A close-up, macro shot of a bright yellow tennis ball. The image shows the fine, fibrous texture of the ball's felt and a white, curved seam that runs across the middle. The lighting is soft, highlighting the texture and the curve of the ball.

# **Tennis in the Bronx Building the Cary Leeds Center**

**GLUCK+**

**Tennis in the Bronx**  
Building the  
Cary Leeds Center

GLUCK+

# On the architecture of the Cary Leeds Center and the people that made it possible.

**GLUCK+** buildings tell stories—stories shaped by their context, by the people who commission and inhabit them, by the minds that design them, and the hands that build them.

To discover how the Cary Leeds Center has contributed to the recent and ongoing recovery of the South Bronx is to learn about the history of the neighborhood and its deterioration during the 20th Century. To grasp how the Cary Leeds Center exists today as a community hub and a world class tennis facility is to become familiar with the vision and journey of New York Junior Tennis & Learning (NYJTL). To understand the design and construction of the Cary Leeds Center—and its spatial relationship to the landscape of Crotona Park—is to recognize the potential of Architect-Led Design Build and the value of public-private partnerships in building civic architecture that enhances the city and the lives of its residents.

**Introduction 8**

**The History: The Bronx and Crotona Park Take Shape 34**

**The Mission: Leveling the Playing Field 52**

**The Idea: How Do You Make a Building Disappear? 76**

**The Collaboration: NYJTL, NYC Parks, GLUCK+ 100**

**The Building: Architect-Led Design Build 118**

**Appendix 158**

CARY LEEDS CENTER



for tennis & learning



**Through tennis  
lives can be  
changed and  
spirits reclaimed.**  
—Arthur Ashe,  
New York Junior  
Tennis & Learning  
Co-founder,  
US Open &  
Wimbledon  
Champion





**A public-private  
partnership  
inside  
Crotona Park—  
a 125-acre  
public park  
in the  
South Bronx.**

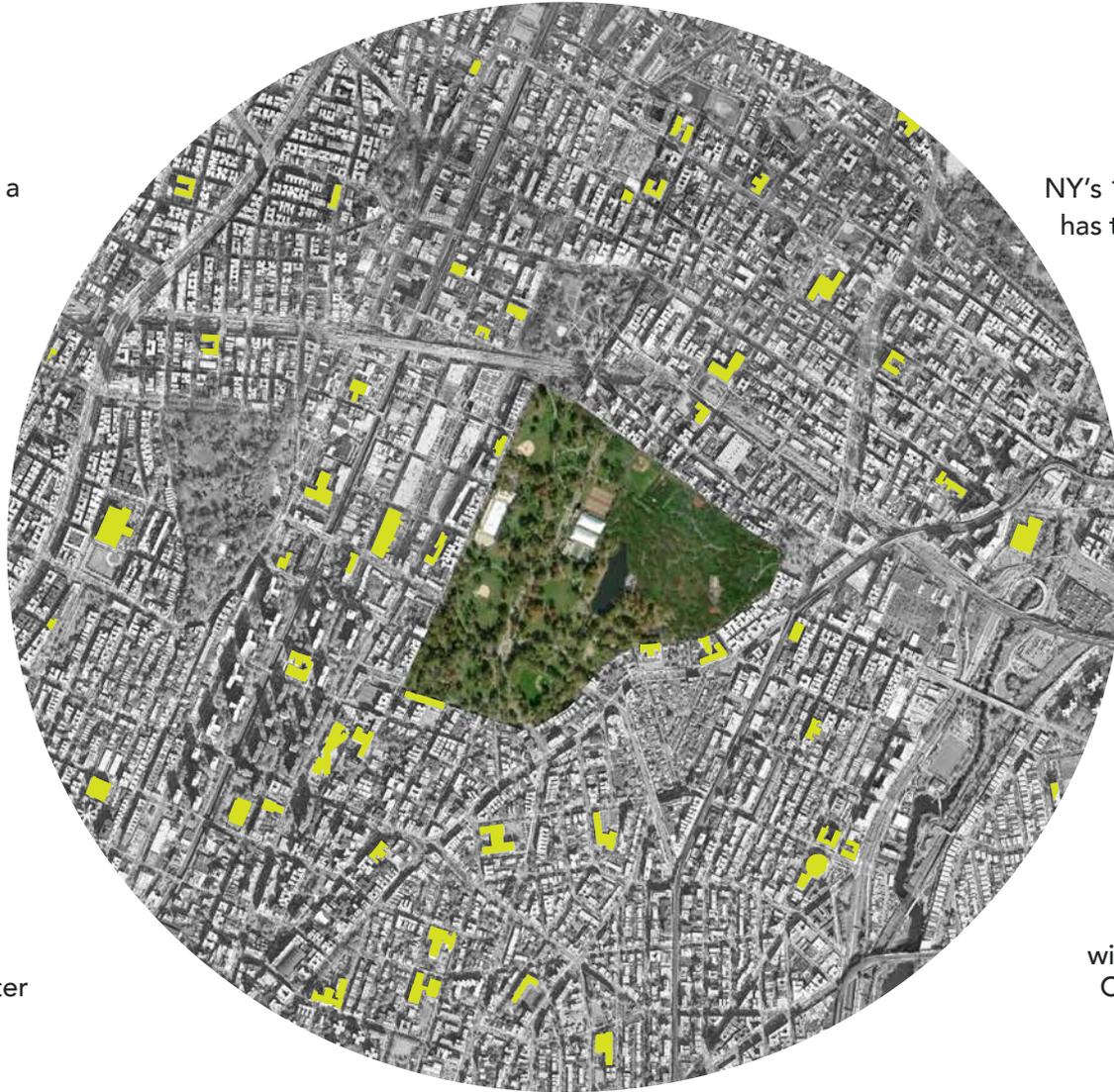
There are **51** schools on a one mile radius from the Cary Leeds Center

There is an extreme public need in this area, the neighborhoods around Crotona Park in the South Bronx [...] It's one of the toughest areas of the city. A project like this brought a lot of benefits, a greater measure of safety and a new way of perceiving the park.

Lewis "Skip" Hartman  
NYJTL Co-Founder,  
Chair Emeritus

**78,000+** kids live within a one mile radius from the Cary Leeds Center

Source: Social Explorer – ACS 2021  
5-year estimates



NY's 15th Congressional District has the **highest** poverty rate in the entire United States

Source: FRAC analysis of 2017  
American Community Survey data.

NYC Department of Parks & Recreation oversees more than 30,000 acres of land —**14% of NYC**— including more than 5,000 individual properties

Source: nycgovparks.org

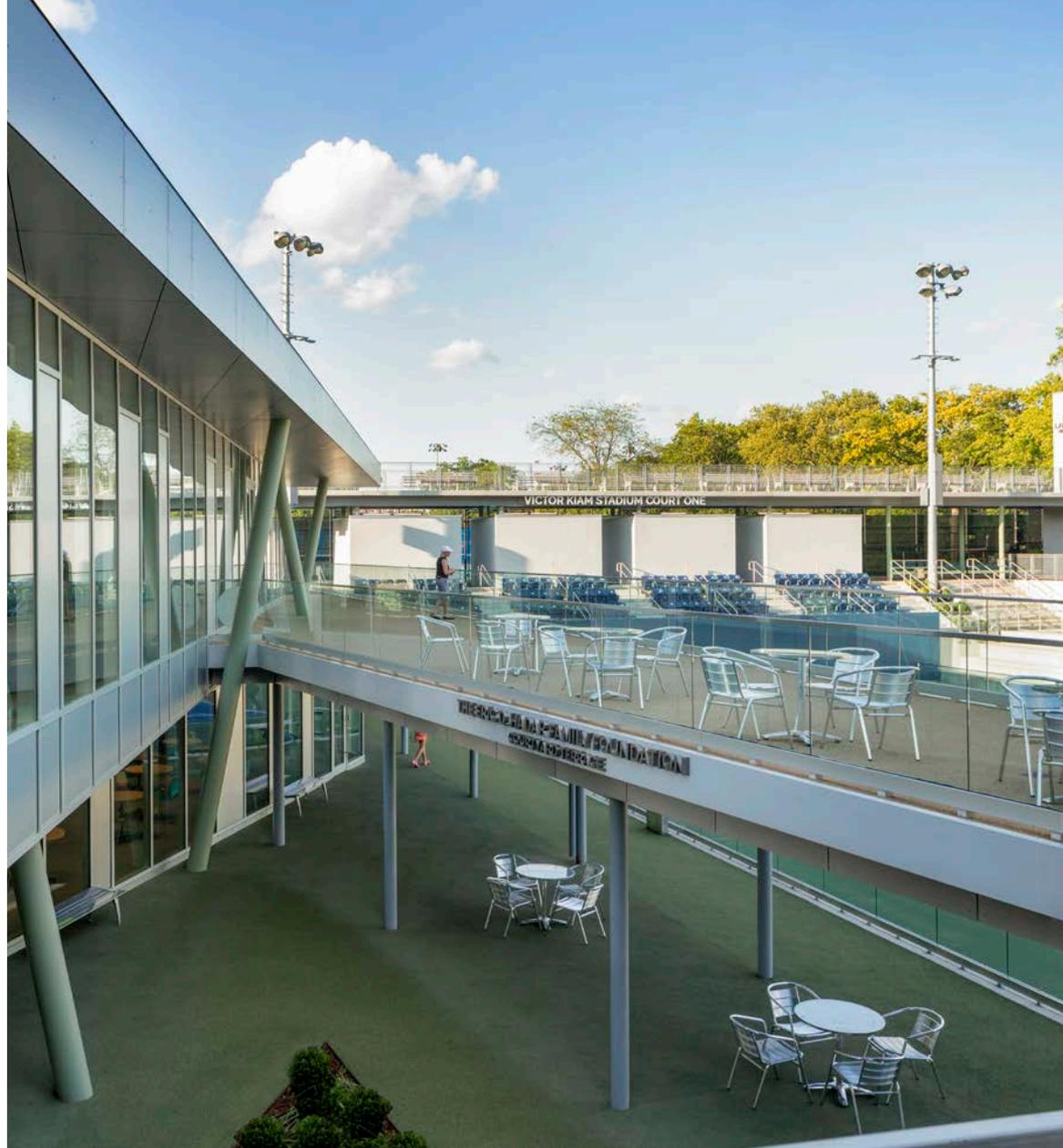
**44%** of kids within a one mile radius from Crotona Park live in poverty

Source: Social Explorer – ACS 2021  
5-year estimates



**Hidden in plain sight:** a state-of-the-art clubhouse and two exhibition courts.

**A \$26 million,  
181,250 sq. ft.  
public amenity,  
designed and built  
by GLUCK+**





**One of the  
city's best  
new works  
of public  
architecture.**  
—Michael  
Kimmelman,  
The New York  
Times  
Architecture  
Critic

**More than 50  
years in the  
making: a flagship  
home for tennis  
and education, on  
and off the court.**



	1876	1881	1884	1888	1898	1904	1910s	1933
Crotona Park		New York Park Association is created	New York State passes New Parks Act to fund the acquisition of the Bronx's six major parks	Crotona Park land purchase			Twenty-five tennis courts built at Crotona Park	
NYJTL								
NYC	Central Park opens			NYC Consolidation: 5 boroughs 1 city		Rapid transit for the Bronx		
USA								FDR New Deal in the Great Depression
Census				NYC pop.: 1,515,301 1% Black 99% White			Bronx pop.: 732,016 1% Black 99% White	Bronx pop.: 1,265,258 1% Black 99% White

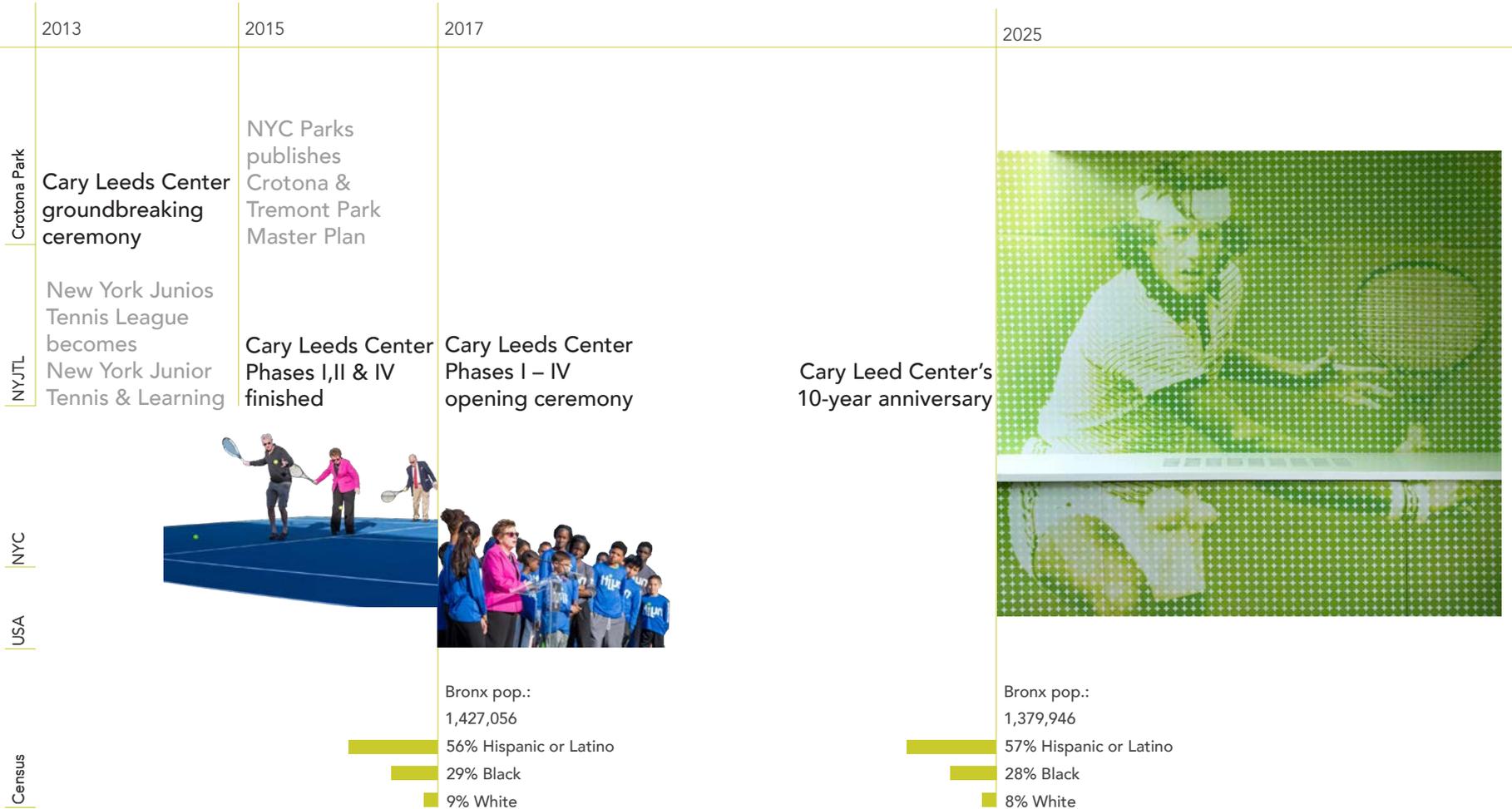
	1934	1935	1936	1941	1942	1948	1960	1963	1968
Crotona Park	Free tennis lessons by NYC Parks & the Eastern Lawn Tennis Association		Swimming pool and bathhouse complex built	Tennis and handball courts, baseball fields, playgrounds renovated					
NYJTL									
NYC	Robert Moses appointed first sole Commissioner of unified NYC Dept. of Parks					Cross Bronx Expressway begins construction			
USA		Work Progress Administration (WPA)			Robert Moses appointed NYC Planning Commissioner			Cross Bronx Expressway opens	
Census				Bronx pop.: 1,394,711 2% Black 98% White			Bronx pop.: 1,424,815 12% Black 88% White		

	1969	1971	1975	late 1970s	1984	1988	1990	1991	1992
Crotona Park									Bronx Pro Classic Men's Challenger at Crotona Park
NYJTL	Ashe, Pasarell and Snyder found National Junior Tennis League (NJTL)	Ashe and Lewis "Skip" Hartman found New York Junior Tennis League (NYJTL)	Ashe wins Wimbledon	NYJTL offers free tennis clinics at Crotona Park	Pool complex restored  First facility managed by NYJTL at Hoe Avenue, South Bronx	First Mayor's Cup (free citywide juniors tournament) hosted by NYJTL		NYJTL SoBro Bronx Open at Rev. T. Wendell Foster (Mullaly) Park	
NYC									
USA									
Census		Bronx pop.: 1,471,690 22% Spanish origin 24% Black 74% White			Bronx pop.: 1,168,972 34% Spanish origin 30% Black 34% White			Bronx pop.: 1,203,789 43% Hisp. origin 31% Black 23% White	
								David Dinkins becomes NYC Mayor	



	1994	1999	2001	2004	2006	2007	2008	2009	2010
Crotona Park	Friends of Crotona Park founded		Nature Center re-opened at Crotona Park			Crotona Play Center receives Landmark designation		Pond and amphitheater restoration	Final year of GHI Bronx Tennis Classic at Crotona
NYJTL	NYJTL opens four indoor/outdoor courts at Stevenson Commons Soundview	NYJTL selects GLUCK+ to develop Stevenson Commons feasibility study  NYJTL \$10M public/private fund raising begins		Stevenson Commons site withdrawn. Search for new site begins  NYJTL \$10M public/private fund raising ends		GLUCK+ test fits site at Ferry Point Park	Ferry Point Park site not approved by Parks	NYC Parks RFP at Crotona Park	GLUCK+ starts designing the Cary Leeds Center





Source: Census Bureau Decennial Census & ACS

CARY LEEDS CENTER  for tennis & learning



# The History: The Bronx and Crotona Park Take Shape

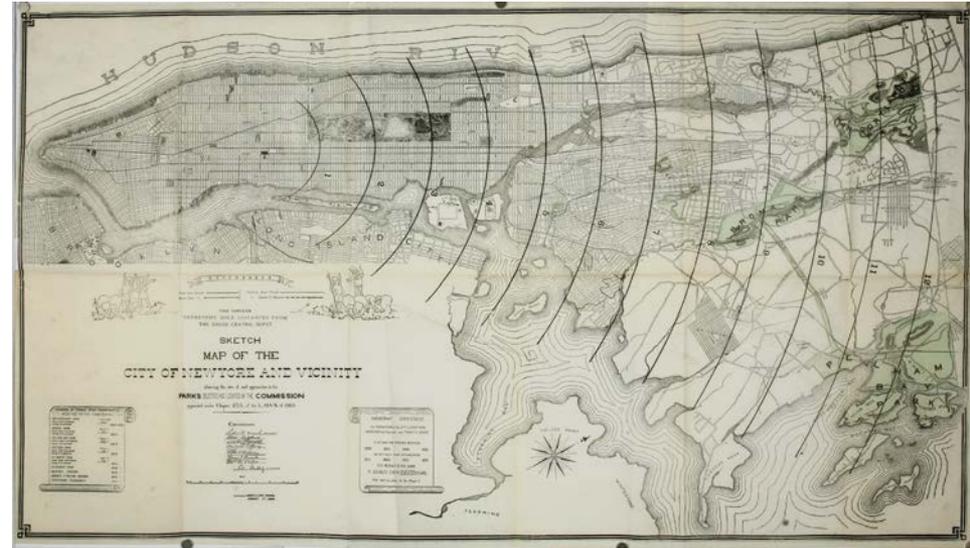
New York City's history can be told in a thousand different ways. The history of the urban and social context where the Cary Leeds Center was built, might be just one of them.

The history of the Bronx reflects the process of colonization, immigration and urbanization that created the New York City we know today. Before the arrival of the Dutch, the area was inhabited by the Lenape who used it primarily as a hunting ground. In the 1640s it became known as Bronk's Land after a Swedish farmer who owned property around today's Mott Haven. The area was part of Westchester County until it was annexed by New York City in 1874. The current boundaries of the borough were established when the Western Bronx was added in 1898.

## A space for breathing

Seeing parks as a luxury, not a necessity, New York city officials refused to plan for new parks in the Bronx. In response, the New York Park Association was created in 1881 to advocate for more open space. They believed the city should match other great cities in the ratio of open space to its population. They envisioned the new parks as “great breathing places beyond the Harlem River” where people could freely enjoy themselves.

The result of this advocacy was the New Parks Act signed by Governor Grover Cleveland in 1884 and allocating funding for six parks and three parkways in the Bronx.



Sketch Map of the City of  
New York and Vicinity...  
*The New Parks beyond the  
Harlem.* John Mullaly. University  
of California Libraries (1887)

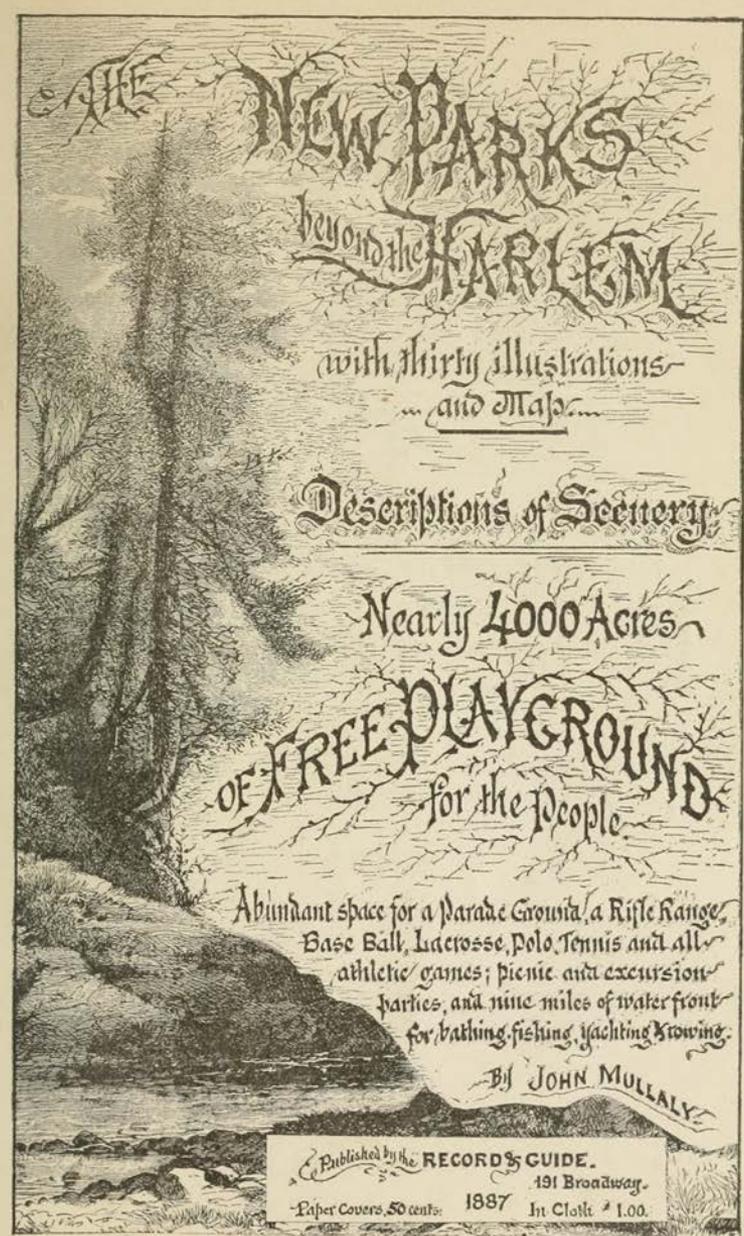
Crotona Park is seven miles  
from The Grand Central Depot.

## Urban growth, wooded refuge

Anticipating rapid growth, the city began construction of the 3rd Avenue elevated train line in 1875, completed in 1878 connecting the south Bronx to City Hall. The land for Crotona Park was purchased in 1888 and quickly became a weekend destination for local inhabitants as well as visitors from the dense urban areas of "Old New York".

Early in its history Crotona Park remained wild, offering visitors 127 acres of lawns, trees, a picturesque lake and distant views.

*The New Parks beyond the Harlem with Thirty Illustrations and Map...*  
John Mullaly. University of California Libraries (1887)





Crotona Park—The Dell.

## Crotona's tennis traditions

By the 1920s, Crotona Park was cherished as a public destination, home to the city's largest public tennis facility—25 courts built in 1910. Countering the unfettered industrialization of the 20th century, the park promoted outdoor activities and physical exercise for the well-being of urban communities.

In the 1930s, the park's courts hosted free tennis lessons for local youth by Mr. Montgomery Ogden, a "recognized authority on tennis." By the late 1970s, NYJTL began free tennis lessons at this location. From 1991 to 2010, Crotona Park hosted the men's GHI Bronx Tennis Classic. In 1996, a women's professional event was added—both USTA Challenger tournaments leading up to the US Open.

In 2019 and 2022, NYJTL brought the Pro Circuit back to the Bronx at the Cary Leeds Center, a culmination of nearly a century of tennis at Crotona Park—where community engagement, youth development, and world-class competition have long intersected.

pp. 44 – 45  
1934 Parks Department Press  
Releases (Part 1)  
Historical Reports, Press  
Releases, and Minutes, NYC Parks  
(color added for emphasis)



Children engaged in exercise activities at Crotona Park's Vacation Playground (1901)

DEPARTMENT OF PARKS  
ARSENAL, CENTRAL PARK

For Release, Saturday  
July 28, 1934.

Regent 4-1000

90

Under arrangements made by the Recreation Division of the Department of Parks, the Eastern Lawn Tennis Association cooperating, Mr. Montgomery Ogdan, recognized authority on tennis, will continue his free instruction for boys and juniors holding park permits.

Those wishing to avail themselves of this instruction must be on the tennis courts at 9 a.m. sharp, on the dates indicated:

Mondays, July 30, August 6, 13 and 20, Mr. Ogdan will

be in Central Park, Manhattan.

Tuesdays, July 31 and August 14, he will be in McKinley

Park and on the alternate Tuesdays, August 7 and 21, at Gravesend Park, Brooklyn.

Wednesdays, August 1, 8, 15 and 22, he will be at the

Crotona Park Courts, Bronx.

Thursdays, August 2, 9, 16 and 23, he will be at Forest Park, Queens.

Fridays, August 3, 10, 17 and 24, he will be at the

Livingston Park Courts, Richmond.

DEPARTMENT OF PARKS  
Arsenal, Central Park,  
New York City, N.Y.  
Tel. Regent 4-1000

66  
FOR IMMEDIATE RELEASE

The Department of Parks has made arrangements for Mr. Montgomery Ogdan, one of the recognized authorities on tennis, to give free instruction to boys and juniors holding park permits. The Eastern Lawn Tennis Association is cooperating with the Department of Parks in the movement.

The schedule of Mr. Ogdan is as follows:

Monday	July 2	- Central Park, 93rd St. & Central Park West
Tuesday	" 3	- McKinley Park, Brooklyn, Bay Ridge and Ft. Hamilton Parkway.
Thursday	" 5	- Crotona Park, Bronx.
Friday	" 6	- Forest Park, Woodhaven-Park Lane, South and 90th Street.
Saturday	" 7	- Livingston Park, Staten Island, Davis Ave. Bard and Delafield Place.
Monday	" 9	- Central Park
Tuesday	" 10	- McKinley Park
Wednesday	" 11	- Crotona Park
Thursday	" 12	- Forest Park
Friday	" 13	- Gravesend Park, Brooklyn, 56th St. & 18th Ave.
Monday	" 16	- Central Park
Tuesday	" 17	- Kelly Memorial Park, Brooklyn, Ave. S and East 14th Street.
Wednesday	" 18	- Macombs Dam Ext. Bronx, 161st St. & Jerome Ave
Thursday	" 19	- Kissena Park, Flushing, Rose St. & Oak Ave.
Friday	" 20	- Silver Lake Park, Staten Island, Victory Blvd. and Forest Avenue.
Monday	" 23	- Central Park
Tuesday	" 24	- Gravesend Park, Brooklyn.
Wednesday	" 25	- Crotona Park
Thursday	" 26	- Forest Park
Friday	" 27	- Riverside Park, N.Y.C., 172nd St. and Riverside Drive.

Those wishing to avail themselves of this instruction must be on the tennis courts at 9 a.m. sharp.

## A golden age of public works

After the economic crash of 1929, national unemployment rose to 23%. Focusing on “relief for the unemployed and for the poor and the recovery of the economy back to normal levels,” President Franklin D. Roosevelt’s New Deal created the Works Progress Administration (WPA). The development and rehabilitation of parks—one of WPA’s larger projects—was especially evident in New York City.

Robert Moses was appointed sole commissioner of a unified Department of Parks for New York City in 1934, a position he held until 1960. As part of his sweeping large-scale public works initiatives, Moses undertook significant projects to promote recreation across the city—including the construction of a new swimming pool and bathhouse complex opened in 1936, and the renovation of 25 public tennis courts within Crotona Park.



Crotona Park Pool and  
Tennis Courts. Neg.12647.  
NYC Department of Parks  
& Recreation (1937)

## Movement and migration

After World War II, New York City underwent significant demographic changes driven by shifting industrial and economic trends. Longstanding sectors like printing, manufacturing, and transport relocated elsewhere, resulting in the loss of hundreds of thousands of jobs. At the same time, two major migrations—from the Jim Crow South and Puerto Rico—transformed the city's demographic makeup, bringing new cultural identities and communities to its neighborhoods.

These changes coincided with the emergence of the American suburb, which dramatically altered the physical and social boundaries of the city and its outskirts.

By 1980, the combined effects of these shifts were especially evident in the Bronx, which had lost nearly 20% of its population. Of its remaining 1.16 million residents, 64% identified as Black and/or Latino.



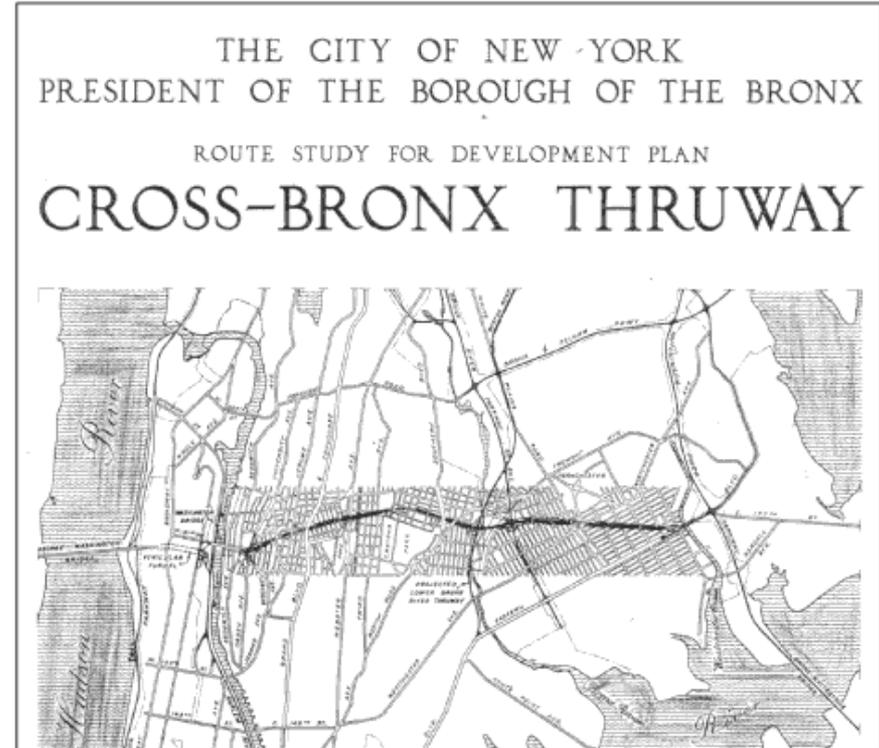
Secretary of H.U.D. Patricia Harris, Jimmy Carter and New York Mayor Abraham Beame tour the South Bronx. U.S. National Archives and Records Administration (1977)

## Displacement and destruction

The legacy of Robert Moses hangs over the Bronx in the form of the Cross Bronx Expressway. Built between 1948 and 1964, the highway cut a seven-mile wound through the area, displacing 1,500 Bronx families and splitting Crotona Park in two. Property values dropped, vacancy rates went up and crime made the area around the park increasingly unsafe. More white residents fled to the suburbs, an option denied to most Black and Latino residents by redlining and other racist policies.

From there things got worse. In the 1970s and 1980s fires in abandoned and poorly maintained rental buildings destroyed almost 80% of the housing in the South Bronx.

NYJTL was founded as a response to serve the extreme public need in communities like the South Bronx.



# The Mission: Leveling the Playing Field

A few days before winning the 1968 US Open, Arthur Ashe had an original idea: to “use tennis as a way to gain and hold the attention of young people, so that we can teach them about matters more important than tennis.”

A year later, in 1969, he co-founded, with Charlie Pasarell and Sheridan Snyder, the National Junior Tennis League (NJTL), offering programs combining tennis and education to reach under-resourced youth in public sites.

Around the same time, Lewis “Skip” Hartman, a young NYC lawyer and tennis enthusiast, had recently secured a contract with NYC Parks to construct his first air-supported removable structure over a public court in the Bronx. Approached by Gene Scott and Stu Ludlum, and with the desire to give back to the community, Skip started to look for a youth tennis program to collaborate with.

In contrast to other one-off exhibition/tennis clinics, NJTL focused on continuous engagement: the program required a minimum three hours of programming, three days a week for six to eight weeks.

Skip thought this was brilliant.



Combining their vision and passion, Hartman and Ashe founded the New York Junior Tennis League in 1971.



By 1975, NYJTL programs were in 55 parks and 6 public schools throughout the 5 boroughs.





Thirty years before the Cary Leeds Center was built, its foundations were already laid in the heart of the South Bronx. At Stevenson Commons, NYJTL ran four winterized courts (with air structures) from a mobile trailer.

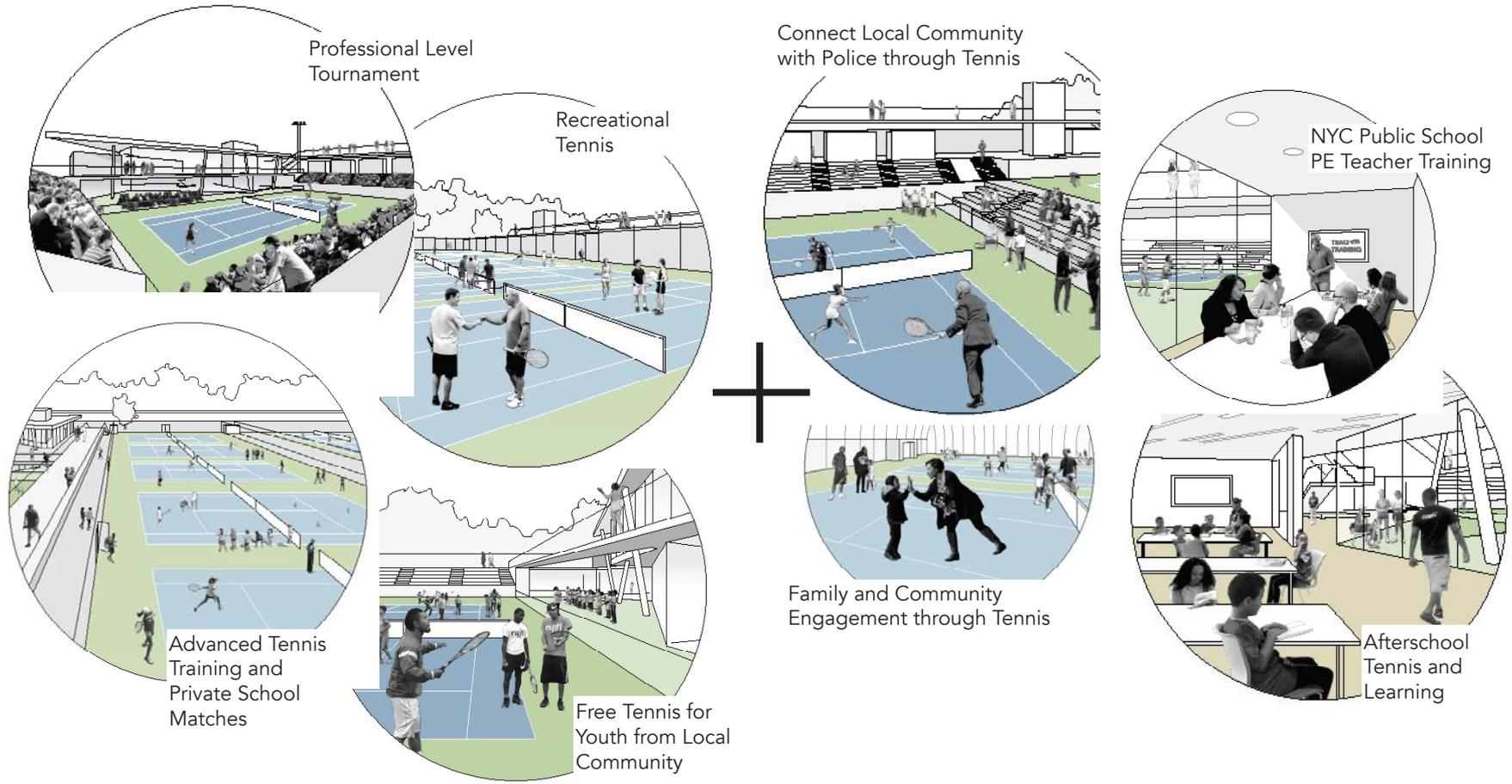


To better reflect its educational mission, the League changed its name in 2013 to New York Junior Tennis & Learning.



**Start where you are.  
Use what you have.  
Do what you can.**  
—Arthur Ashe





## Tennis and Learning

### SAP · Scholar Athletes Program

In-depth tennis and education instruction, academic preparedness and a pathway to college. NYJTL flagship program is based out of the Cary Leeds Center.

### STP · School Time Tennis Program

Multiple times a year NYJTL offers NYC teachers instruction at the Cary Leeds Center, giving them the skills to teach the fundamentals of tennis in school, including drills and games.

### ACES · Afterschool Program

NYJTL runs ACES in 30+ schools throughout New York City. They host ACEster's Cup and ACES President's Tournament at the Cary Leeds Center.

### CTP · Community Tennis Program

Youth ages 5-18 receive free tennis instruction in schoolyards and public parks in all 5 NYC boroughs. The Cary Leeds Center hosts a wide array of Community Tennis competitions.



## Community Tennis

### Youth Community Tennis

A free year-round community program introduces tennis and improves children's self-confidence and athletic skills.

### Adult and Older Adult Community Clinics

Even adults who have never played before have access to free classes with an emphasis on learning by doing.

### Saturday Night Lights

The Cary Leeds Center is the only tennis-exclusive partner in the city-wide program led by NYC Department of Youth and Community Development to engage youth and police through free, year-round sports on Saturday nights.

### Serve & Inspire

A community/police engagement program to bring youth and police together through tennis to create informal mentoring, relationship building, and the delivery of a life skills curriculum.



## Tournaments and Events

### The NYJTL Mayor Dinkins Cup

The largest free junior interscholastic tennis competition in the nation, named after NYC's first Black Mayor and NYJTL Board Member David N. Dinkins. In 2024 over 550 players participated.

### Chase: Return the Serve

Hundreds of children from NYJTL programs come for a day of exercise, tennis, zumba, arts & crafts, and healthy living.

### The Bronx Open

The Cary Leeds Center hosted this professional women's tournament in 2019 and 2022.

### US Open Junior Qualifier Tournament

Hosted at the Cary Leeds Center from 2018 to the present.

### NYJTL ACES Afterschool Fall Festival

Hundreds of elementary school students come together on Indigenous Peoples' Day for tennis and autumn joys.

### Special Populations Festivals

Summer tennis festivals serving children with special needs.



2019 Bronx Open  
WTA 250  
International Tournament

## Lasting Impact and Legacy

**30,000+** players have walked through the doors of the Cary Leeds Center

**6,000** hours of free court time are offered to the South Bronx community year-round

**1000+** South Bronx youth are served at the Cary Leeds Center

**100%** South Bronx Community School Districts have engaged with Cary Leeds Center's programming

Between 2017 – 2024, crime inside Crotona Park decreased **59%**

Source: NYC Parks Crime Statistics, Crotona Park Seven Major Complaints



**Our idea is to use tennis as a way to gain and hold the attention of young people, so that we can teach them about matters more important than tennis.**  
—Arthur Ashe



# The Idea: How Do You Make a Building Disappear?

**What is a park? According to Frederick Law Olmsted “a sense of enlarged freedom”—essentially a relief from buildings.**

In keeping with the park’s fundamental purpose, NYC Parks and the Public Design Commission required the project to be as non-intrusive as possible.

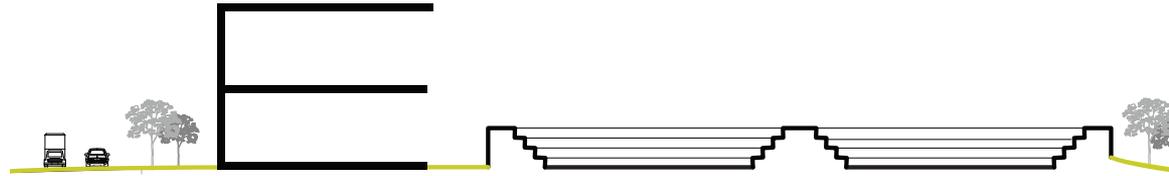
NYJTL’s vision for its flagship home was to enhance the lives of kids in and around the park, the vitality of the neighborhood, the borough, and the city. The Cary Leeds Center needed state-of-the-art courts for its tennis programs and indoor spaces to offer academic support.

But how to achieve both these things? They needed a world-class arena that didn’t interrupt the park. But how to achieve that—how to make a building disappear?

## Bury the building in the park

With one solid bold move, the Clubhouse and the exhibition courts are hidden in plain sight—any visitor can see tennis and at the same time view and feel the park.

In various contexts, sizes, and programs, GLUCK+ had previously designed and built below grade. That's why a partially buried building, to be constructed on public land with public funds, didn't seem illogical or out of reach.



A traditional approach would have put the clubhouse, bleachers and courts on grade, making the park and tennis separate experiences.



The GLUCK+ strategy puts the courts and part of the clubhouse below grade, integrating tennis into the landscape.



City Leeds Center for Tennis and Learning

## A small theater for tennis

The strategy for the new Cary Leeds Center is simple: bury the exhibition courts—including their necessary bleachers—and half of the clubhouse, and instead of a stadium sitting on top of the park, people (and the park) will get a concealed arena that doesn't exist anywhere else.

As Skip Hartman put it: an intimate experience, the only small theater in the City for tennis.



Clubhouse and courts: visually and spatially connected.



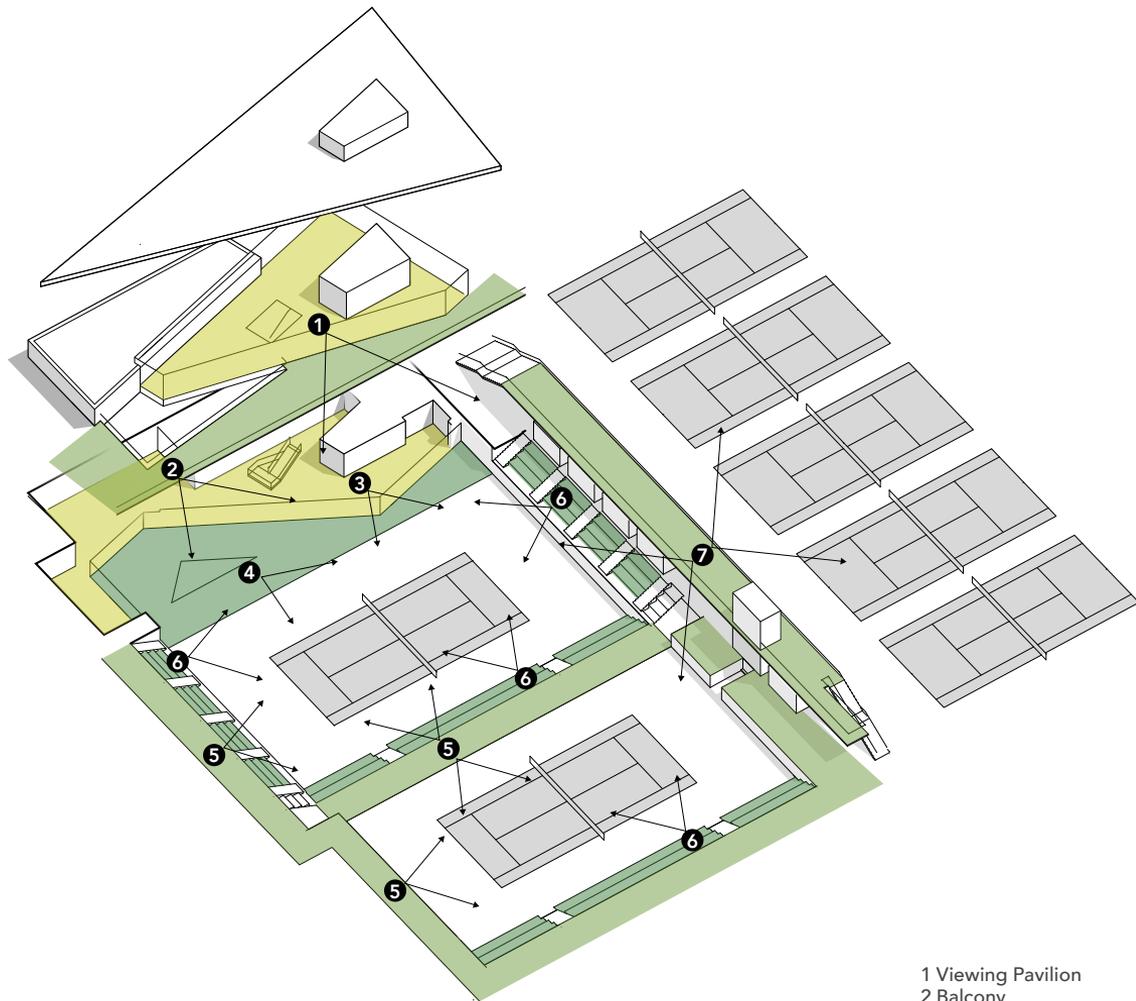
2011  
Bronx Open  
with temporary  
bleachers at  
Crotona Park.



2019  
Bronx Open  
at Victor Kiam  
Stadium  
Court One.

## 360° Tennis

When all tennis courts are on grade, it's hard to see anything except the court in front of you. But great buildings have moments of surprise. The Cary Leeds Center—with platforms at multiple heights, its balcony and patio on different levels—allows for different perspectives where built-in seating and casual viewing combine to offer spectators a fantastic, ever shifting, all-eyes-on-court tennis experience.



Viewing experience diagram:  
seven ways to look at tennis.

- 1 Viewing Pavilion
- 2 Balcony
- 3 Youth Lounge
- 4 Courtyard
- 5 Viewing Path
- 6 Bleacher Seating
- 7 Viewing Bridge



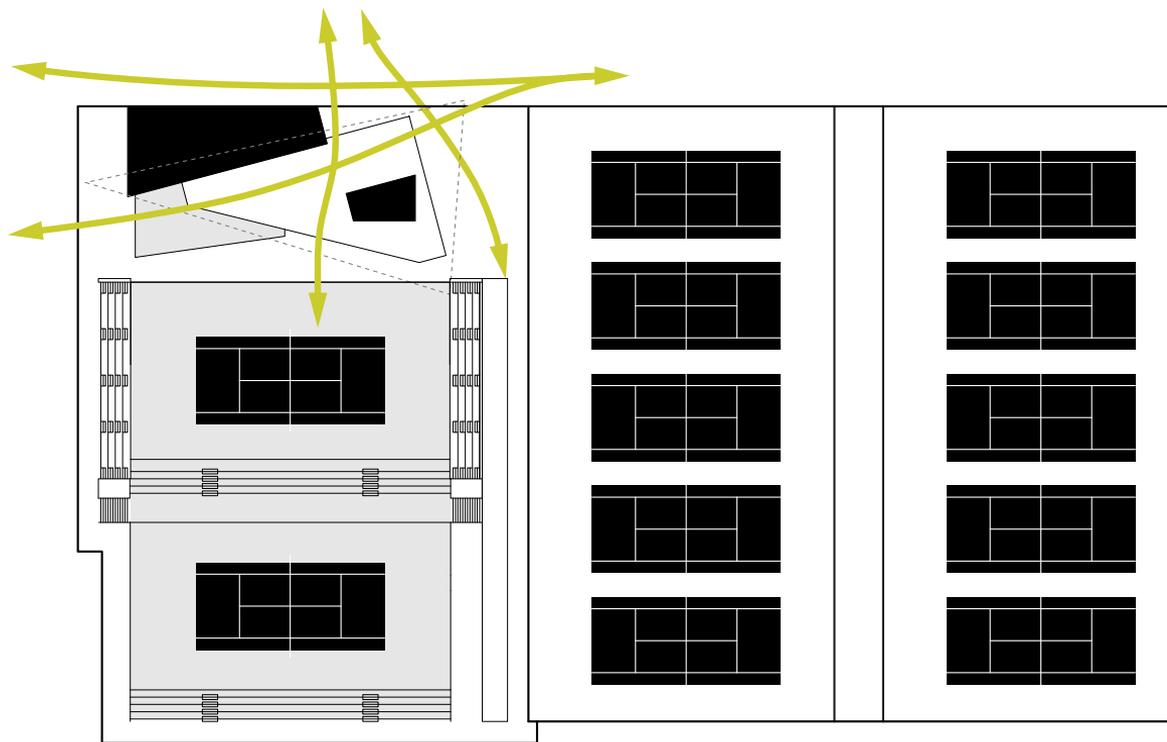


## Volley, stroke, topspin

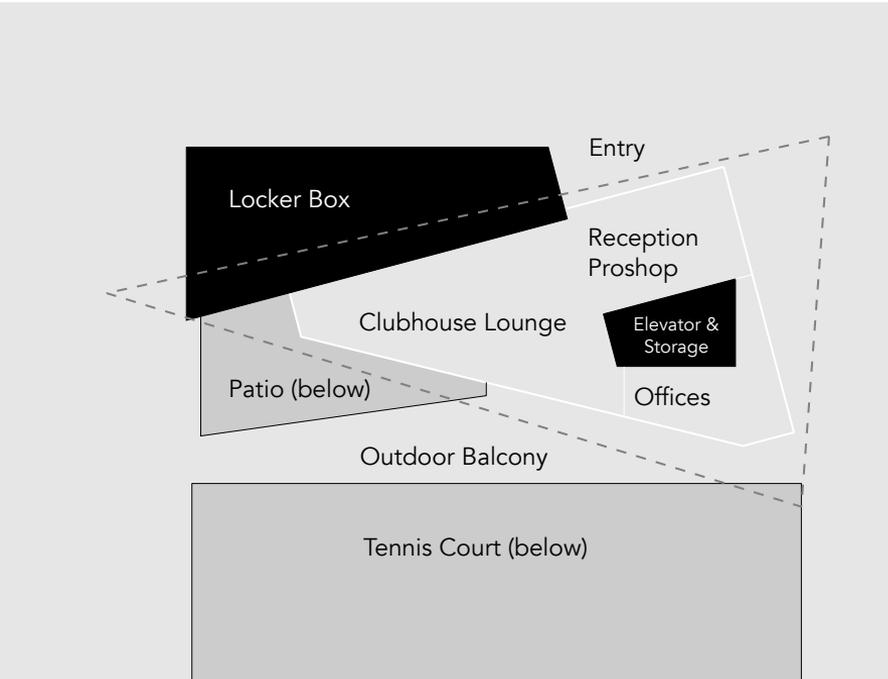
In addition to the simple rectangular forms required by the courts, the project needed to transmit the dynamic nature of playing and learning. To allow for a dynamic layout, six diagonals across the building's floor plan were traced. The powerful non-rectilinear force of these lines determines the clubhouse building's geometric logic.

A shallow triangular roof extends askew, in tension with the tennis courts. Below it, classrooms, locker rooms, lounges, offices, an elevator shaft, and a gym compose a playful layout.

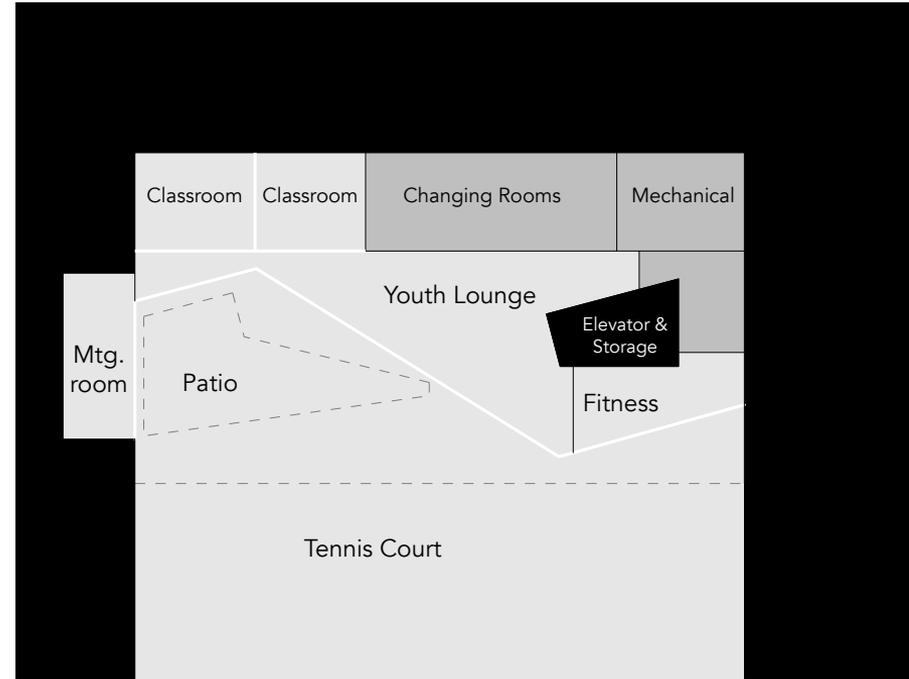
A whole world—devoted to education and tennis, filled with young energy, enclosed by solid bluestone and transparent glass—unfolds below this scalene triangle.



Site plan diagram



Park level diagram



Court level diagram



One space,  
multiple uses.





CTOR KIAM STADIUM COURT ONE

DANIEL S.  
LARRY LEVINE

PESHING SQUARE STADIUM COURT TWO

# The Collaboration: NYJTL, NYC Parks, GLUCK+

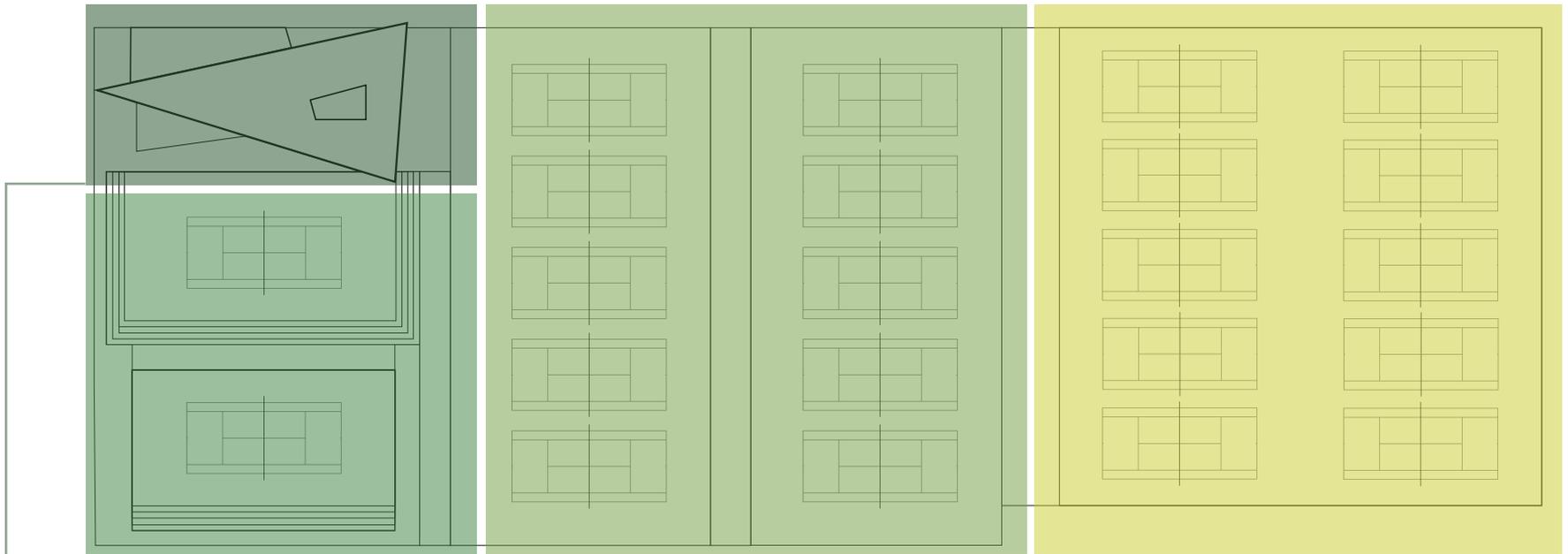
Because of its size and complexity, the Cary Leeds Center project was divided into phases. According to the original contract, NYC Parks would finance and construct Phases I (10 reinforced outdoor courts), II (10 indoor/outdoor courts with an expanded footprint for air structures), and III (two below-grade exhibition courts). NYJTL, in turn, would finance and build Phase IV: a clubhouse with classrooms fully integrated into the court layout.

After receiving approval from the Public Design Commission, GLUCK+ delivered the clubhouse on time and on budget. Simultaneously, they were retained by NYJTL as consultants to NYC Parks for the design of Phase III. Upon completing that design, Parks acknowledged that it had never undertaken the construction of a below-grade facility. By then, the project was already three-quarters complete—open, operational, and with the below-grade courts functionally tied to the clubhouse.

Given GLUCK+'s proven track record and the integrated nature of the work, Parks agreed to have NYJTL and GLUCK+ carry out Phase III using public funds, in accordance with public project requirements.

Barry LePatner, NYJTL's Construction Manager, and Steve Simkin, Vice President of NYJTL's Board, played key roles in facilitating the agreement. In what Skip Hartman has called "an unprecedented common-sense solution," GLUCK+ committed to a fixed price and fixed contingency, completing Phase III below budget and on time—demonstrating the value of Architect-Led Design Build.

		2010	2011	2012	2013	2014	2015	2016	2017	2018
Phase I	Design									
	Construction	NYC Parks								
Phase II	Design	GLUCK+								
	Construction		NYC Parks							
Phase III	Design	GLUCK+								
	Construction					NYC Parks obligation per original agreement		GLUCK+ takeover		
Phase IV	Design	GLUCK+								
	Construction				GLUCK+					



**Phase IV**  
Construction of new clubhouse

**Phase III**  
Construction of two new exhibition courts

**Phase II**  
Redesign of 10 existing courts and construction for two air supported domes

**Phase I**  
Resurfacing of 10 existing north courts

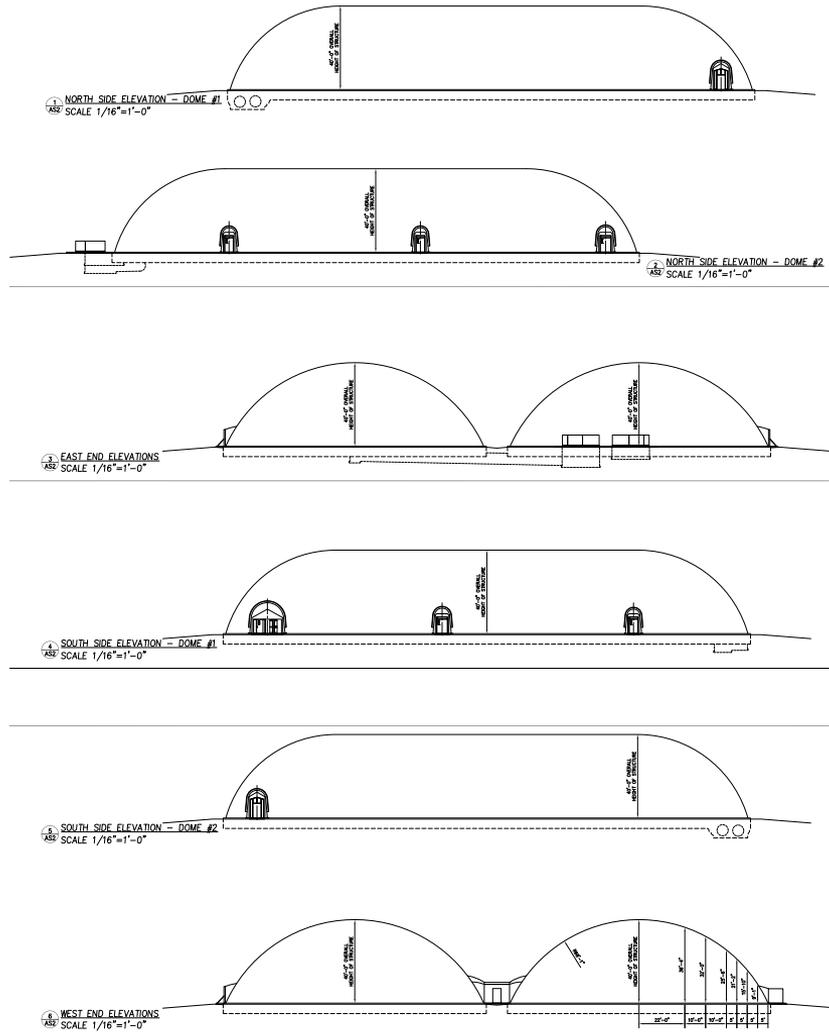
## Tying bubbles

To fulfill its mission, the Cary Leeds Center needed to be a year-round, all season public amenity. Two air-supported domes—“bubbles”—were designed to be deployed during the winter, covering 5 courts each.

Though NYC Parks built Phases I & II, GLUCK+ designed the drainage system and the grade beams to anchor the domes.



Below grade beams:  
concrete anchors for  
air-supported domes.



Tennis all year round,  
regardless of the season.

## Time lapse

On May 22nd, 2013, a few weeks after the completion of Phase II by NYC Parks, the ten winterized outdoor courts, the Clubhouse broke ground.

Gradually the elegant half-buried form began to emerge.





Cast-in-place: concrete foundations and retaining walls.



Court level steel structure.



Park level steel deck  
and roof steel structure.



Aluminum framing:  
between skin  
and bones.



The clubhouse is almost done,  
but the exhibition courts  
are pending.

## Expanded scope of work

Two years later and on schedule, the pavilion was nearing completion but construction of the exhibition courts had not started.

With the proven ability of GLUCK+ and the design-build process to deliver, the collaborators amended the contract to authorize GLUCK+ to build the sunken exhibition courts (Phase III), just as they had the clubhouse.

It was an exciting opportunity to show what Architect-led Design Build could do.



Architects, builders and contractors:  
GLUCK+ wears multiple hats.  
(left to right) Robert Wall, Wazir  
Kahn, Sam Currie, Marc Gee,  
Peter L. Gluck, Stephane Derveaux

# The Building: Architect-Led Design Build

**Architect-Led Design Build is a different way of doing architecture, one in which the whole design process—from drawing, to budgeting, to construction—has a completely different trajectory.**

In the standard architectural process, drawings made by the architect are passed on to the builder, who transforms them, as directly as possible, into the pieces and parts that make up the building.

Because there is little or no exchange between the intention of the designer and the practical realities of construction, the final product inevitably falls short.

In Architect-Led Design Build there is a continuous dialogue. Construction decisions are informed by the designer's intention so that nothing is lost.

The ultimate goal is to better express the clients' mission, creating a space in which they can realize their full potential.



Work on the exhibition courts begins.

## Going deep without flooding

Schist, gneiss, and marble are the metamorphic rocks that emerge when excavating in NYC. Characterized by its crystalline and banded texture, the bedrock beneath Crotona Park is exceptionally hard. As a result, water tends to fill up low-lying areas.

Building below ground level meant taking extra steps to prevent flooding. An engineering-driven approach would have involved the implementation of mechanical equipment for water extraction. But such a system would have been expensive to maintain.

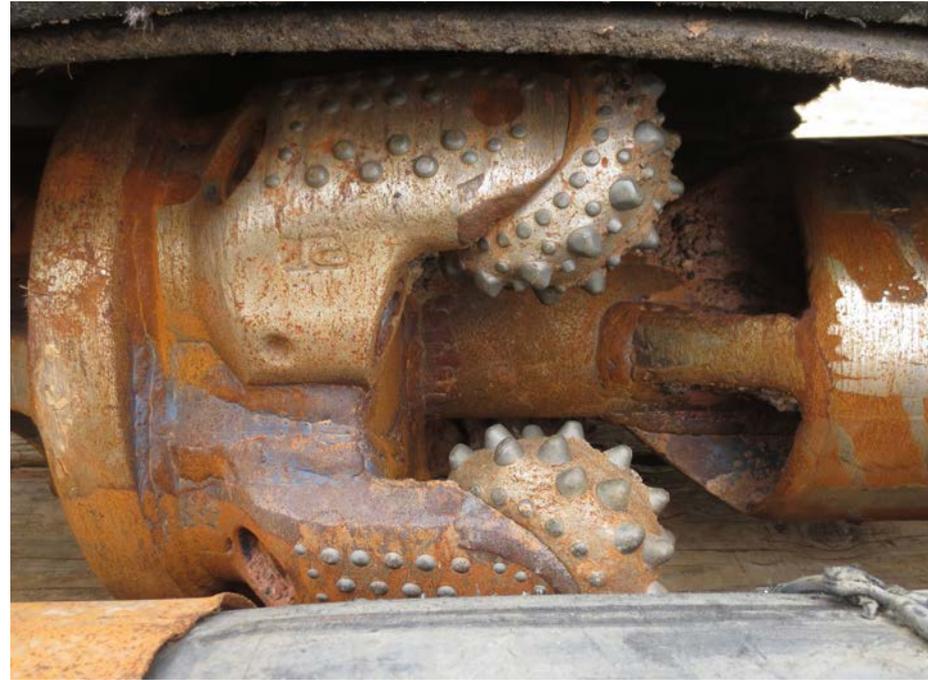
The architecture-led strategy—a creative approach to reducing future costs—involved drilling trenches to drain runoff by gravity to nearby Indian Pond.



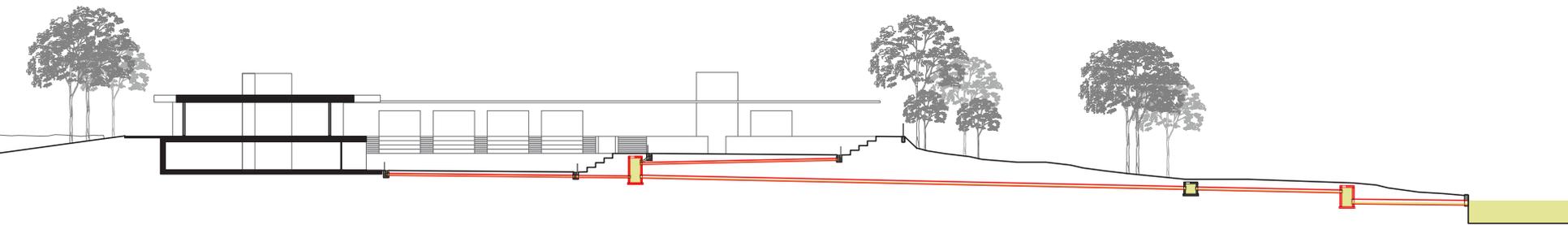
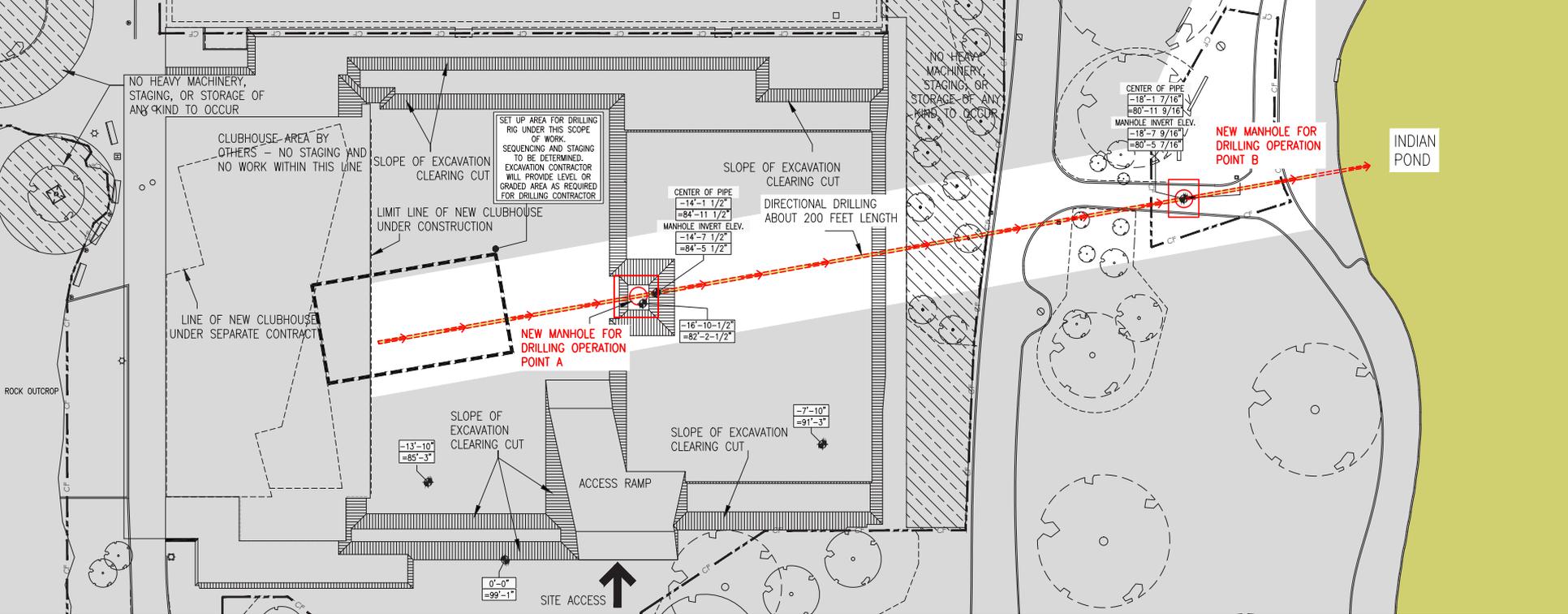
Site conditions without proper drainage.



Ditch Witch  
JT4020  
Directional drill.



Drilling head for  
8" gut line.

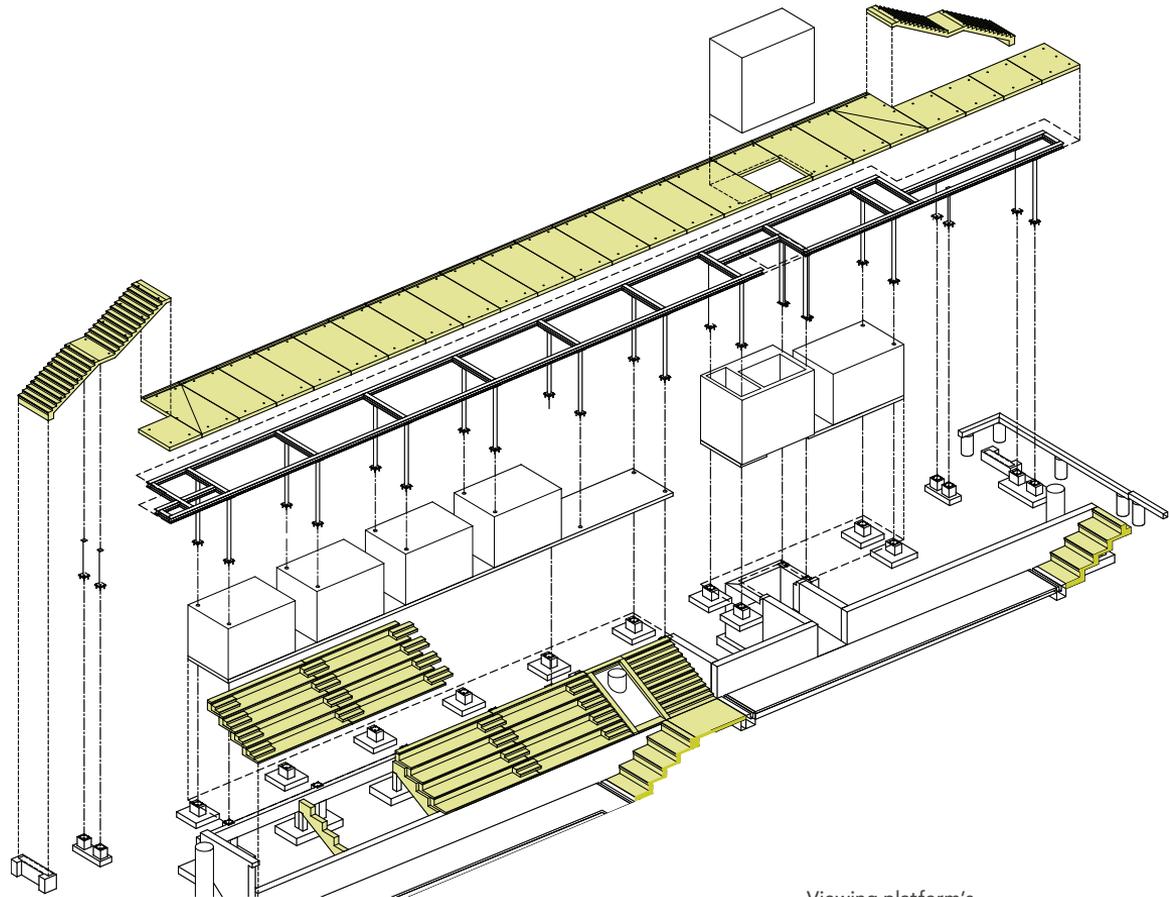


Directional drilling plan & section: draining from the courts to the Indian Pond.

## Offsite construction

A viewing bridge connects the four project elements—public park, public courts, clubhouse, and exhibition courts. This one-of-a-kind solution was built from precast components, allowing the work to be done in parallel and quickly assembled when ready.

From the viewing bridge visitors can watch seven tennis courts, five public courts and the two exhibition courts, and contemplate all of Crotona Park, including the Indian Pond. It also houses much needed storage rooms.



Viewing platform's exploded diagram: precast elements highlighted.



Precast concrete:  
greater detail and  
faster turnaround.



Assembling the precast concrete stair.



CREATIVE LEARNING CENTER  
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**Disney**

CREATIVE LEARNING CENTER

## Lasting compression

Cracks on a tennis court are like seams on a pool table. They ruin the game and, even worse, can injure players and spectators, if only by their uneven edges and terrible looks.

A good rule of thumb is to resurface outdoor asphalt tennis courts every four to eight years. To do so, heavy machinery is needed—floor scrapers, blowers, pressure washers, drills, a Barber-Greene. Bringing those into sunken courts is quite disruptive, unpractical, a little nightmare.

By contrast, post-tensioned concrete guarantees minimal maintenance and ensures a longer lifespan for the courts. Today, all the courts at the National Tennis Center in Queens are built with post-tensioned concrete.



Post-tensioned concrete:  
a resistant material to  
guarantee durability.



CARY LEEDA CENTER for tennis & learning

PERKINS MANAGE STADIUM COURT ONE

PERKINS MANAGE STADIUM COURT TWO

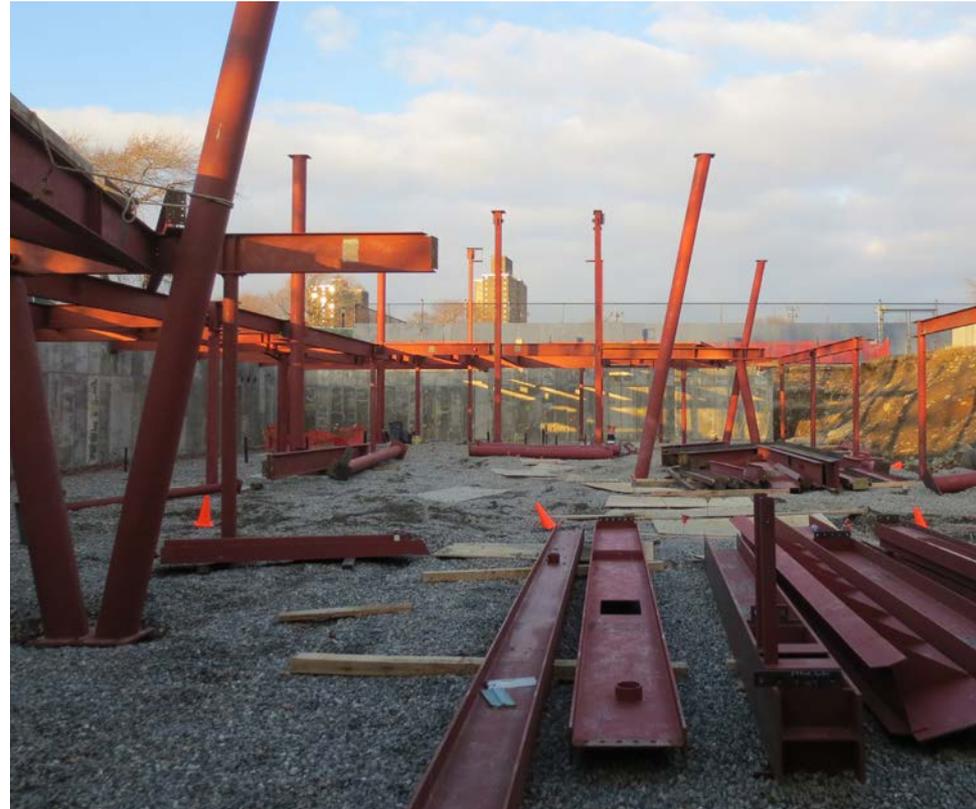
## Sixty-one steel bones

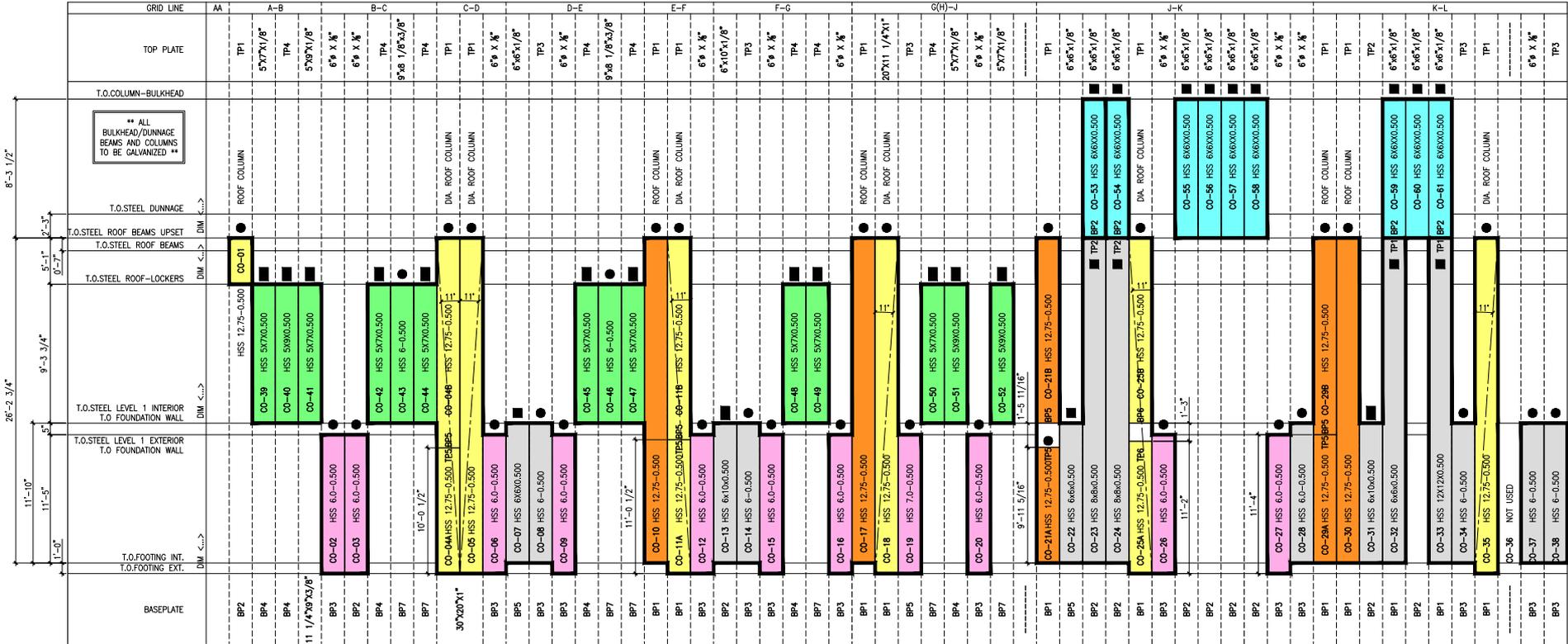
The bones of a building, much like the skeleton of an animal, must aim for efficiency and strength. Structurally speaking, no material can do so much, with so little, as steel.

The steel structure of the Cary Leeds Center consists of two intersecting logics. One supports the first floor and the balcony, the other carries the roof, enabling it to stretch beyond the building's footprint.

Each column in the system is unique—designed for a specific location and carrying a specific load.

Managing this complexity required careful coordination—and detailed documentation—to ensure the metallic body was assembled correctly.





01 COLUMN SCHEDULE N.T.S.

Column schedule:  
how to visualize every steel  
column in the project in  
one place.

# GARY LEEDS CENTER



University of Miami

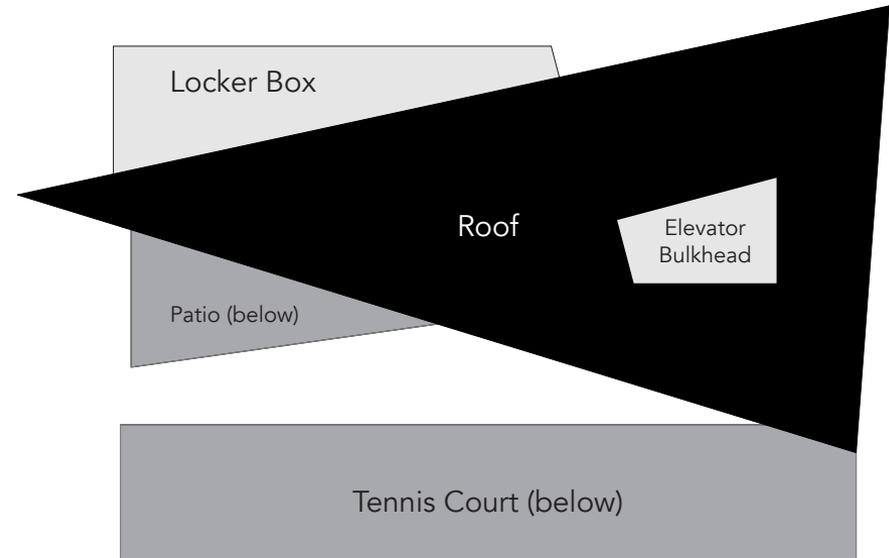
VICTOR KIAM STADIUM COURT ONE

GERARDINO BAZZANI  
ARCHITECTS

## Triangles, triangles, triangles

Due to its irregular shape, cladding the roof ceiling posed a particularly complex challenge. Slanted columns lack vertical centerlines, making it impossible to establish a regular grid for ceiling tile layout.

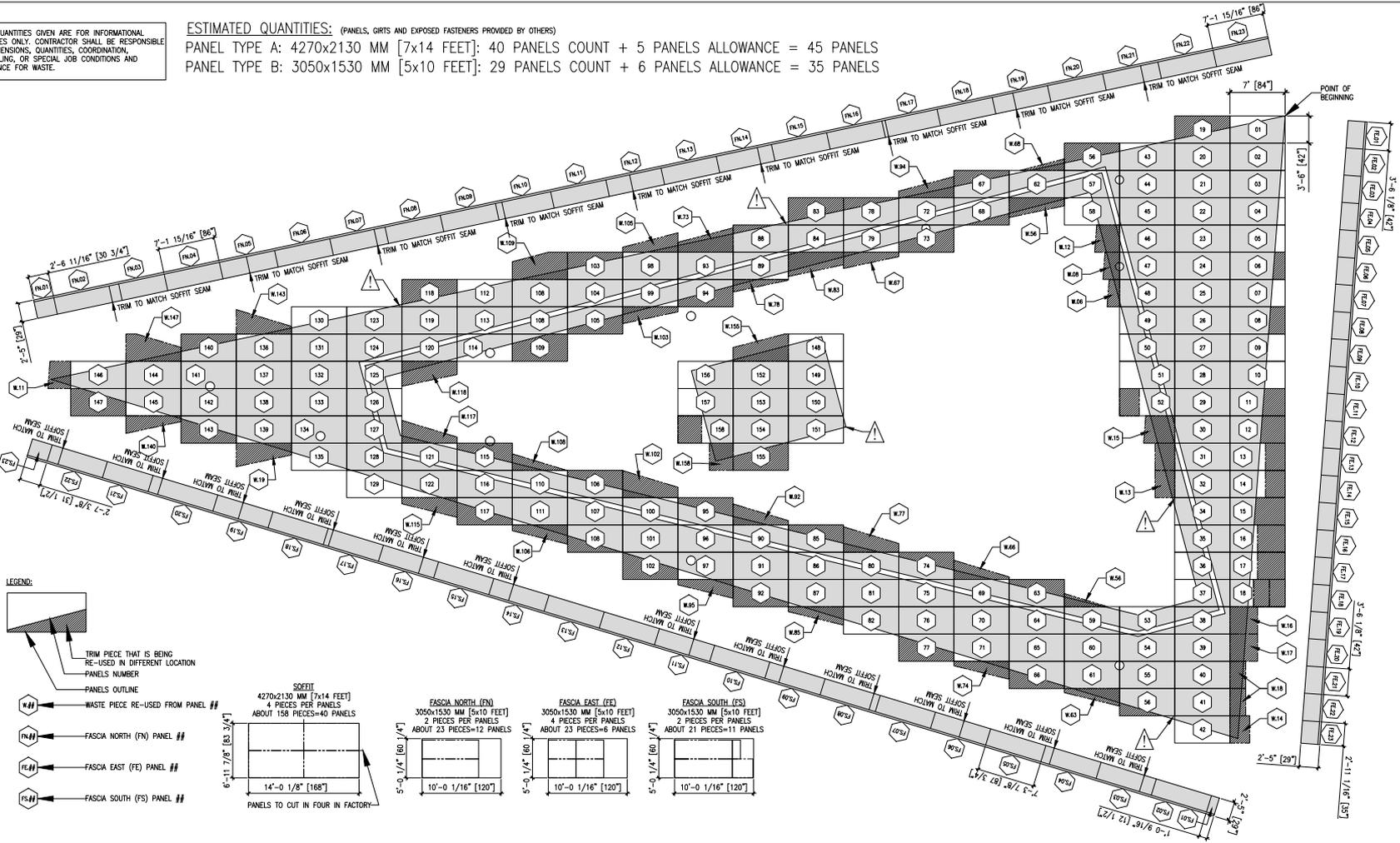
To further complicate matters, the clubhouse roof isn't a solid triangle but rather a triangular donut, with the cutout located near its base.



Roof diagram

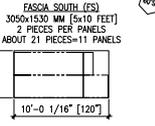
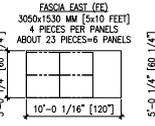
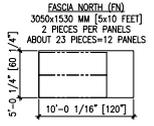
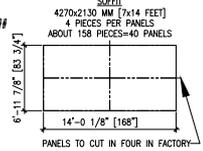
NOTE: QUANTITIES GIVEN ARE FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR DIMENSIONS, QUANTITIES, COORDINATION, SCHEDULING, OR SPECIAL JOB CONDITIONS AND ALLOWANCE FOR WASTE.

**ESTIMATED QUANTITIES:** (PANELS, GRIDS AND EXPOSED FASTENERS PROVIDED BY OTHERS)  
 PANEL TYPE A: 4270x2130 MM [7x14 FEET]: 40 PANELS COUNT + 5 PANELS ALLOWANCE = 45 PANELS  
 PANEL TYPE B: 3050x1530 MM [5x10 FEET]: 29 PANELS COUNT + 6 PANELS ALLOWANCE = 35 PANELS



**LEGEND:**

- TRIM PIECE THAT IS BEING RE-USED IN DIFFERENT LOCATION  
PANELS NUMBER
- WASTE PIECE RE-USED FROM PANEL ##
- FASCIA NORTH (FN) PANEL ##
- FASCIA EAST (FE) PANEL ##
- FASCIA SOUTH (FS) PANEL ##



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PROJECT  
**Cary Leeds Tennis Center**  
 1720 Crotona Avenue, the Bronx, New York

NO.	DATE	NOTES

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 Tel: 718.786.7110 Fax: 718.786.0332

GENERAL NOTES	CONTRACT TYPE	STAMP

DRAWING DATA - CHECK SHEET

**REFLECTED CEILING PLAN**  
 LEVEL ONE - TRESPAS LAYOUT  
 CLADDING - NOT FOR CONSTRUCTION

DRAWING TITLE

DATE: 09.03.2014 PROJECT NO: 1005  
 SCALE: 3/8"=1'-0"

**A-401.1-CL**

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## The roof mathematician

It was one thing to draw comprehensive reflected layout ceiling plans on a computer, and yet another to transfer them onto the actual roof, which had no grid, no right angles, and hardly any reference points.

A trained mathematician, hidden among us as a skilled carpenter, devised a brilliant geometric method to trace parallels, extend lines, and hit exact points on every single layout panel. When the carpentry crew installed the last Trespa® panel, it fit exactly. Everyone took their hats off in awe.

So much depends upon the team, in the mutual exchange between client and architect, architect and builder, builder and craftsman.



Subcontractors' skills plus close supervision to achieve the best solution possible.



VICTOR KIAM STADIUM COURT ONE

BIG SQUARE STADIUM COURT TWO

**High quality architecture emerges when architects are involved in all aspects of the project—from the earliest phases of conception to the final details of construction.**





**The Cary Leeds Center fully opened to the public on April 7, 2017.**  
The start of a new era for NYJTL and Crotona Park.

# Appendix

**The following interview brings NYJTL's recent history and the long process culminating in the Cary Leeds Center into focus. Dive into it as Lewis "Skip" Hartman shares firsthand accounts of the collaborative efforts behind the creation of this important community resource.**

How did the Cary Leeds Center start?

First and foremost, it is important to understand that NYJTL has, from the get-go, focused on providing programs to underserved, low-income areas around New York City. For many years, in the late 70s and early 80s, we were doing free clinics in Crotona Park and at probably twenty-five other sites in the Bronx.

Around 1985, we started a program in the heart of the South Bronx, on Hoe Avenue. With the help of the city, we built nine outdoor courts there. That became the first facility we managed and ran on city owned public land. Everything else prior to that had been on public school or Parks property. The program was so successful in terms of improving the neighborhood that the community board recommended to the Mayor to remap the property into parkland. NYC Parks then decided to convert the site into a community playground. So, tennis essentially lost the site.

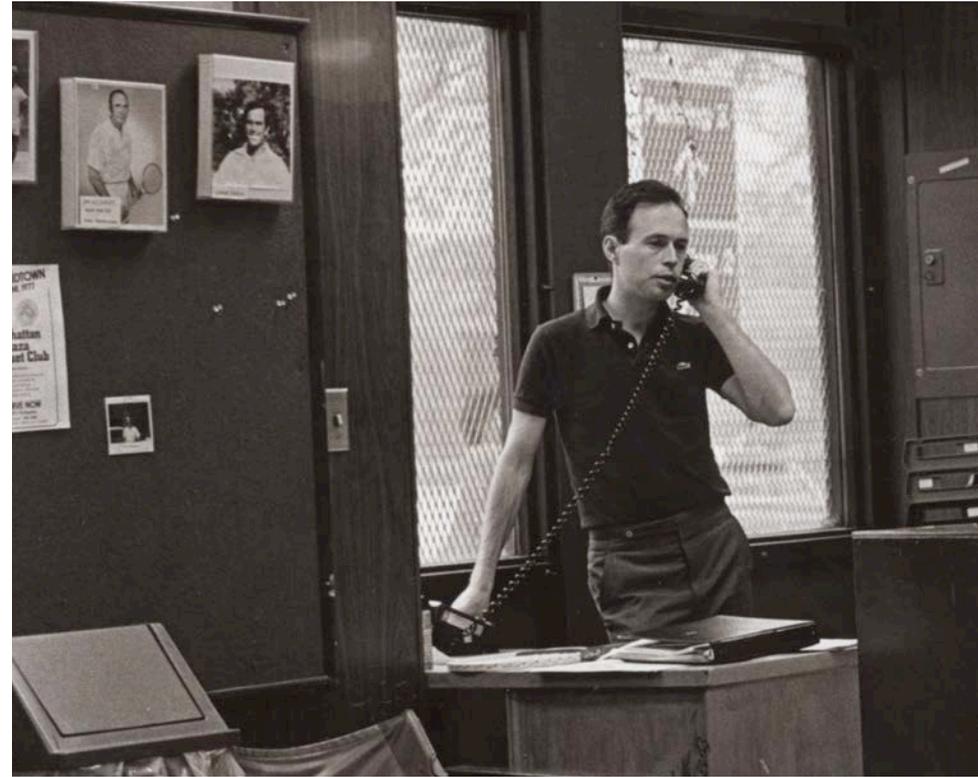
### How did the League move forward?

Not too far from there we were providing tennis programs at Stevenson Commons, a Mitchell-Lama subsidized housing program on Lafayette Ave. Around 1994, on what had been three outdoor courts, we renovated and expanded to four tennis courts and installed a bubble, with a modest trailer clubhouse, so that people could play during the winter. We ran a lot of tournaments and free community programs.

A couple of years later, the owners of the property welcomed the idea of expanding from four courts to thirteen courts, adding a permanent clubhouse and transforming the site into a first-class facility as opposed to a bare-bones one. We then went about retaining an architectural firm to help us with this expansion.

### Is that when you first met GLUCK+?

Yes. We gathered the names of eight or nine architectural firms with experience building gymnasiums and community centers. One of them was GLUCK+. I had visited one of the buildings designed and built by their office, so I was familiar with the kind of architecture they could create. Now, in my experience with constructing commercial tennis clubs, I know that most of the time, architects don't get involved in construction and that, invariably, costs are much higher than they project.



Lewis "Skip" Hartman  
(c.1977)  
NYJTL Co-founder &  
Chair Emeritus

So, when GLUCK+ talked about architect-led design build, I was intrigued. I thought it would enable us to get a real sense of what the building was going to cost.

We had to fundraise for this building. It's not exactly like we had plenty of money, and so if we were going to have to go raise money, we didn't want to go raise it twice. We really wanted to know what the project was going to cost. That was the most significant factor in the decision and what tipped it in GLUCK+'s favor.

And I will tell you one more thing: All the other architects looked like they could design something pretty nice. All of them came well prepared for the interviews; they had slideshows of their work. But when Peter Gluck came for his interview, his slide show didn't work! So, thank goodness he had that design-build concept. He talked without the benefit of a multicolored exhibition power-point presentation, and he was very convincing.

### **After GLUCK+ got the job, what happened?**

They started to design the Stevenson Commons project while we went ahead and raised about \$10M for it, with \$7.5M of public money and \$2.5M of private money. Larry Leeds wanted to honor the life and the athletic achievements of his late son Cary. He quickly became our largest donor and helped raise the first \$2.5 million. It goes without saying how important the Leeds family has been for this project from the beginning.

We were rocking and rolling, until the time came to trigger the use of the public money. Since the site was private property, the city required a commitment from the owner to lease the property for public use for a 30-year period. Much to our surprise and dismay, the owners decided not to do it. They backed out because there was a lot of pressure to build additional affordable housing. There still is. The owners realized that they might be able to build more buildings and so they did not want to commit the property for 30 years to this project.

Thanks to GLUCK+, we had the layout and the concept for the building, with a team ready to develop the project and with \$10 M raised. But... we had no site.

### **A difficult blow...**

We worked with the city, the Bronx Borough President's Office, and NYC Parks to find another site. The Bronx probably had more vacant land than any other borough. But believe it or not, just about every site that we saw on private land had some major project scheduled for it, whether for two or eight years. Nobody wanted to see tennis courts on those sites. And so NYC Parks pointed us to Ferry Point Park.

We started again. GLUCK+ graciously did a test fit for us there, but after thinking about it for a year, NYC Parks decided that the site was not good. The land that we identified was part of a drip of potential overrun or drainage, overrun swale. They did not want to put anything there.

### Third time's the charm?

Once the second site was rejected, we started to put a bit more pressure on the city—Lary Leeds' involvement in that aspect was fundamental too—until the City finally agreed to do it in Crotona Park. They released a Request for Proposals (RFP) for Crotona Park. And I must say, all through this long and complicated process, GLUCK+ were very patient. I don't know what they were thinking, but they were always by our side and provided the basic support services we needed to present all those design possibilities to different groups that had to approve them. I am very thankful for that. I really appreciate the way GLUCK+ partnered with us as we worked through all these challenges.

In 2009, ten years in the making, NYJTL was finally awarded the concession for Crotona Park, which made it possible for GLUCK+ to really roll up their sleeves and go to work on designing and then building the Cary Leeds Center.

### Acknowledgments

The realization of the Cary Leeds Center involved the dedication and hard work of numerous individuals from NYJTL and NYC Parks. Lewis "Skip" Hartman stewarded this project with unwavering tenacity from start to finish. Steve Simkin, Deborah Antoine, and Barry LePatner were crucial to the momentum of the process. Alessandro Olivieri and Anthony Macari at NYC Parks deserve special mention for taking on architect-led design build. Support from Mayor David Dinkins and the Bronx Borough President Ruben Diaz Jr., and NYJTL Board members Tory Kiam and Bill Ackman closed a critical gap. Larry and Dalia Leeds' generosity and their drive to honor the life of their late son Cary were fundamental to making the project a reality.

We are also indebted to those who contributed their time to make this publication possible. Thank you to Skip Hartman and Udai Tambar, Raiyan Nafee, Jim O'Neill, and Sachi Kurup from NYJTL; Bonnie Siegler, Will Gluck and Anne Langston; and Jonathan Akinniyi, whose research contributions were instrumental to this book.

## Awards

**2024, 2019 Outstanding Facility Award**  
United States Tennis Association (USTA)

**2020 Design Award of Excellence**  
Society of American Registered Architects (SARA)

**2019 Design Award of Merit**  
Society of American Registered Architects/NY Council  
(SARA/NY)

**2017 Honorable Mention**  
The American Architecture Prize

**2014 Bronx Building Award**  
The Bronx Chamber of Commerce

**2012 Award for Excellence in Design**  
NYC Public Design Commission

## Team

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Architect and Builder

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Marc Gee  
Robert Wall  
Sam Currie  
Stephane Derveaux  
Neelu Shruti

TYLin (formerly Silman)  
Structural Engineer

eConstruct USA, LLC  
Structural Engineer (Precast Concrete)

Rosini Engineering, P.C.  
MEP Engineer

Iros Elevator Design Services  
Vertical Transportation Design

RA Consultants  
Geotechnical Engineer

Michael Wein P.E.  
Civil Consulting Engineer

Fehring Surveying  
Surveyor

Design 2147  
Expeditor

Starr Whitehouse  
Landscape Architect

Eight and a Half  
Graphic Identity

Lux Populi  
Lighting Designer

Global Sport & Tennis Design Group  
Sport Facility Design

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NYC Department of Parks and Recreation / 44, 45, 47

NYJTL / 9, 21, 26, 30, 54-61, 63, 67, 69, 73, 75, 84, 85, 90, 96, 107, 155, 156, 161

Paul Warchol / 17, 18, 83, 98, 134, 144

Randy Rubin / 6-7, 10, 88-89, 138-139

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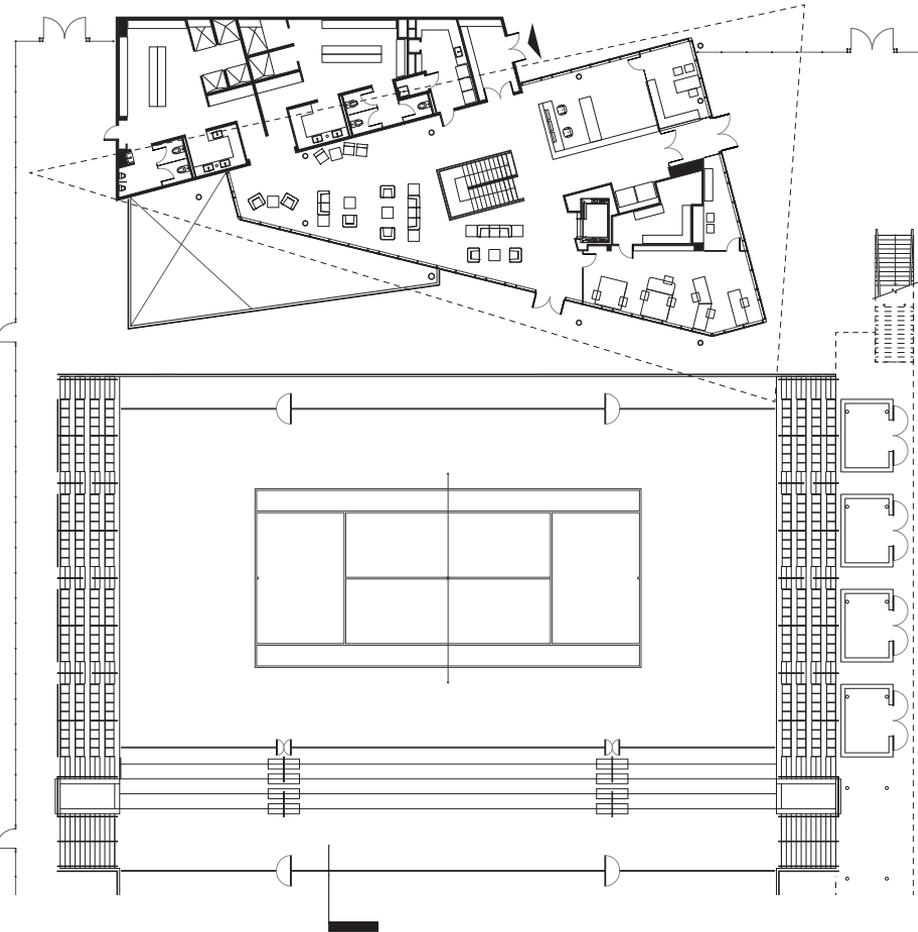
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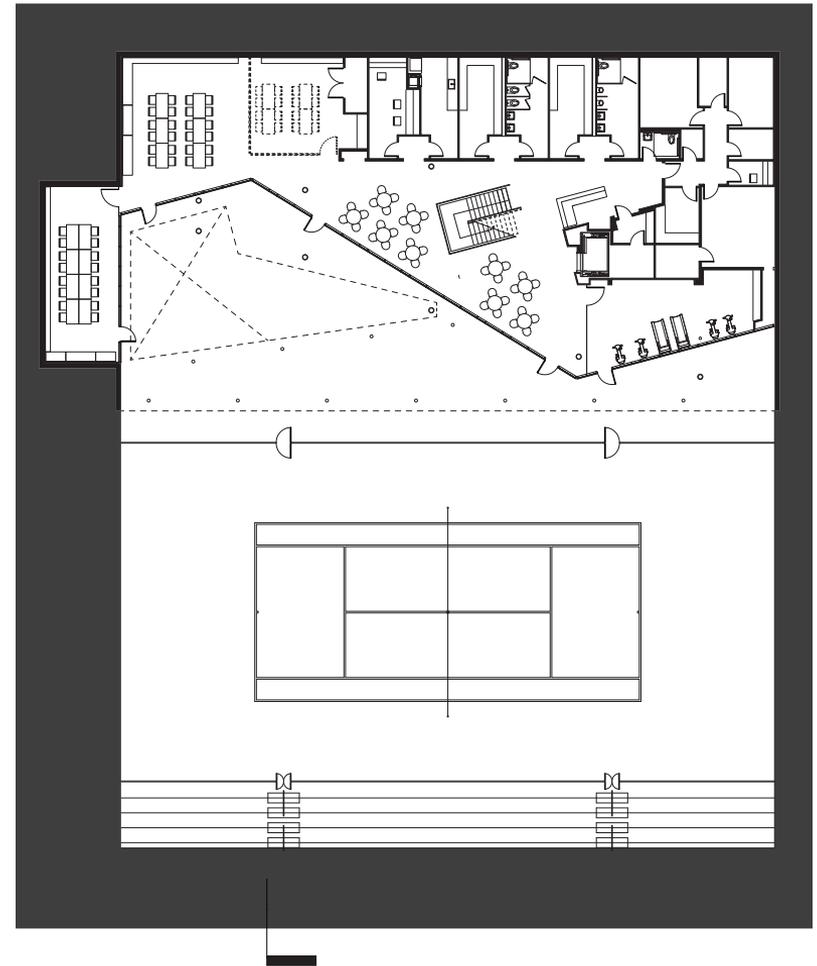
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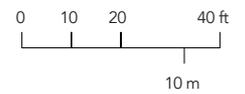
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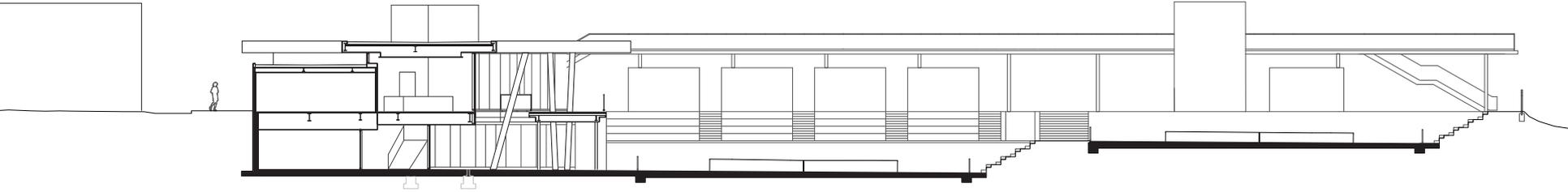


Park level plan

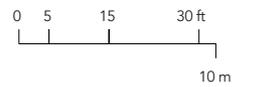


Court level plan





Long section





GLUCK+ Booklet Series · I  
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