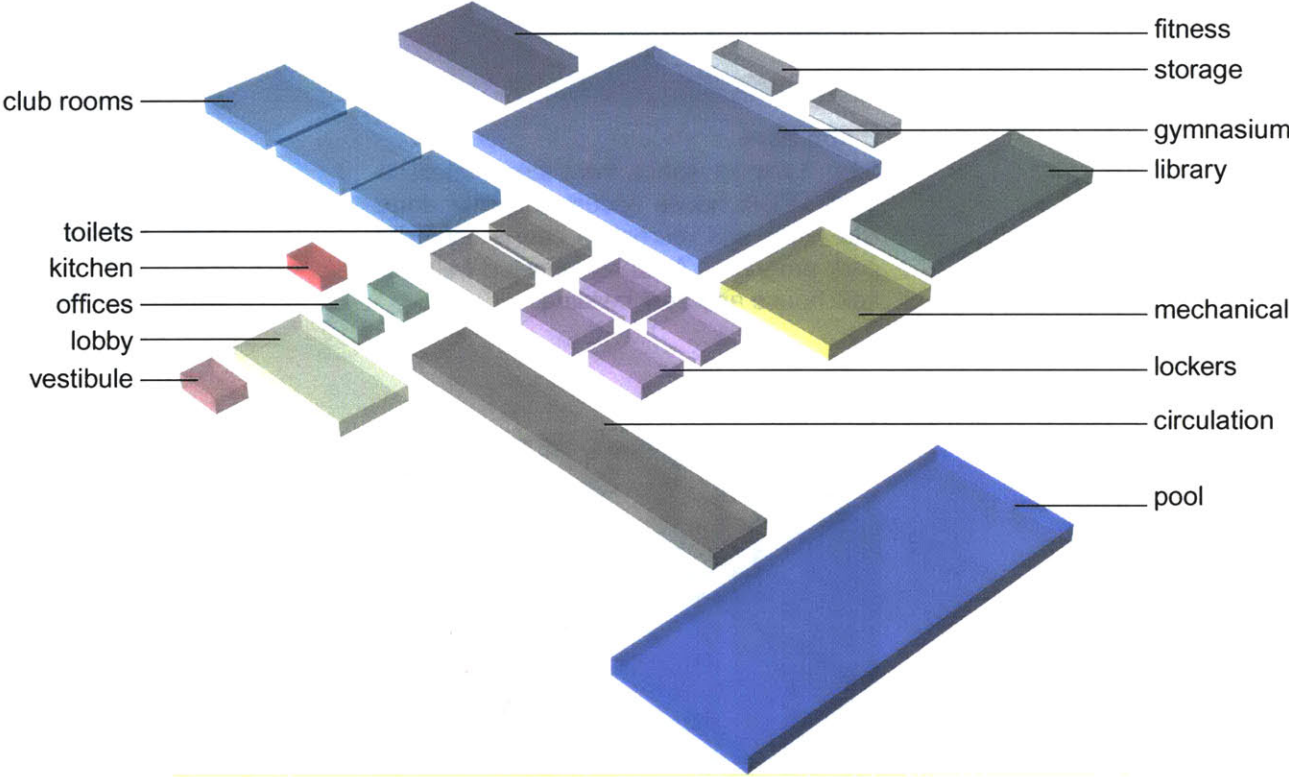




| Chicago Park District Statistics | |
|---|-------|
| total parks: | 551 |
| total acreage (by CPD): | 6,697 |
| total acreage (by City): | 481 |
| field houses: | 258 |
| school campus parks: | 100 |
| forest preserves: | 6 |
| beaches: | 33 |
| baseball diamonds: | 791 |
| swimming pools: | 90 |

left: A typical distribution of park program (Union Park). Other possible recreation programs include skate park, parking, water features and pavilion.

right: A typical distribution of field house program. Other possible programs include a boxing ring, auditorium, lecture hall and stage.



26

fig. 21 Union Park playing fields and field house.

fig. 22 Back facade of Union Park field house.



21

Union Park

Site: Leftover space from street intersections. Field house occupies corner edge. Ball fields and recreation courts comprise park program. Axial relationship between field house and pool building.



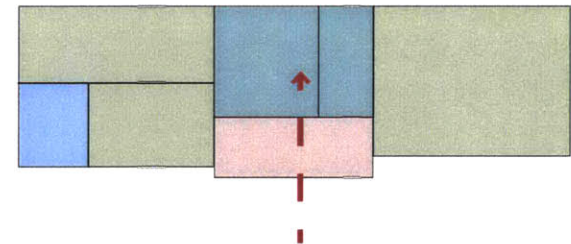
Union Zoning Diagram

- residential
- commercial
- park
- industrial



22

Building: Materials comprised of brick, stone and wood. Interior spaces made up of small series of club rooms and gathering places. Auditorium/theater on ground floor.



Union Program Arrangement

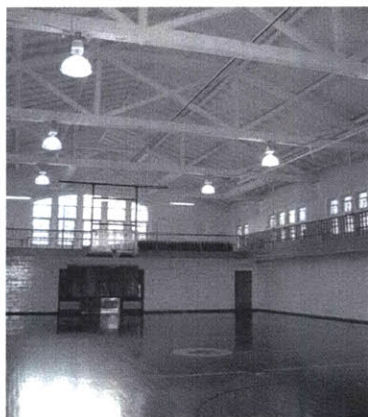
- entry/lobby
- meeting rooms
- lockroom
- offices
- gymnasium

fig. 23 Fuller Park field house courtyard.



23

fig. 24 Fuller Park field house gymnasium.

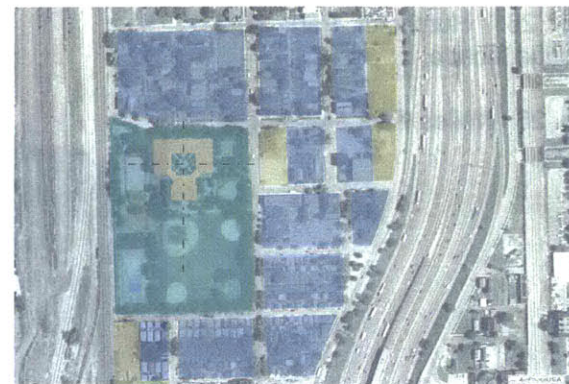


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Fuller Park

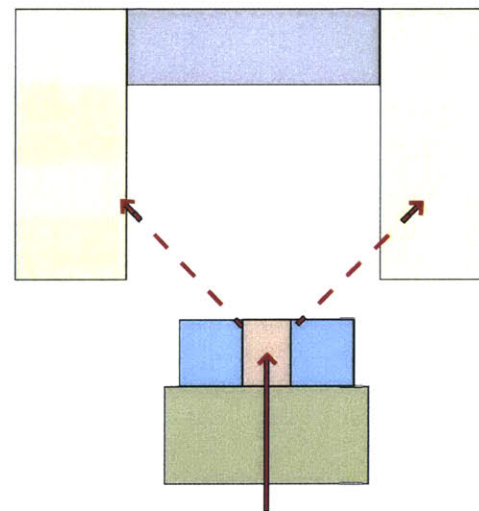
Site: Small site constrained by residential buildings and train tracks. Highway infrastructure forms far eastern boundary. Field house occupies north edge with pool structure on western side.

Building: Stucco exterior cladding with wood interiors. Truss system in gymnasium. Multipurpose space above entry serves dual meeting and drama functions. Courtyard typology.



27

Fuller Zoning Diagram

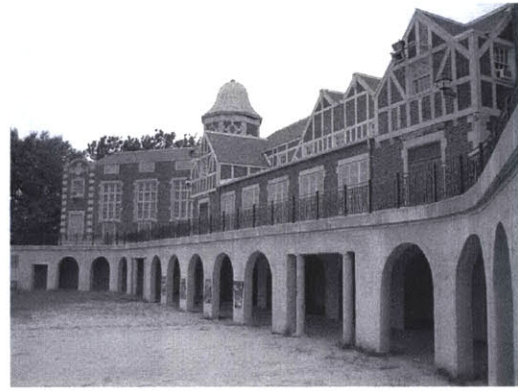


Fuller Program Arrangement

fig. 25 Humboldt Park field house facade.

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fig. 26 Welles Park field house pool.



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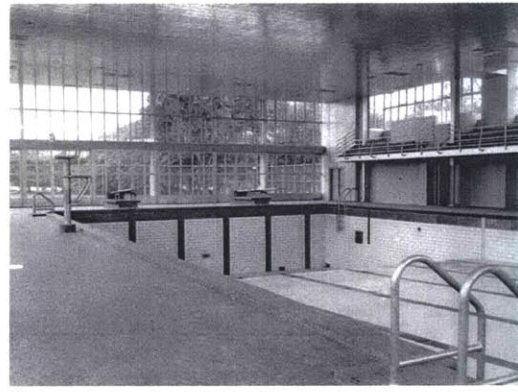
Humboldt Park

Site: Occupies central park position with off-axis street relationship. Lagoon to south used for ice skating in fall. Large grounds.



Humboldt Zoning Diagram

- residential
- park
- commercial



26

Welles Park

Site: Completes center northern edge of site. Mixed commercial and residential neighborhood. Park contains ball fields and extensive recreation components.



Welles Zoning Diagram

fig. 27 Commercial Club playground.



27

Commercial Club

Site: Very small contained site with field house situated at end. Center entry with axial play lot and ball field.



29

Commercial Club Zoning Diagram



28

Indian Boundary

Site: Field house at southern edge. Park flows up to residential buildings. Small zoo included in park program.



Indian Boundary Zoning Diagram

fig. 29 Wood members of Dunescape Project by SHoP.

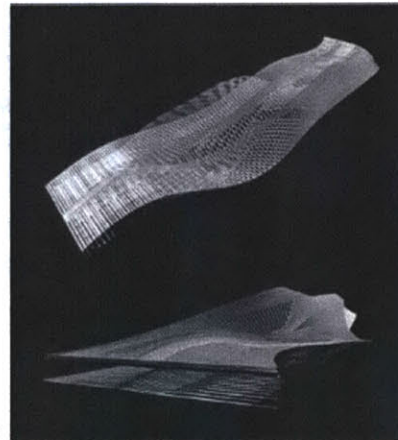
fig. 30 Ground Floor Plan for Arena 2020 by HOK.

Contemporary Precedent

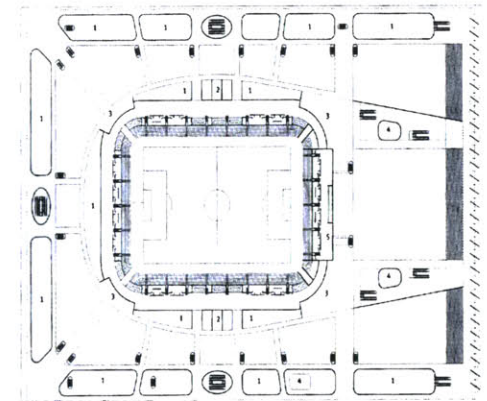
Chicago has always been a worldwide leader in innovative park policy, design and construction. However, stagnation in forms and typologies has plagued many recent designs. Contemporary cases from Europe and New York illustrate new potentials for open space design and implementation. Grid overlays, small sites, artificial landscape, prototyping and activity clusters are some of the current proposals architects and landscape designers are using to shape the urban fabric.

The Dunescape project by SHoP Architects was executed for the PS1 Museum in New York. It utilizes rapid prototyping and the transformation the interior spatial enclosure to exterior landscape. Advanced computer technology allows for a complex arrangement of members and their deformation patterns. Standard lumber is employed for a low budget and quick erection time. The outdoor “pavilion” is a response to the museum’s desire for an exciting outdoor entertainment space and is used in the summer months.

At a much larger scale the unbuilt Arena 2020 project by HOK looks at integration with the dense urban landscape. This conceptual, mixed-use structure allows for expanding and changing spaces that create a critical mass of sport and leisure. It incorporates a central multi-use event space for large games. Parks and landscape surround the center and link to the perimeter programs of service, retail and accommodations. The complex operates on a 24/7 methodology. “It is both flexible and adaptable in order to maximize its potential usage over time. The event space will be able to adapt for a myriad of sporting, cultural and social events while the surrounding support structure will provide a framework into which certain types of facilities can be grafted and renewed over time.”⁹



29



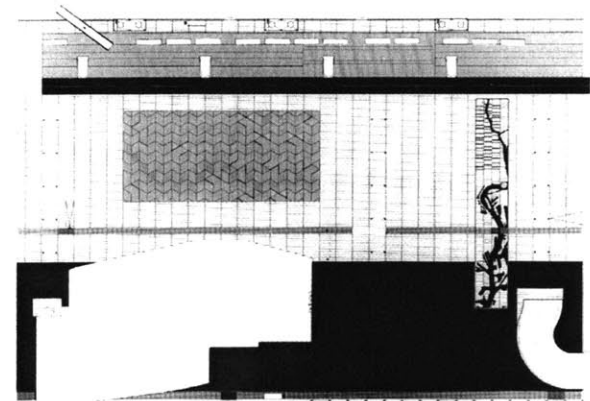
30

fig. 32 Folie at Park de la Villette by Tschumi.

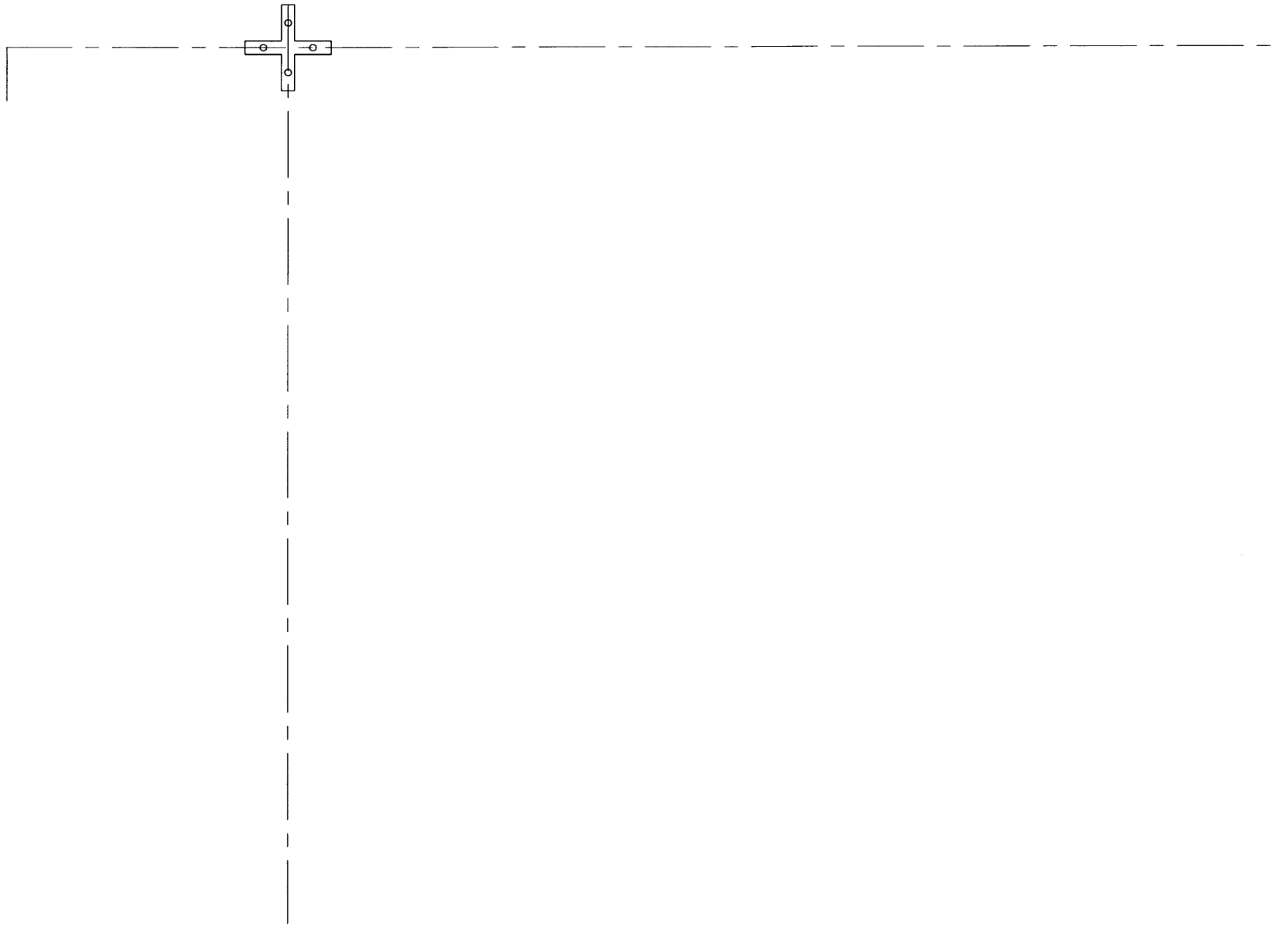
fig. 32 Plaza Floor Plan of Schowburnplein by West 8.

At Parc de la Villette, Tschumi makes a splintering break with established urban park typology. He tries to reanimate Paris' district of Villette by combining urban planning and cultural institutions. Tschumi's concept lies in the structure of three superimposed grids. This system of points, lines and surfaces provides a framework that locates the park and its events in time and space. Traces and fragments of the city grid are combined with pedestrian movements. Red cubic "folies – represent disjunctions and dissociations between use and form and social values."¹⁰ The project works as a large-scale urban gesture.

The architecture firm, West 8, reconceived the urban plaza in their design for Schowburnplein in Rotterdam. The raised platform plaza makes use of hardscape and artificial landscape materials such as rubber, wood and metal. The design seeks to demarcate activity zones of use in new ways through shadow patterns and materiality. The square is fronted by several theater complexes and has transformed into a vibrant, new city center. Operable cranes at the edge of the site further add to the space's complexity.



32



the site
chicago, illinois



fig. 33 The grid of Midwestern agricultural fields.

34

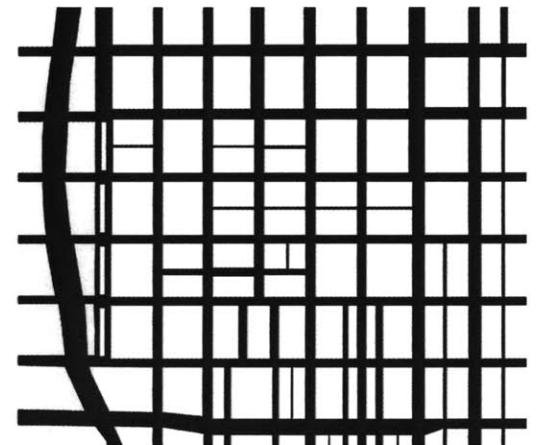
below: Plan of Chicago's street grid in the downtown Loop.

The City of Chicago

Known as the "Windy City" or the "City of Big Shoulders," Chicago has played a strong role in American development. With a current population of 3 million residents, the Midwest Metropolis is home to miles of lakefront, a developed green space system and towering skyline. Built on the swampy shores of Lake Michigan, Chicago was officially established in 1837. Since that time, it has become America's third largest city and a place for growth and innovation in architecture, landscape and urban design. Some of the most renowned examples are the elevated rail system, balloon frame construction, Burnham, Grant Park, Frank Lloyd Wright and the Sears Tower.

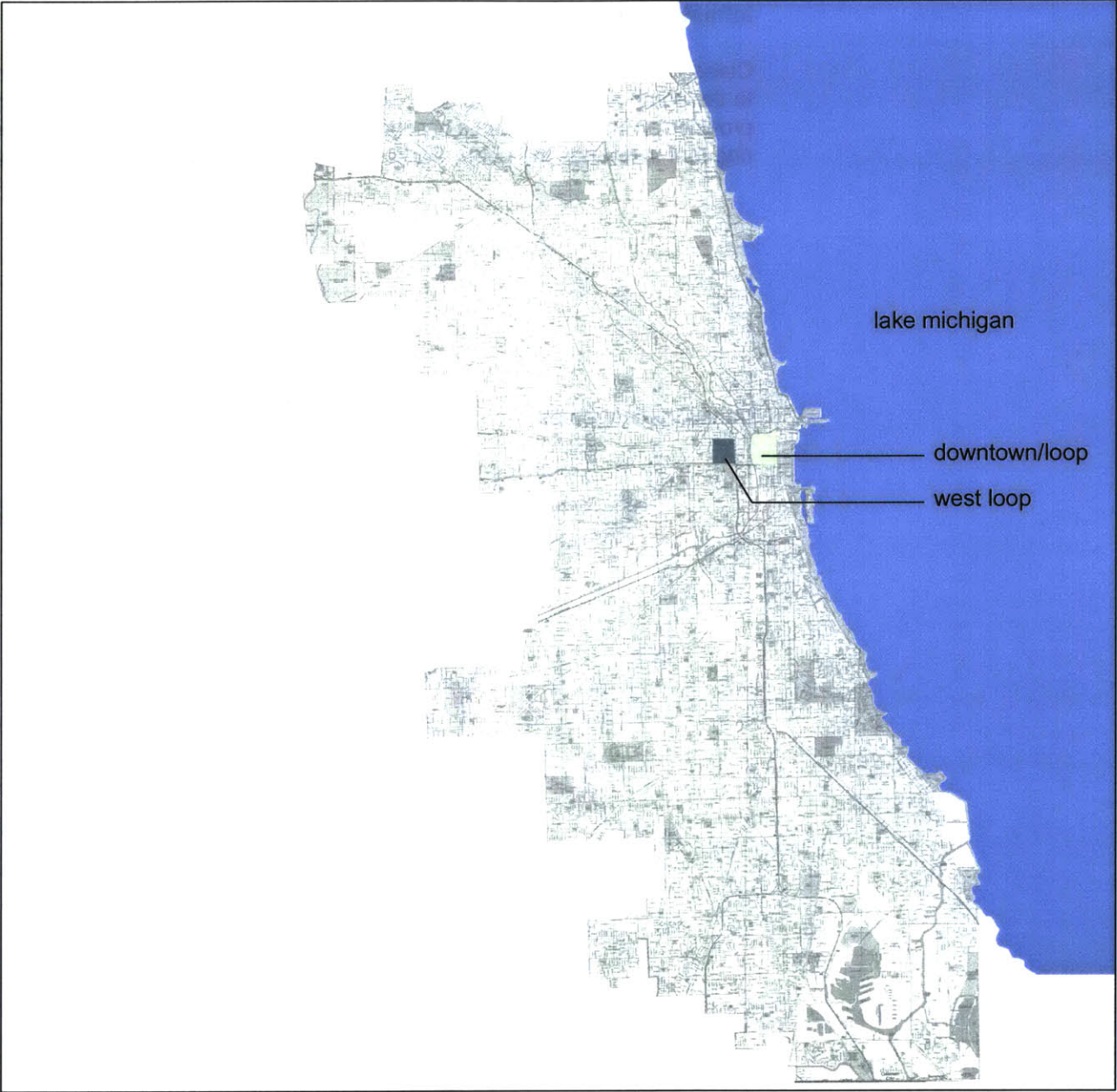
The grid is a defining element of Chicago's urban form and makeup. Its North-South orientation along the lake exemplifies a rational order and division. Many of the city's prominent architects and designers, such as Mies van de Rohe, have highlighted this overlying system. Also, the grid exists at a larger scale in the network of field divisions of midwestern agricultural lands. It has informed the placement and composition of the City's neighborhood parks. Many fit within the standard 330' x 660' block size.

Chicago faces many challenges in the beginning of the twenty first century. With a growing population and many communities in transition, the future of open space is a complex question. It must respond to a host of important societal, economic and ecological issues. The active mayor and the CPD's *CitySpace* guide represent positive steps. However, park design must not cling to outmoded models and forms. It must consider new typologies that can enhance current use patterns and respond to changing environments. New methods should seek to benefit the relationship between open spaces and the contemporary urban fabric and make a more integral and humane place.



33

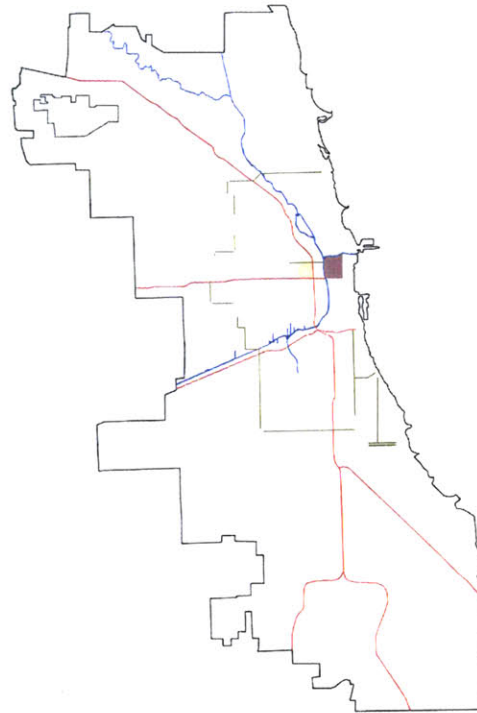
right: Plan of the Metropolitan Chicago Area (nts)



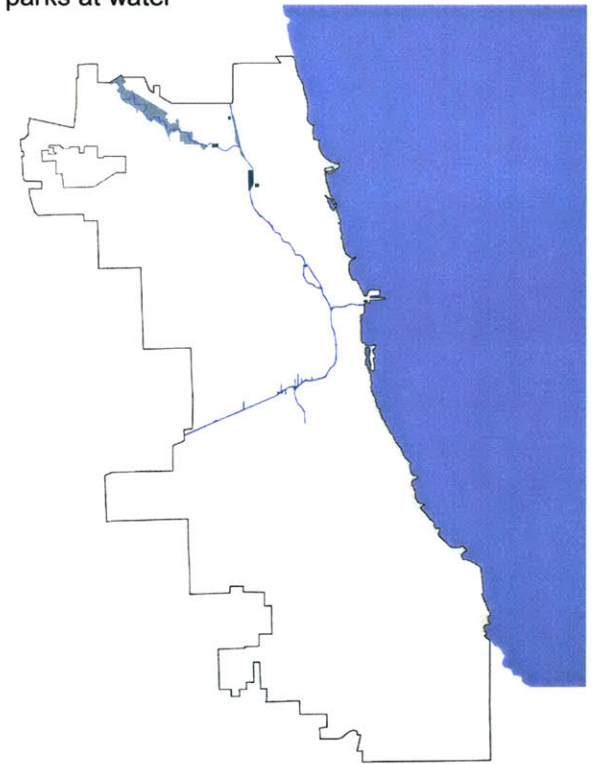
Infrastructure

Chicago built a multifaceted transportation network. Major highways intersect the downtown and provide links to the south and west. The busy airports of O'Hare and Midway connect to the City, while the Chicago River provides an important source of commerce and boating transport. Green is part of this system, with a boulevard ring that surrounds the Loop. Parks are situated near water with many lining the lakefront and river.

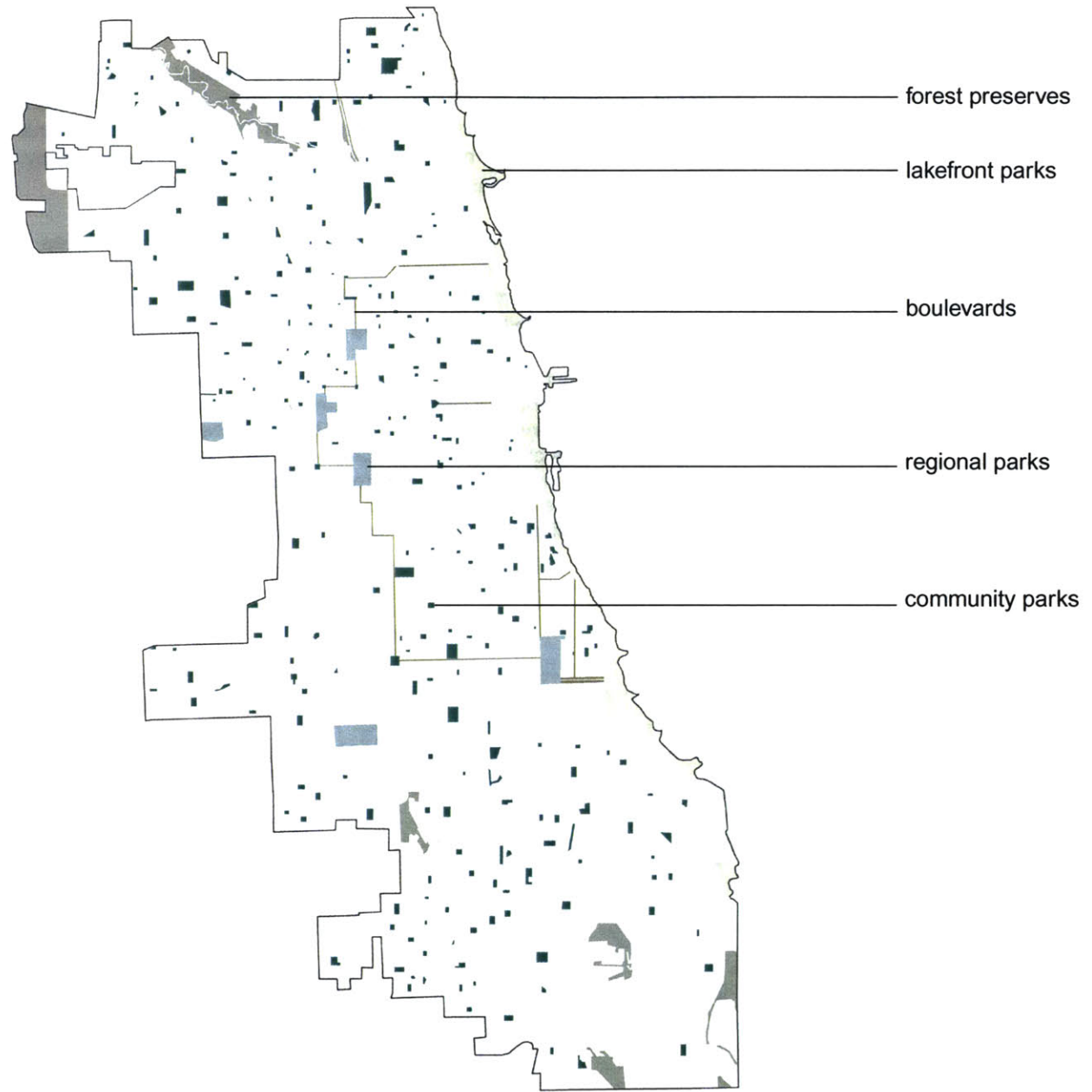
transportation routes



parks at water



right: Diagram illustrating the breakdown and composition of Chicago's parks and green spaces.



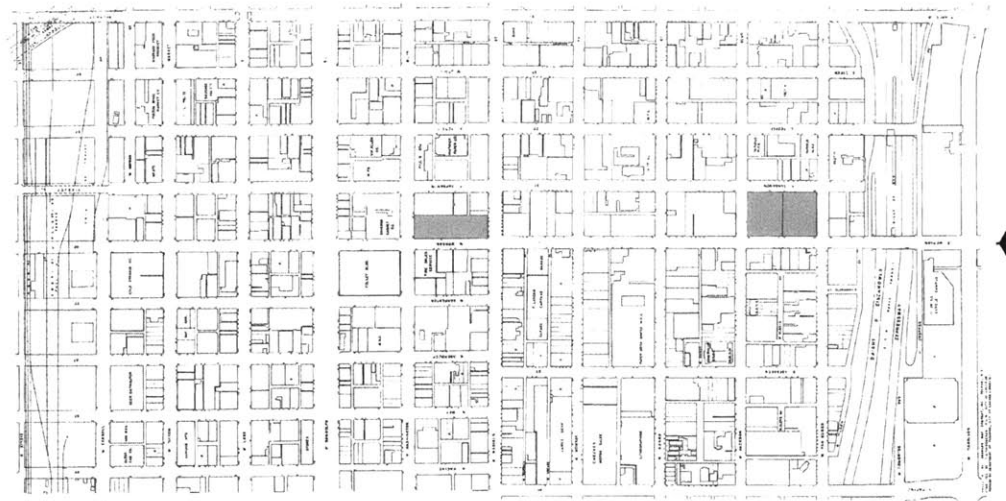
38 | fig. 34 Sanborn Map of Chicago's West Loop. (Rotated with East facing up - nts)

The West Loop

The West Loop functions as an incubator for this thesis. The area lies adjacent to the downtown Loop and is separated by major urban infrastructure. Rail yards form its northern edge while interstate 90 and 94 create eastern and southern barriers. The University of Chicago's main campus lies just South of these highways. "E" train lines on the periphery meet the area's transportation needs. Many restaurants line Randolph Street while predominantly Greek businesses occupy South Halsted Street.

The West Loop began as a commercial and industrial center. Factories, warehouses and markets were the most common building types. A small immigrant population flourished. In the mid 1990s, with increased demand for urban living spaces, much of the old building stock was torn down or converted to residential developments. Restaurants, some retail and a growing artist population have accompanied this transformation.

The secret is out. The Near West Side is in. Surprisingly, it is becoming Chicago's hot, new place to live. An increasing number of loft condominium and townhouse buyers are flocking to this neighborhood that used to be considered the very opposite of trendy. The ambience is gritty and industrial. This is the drab underbelly of the city that spreads out west from the canyons of the Loop, an area that still is trying to live down negative images of the past - from Skid Row to the fires and riots of 1968 after the assassination of Martin Luther King Jr. Now rising from the ashes of yesteryear is a residential boom that is expected to total 4,000 new housing units in the next year, doubling the number in existence now."¹¹



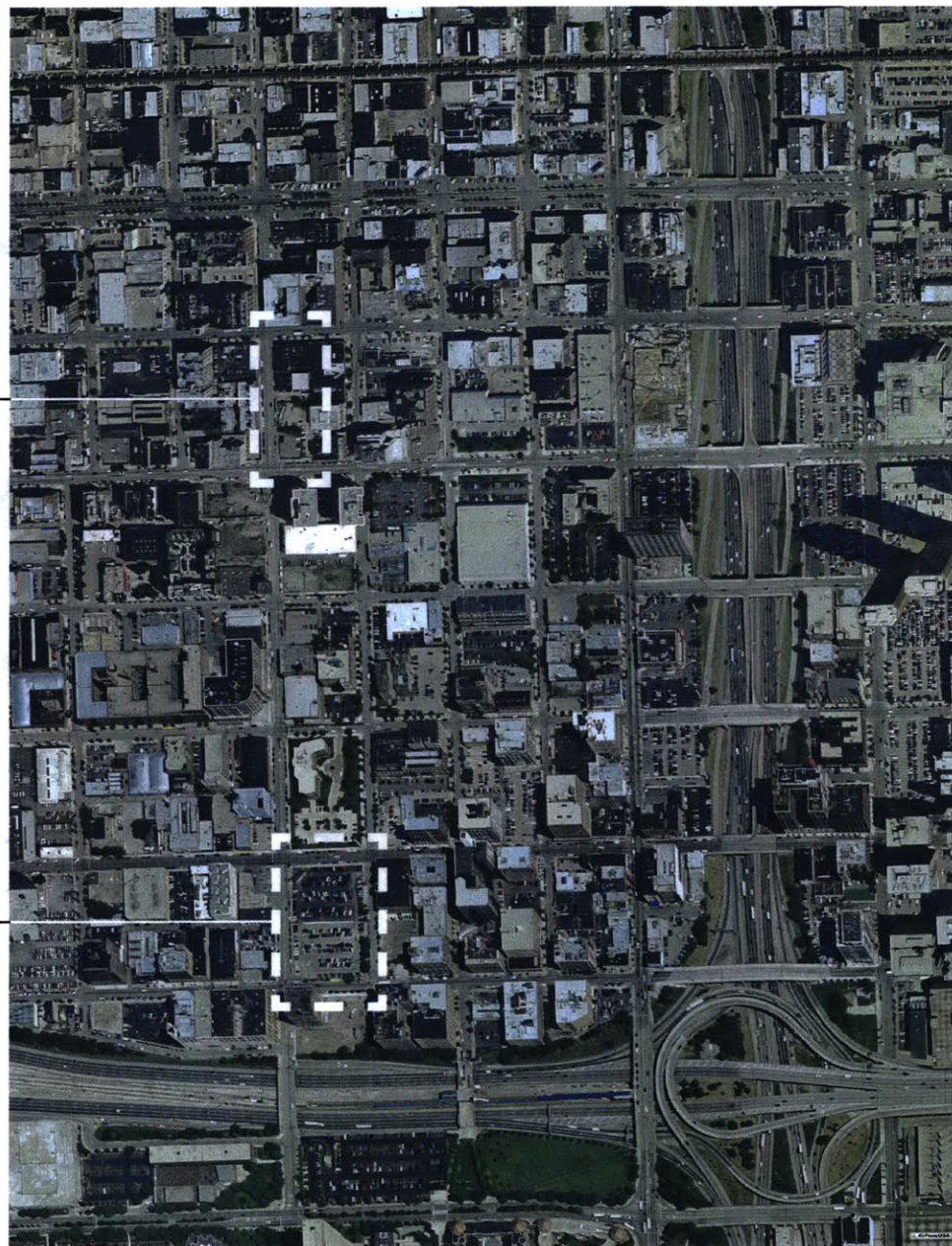
This project will explore development on two sites in the West Loop. Their differing scales and relationships to the surrounding context allow for unique approaches and solutions.

Site 2

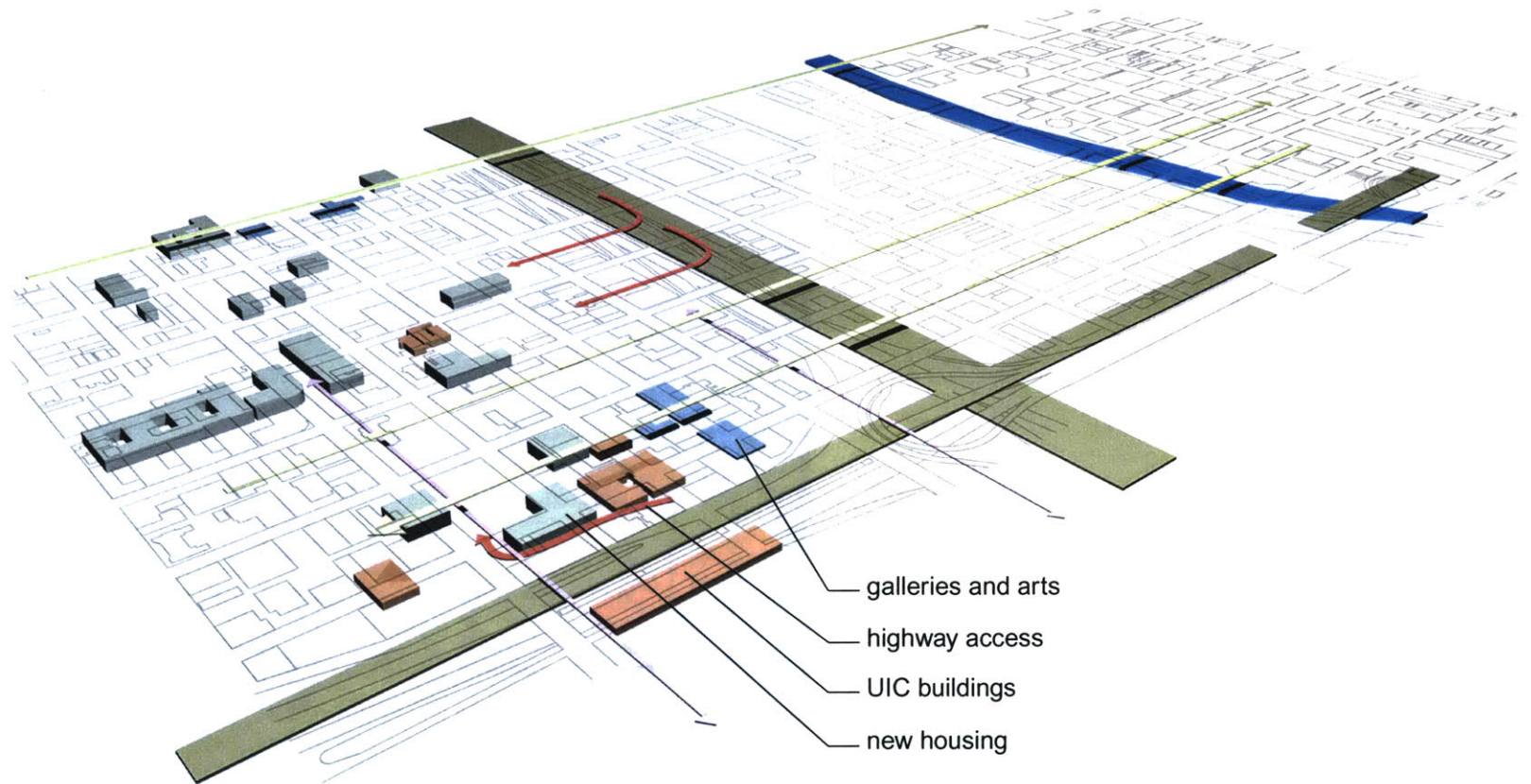
Existing condition: parking lot occupies half city block
Size: 420' x 120' - 1.2 acres

Site 1

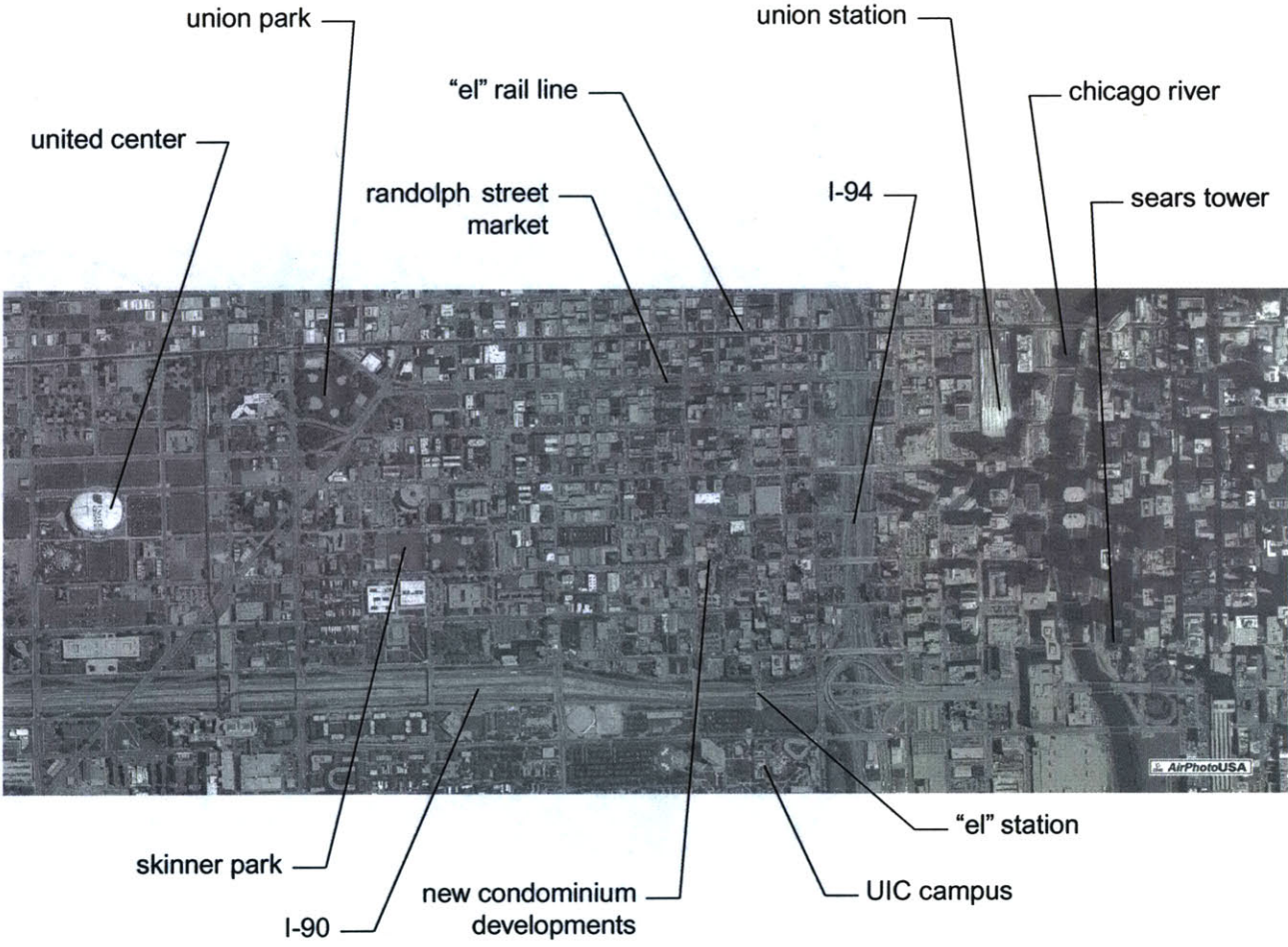
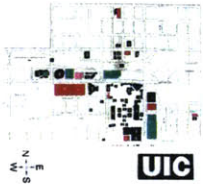
Existing condition: parking lot occupies full city block
Size: 390' x 250' - 2.3 acres



40 | right: Diagram illustrating the movements, forces and relevant programs.



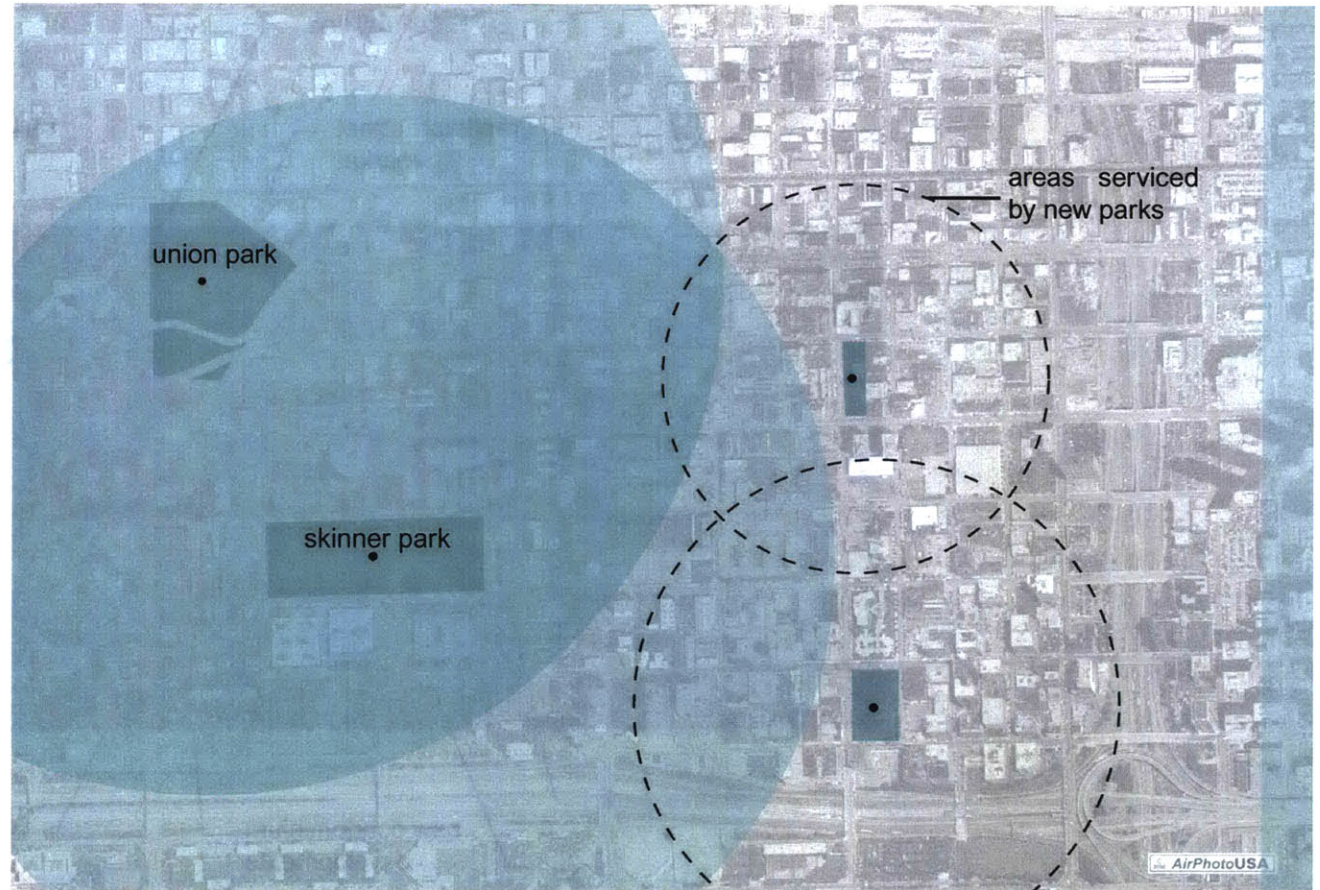
below: Activity points in West Loop surroundings.



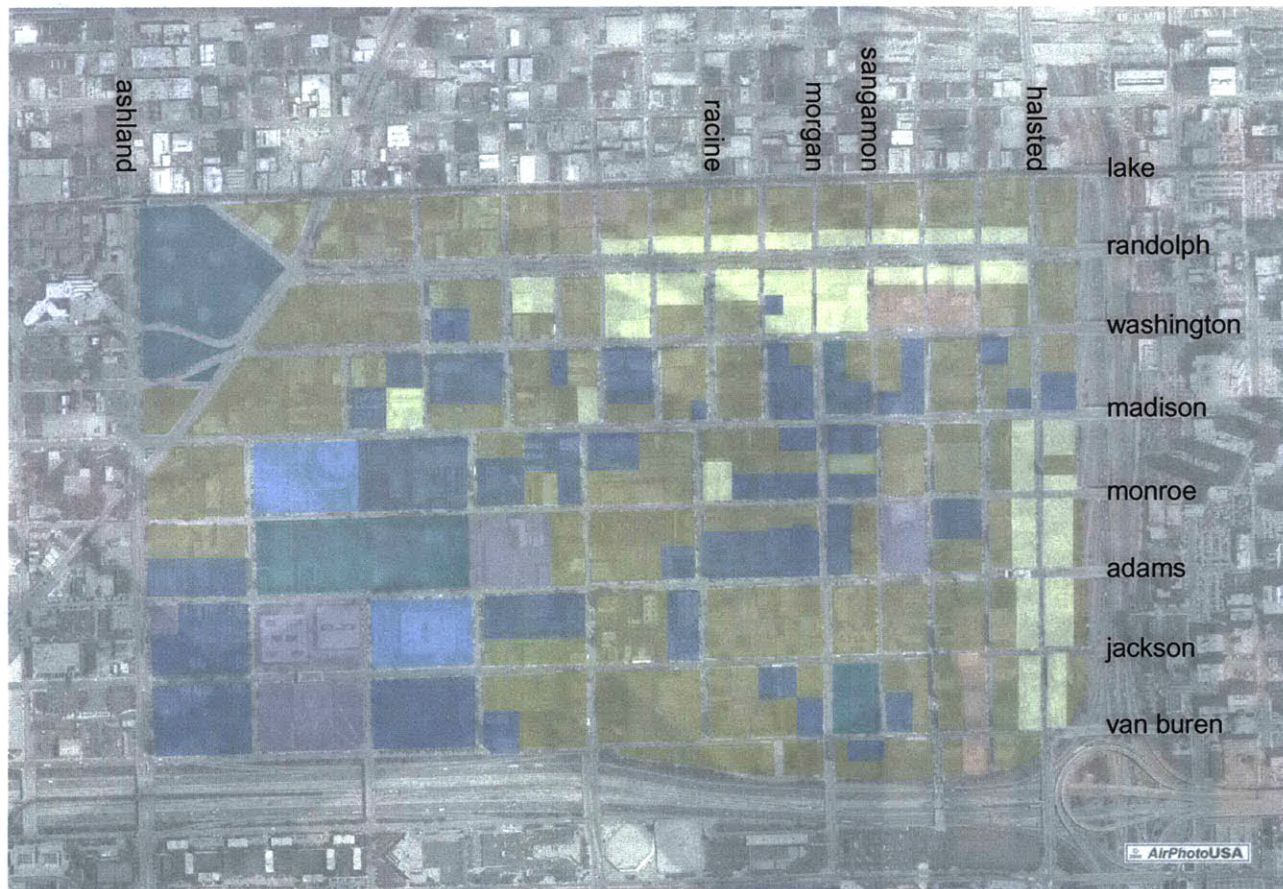
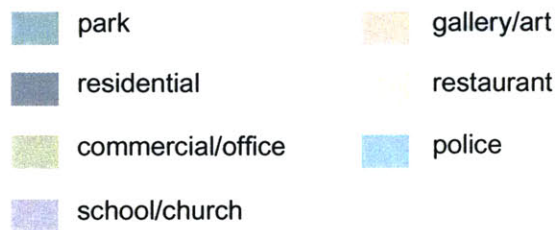
right: Diagram showing areas of West Loop that are serviced by parks.

The burgeoning community faces demographic changes along with its evolving building stock. Young urban professionals, new dual-income families and artists are buying up the new condominiums and lofts. A hip and edgy culture is emerging. The surge of younger home buyers has another effect upon the neighborhood. Many will move away after five to eight years. This transient population contributes to the community's state of flux.

Due to its heavily industrial beginnings, the West Loop never included parks as a component of its urban fabric. Even today, viable open space and recreation areas are severely lacking. Union and Skinner Parks lie far to the West and are out of distance for most residents. The West Loop presents a unique opportunity to adapt new park spaces to a unique urban community.



right: Digram of area's zoning.



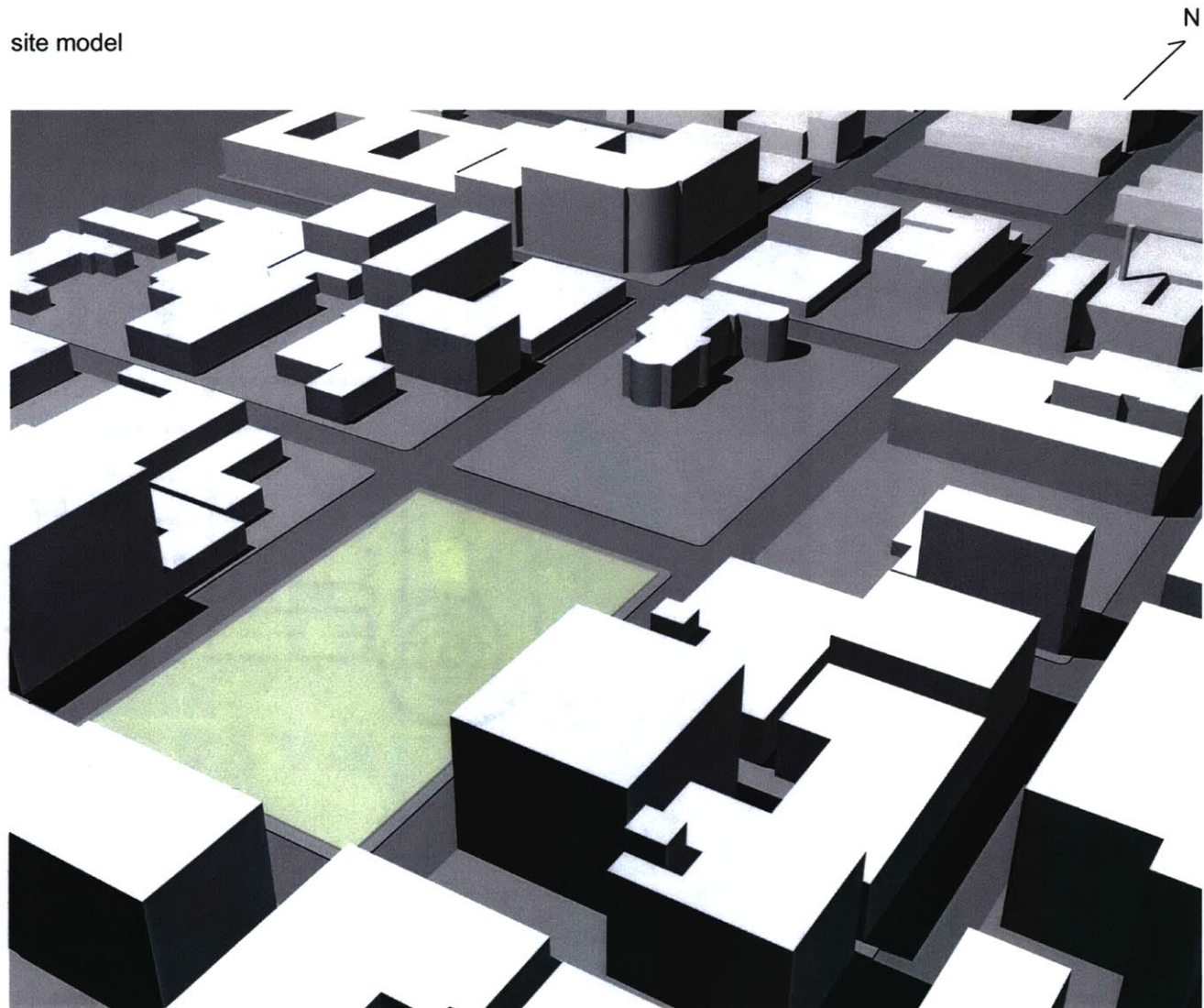
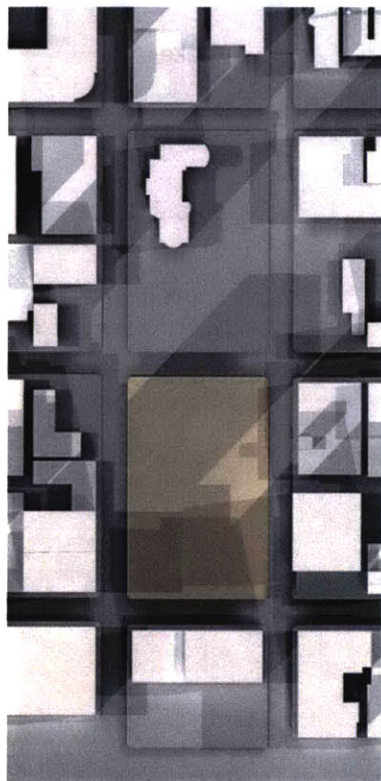
below: Light model of Site 1 illustrates combined shadow patterns of winter and summer solstices.

right: Site model of Site 1 showing context and adjacent building heights.

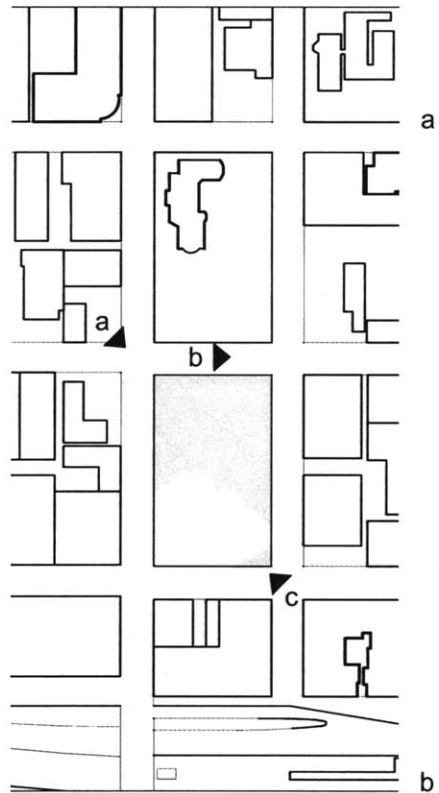
west loop park site 1

site model

light study model



below: Site 1 plan (nts)



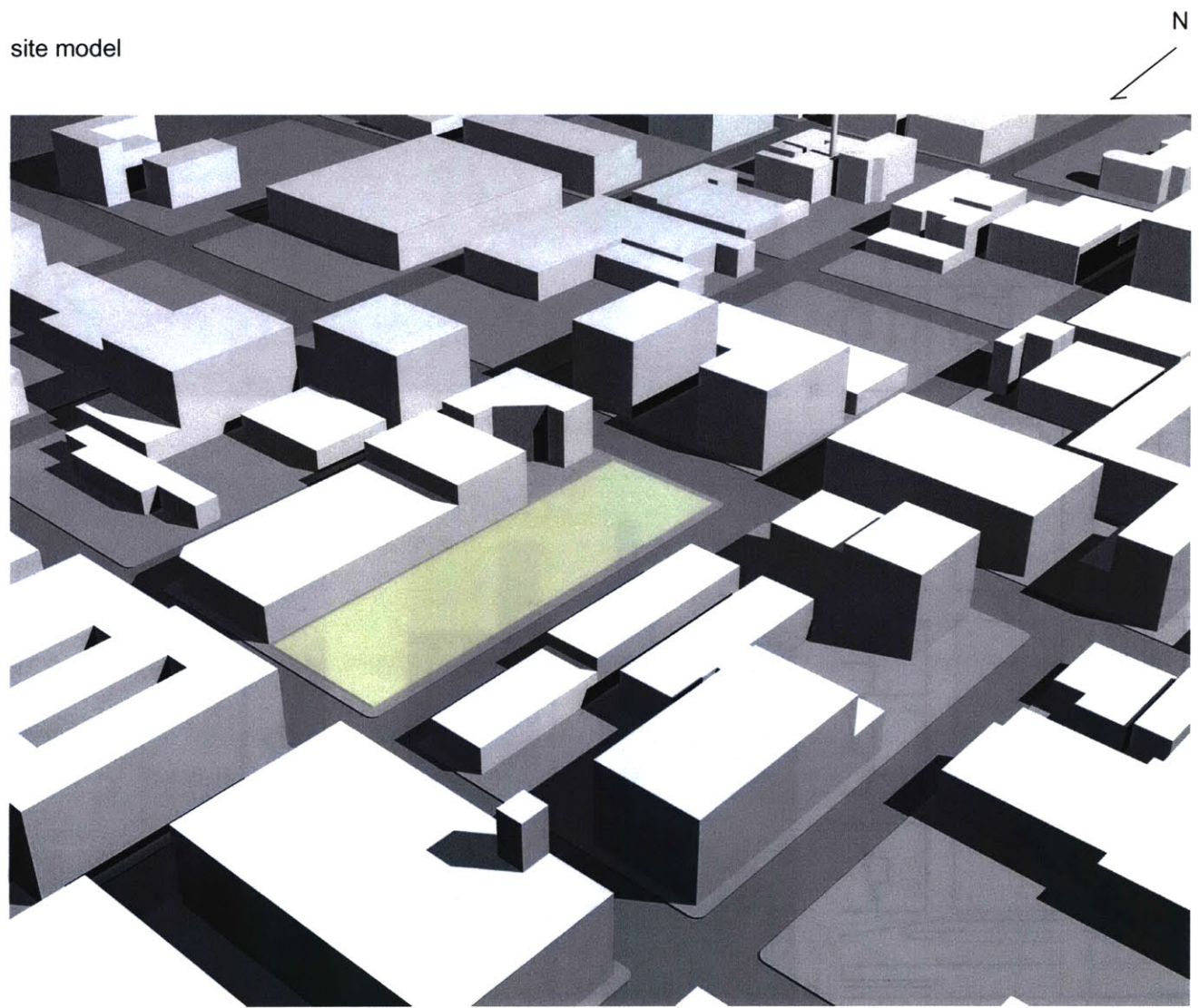
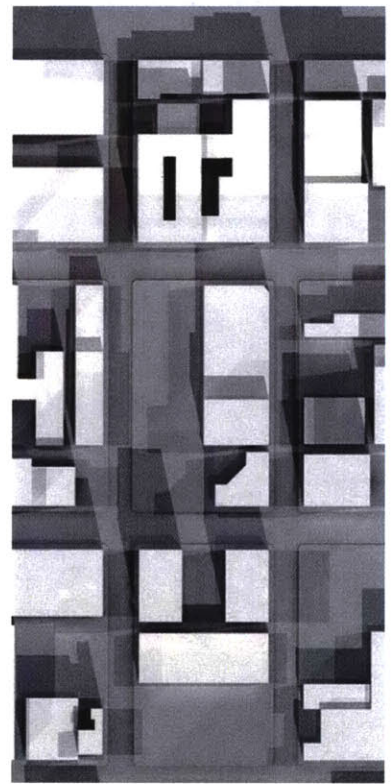
below: Light model of Site 2 illustrates combined shadow patterns of winter and summer solstices.

right: Site model of Site 2 showing context and adjacent building heights.

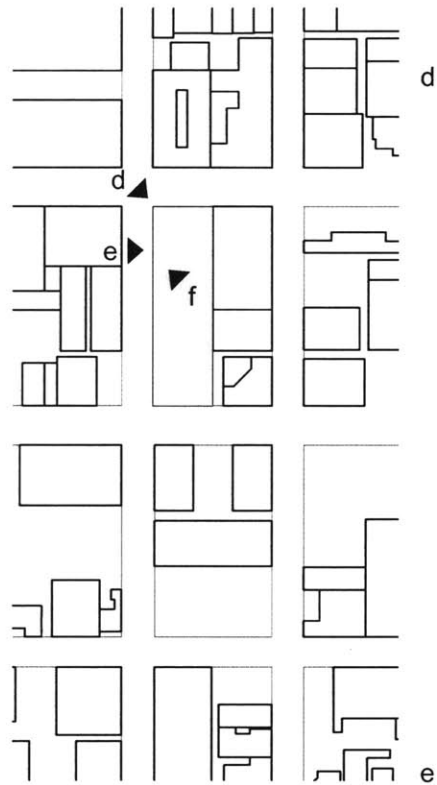
west loop park site 2

site model

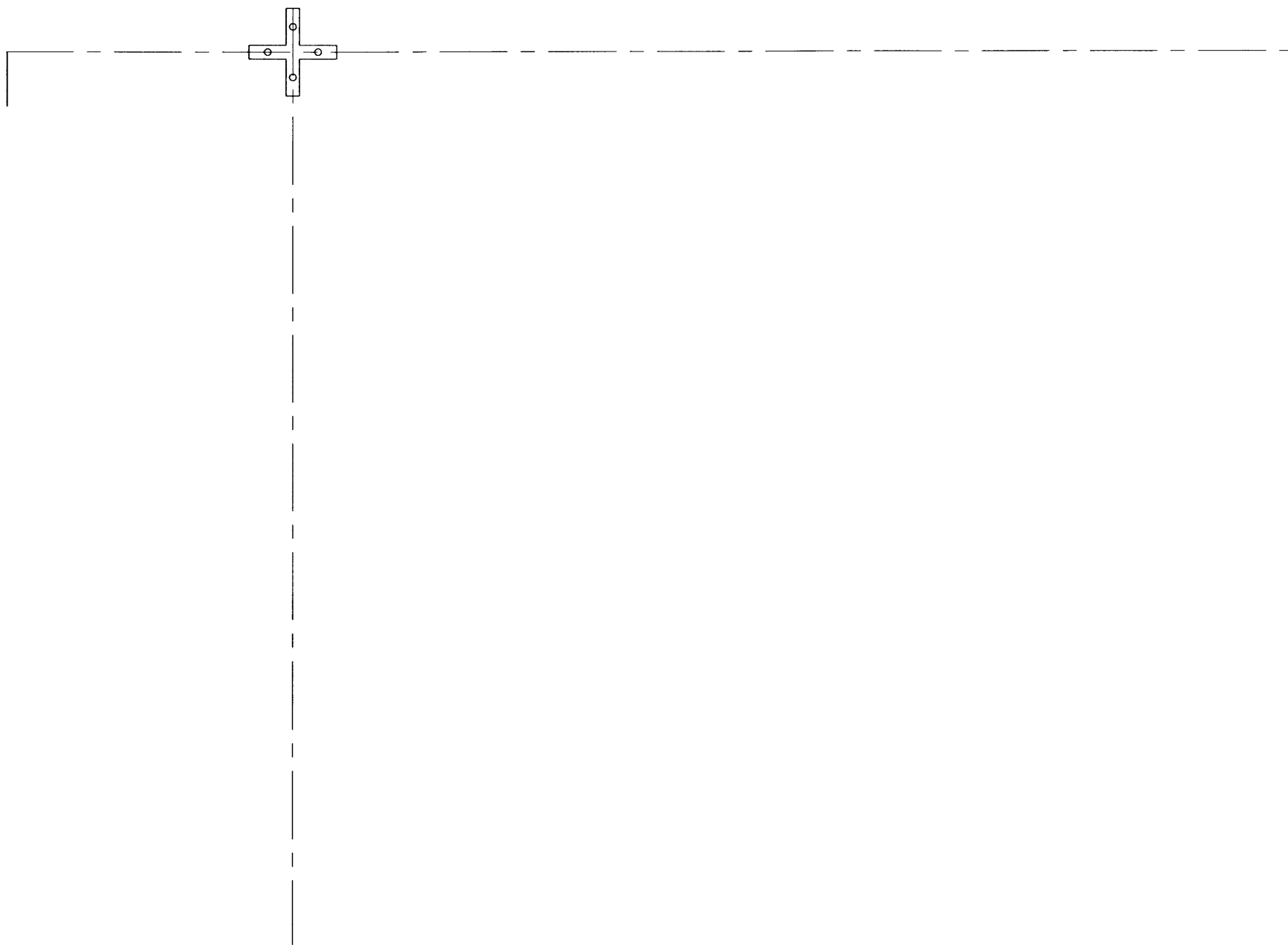
light study model



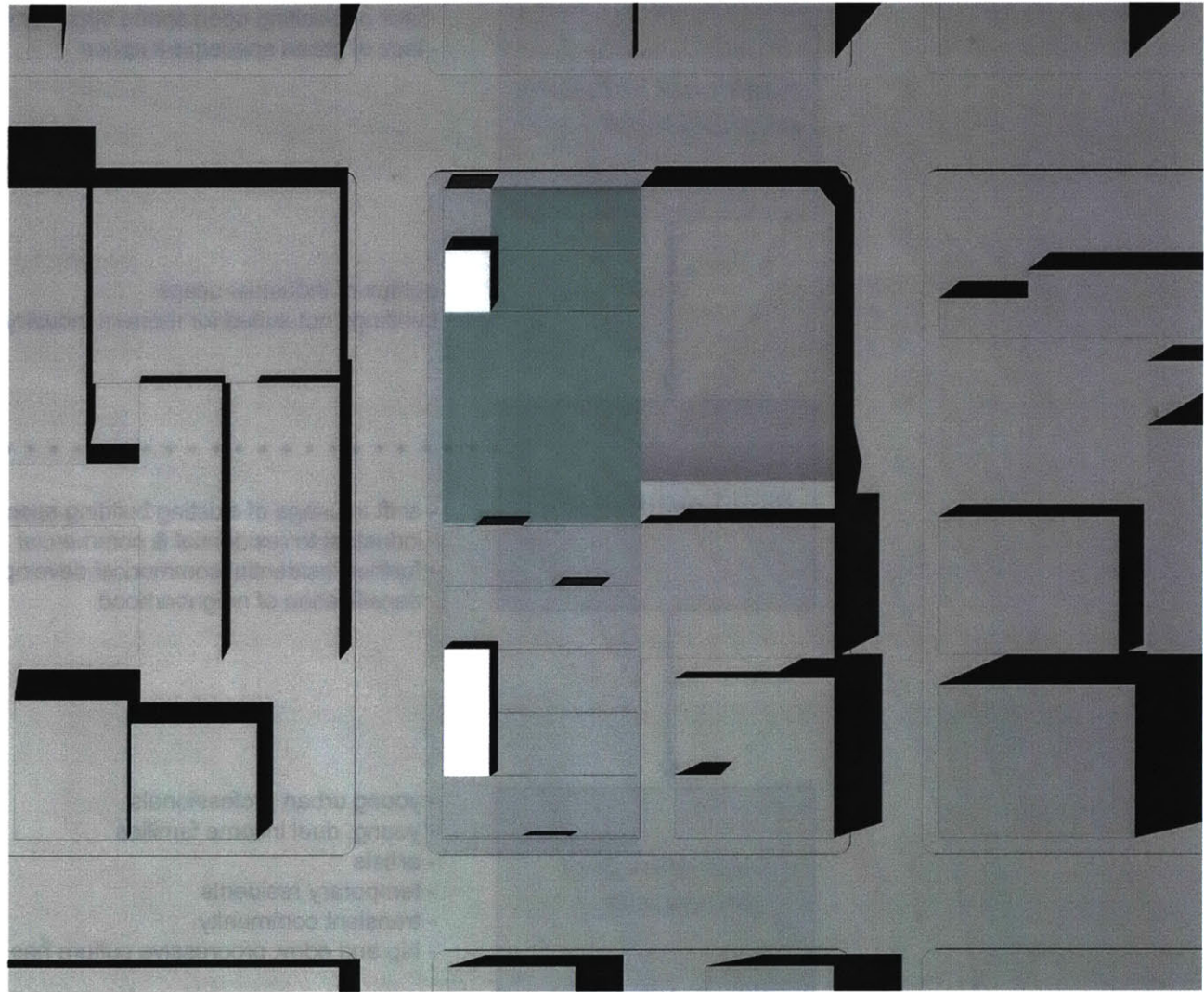
below: Site 2 plan (nts)



48



the new park
design analysis & framework



transformation of

community (contextual)

traditional industrial neighborhood

- lack of existing open space opportunities
- lack of green space/park space



outflux of industrial usage
buildings not suited for modern industry

neighborhood shift



west loop

- shift in usage of existing building space from industrial to residential & commercial
- further residential/commercial development yields densification of neighborhood

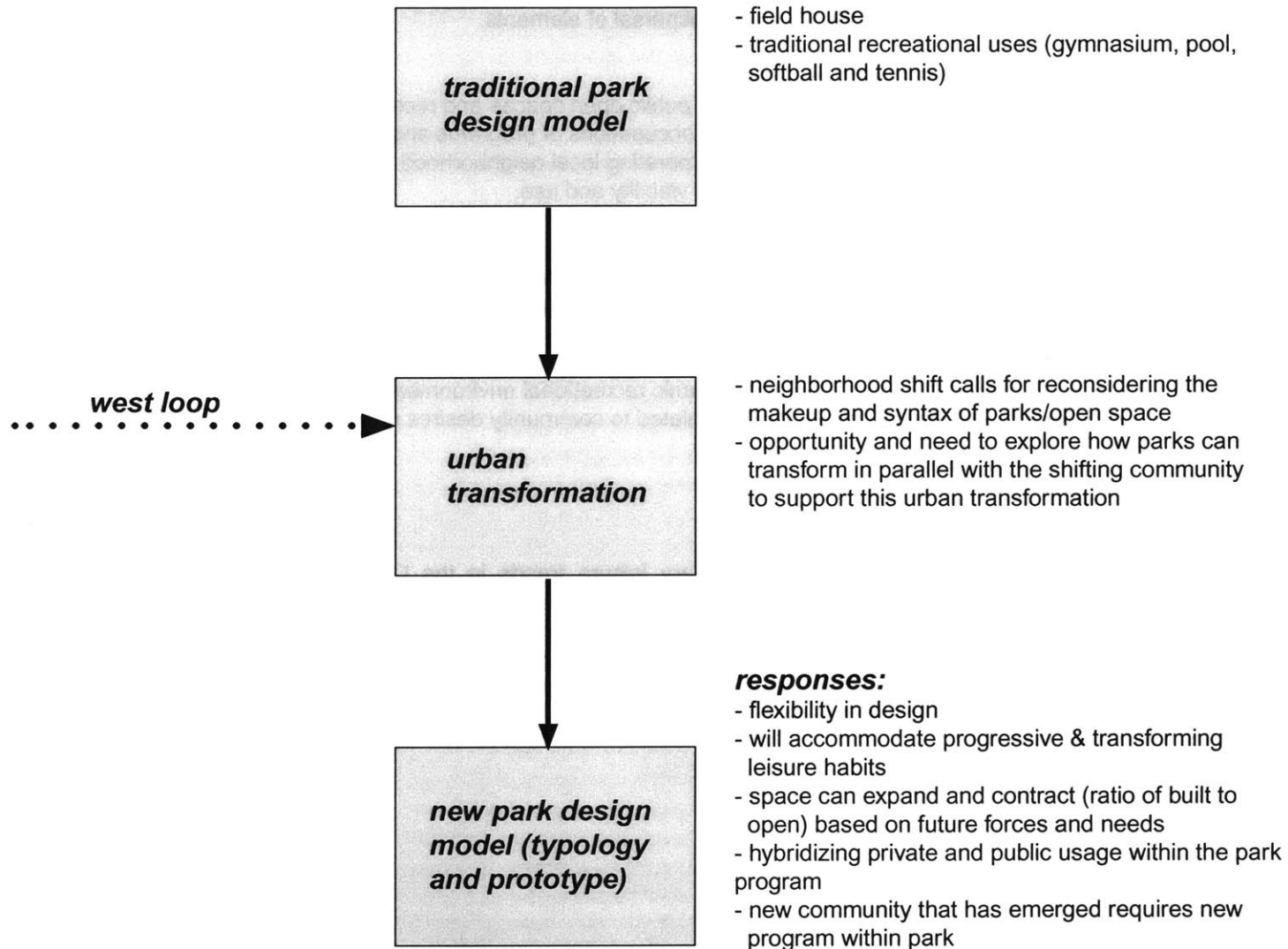


new emergent community

- young urban professionals
- young, dual income families
- artists
- temporary residents
- transient community
- hip and edgy, progressive culture has emerged

the urban park

open space/parks (conceptual)



Categories of Design Intent

A. Change and flexibility of architecture and landscape

- Park design accommodates long-term neighborhood expansions and contractions.
- Modular architectural and landscape interventions facilitate quick deployment and grafting possibilities.
- Combination of indoor and outdoor environments explores seasonal adaptability.
- Organizing system allows for structured dispersal of elements.

B. Hybridization of disparate programs

- Non-recreational private uses merge with public open spaces and recreation.
- Urban gesture brings together diversified occupations of programs and landscape environments
- Potential of urban site maximized by incorporating local neighborhood uses and larger city functions
- 24/7 weekly access to complex increases viability and use.

D. Ecological identity and responsibility

- Sustainable materials palette respects environmental concerns.
- Material selection acknowledges life cycle of weathering and replacement.

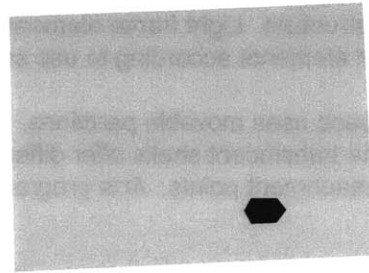
E. Social needs of community and contemporary forces

- Programs respond to interactive and dynamic recreational environments.
- Park design and development integrally related to community desires and input.

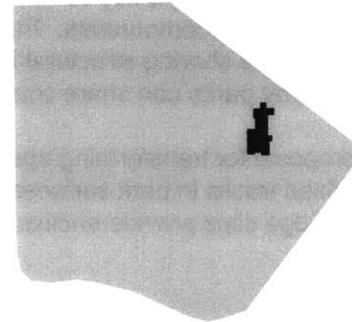
Program

New Parks can better address contemporary leisure trends in the Chicago area by supporting spaces for diverse activities, such as rock climbing, skateboarding and inline skating. Private programs such as laundromats, restaurants, outdoor movies, performance centers, coops, parking, galleries, sport rentals, cafes, car washes and day-care centers can positively transform park spaces and the surrounding urban fabric. The public tendency to “view the park and [private], commercial uses as incompatible seems to be decreasing, at least among park users, who frequently request such amenities as food concessions and equipment rentals.”¹¹

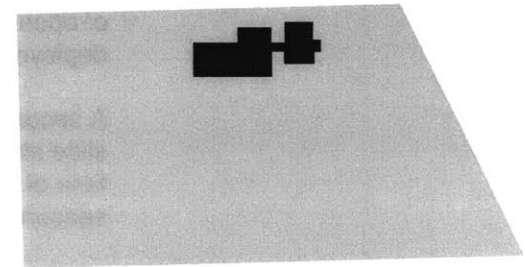
right: Plan diagrams distribute ratios of built vs. open space among several typical Chicago parks. Possibilities exist in challenging the existing typology with new spatial configurations.



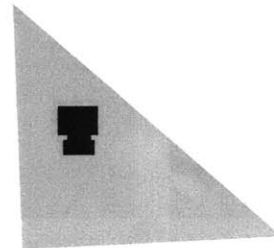
indian boundary park
 open space: 99%
 built structure: 1%
 site acres: 12.9



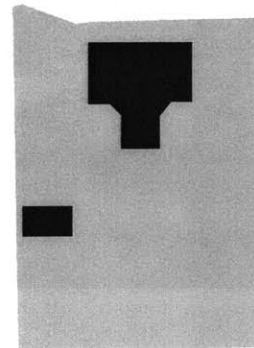
union park
 open space: 98%
 built structure: 2%
 site acres: 11.7



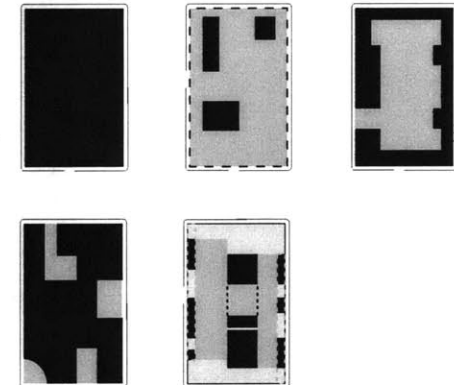
welles park
 open space: 96%
 built structure: 4%
 site acres: 16



wicker park
 open space: 96%
 built structure: 4%
 site acres: 4.5



fuller park
 open space: 88%
 built structure: 12%
 site acres: 11.4

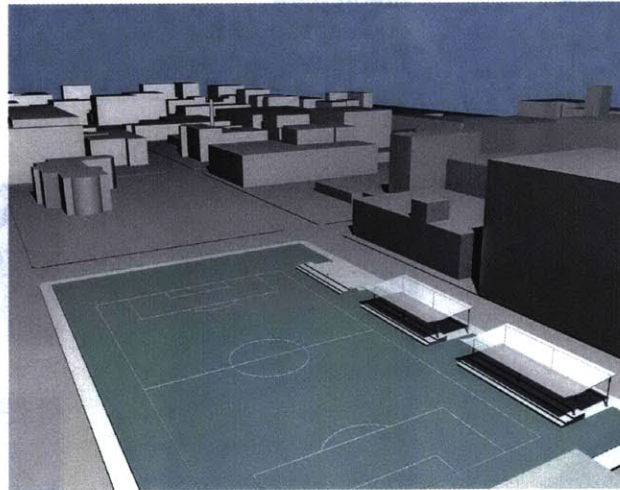


new typology
 open space: 70%
 built structure: 30%
 site acres: 2.5 (test case)

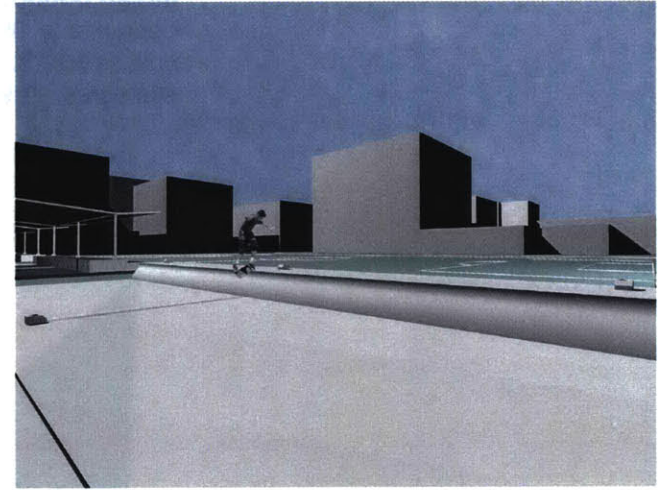
Flexibility and change is a key component of this study. The park edge is an opportune location to incorporate adaptable components. Transition between seasonal markets and a skate park allows for reuse of open space while sharing structural infrastructure. Light frame elements provide enclosure and are quickly deployed. Nearby parks can share common elements according to use schedules.

A second proposal for transforming open space uses movable partitions. Light plastic/steel constructions slide along fixed tracks in park surfaces. The translucent shells offer different readings based on position and time of day. Edge clips provide enclosure attachment points. Arts programming would adapt to the temperate seasonal use.

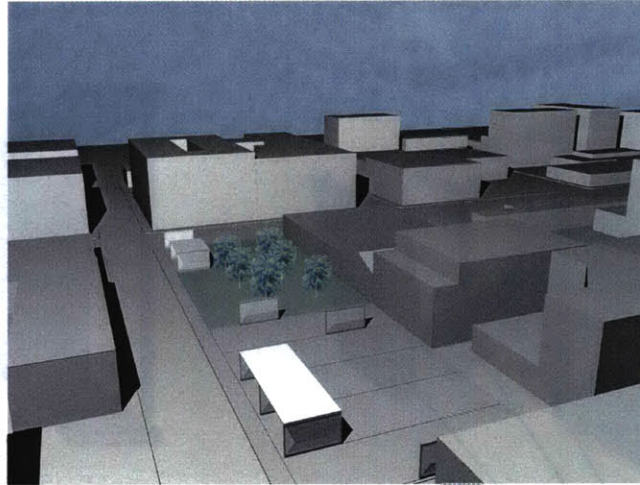
flexible market/skatepark



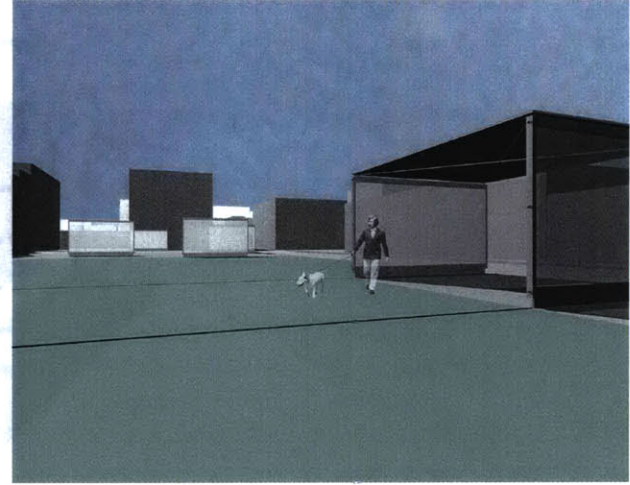
receptors and stands



variable panel deployment

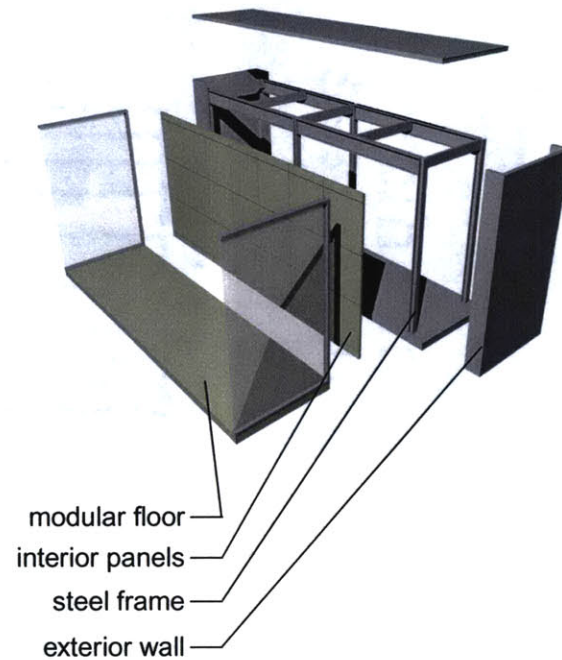


enclosure stand

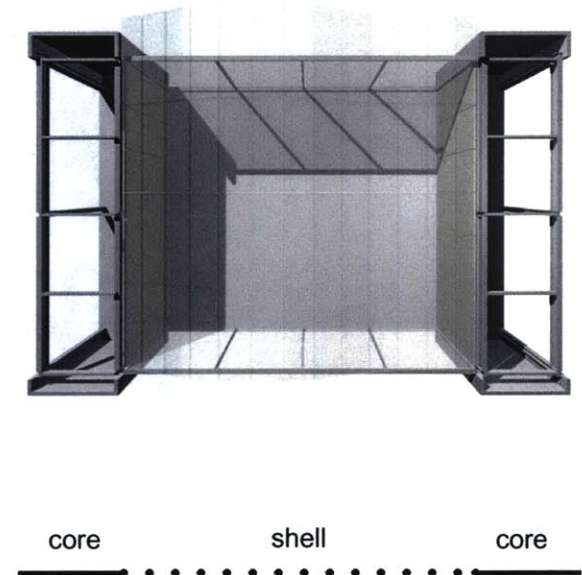


The **prototype assembly** offers another avenue for integration between park and recreation spaces. Light steel or wood frame construction offers quick erection time and response to many differing sites. This study looks at a prototype system with an infrastructure core and lightweight shell. Long spans allow for a large open space, while the work-a-day requirements are kept to a solid band. Modular panels provide for long-term expansions. Expansive glazing heightens the interaction between inside and outside.

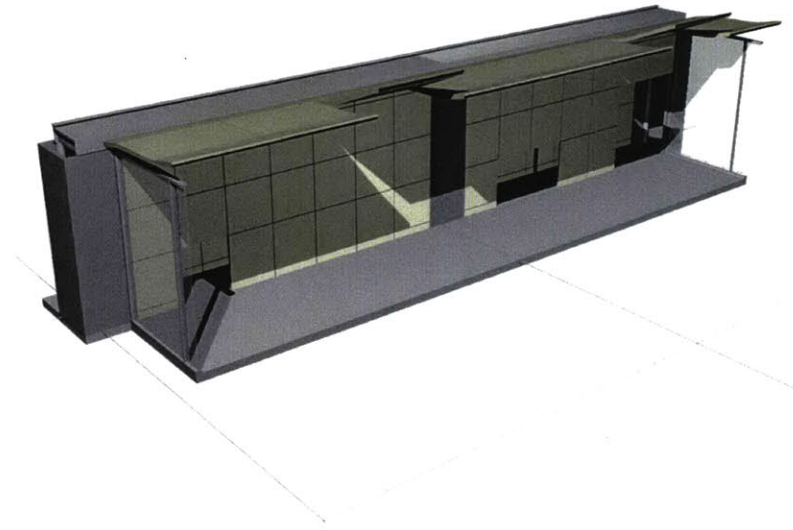
prototype exploded axonometric



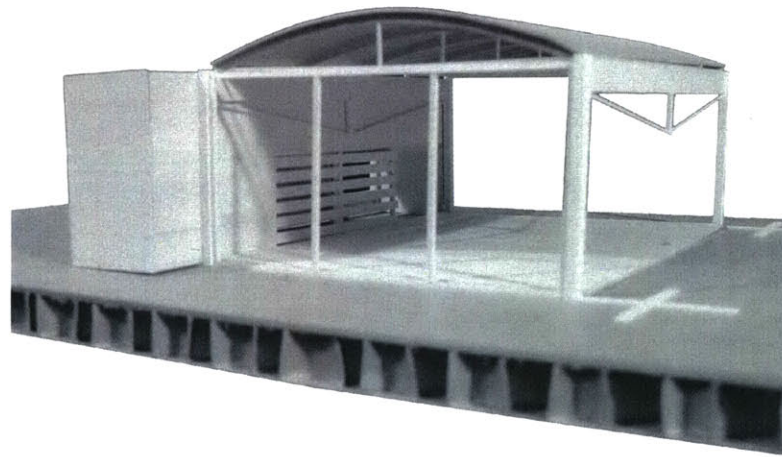
plan view



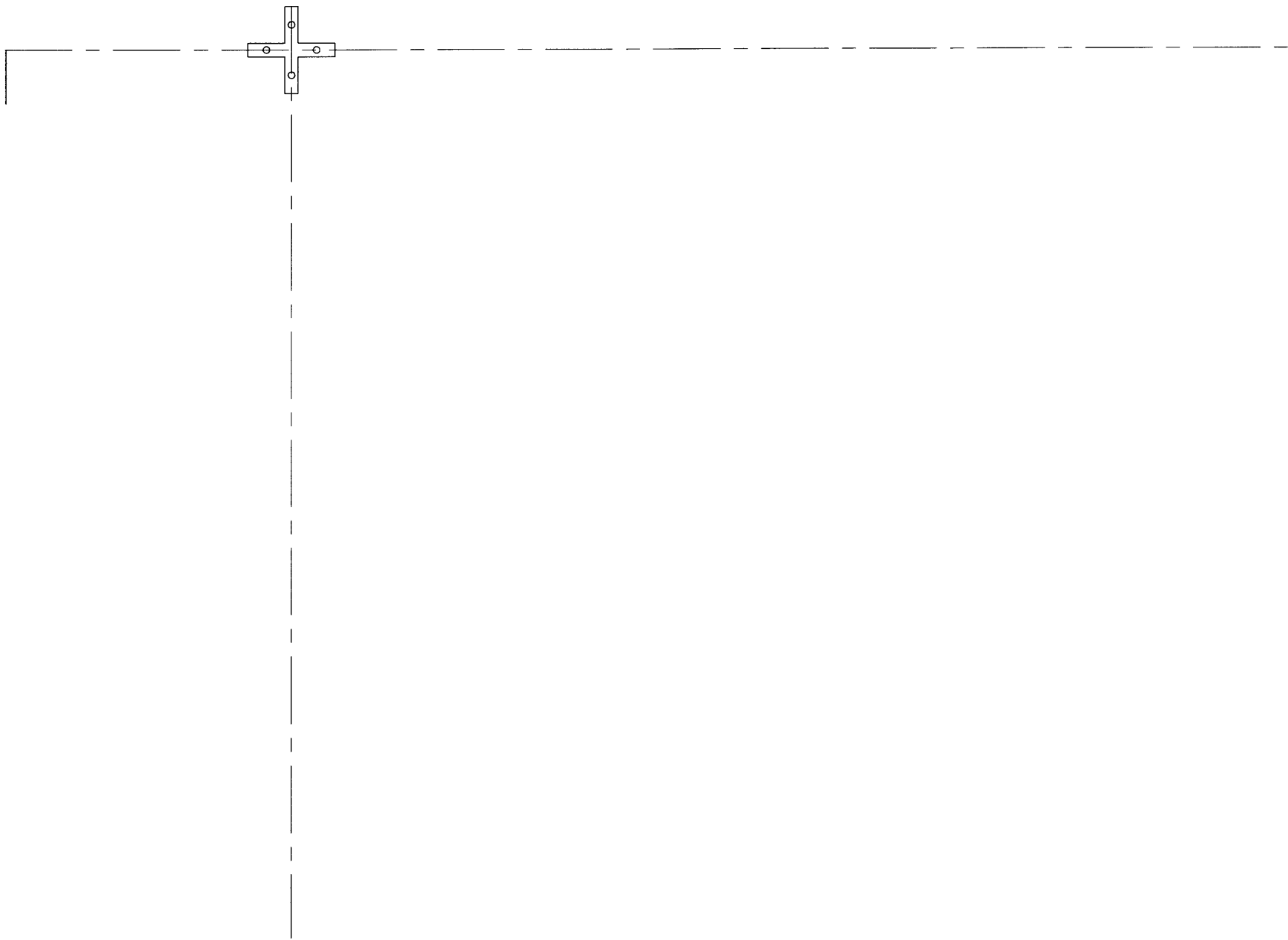
combined assembly model



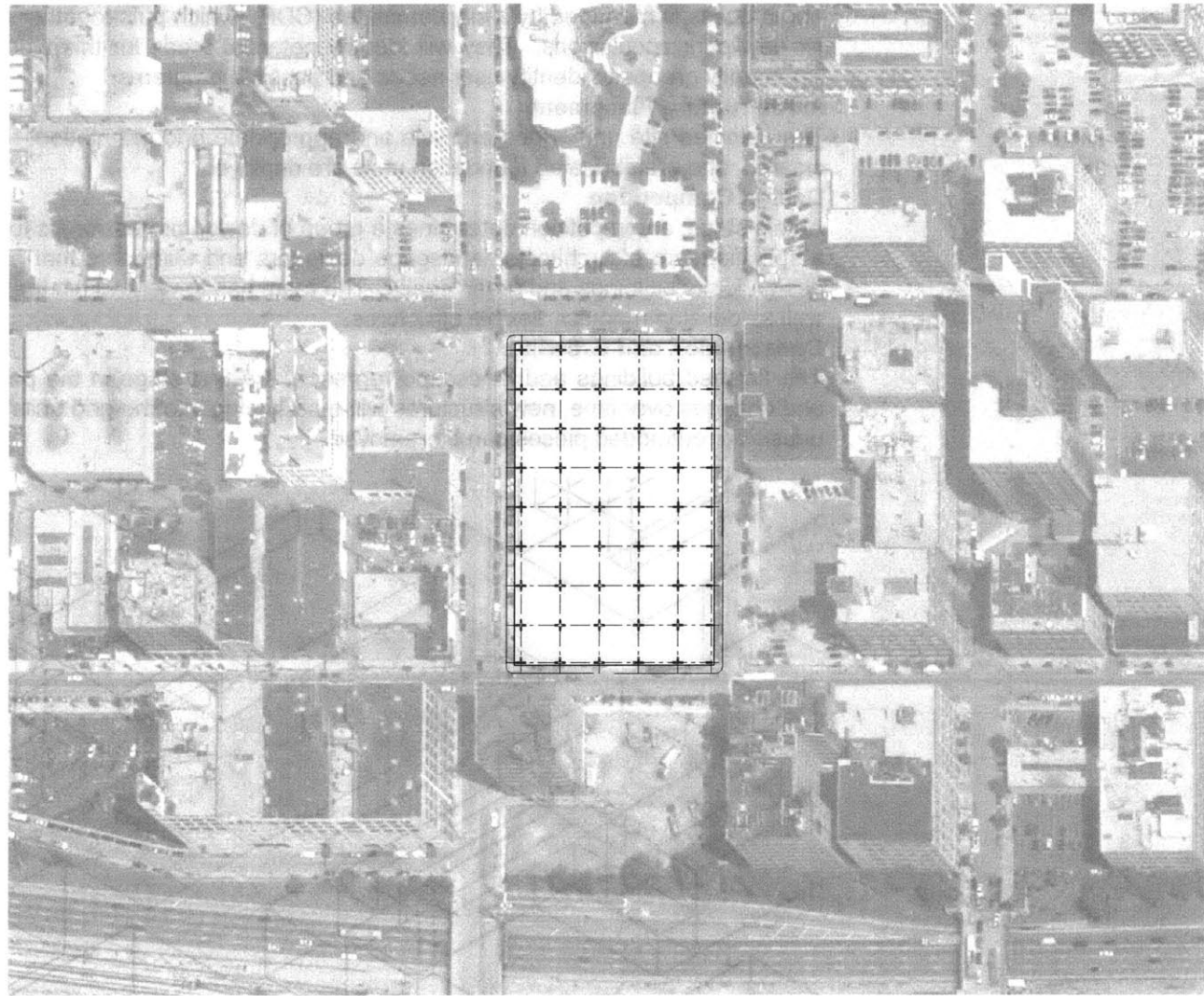
interior shell space



58



park development
hybridizing the landscape



Below: Site 2 grid and concrete cross placement responding to context.

Park Development Framework

The implementation of this proposal takes on a systematic approach. It differs from current park development because it sets up an initial framework that accommodates transition over the lifetime of the green space. The progression includes four major steps.

Site Selection

The process is managed by a city committee (CDP), which puts together a series of guidelines and standards for new park acquisitions. They will identify potential areas for this typology and work closely with specific community groups to identify user needs and possible programs.

Infrastructure Placement

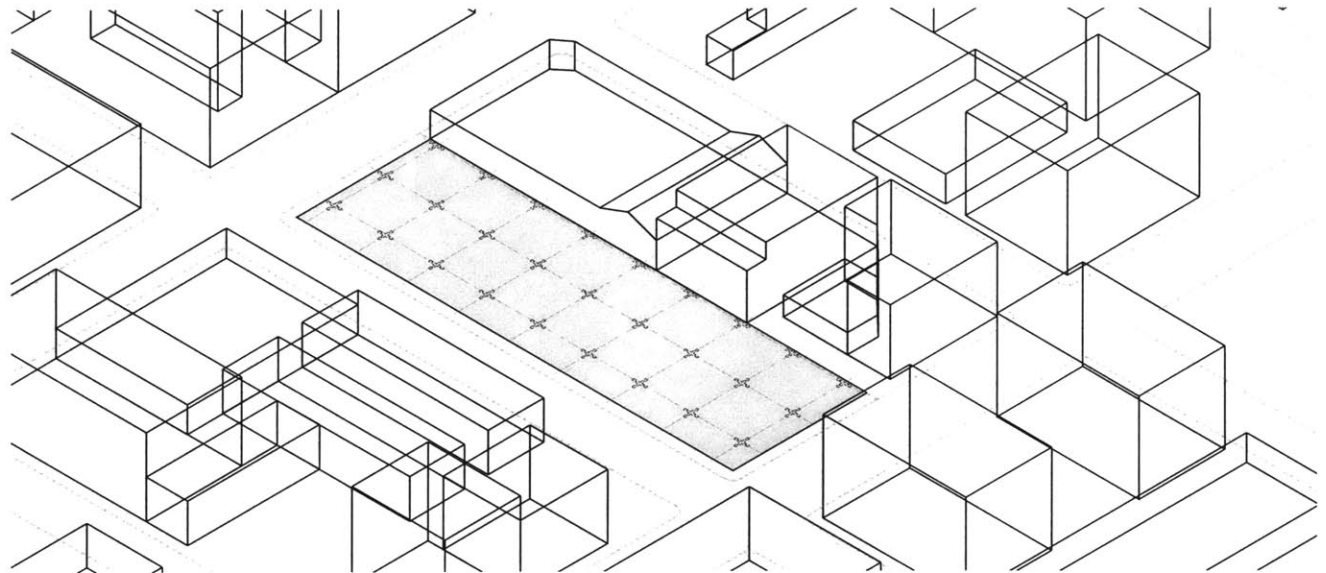
The selected site undergoes analysis and appropriate grid orientation. Next, the existing ground surface is cleared, and prefabricated foundation units are deployed.

Design Competition

At this stage, a competition determines a group of design professionals to work on the project. Each park has a specific team of architects, landscape designers and engineers that produce an individual and contextual design for its buildings and green space. The team has to work within the framework of the foundation grid, as well as develop modular, flexible structures.

Construction and Growth

The finished buildings and landscape represent the first stage in the park's life. As the community evolves and changes over time, new structures will quickly plug into the grid units to meet contemporary needs. Also, unused or outmoded pieces can be removed.



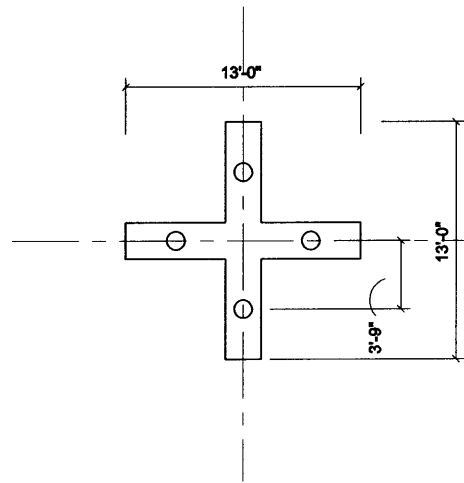
Foundation Cross

The foundation piece is the fundamental component of the design. This two-foot thick, precast concrete cross allows for the integration of a structural steel assembly. This is fixed to a baseplate on the top face. The concrete member is fitted with four hollow cores that accept infrastructure components. Complex jobsite formwork is not needed because the piece is fabricated offsite and shipped to project locations by truck.

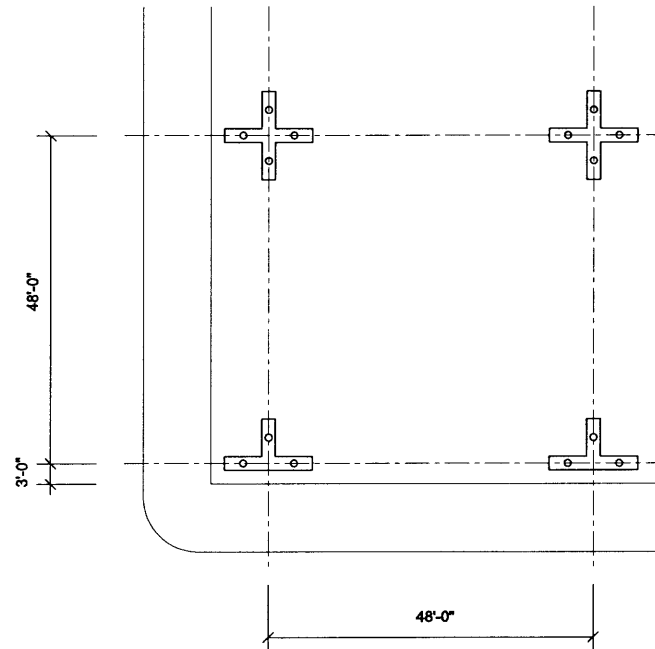
61

The standard thirteen foot length accommodates an interior service space spanning between the edges. This area is supplied by the foundation's electric and plumbing feeds. The cross-shape promotes spanning flexibility in either X or Y directions. Forty-eight foot grid-to-grid dimensions are employed due to the compatibility with a regulation high-school basketball court. The grid and cross shapes are not static and each site's configuration determines the end conditions and overall layout. Initial planning determines the need for custom pieces.

concrete "cross" dimensions



grid configuration



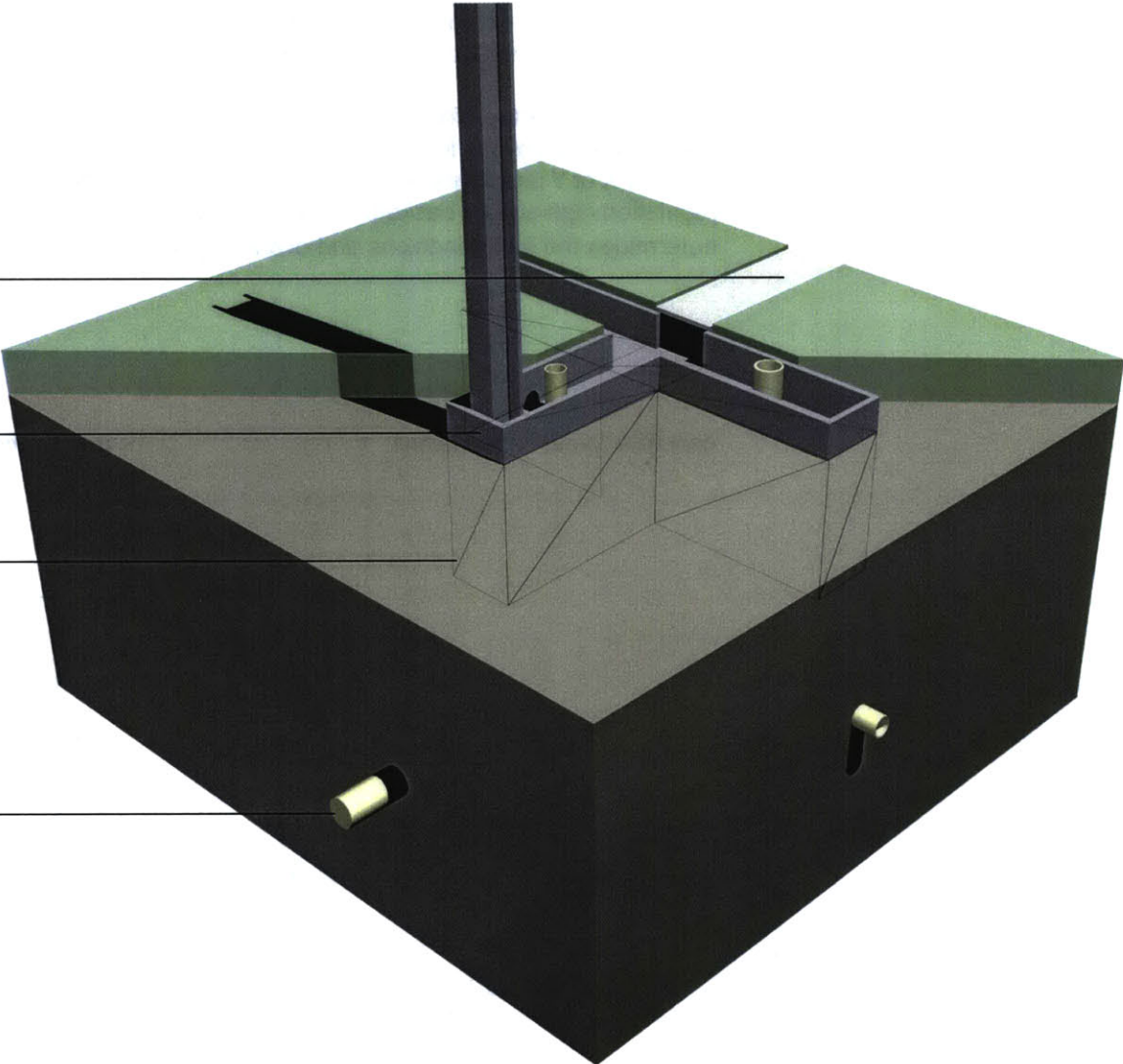
precast plug + play component

metal cover fascia plate attached to waterproof membrane

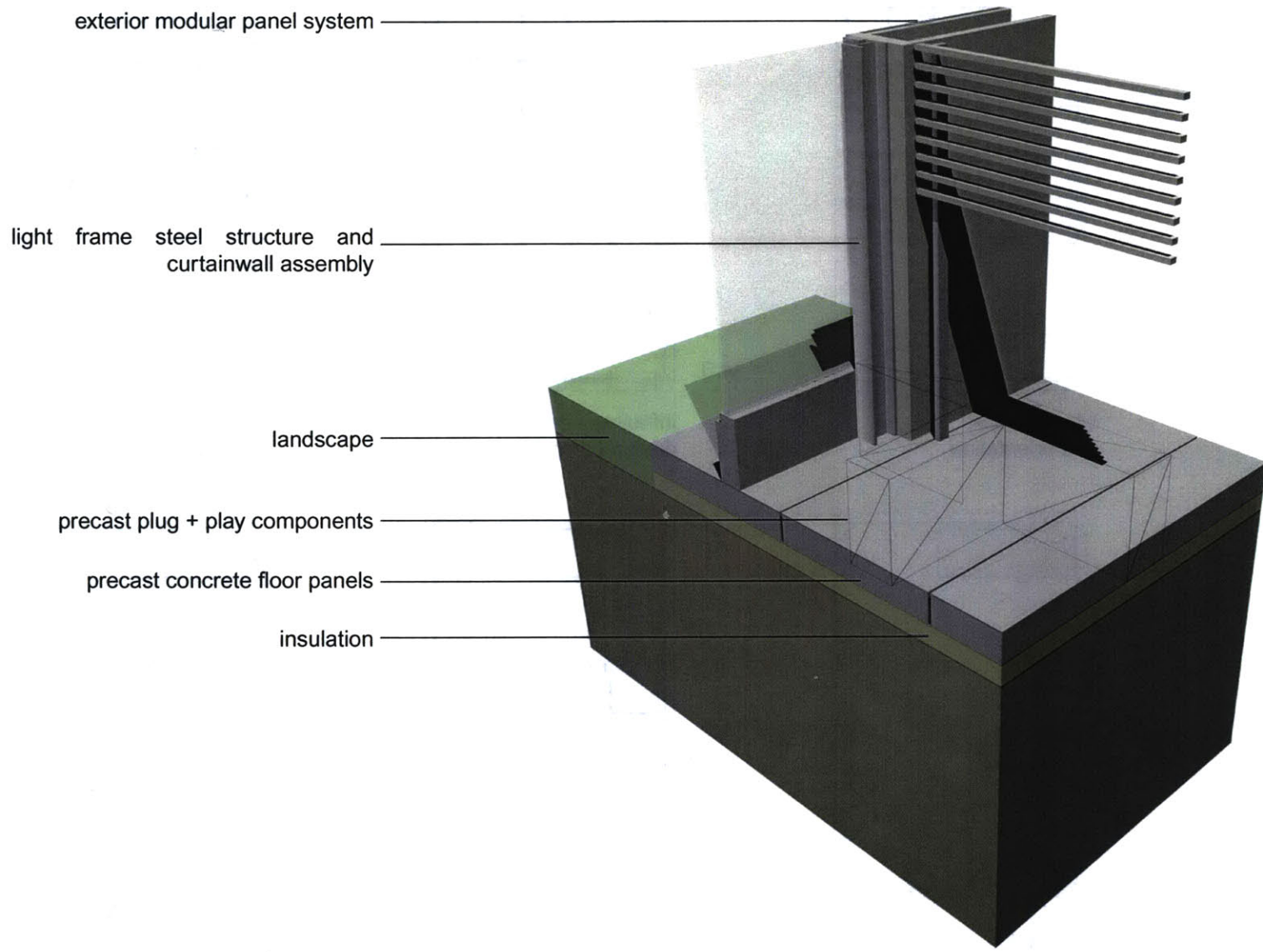
bolted steel frame connection for quick construction

premanufactured concrete foundation "cross" with holes for services, set 42" below ground level

integrated electrical and conduit lines with protective cover, sleeved through precast

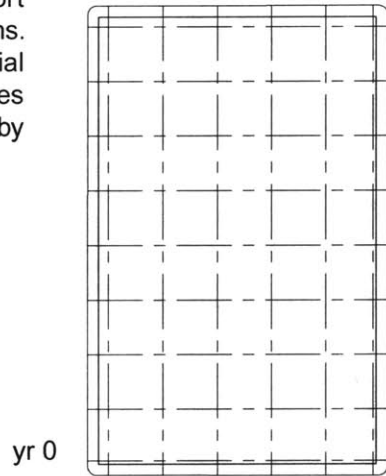


prototype wall detail



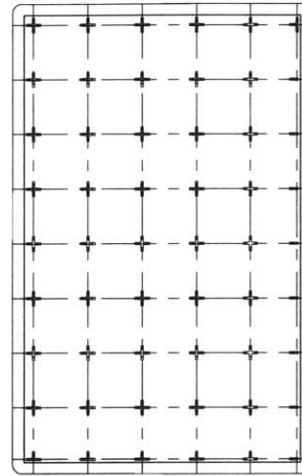
At Site 1, the large open space and heavy pedestrian traffic patterns yield sport and recreation solutions. The proximity to residential buildings and UIC promotes everyday programs needed by the community.

site 1 development and change



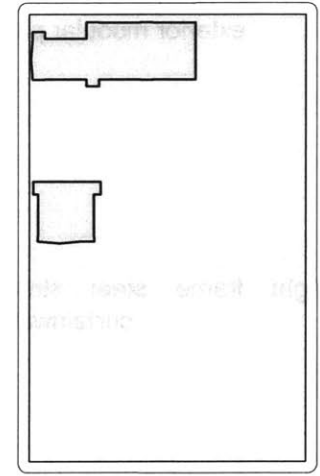
yr 0

site selection
grid orientation



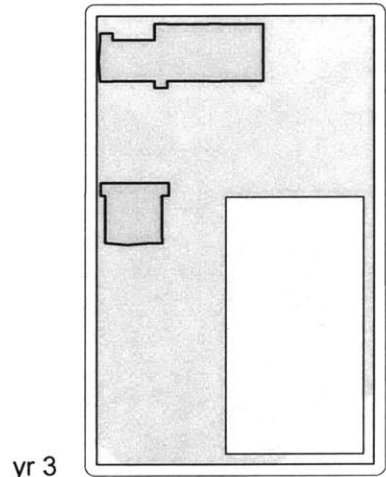
yr 0

infrastructure placement
design competition



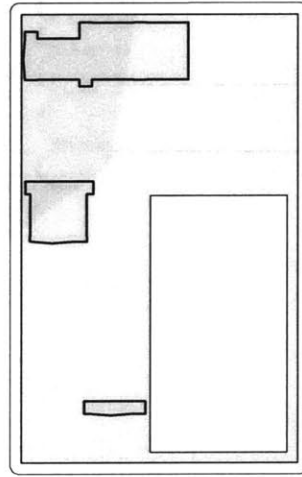
yr 1

day care center
laundromat
landscape development



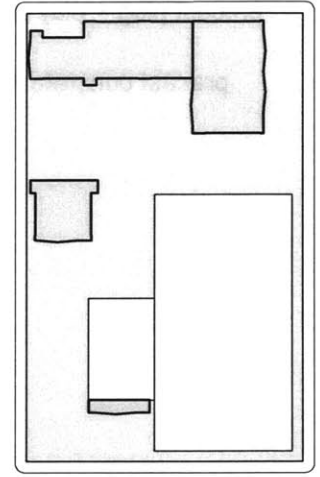
yr 3

sport fields



yr 8

sport equipment rental

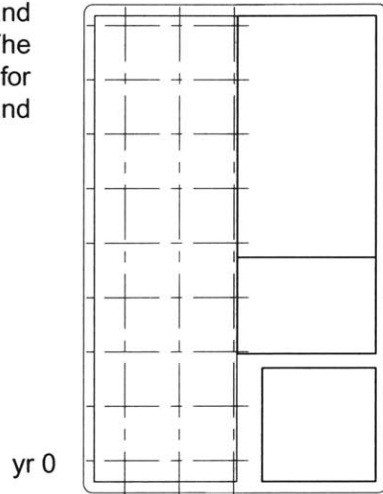


yr 15

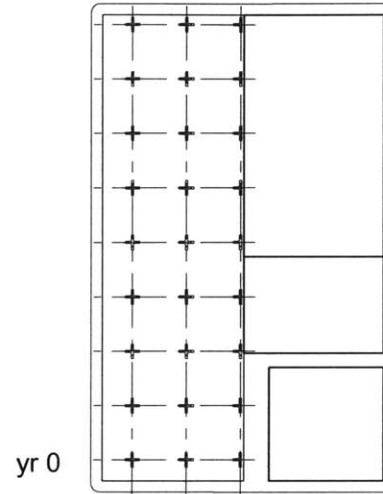
gymnasium
skatepark / ice rink

At Site 2, the nearby galleries and restaurant district yields opportunities for arts and entertainment programs. The narrow strip also allows for temporary gatherings and events.

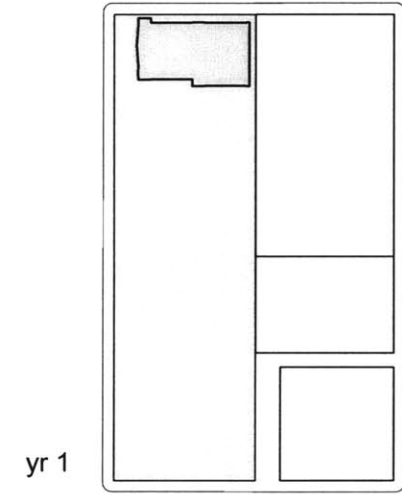
site 2 development and change



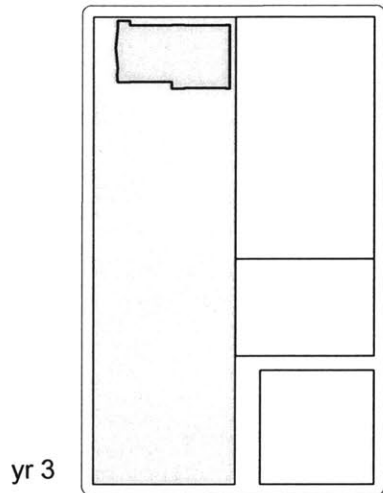
site selection
grid orientation



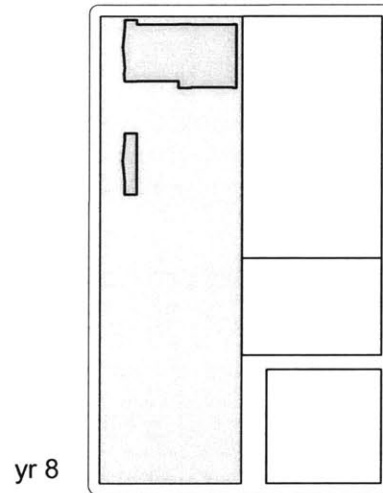
infrastructure placement
design competition



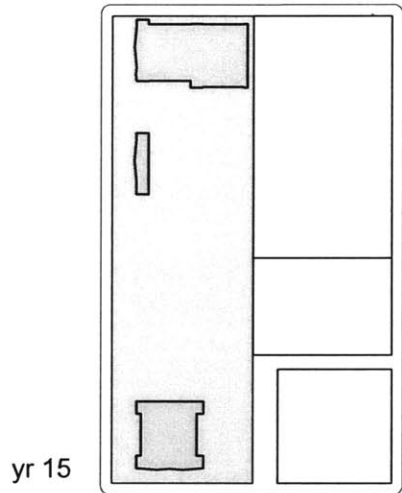
arts coop / cafe
landscape development



summer movies
temporary outdoor exhibits

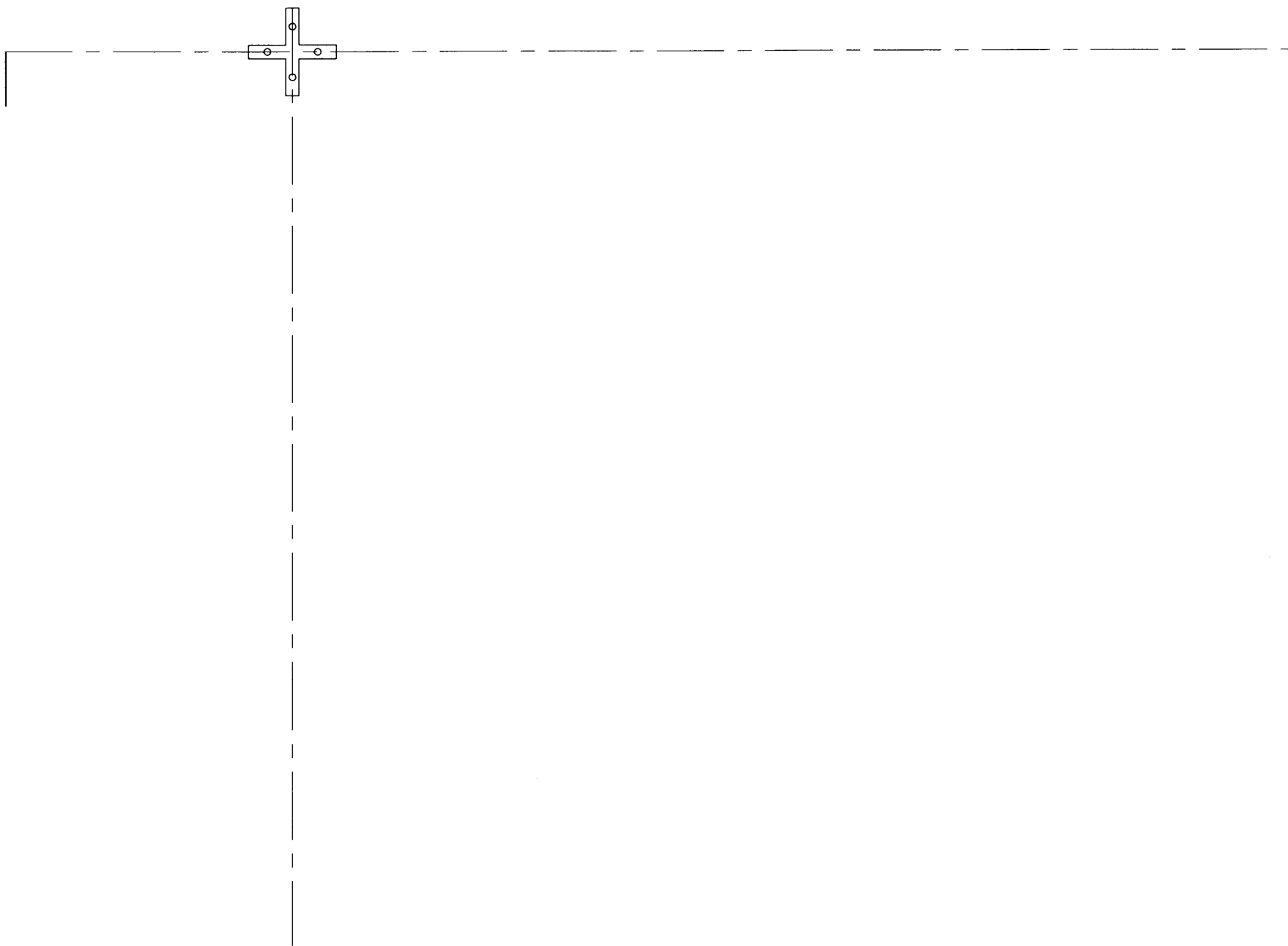


galley



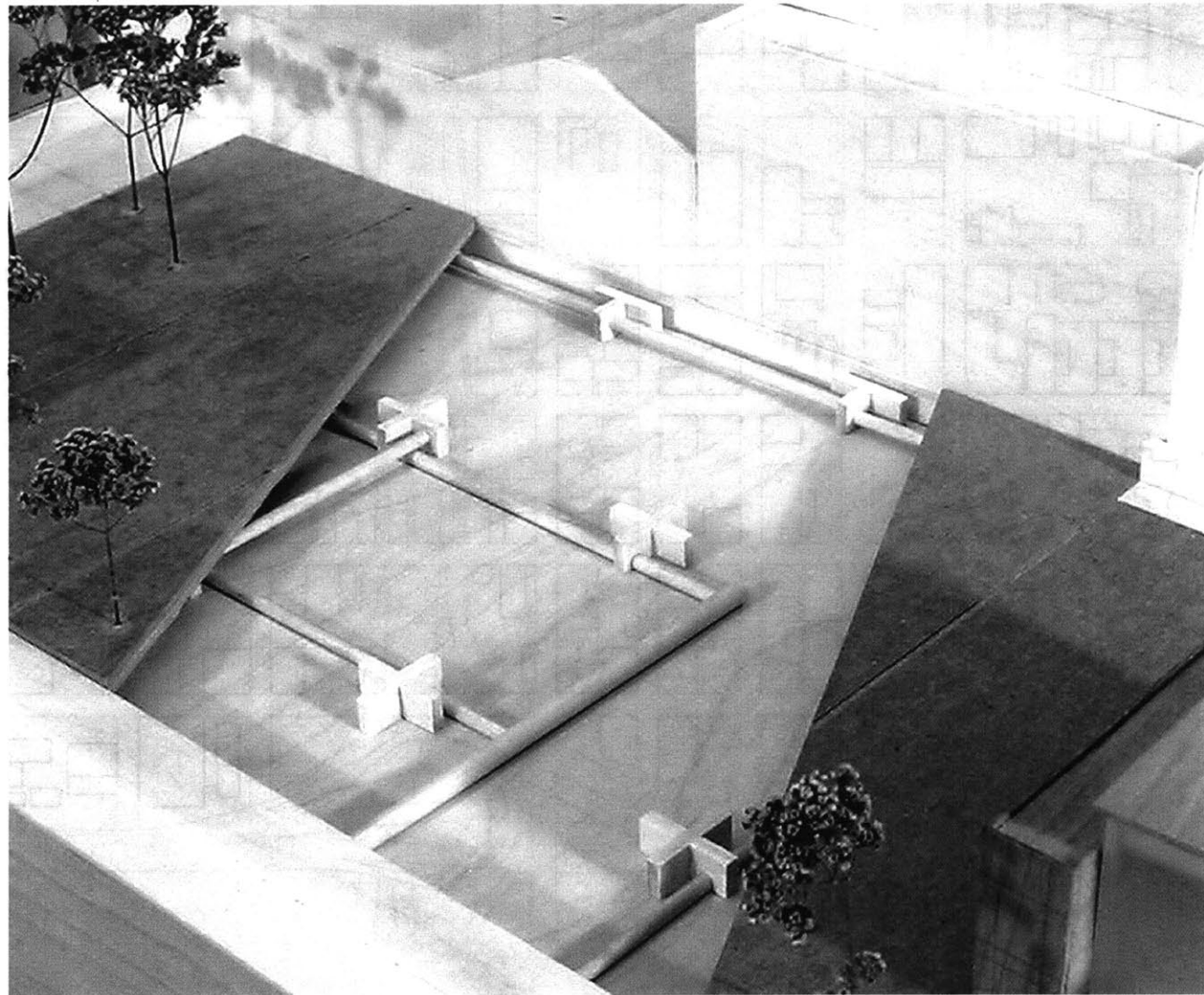
performance / club

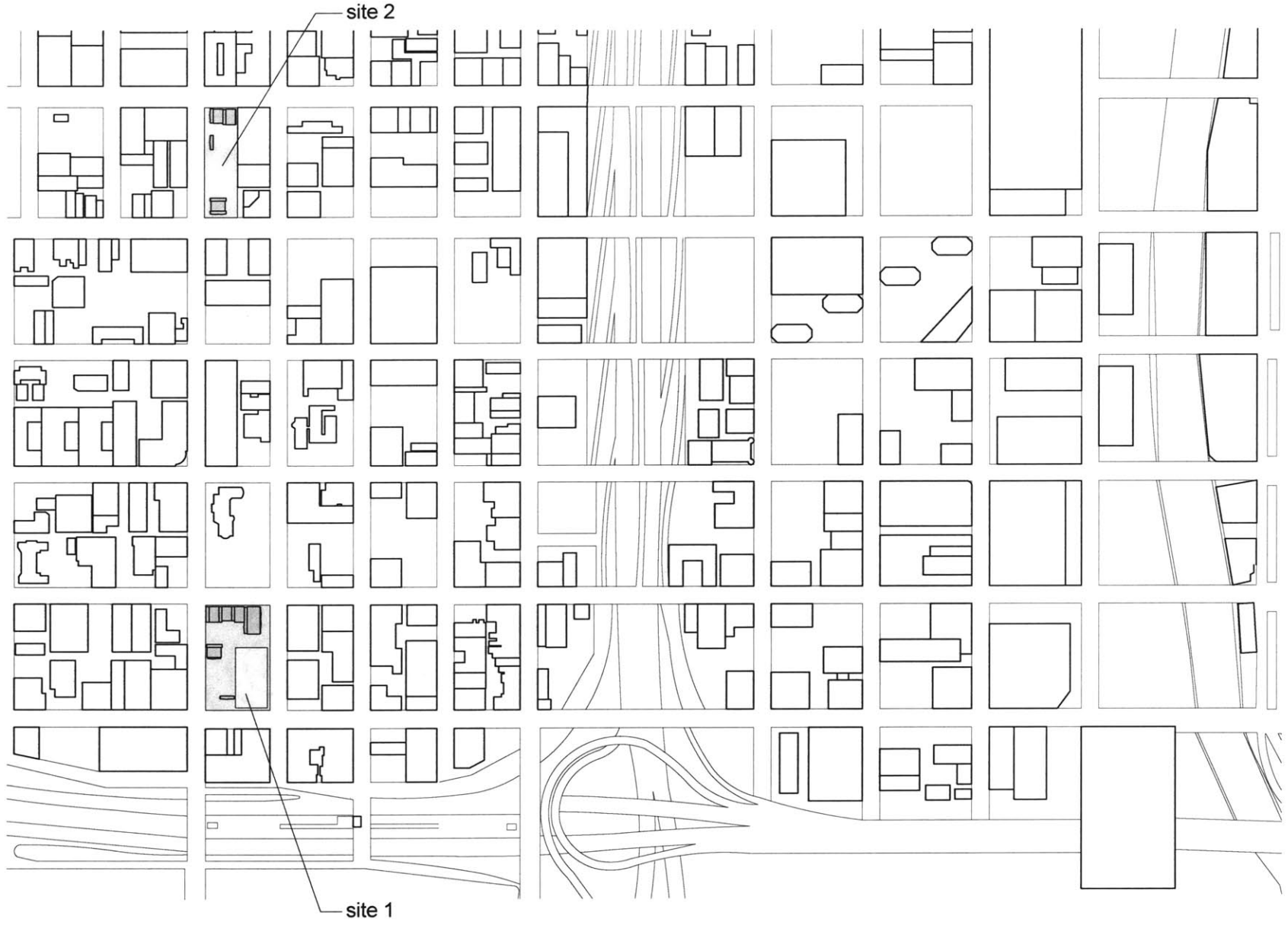
66



architecture proposals
hybridizing the building

67





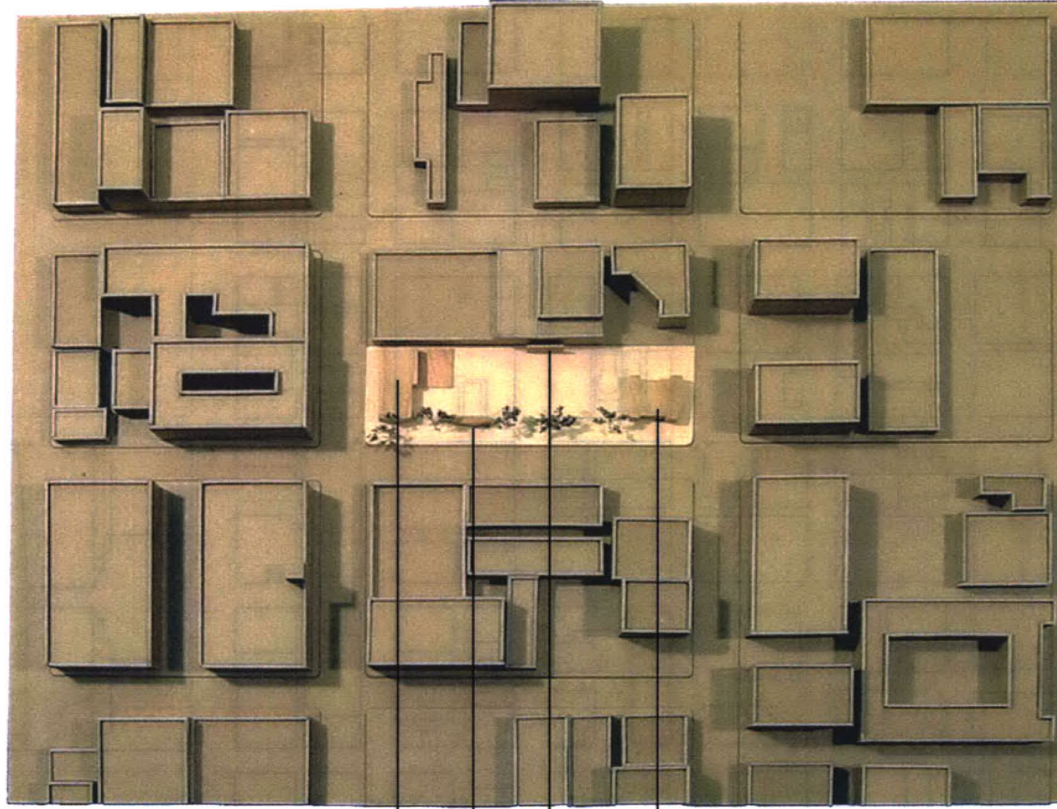


sears tower

grant park

chicago loop plan

0' 125' 375' 750'



arts coop / cafe

gallery

outdoor movie screen
& temporary exhibits

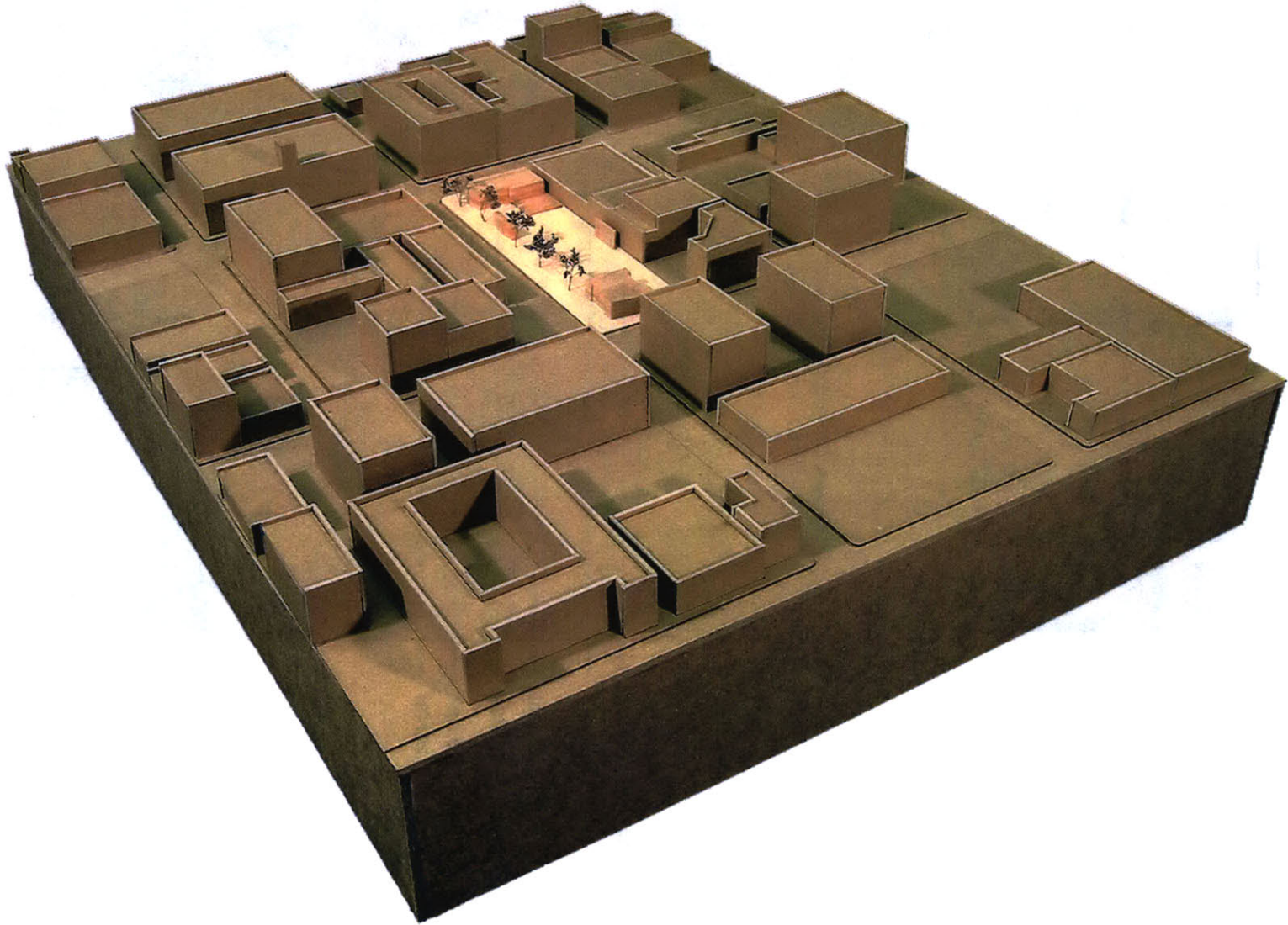
performance venue / club

1/64" model - site 2

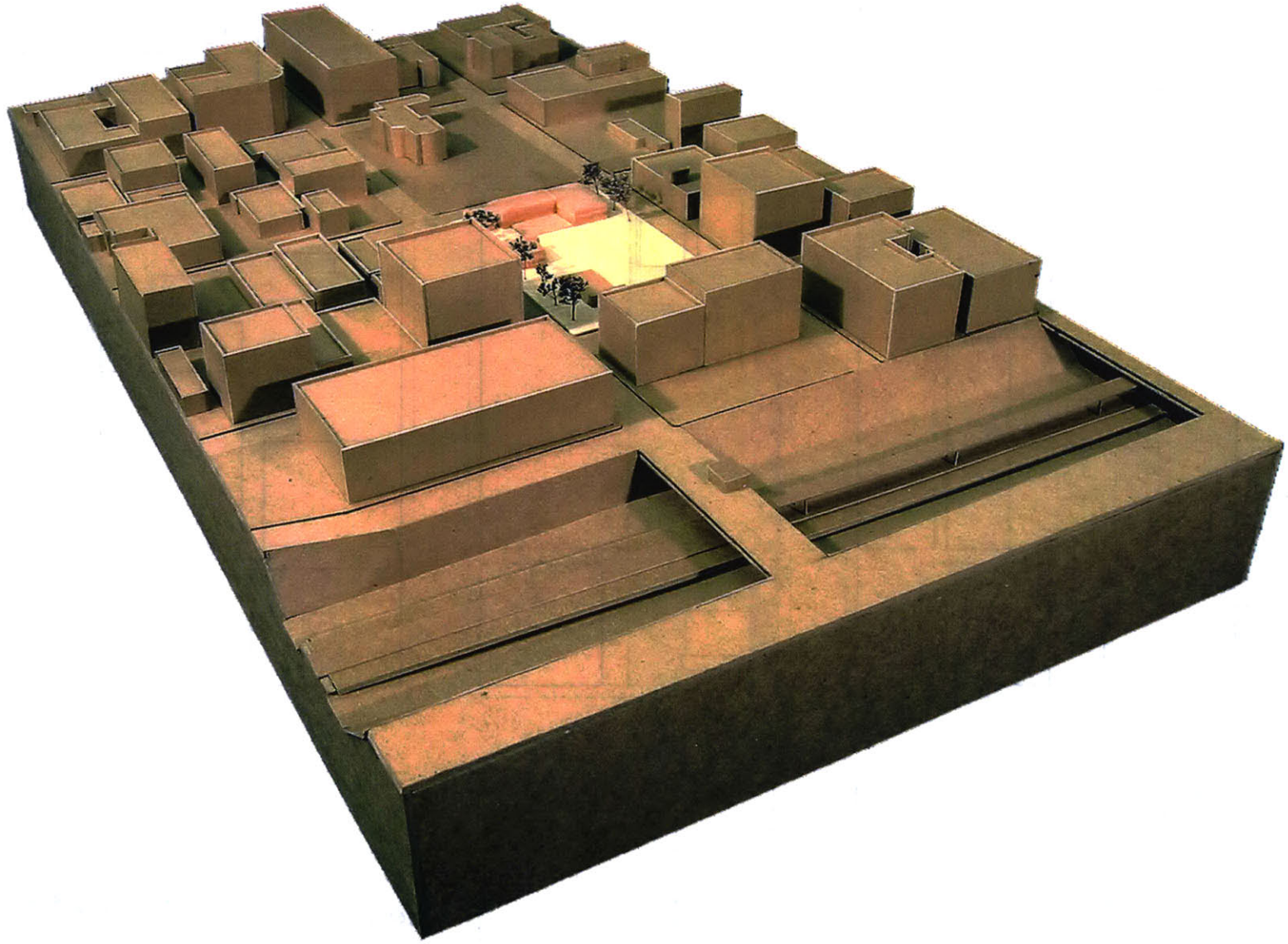
1/64" model - site 1



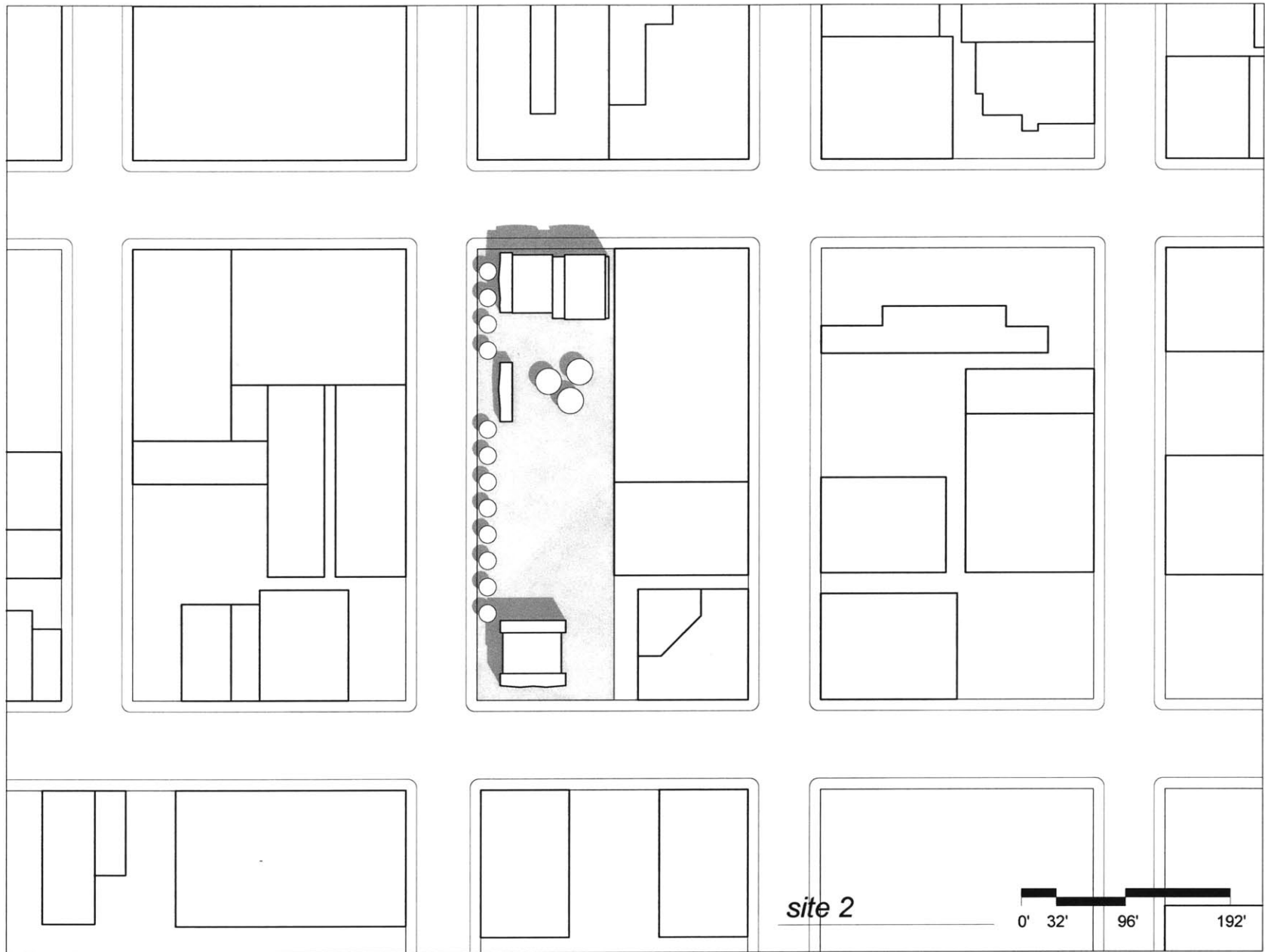
- day care center
- gymnasium
- laundromat
- sport fields
- skate park / ice rink
- sport equipment rental

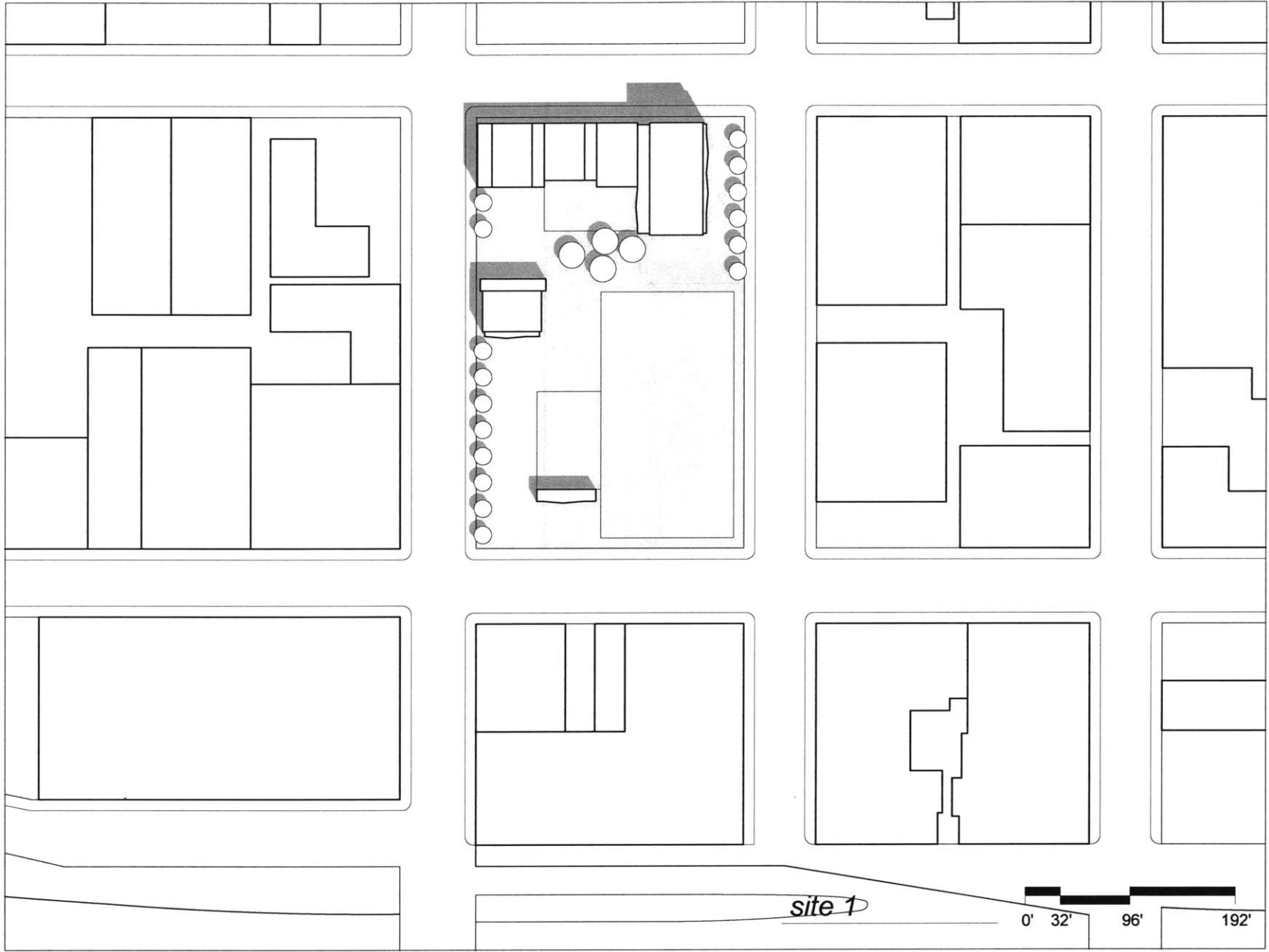


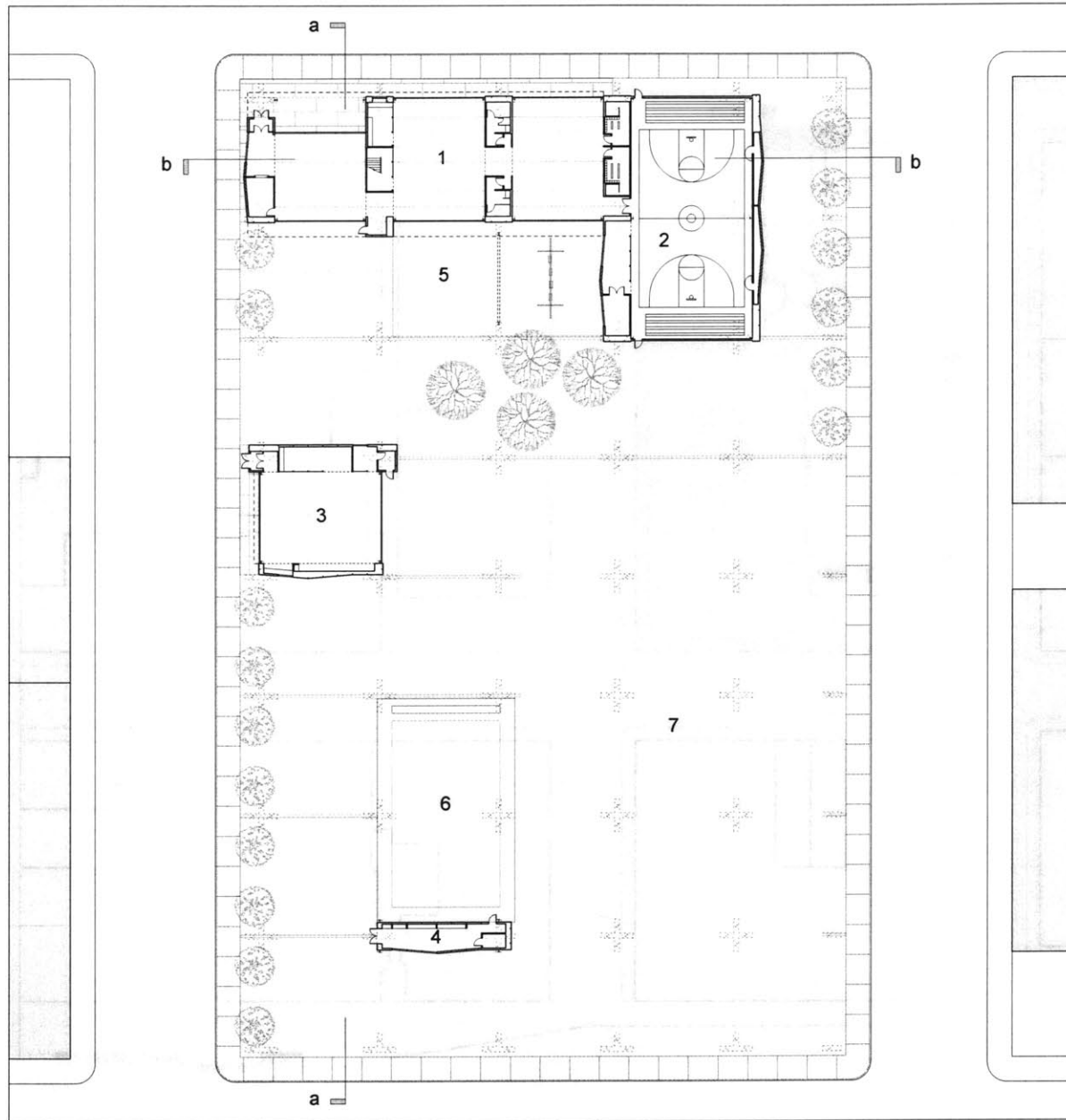
site 2 - aerial looking northeast



site 1 - aerial looking northeast

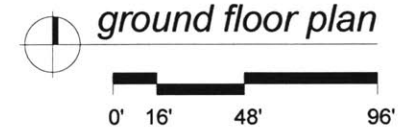






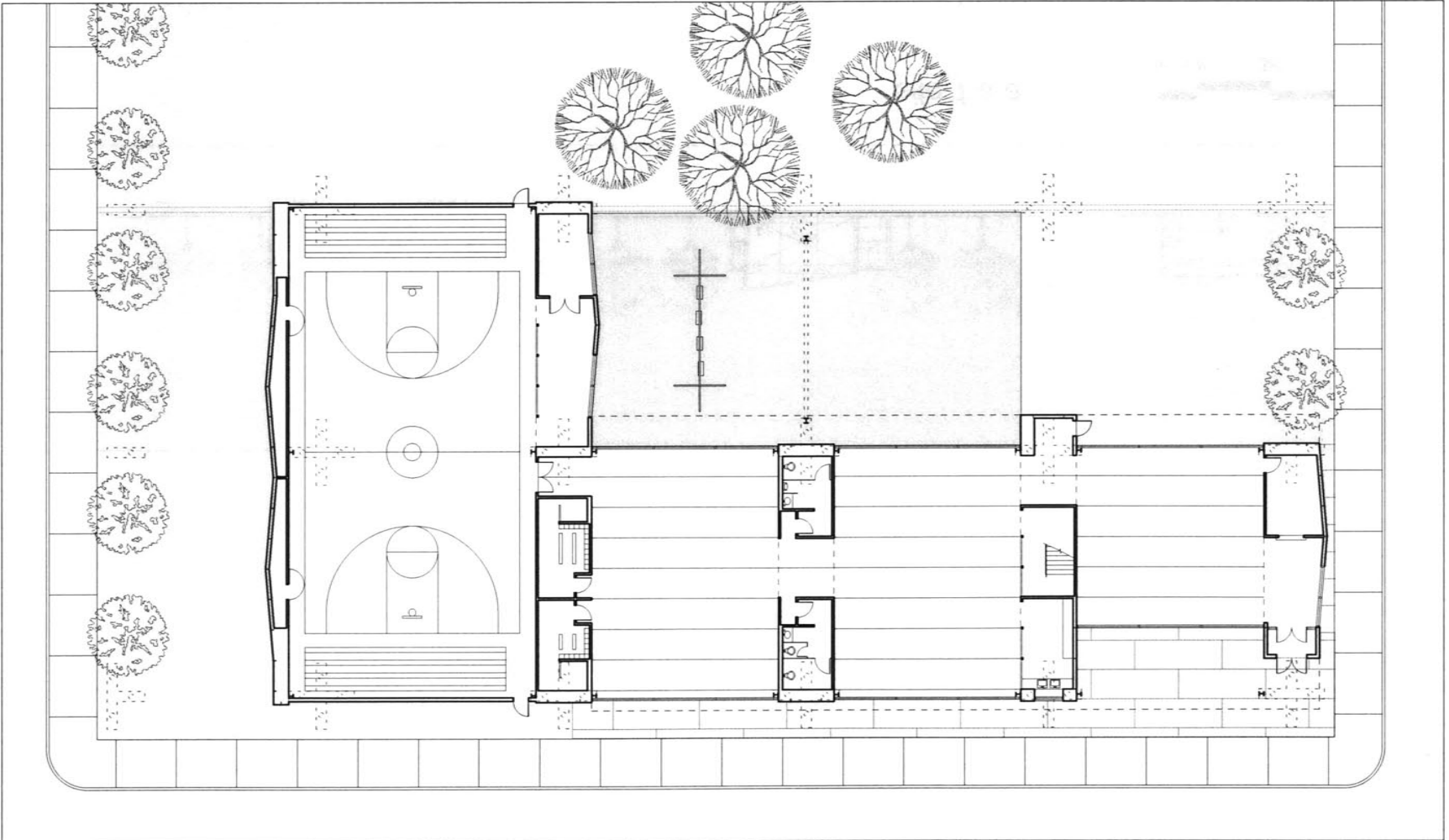
site 1 key

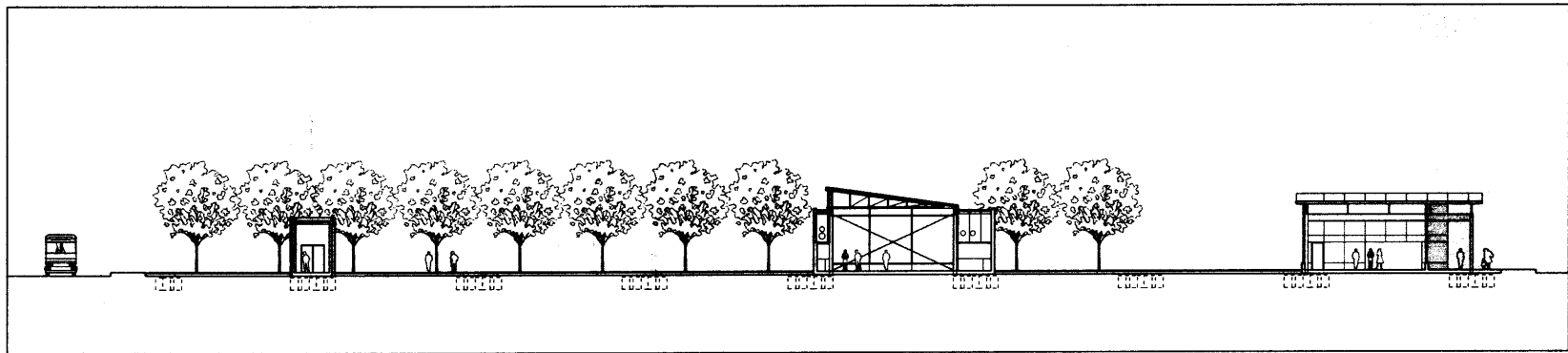
- 1. day care center
- 2. gymnasium
- 3. laundromat
- 4. sport and equipment rental
- 5. playground
- 6. skatepark / ice rink
- 7. sport field



0' 8" 24' 48'

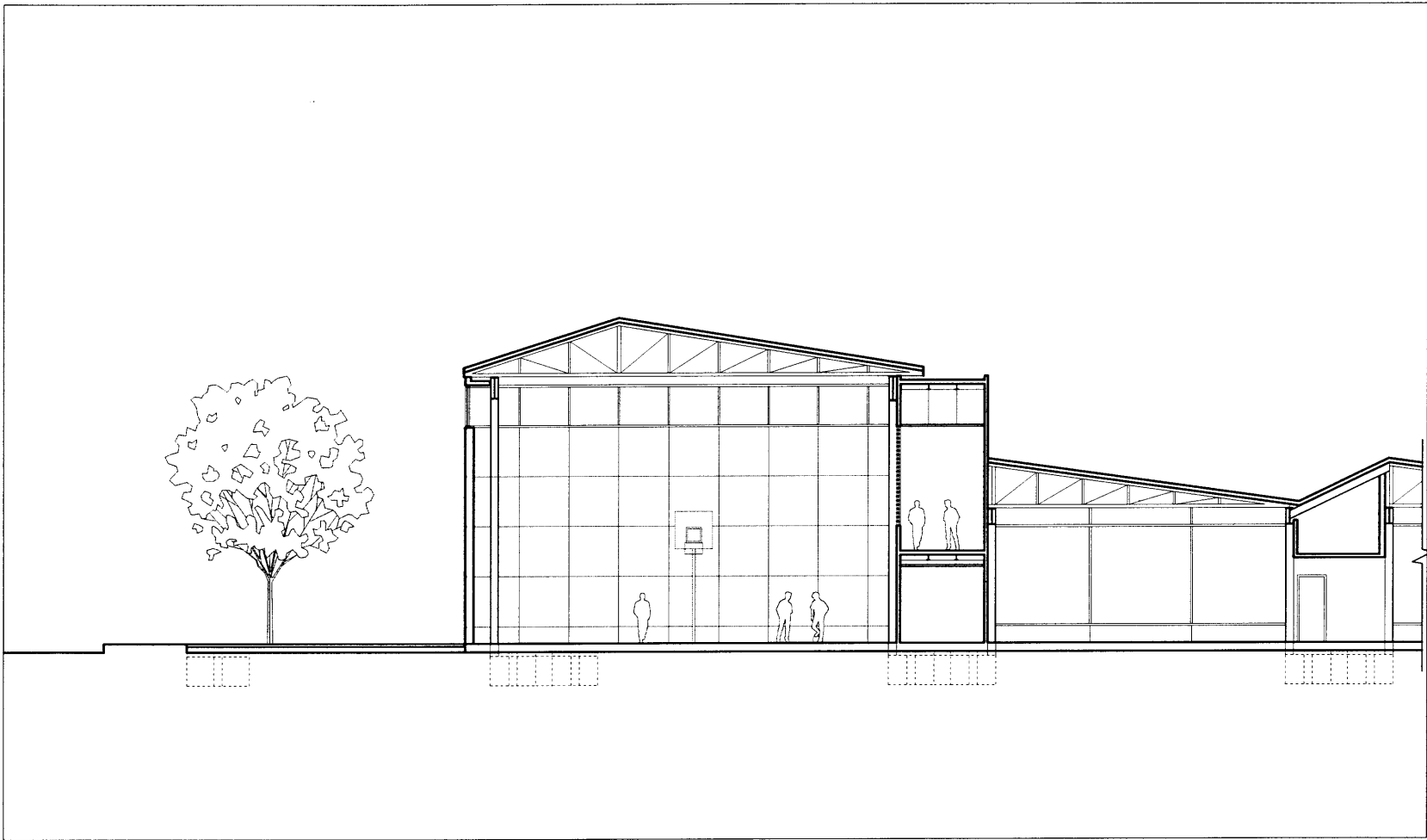
day care/gym plan





site 1 a,a



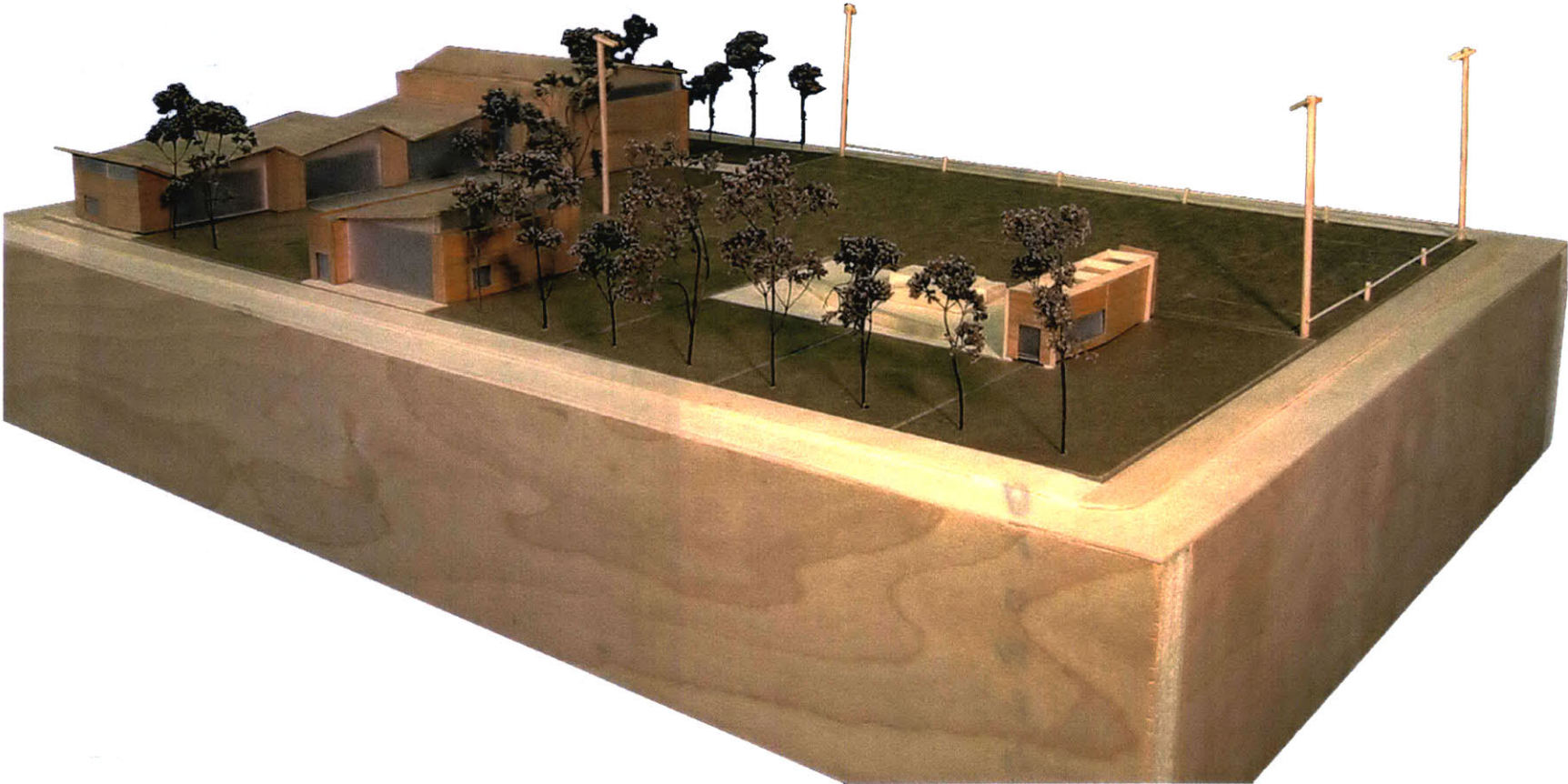


site 1 b,b





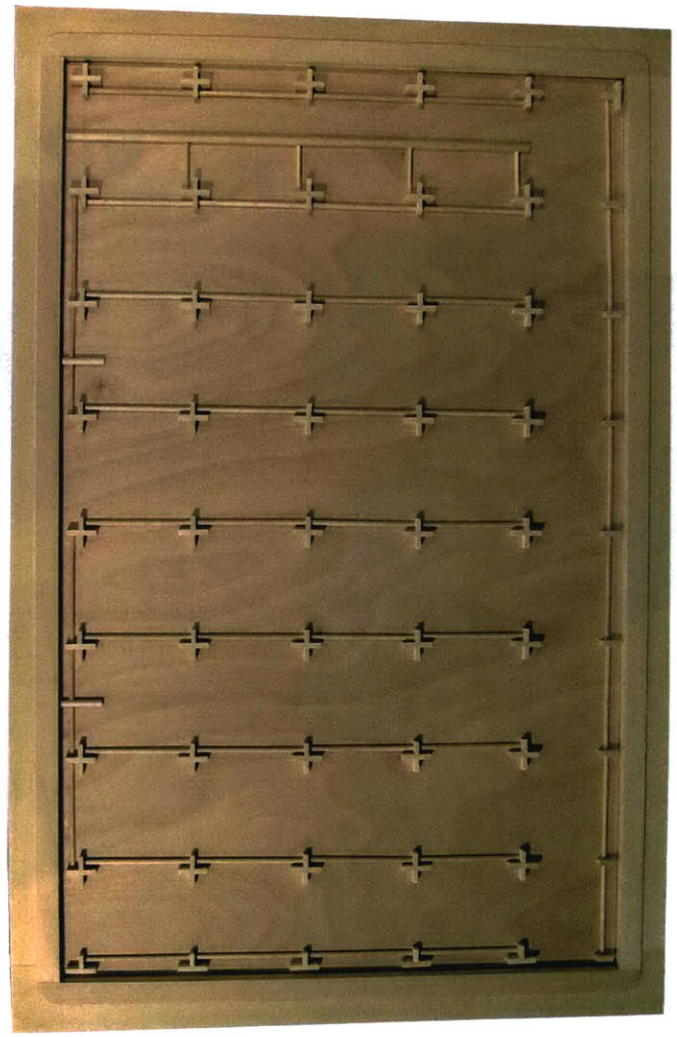
site 1 - aerial



82 right: transformation of site
1 architecture and landscape
over 15 year period. Buildings
adapt to site through sunken
infrastructure.

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yr 0



yr 1



yr 3



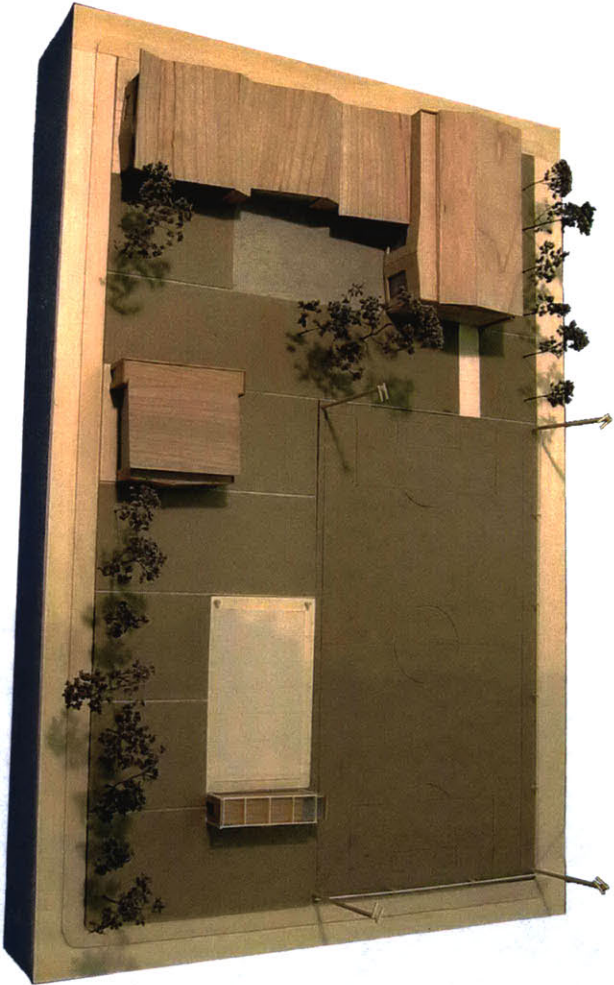
yr 5



yr 8



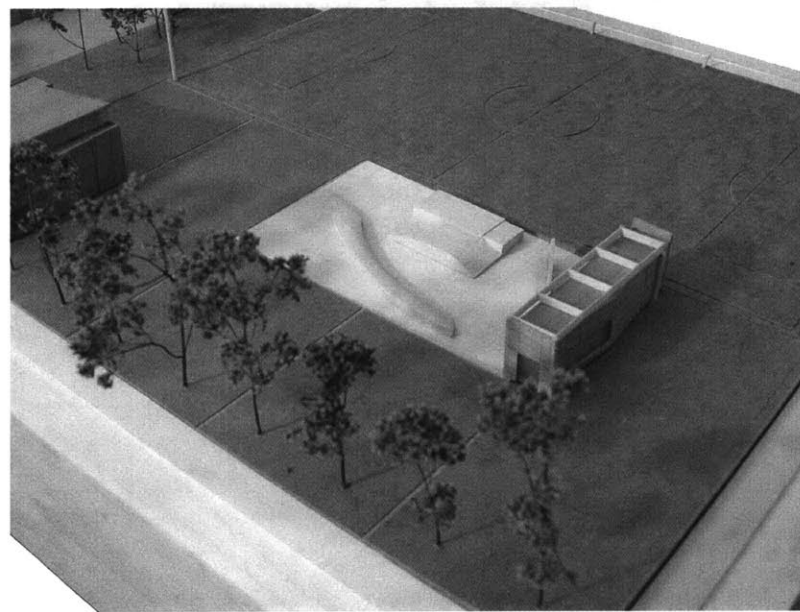
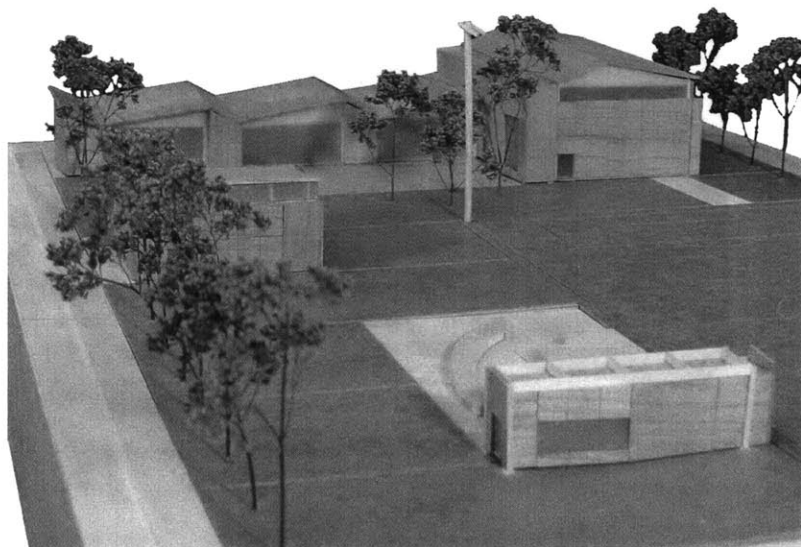
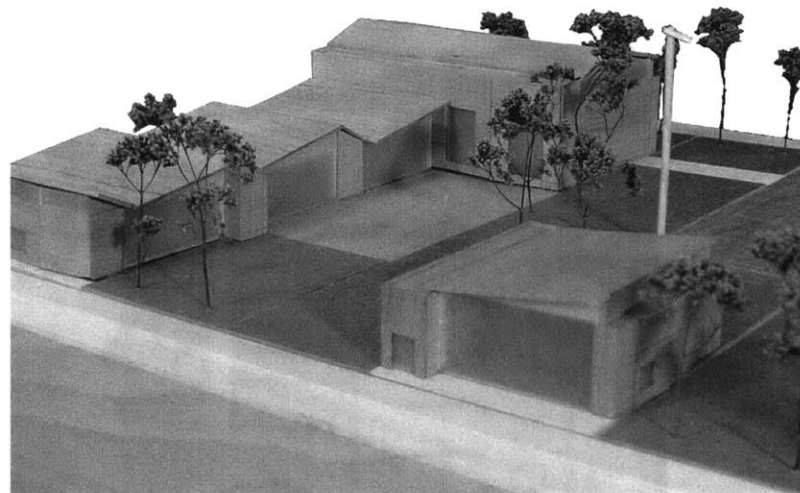
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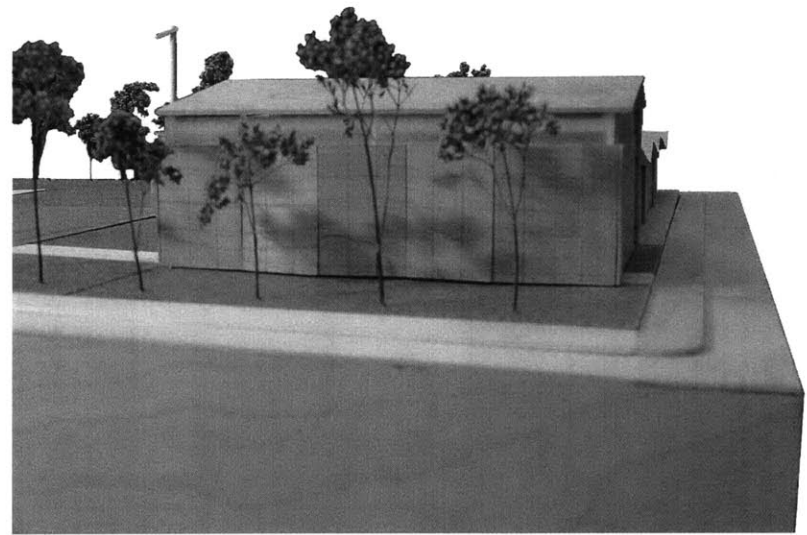
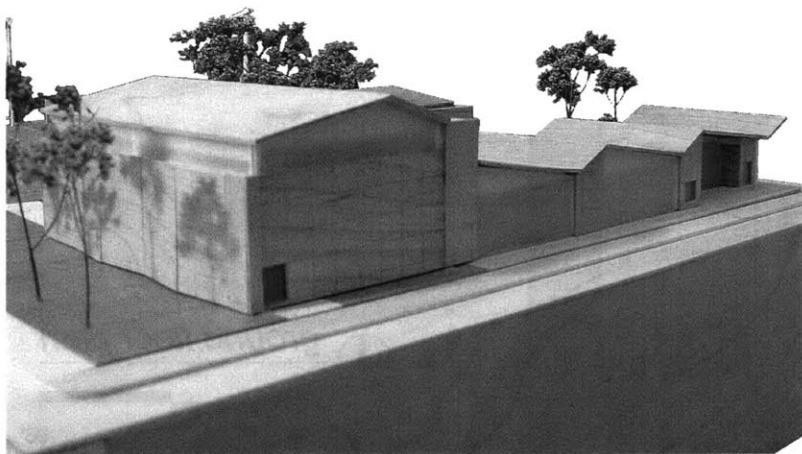
yr 15

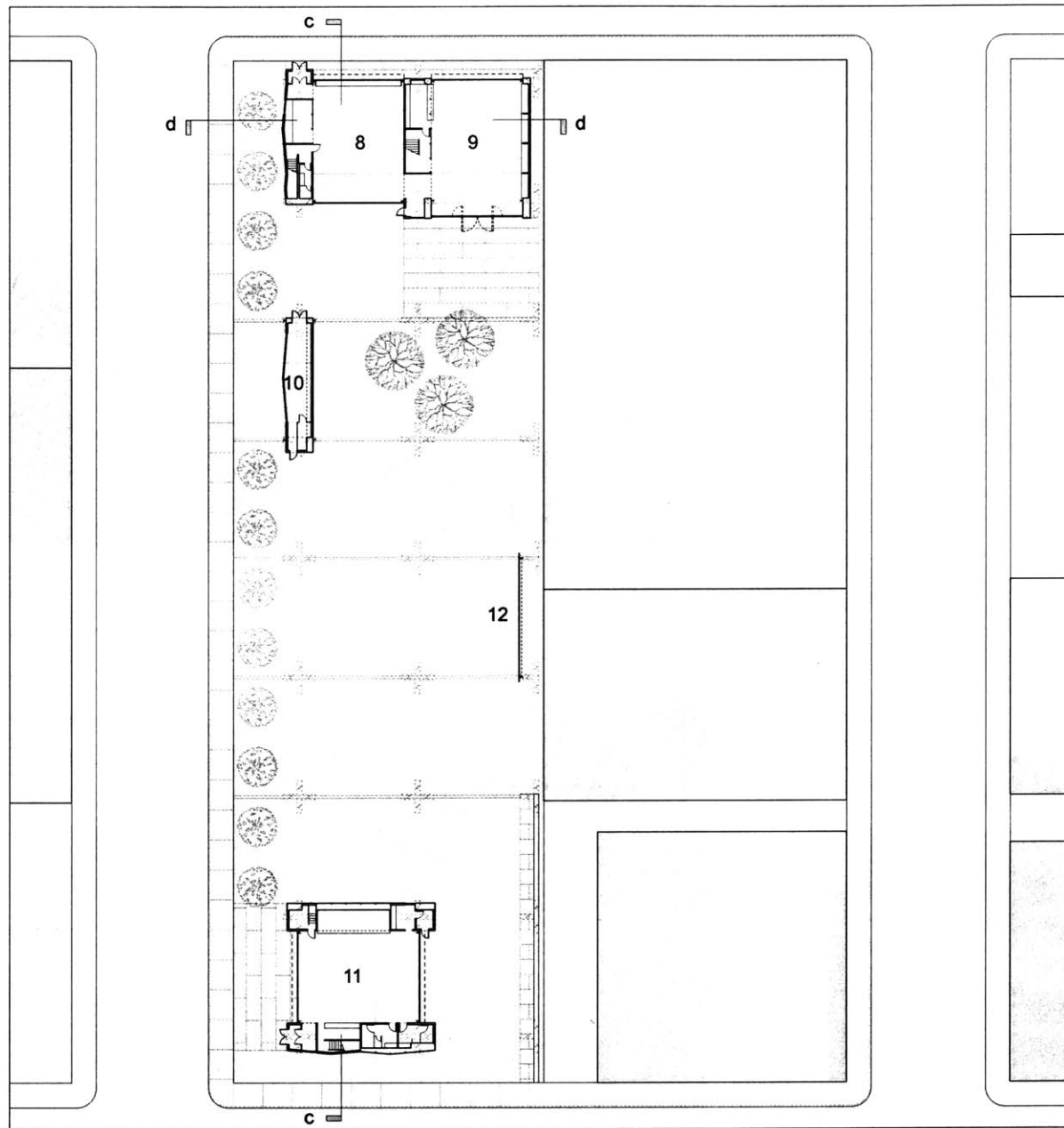
right: Aerial views of site 1 recreation zones.

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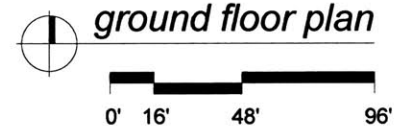
right: Aerial views of site 1 day care center and gym.



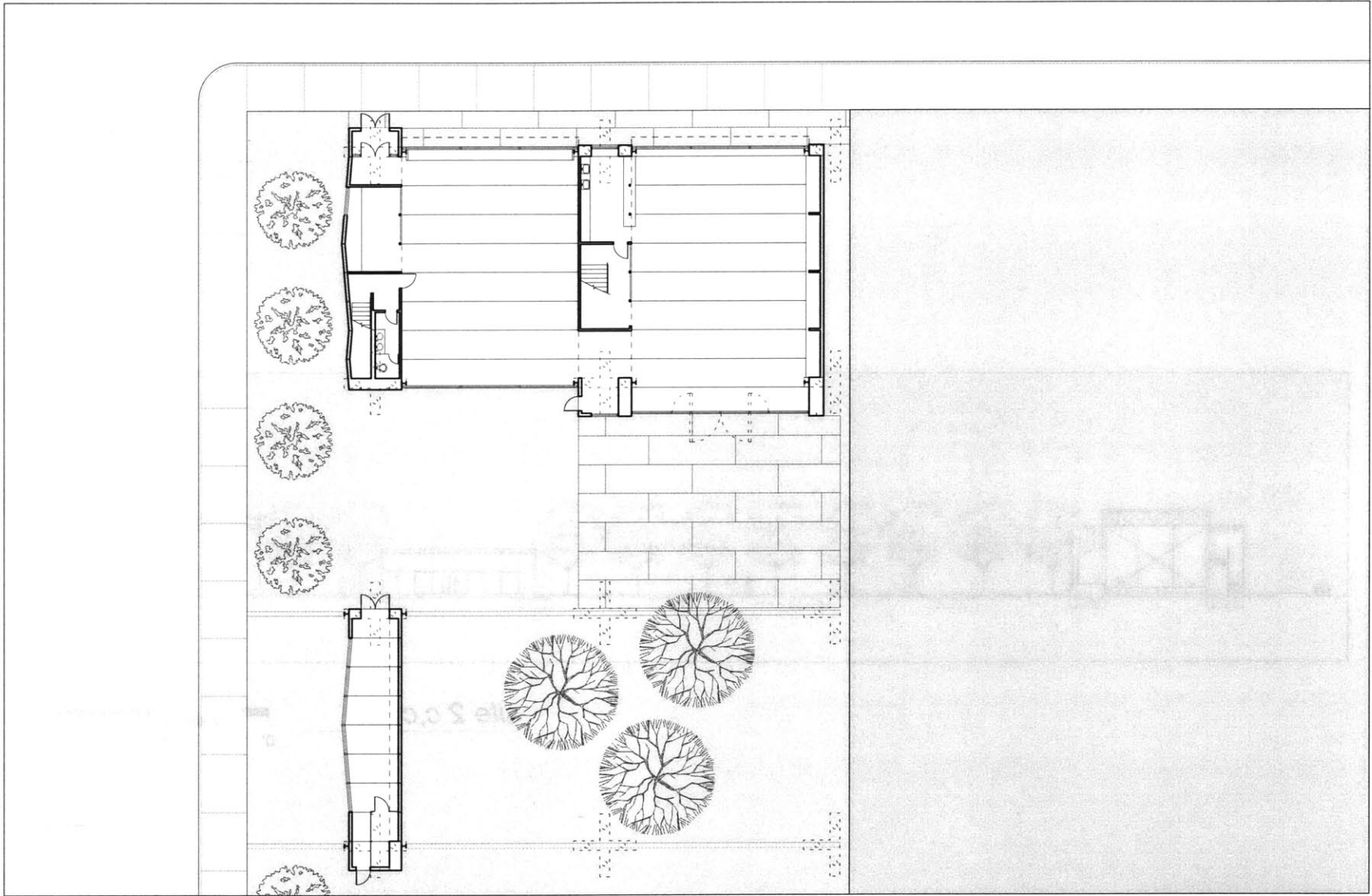



site 2 key

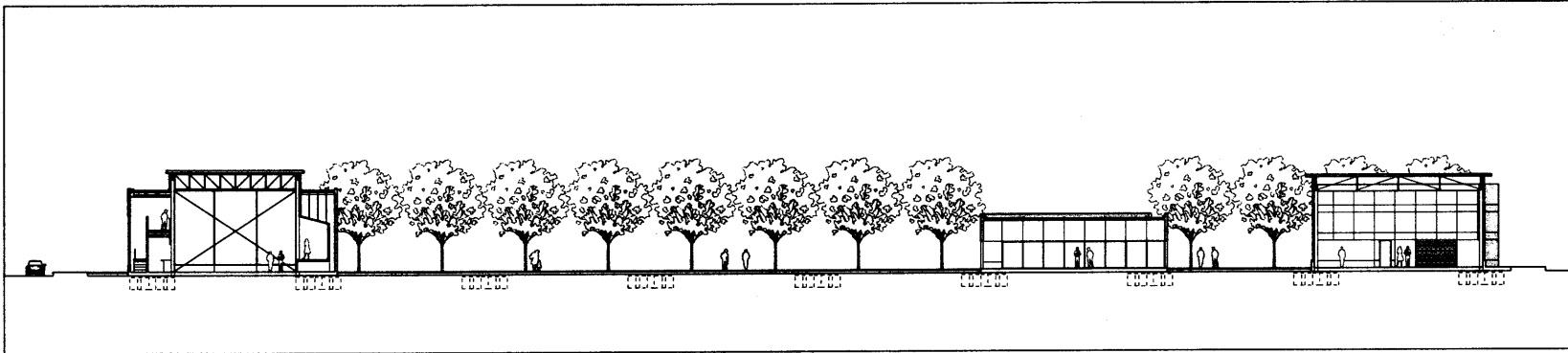
- 8. arts coop
- 9. cafe
- 10. galley
- 11. performance club
- 12. outdoor movie screen



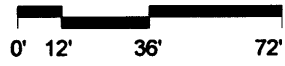
ground floor plan

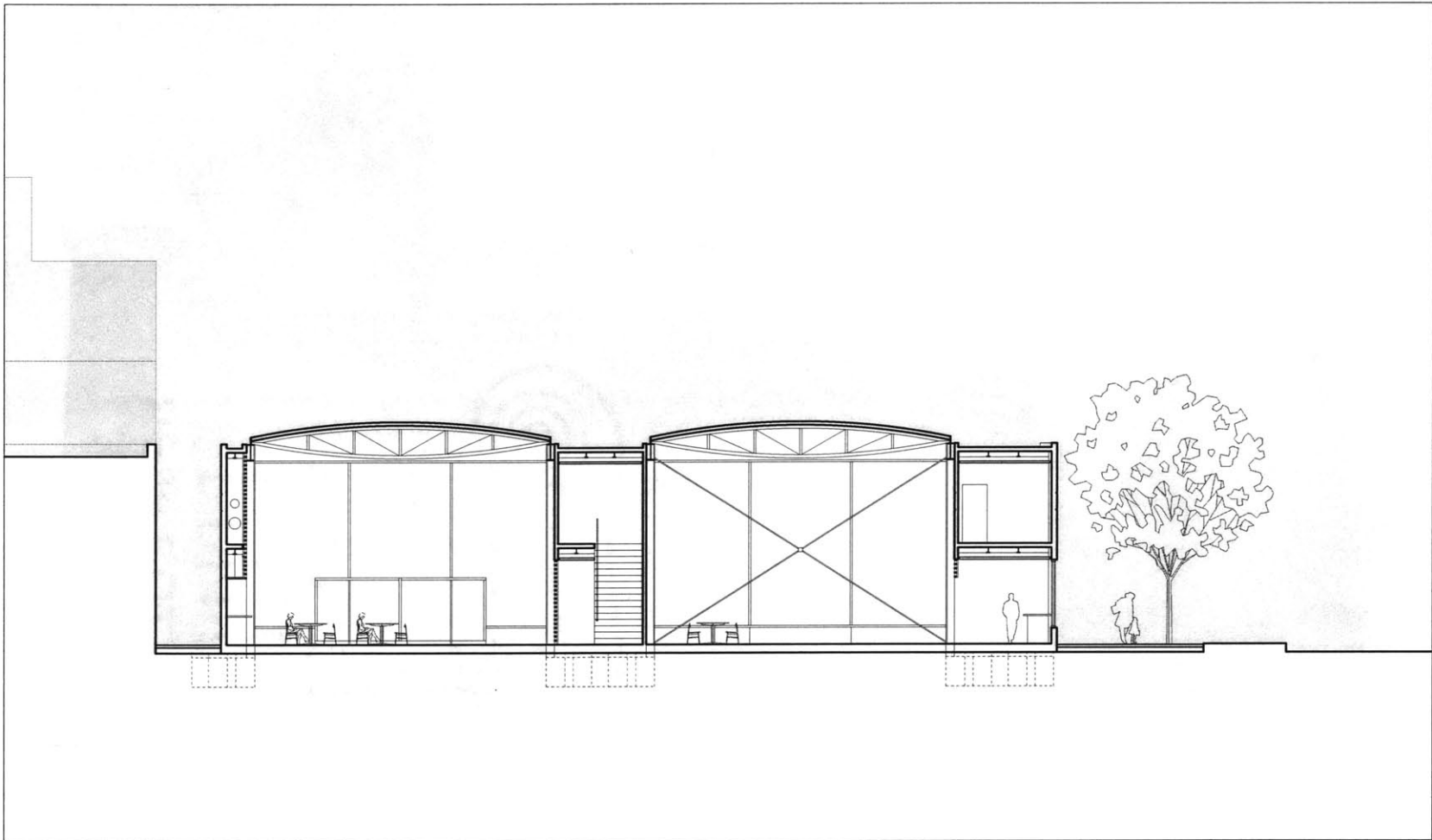


 *coop & gallery plan*
0' 8' 24' 48'



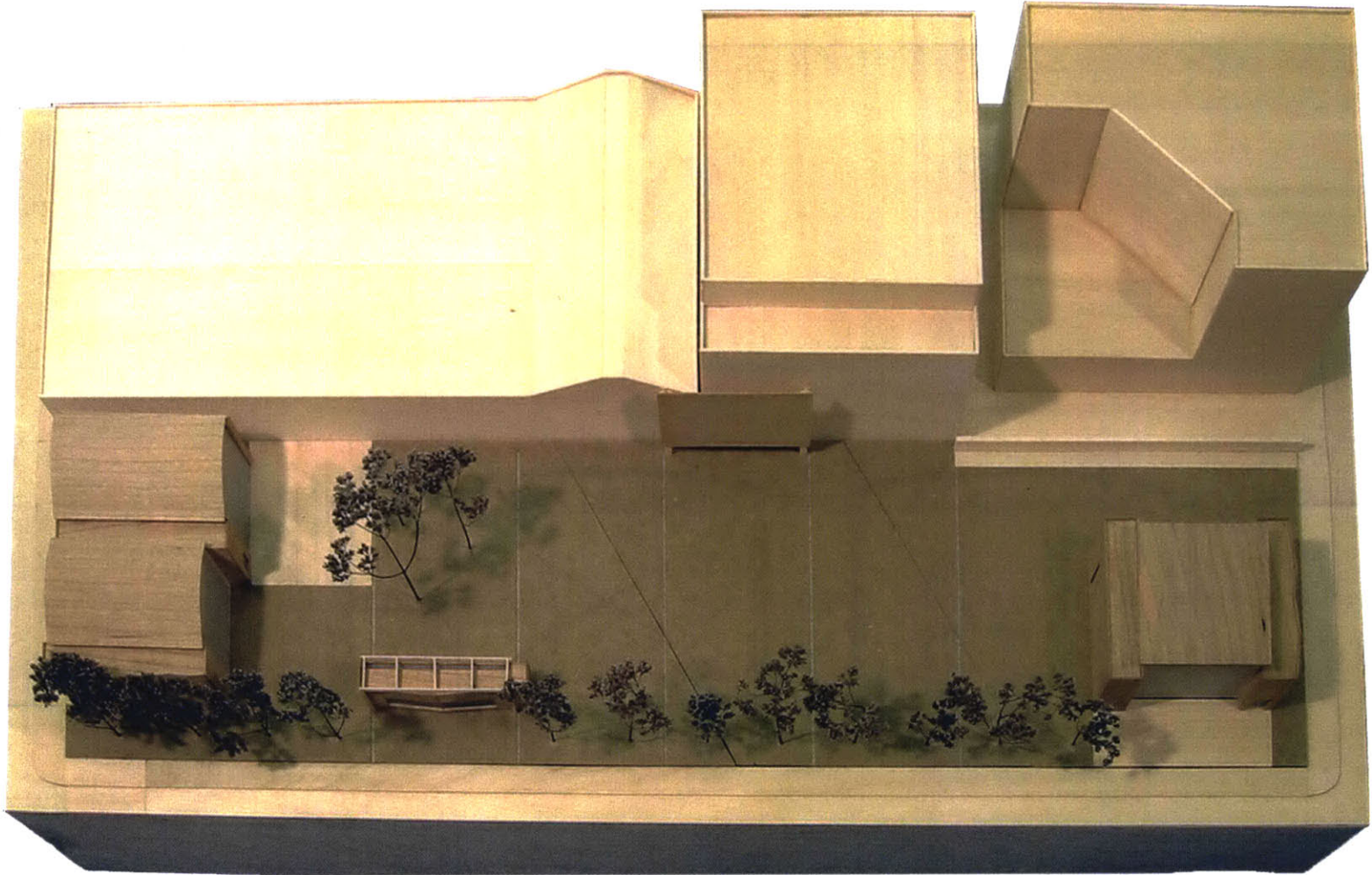
site 2 c,c





site 2 d,d

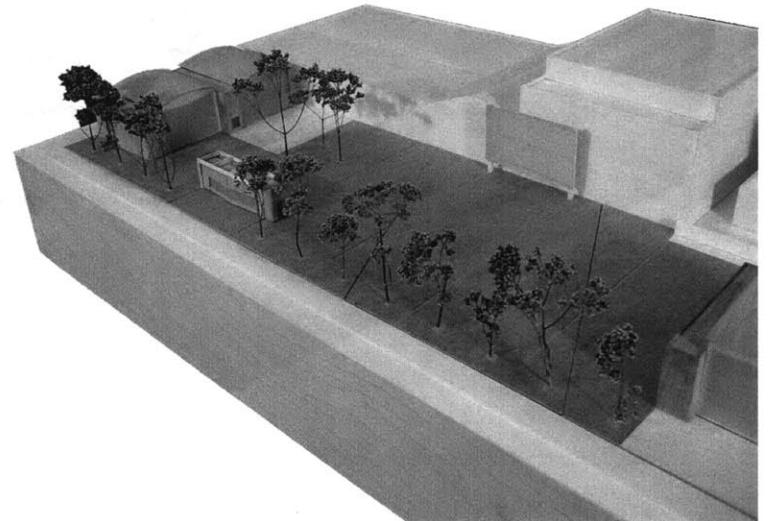
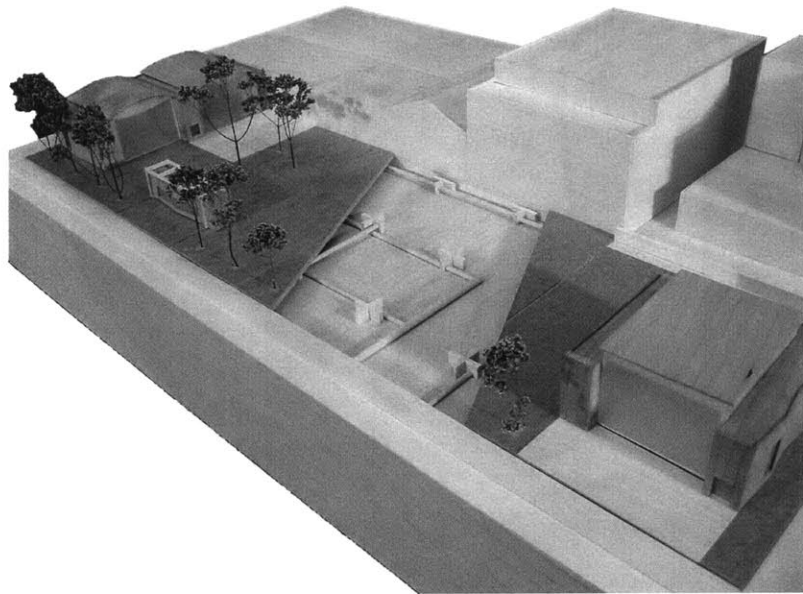




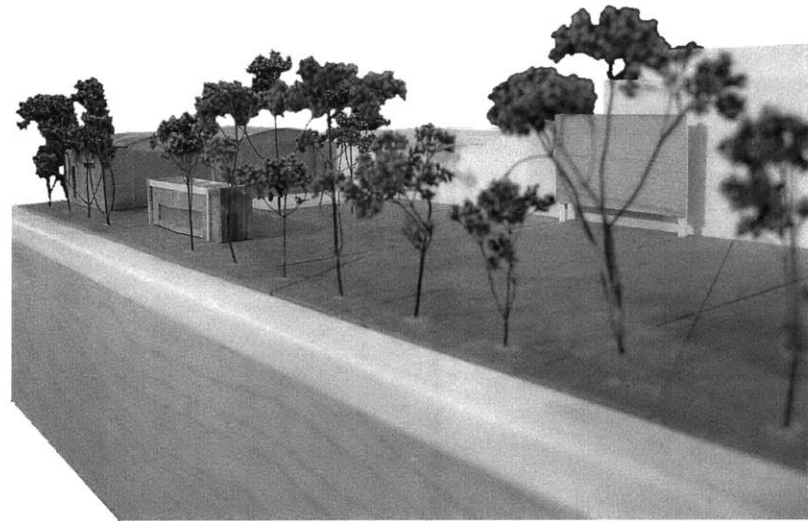
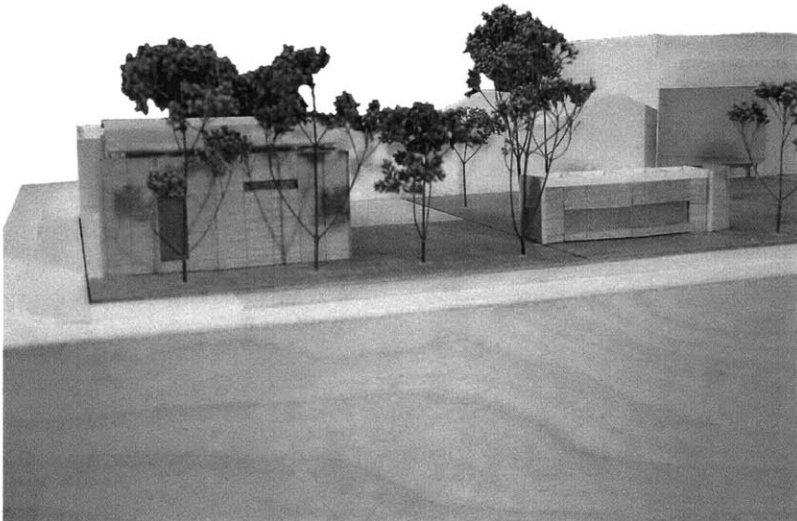
site 2 - aerial



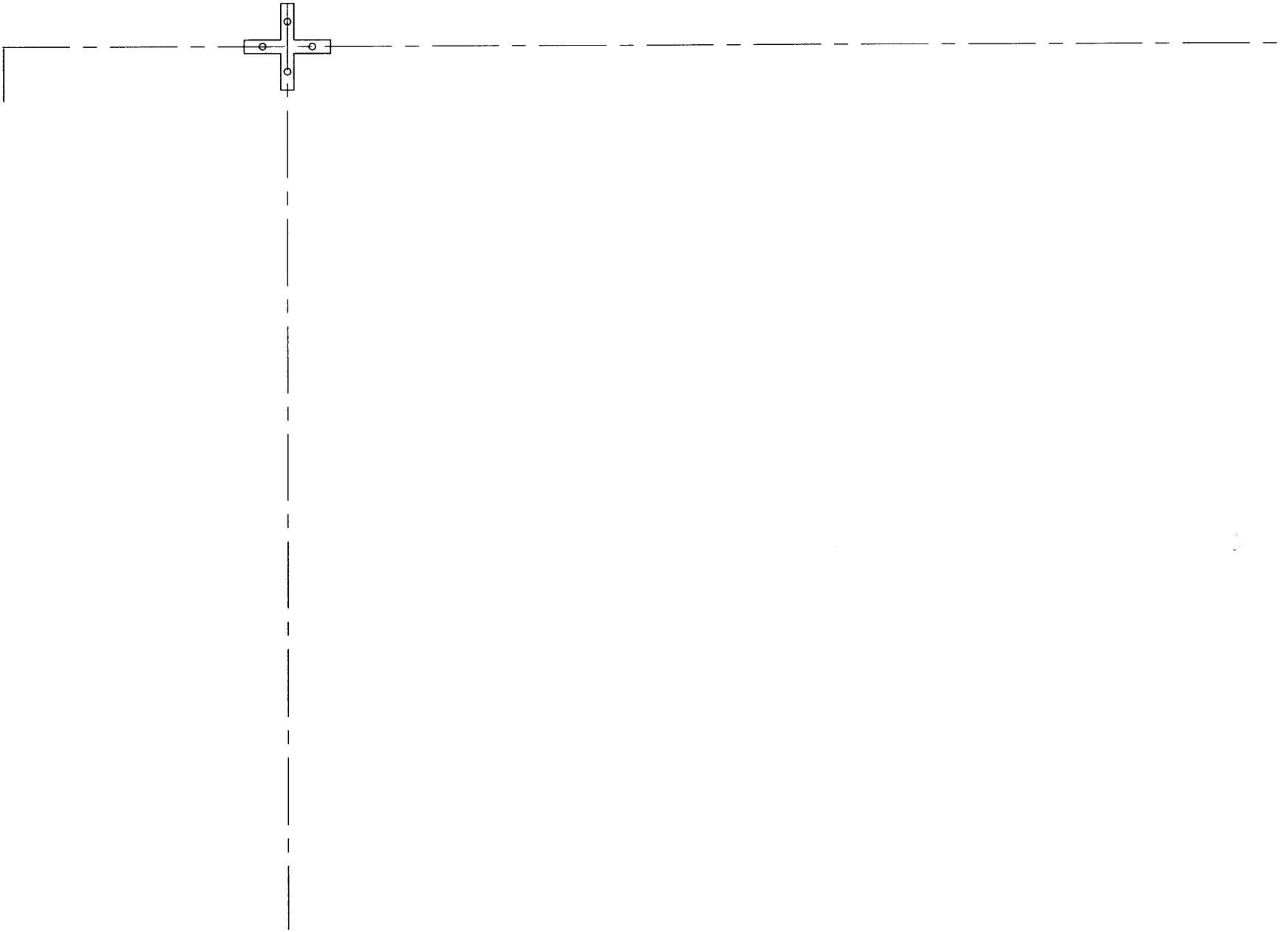
94 | right: Submerged foundation crosses on site 2 provide bearing points and services for development.



right: aerial views of site 1 coop
and open space.



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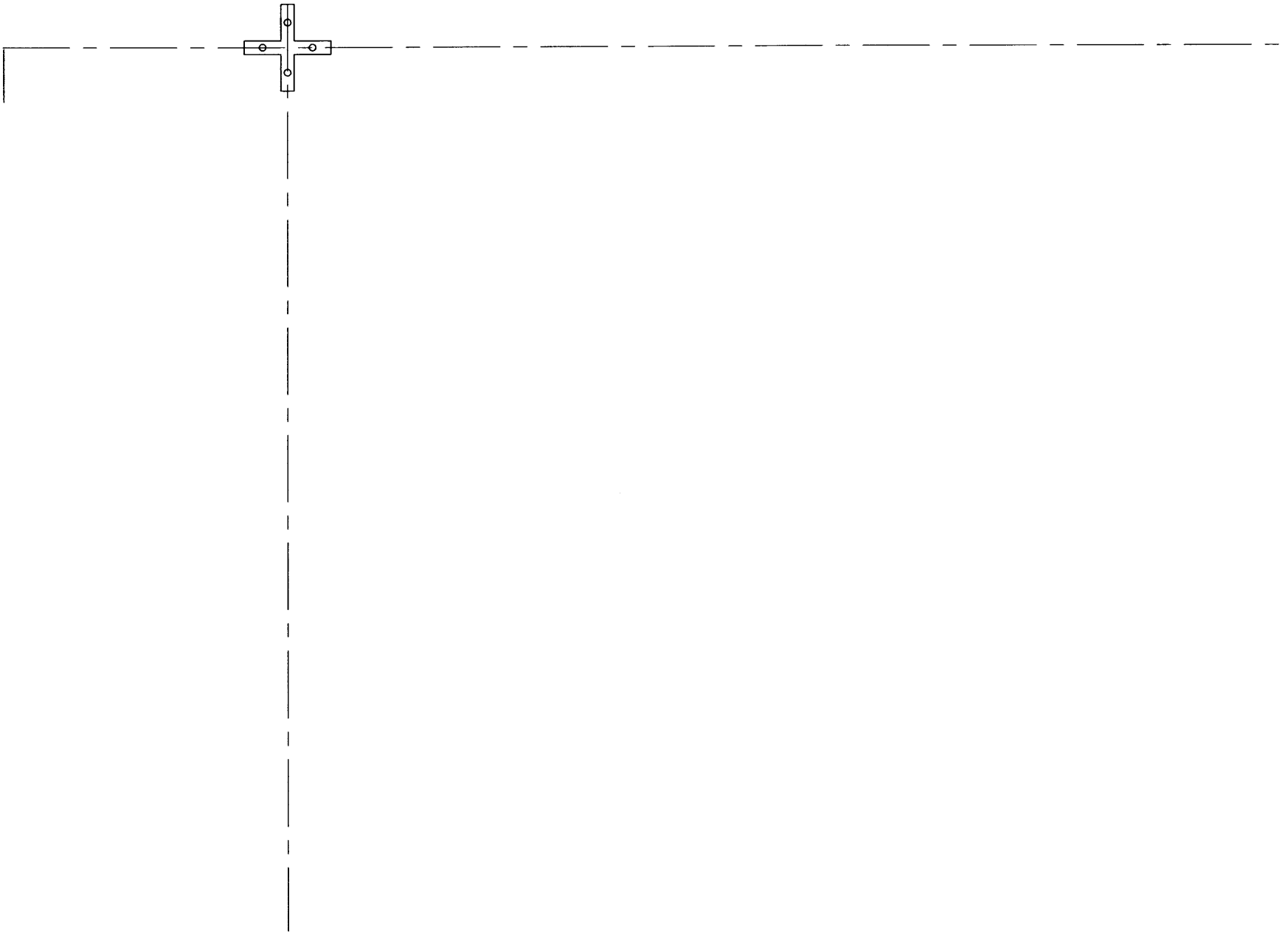


The ideas expressed in this thesis explore flexibility and architecture. There has been a great deal of academic and professional work surrounding this topic. From the Pompidou Center to standardized structural components, flexibility is a complex subject. This study hopes to bring the discussion from the domain of the building into the landscape (a place where adaptability does not often venture.) Chicago's exceptional history of green open space presents an even greater opportunity for exploration. It seems only fitting the "City in a Garden" should again be the focus of experimentation in park design.

Parks will continue to play a fundamental role in the development of American cities. Their presence will become an even more valued commodity as dense building patterns threaten to choke the life out of urban communities. Less space and more program is a contemporary reality affecting our structures and landscape. Adjustable spaces, whether open or enclosed, offer solutions to existing places that no longer meet current needs. As architects, we do not know the future, but in the act of building, we must predict. An adaptable architecture relieves some of this burden and allows the future to shape its own path.

This design is relevant to the specific neighborhood of the West Loop and the City of Chicago. However, a broader scope is implied through the development plan. A site-specific design competition permits individuality and moves away from a "cookie cutter" approach. This overall design framework lets parks evolve in the communities they serve and hopefully influences the planning of our future green spaces.

98



¹ Riddell, Jill editor. *CitySpace: An Open Space Plan for the City of Chicago*. Chicago, 1998. p. 18.

² Ibid. p. ii.

³ Marcus, Claire Cooper. *People Places: Design Guidelines for Urban Open Space*. New York: Van Nostrand Reinhold, 1998. p. 85.

⁴ Cranz, Galen. *The Politics of Park Design*. Cambridge: The MIT Press, 1982. p. 61.

⁵ Ibid. p. 103.

⁶ Ibid. p. 144.

⁷ Bachrach, Julia Sniderman. *The City in a Garden - A Photographic History of Chicago's Parks*. Chicago: University of Chicago Press, 2001. p. 34.

⁸ Cranz, Galen. *The Politics of Park Design*. Cambridge: The MIT Press, 1982. p. 87.

⁹ Sheard, Rod. *Sports Architecture*. London: Spon Press, 2001. p. 213.

¹⁰ Handley, John. "The West Loop." *The Chicago Tribune*. 15 Mar. 1998. p. unknown.

¹¹ Marcus, Claire Cooper. *People Places: Design Guidelines for Urban Open Space*. New York: Van Nostrand Reinhold, 1998. p. 86.

***Note: Unless otherwise mentioned below all drawings and photographs are by the author.**

****Note: Unless otherwise mentioned below, all aerial satellite imagery is provided to the author by AirPhoto USA via the PhotoMapper Software.**

01. Vic Opeka Garden, 2002. Photograph by Andrew Chauner
02. Ibid. Evergreen Playlot.
03. Ibid. West Loop Parking Lot.
04. Mark White Square's wading pool, 1905. Bachrach, Julia Sniderman. *The City in a Garden - A Photographic History of Chicago's Parks*. Chicago: University of Chicago Press, 2001. p. 13.
05. Ibid. Plan of South Park, 1871. p. 7.
06. Ibid. Aerial view of World Columbian Exposition, 1895. p. 8.
07. Ibid. Dvorak Park Field House, 1912. p. 18.
08. Ibid. Garfield Park Conservatory, 1930. p. 63.
09. Harrison Park Natatorium. Chicago Park District Photo Archive Collection, Chicago, 2002.
10. Landfill growth of Lincoln Park, 1938. Bachrach, Julia Sniderman. *The City in a Garden - A Photographic History of Chicago's Parks*. Chicago: University of Chicago Press, 2001. p. 111.
11. Ibid. Sherman Park Courts, 2000. p. 31.
12. Ibid. Café Bauer Renovation, 2000. p. 108.
14. Open Space Goals, 1998. Riddell, Jill editor. *CitySpace: An Open Space Plan for the City of Chicago*. Chicago, 1998. p. 27.
15. Model of Millennium Park Bandshell, 2002. <<http://www.designbuildmag.com>>

16. Open Space Classification, 1998. Riddell, Jill editor. *CitySpace: An Open Space Plan for the City of Chicago*. Chicago, 1998. p. 9.
17. Ibid. Open Space Need Map. p. 24.
18. Humboldt Park Field House, 1916. Bachrach, Julia Sniderman. *The City in a Garden - A Photographic History of Chicago's Parks*. Chicago: University of Chicago Press, 2001. p. 84.
19. Portage Park Field House. Chicago Park District Photo Archive Collection, Chicago, 2002.
20. Chicago Park Statistics, 2002. *Chicago Park District*. <http://www.chicagoparkdistrict.com>
26. Welles Park Natatorium. Archive Collection of Chicago Park District, Chicago, 2002.
28. Ibid. Indian Boundary Field House.
29. Axonometric of Dunescape Project, 2001. SHoP Web Site. <<http://www.Shoparch.com>>
30. Floor Plan for Arena 2020, 2001. Sheard, Rod. *Sports Architecture*. London: Spon Press, 2001. p. 214.
31. Folie at Park de la Villette, 2000. Tate, Alan. *Great City Parks*. London: Spon Press, 2001. p. 61.
32. Plaza Floor Plan of Schowburnplein, 1998. Molinari, Luca. *West 8*. Italy: Skira Architecture Library, 2000.
33. Agricultural Farm Allotments.
34. West Loop Sanborn Map, 1991. Chicago Department of Planning.

Bachrach, Julia Sniderman. *The City in a Garden - A Photographic History of Chicago's Parks*. Chicago: University of Chicago Press, 2001.

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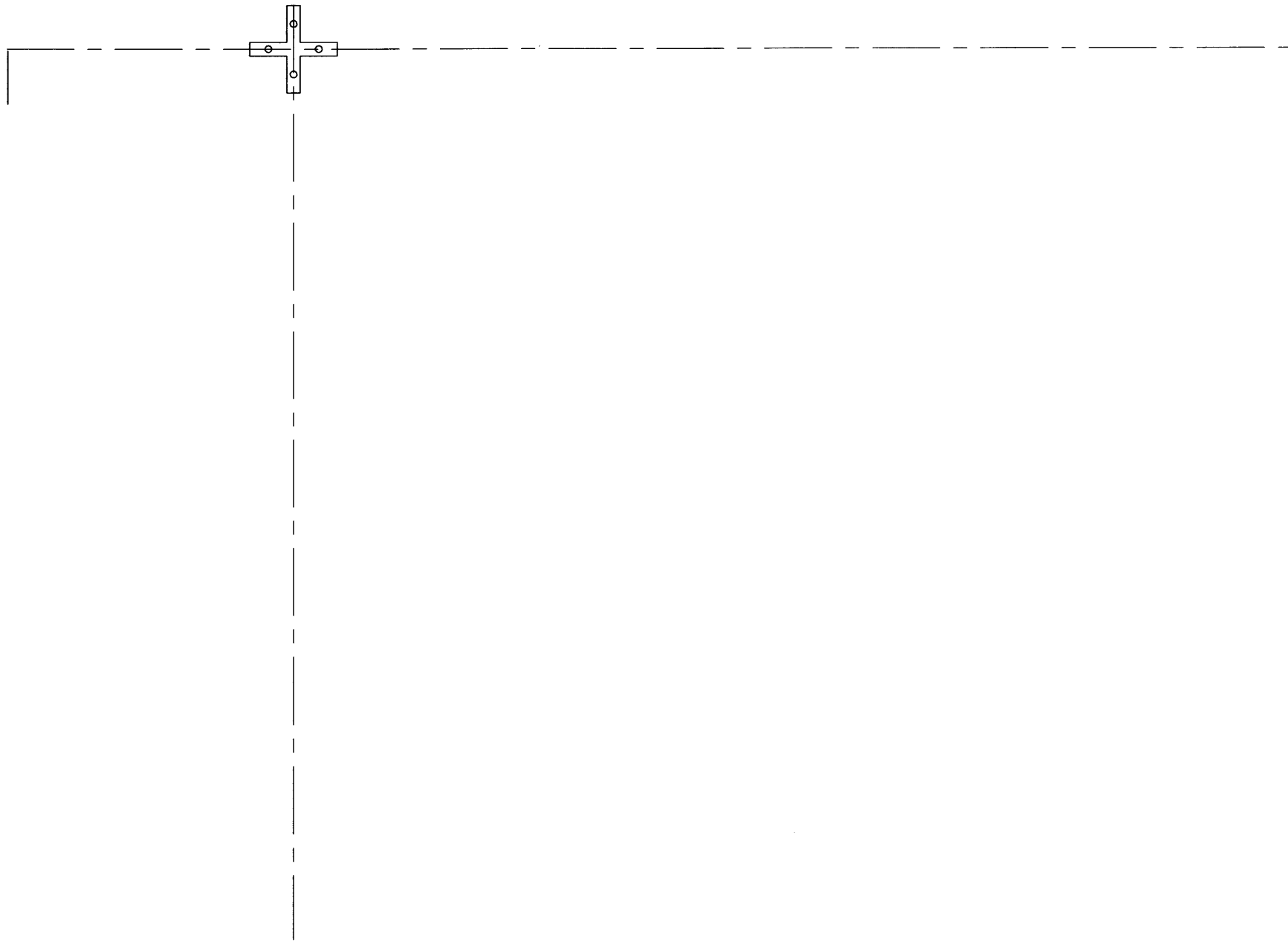
Sheard, Rod. *Sports Architecture*. London: Spon Press, 2001.

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Thresholds 24. Massachusetts: Sherman Printing, 2002.

Thrush Real Estate. "*Block Y*." Chicago: 1998.

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acknowledgements

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I want to thank Ryunosuke and Jamie for making models at the end.

Noah - thanks for having the answers so many times.

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