



# MAKING METROPOLIS

*Rivers and Rails*

# STUDIO BRIEF

## Making Metropolis

### RIVERS AND RAILS

Cities develop along corridors that transport goods and people. Historically transportation routes have been at the edges of cities. Now, urban rivers and rail lines are being surrounded by development. This studio will develop 750,000 SF where rivers and rails merge: in Chicago and in Los Angeles.

These two urban conditions could not be more different.

In 2017 the focus will be on Chicago, just west of the Loop from Jackson to Lake, where developments above the rail lines along the Chicago River were completed over 40 years ago. Yet many parcels and open areas are underutilized. River frontage has never “come alive “ - despite the enormous concentration of people. Thus, the studio will focus on “filling in the gaps” by adding density, mixed use, street life and activity along the river’s edge.

In 2018 the focus will be on Los Angeles. Although storied, the Los Angeles River is an urban wasteland. Only in the last year has a team - led by Frank Gehry - begun to study a master plan for using the river intensively. The 6th Street Viaduct - under the direction of Michael Maltzan - is being reconstructed as major new mixed-use infrastructure. New major projects by Herzog/DeMeuron and BIG are being slated for the Arts District along the river. Thus, the studio will focus on the 1st Street Viaduct at the river to form a “gateway” between Little Tokyo and Boyle Heights by adding density, mixed use, street life and activity along the river’s edge.

In these efforts the studio will be guided by major underlying principles: settlement scaling, the human body, good space, making, place and the street.



Chicago River Today



Los Angeles River Today

# STUDIO BRIEF

## Making Metropolis

### SETTLEMENT SCALING

Whether a village, a town, a small city or a large city, human settlements have always had a core and a periphery.

Climate Change has prompted scientists and anthropologists to form teams to study what occurs as settlements expand. Using historical and parametric algorithms, they have identified an interesting phenomenon: the core grows proportionally stronger.

The core experiences Increasing Returns.

And these returns hold true regardless of Governance, Religion, Economic System, Political System, Urban Framework, Location or Time.

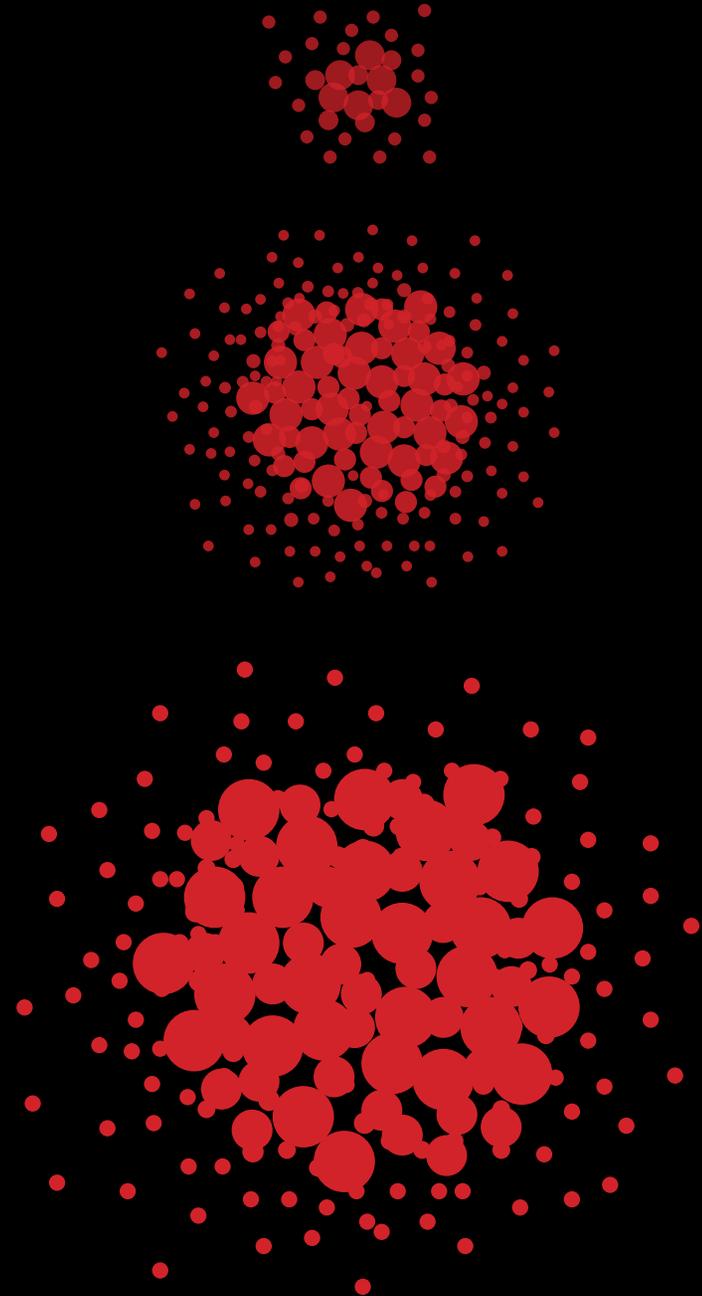
What are Increasing Returns?

Increasing Returns are better health for individual citizens, more wealth, more diversity, more innovation, stronger families, more education, higher individual and group achievement, more sustainability plus a greater sense of fulfillment and happiness at every level of endeavor,

Density is the Driver.

Density creates more, deeper, broader, stronger and more creative linkages in the petri dish of a major urban core.

For a Metropolis to compete in the 21st Century, it must Densify.



# STUDIO BRIEF

## Making Metropolis

### SETTLEMENT SCALING

Curiously then, increasing density leads to counter-intuitive paradoxes.

For instance, New York City - Manhattan - is overall the most sustainable and happiest place to live, work and play on the planet.

Why?

Density.



Manhattan 2016

# STUDIO BRIEF

## Making Metropolis

### SETTLEMENT SCALING

Manhattan knows it must continue to densify.

After \$4,000,000,000 of public investment, now under construction on the island's West Side is the first 11,000,000 SF of 20,000,000 total SF of mixed-use space: Hudson Yards. This is the largest private development in New York City since Rockefeller Center.

But Chicago and Los Angeles know this, too.

Chicago continues to build at a rapid pace, densifying within the Loop and expanding west and south of the Loop with increasingly intense development. Suburban corporate headquarters regularly relocate to downtown Chicago as employees demand the enhanced lifestyles of an urban core. Major investments have been made in public amenities like Millennium Park. The Loop itself is being upgraded.

Los Angeles has reached its natural boundaries of ocean, desert and mountains. It must expand by adding density, going vertical. Within the last year voters passed a referendum to vastly expand their mass transit system. There are now several proposals before governing bodies across the basin to change zoning laws, increasing and mixing uses specifically to add density. Downtown itself is being completely overhauled.

Chicago and Los Angeles want to challenge New York.

They have no choice.



Hudson Yards *KPF, SOM, Diller & Scofidio* Manhattan 2018



Chicago Skyline 2015



670 Mesquit *BIG* Los Angeles 2020

# STUDIO BRIEF

## Making Metropolis

### THINK WITH YOUR BODY

Architects, like dancer/choreographers, both inhabit and conceive their work. We compose naturally through our bodies, using all our senses. We apprehend ourselves and our surroundings physically long before we do emotionally or intellectually.

Similar to the research in Settlement Scaling, it is of fundamental interest that Embodiment and the Senses have emerged as the focus of recent, dramatic breakthroughs in the human sciences. They concern the way we perceive, respond to and understand the world through primal biological operations.

A dancer can stand still and solid, a focus radiating energy to everything around or can constantly twist and turn to respond to other dancers and the surroundings. So can buildings.

Constantly expanding and contracting, pulsing but still, Bramante's *Tempietto* in Rome is a solid sculptural mass radiating energy.

Michelangelo's *Sistine Ceiling*, on the other hand, has figures twisting, turning, torquing and writhing - *Figura Serpentinatas* - in response to each other and within their gridded framework: a very common urban condition.

The studio will explore the meaning and implications of buildings as stolid masses or as *Figura Serpentinatas*, making them into distinct structures to dance within a context of vital Metropolitan Spaces and Places.



Antonio Gades *Spanish* 1936 - 2004



Pina Bausch *German* 1940 - 2009



Tempietto *Bramante* 1502



Sistine Ceiling *Michelangelo* 1512

# STUDIO BRIEF

## Making Metropolis

### GOOD SPACE

Architects must make good space. Space is “good” if it can adapt to a wide variety of functions that comprise basic human needs of shelter, habitation, work, learning, changing, enjoyment, beauty and spirituality. Mies van der Rohe called this Universal Space. Some now call this Hybrid Space.

Good Space is Mixed-Use Space. It has become customary to realize that manufacturing spaces can become living spaces, that department stores can become offices, that offices can become schools, that schools can become clinics, that a space calibrated for one use can become appropriate for another use, that form can be inflexible if over-prescribed by function.

Good Space is space that doesn't know what its functions might be over time. It must be prepared to adapt readily. This includes both interior and exterior space.

Good Space is not neutral. It creates unique character and poetry that derives from its place, its making, its materials and its unique social and economic forces. One place of Good Space is different from another place of Good Space. Each adapts in its own way to location, sociability, ambition, technology, financing, politics, culture and the ever-varying rhythms of life.

In both Chicago and Los Angeles, the studio intends to develop authentic and compelling Good Spaces.



Department Store now Retail, Office and School



Warehouse now Home

# STUDIO BRIEF

## Making Metropolis

### LIVING BY MAKING

Building 60 feet wide effectively accomodates 750 SF minimum, naturally ventilated living modules across a double-loaded corridor. Toilet and kitchen shafts must be constructed for each module. But neither these services nor demising partitions should be built out in base construction. This allows for flexible “Good Space” for a wide variety of other uses such as office spaces, maker spaces and educational spaces. A unique economic model emerges: “starter” units for all types of people entering the urban housing market become affordable by self-building the services.

Typical floor-to-floor height will be 13”-4” to accomodate all uses, providing basic graciousness to even the smallest module. Two exit stairs must be provided plus every 75,000 requires an elevator. Double-skin facades of varying depth are encouraged.



# SITE

## Making Metropolis

### THINK WITH THE PLACE

Chicago is flat along a lake. It wants a grid. So the Chicgo Grid has become legendary both vertically and horizontally. Yet Chicago has great neighborhoods: Wicker Park, Lincoln Park, Logan Square, Streeterville, Chinatown, Hyde Park, Bucktown and Bridgeport to name a few. So Identity within the Grid is highly prized.

Chicago can be cold and windy. It wants to stand solid and protected. Although usually overcast, Chicago's sky changes hourly providing a wide range of moods, atmospheres and light.

People in Chicago work hard and play hard. They are highbrow and lowbrow at the same time. They are tough and resilient.

Los Angeles is a paradise: A Mediterranean climate within an extremely diverse landscape: oceans, mountains and desert. More species of wildlife and plant life abound in greater Los Angeles than in any American National Park. Yet technology is deeply integrated into the ways of business and the ways of life.

Everything becomes beautiful and exotic in Los Angeles.: the plant life, the neighborhoods, the architecture, the freeways, the beaches, the cars, the people. Even the tawdry is beautiful in LA.

Celebrities are a common sight yet people are well-educated and very hard-headed. They know what they want and how to get it.

Chicago and Los Angeles: two entirely different cultures emerging from entirely different places.



Chicago



Los Angeles

# SITE

## Making Metropolis

### THINK WITH THE STREET

*In a City the Street must be supreme. It is the first institution of the City.*

- Louis Kahn

The Street is our everyday Public Realm. It is not just a place to drive. We eat there, we meet there. It is where we purchase and play, relax and do business, learn and act out, find identity with others - physically and virtually. It anchors our neighborhoods. It is a place - a room - where we all agree to connect with one another - even when we don't know one another.

When we walk down a sidewalk we extend our arms: it is our space. Every five seconds we are stimulated, every 25 feet there is something interesting, repetitive but never boring. We walk. We talk. We are active.

Every street is different. We love being lost and then finding our way. The street challenges us then we know it and love it. It is one of our most fundamental places to be.

Streets are for people.

And people are like kids. Play is integral to Urbanity. We are all "kids in the city." Forms of Play are the first expressions of innate human needs: spirit, rhythm, harmony, change, contrast, curiosity, climax, honor, beauty, mystery, fairness and excellence. Sometimes pretend, sometimes serious, play forms are the starting points for the rituals and building blocks of a civil society.

This is what we do in streets: build civil societies.



A Street



Children In the City

**SITE**  
Making Metropolis 2017



Chicago River

The Loop  
Chicago

# SITES

## Making Metropolis 2017

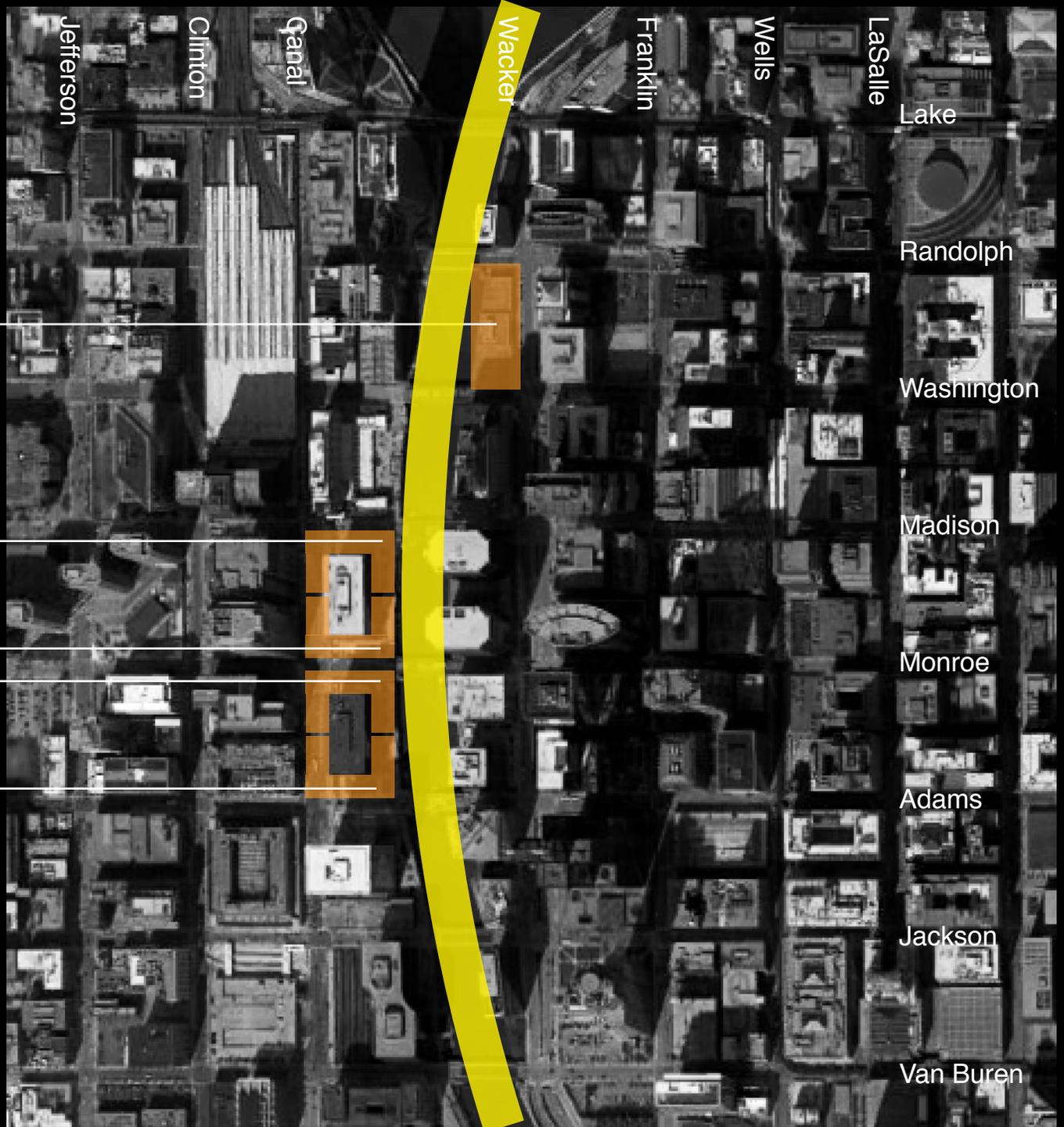
Underutilized Parcel 1

Underutilized Parcel 2

Underutilized Parcel 3

Underutilized Parcel 4

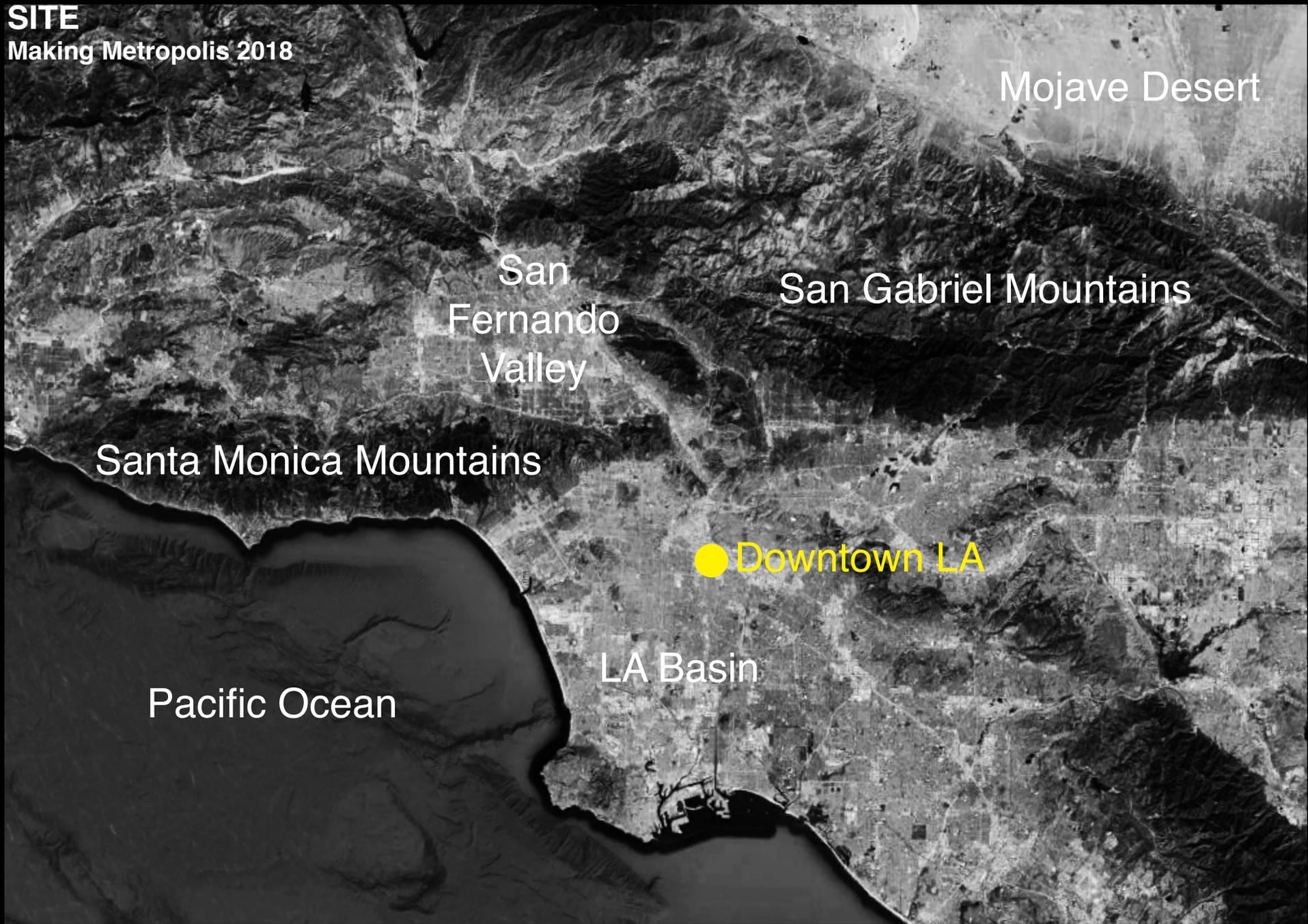
Underutilized Parcel 5





**SITE**

**Making Metropolis 2018**



Mojave Desert

San  
Fernando  
Valley

San Gabriel Mountains

Santa Monica Mountains

● Downtown LA

LA Basin

Pacific Ocean

Greater Los Angeles

**SITE**  
Making Metropolis 2018



Los Angeles: Downtown to Boyle Heights

**SITE**  
Making Metropolis 2018



CalTrans

Geffen/MOCA

Arts District

Little Tokyo

One Santa Fe

SCI-ARC

Alameda Boulevard

Site

1st Street Viaduct

Boyle Heights

4th Street Viaduct

# SITE

## Making Metropolis 2018

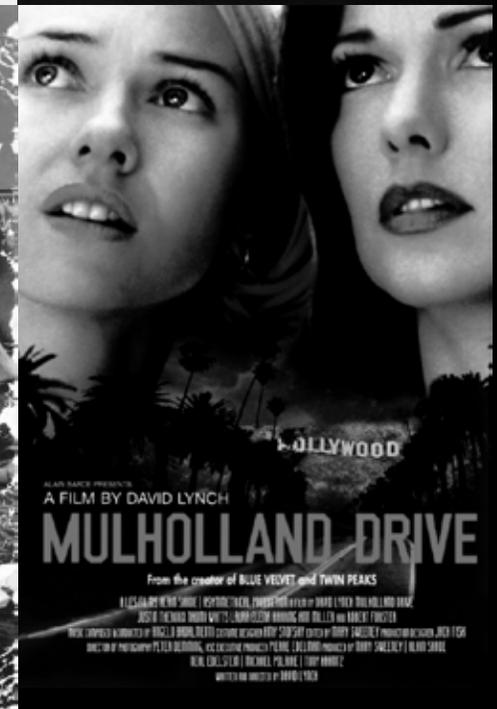
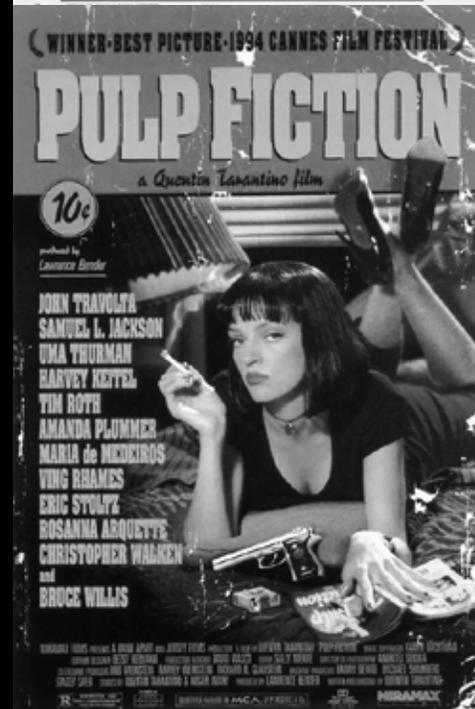
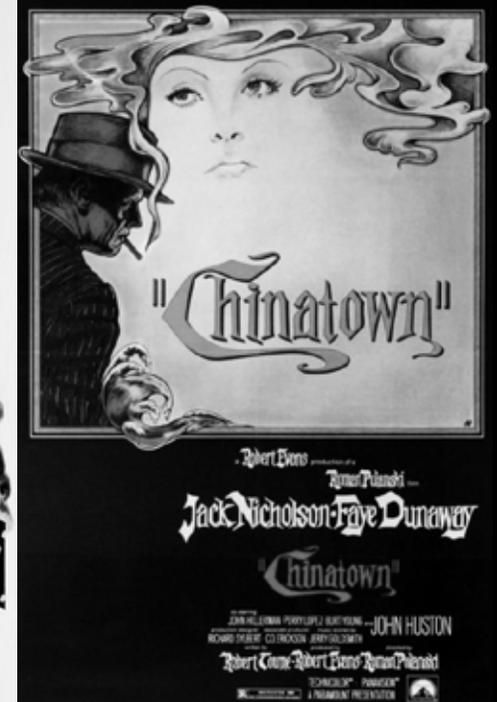
As an investigation into the particular and peculiar “spirit of place” that Los Angeles offers, four movies set in and about Los Angeles will be viewed and discussed.

*Sunset Boulevard* directed by William Wilder, 1950

*Chinatown* directed by Roman Polanski, 1974

*Pulp Fiction* directed by Quentin Tarantino, 1994

*Mulholland Drive* directed by David Lynch, 2001



## EXPERTISE / KNOWLEDGE GAINED

### Making Metropolis

Students will work in teams of three under the direction of the professor. Each team will develop a distinct and separate strategy for both the building and the street. Simulating an actual office situation in competition for a commission, the students will become prepared for future professional conditions.

In the Fall Term, students will investigate issues intrinsic to urban cores: streetscapes, infrastructures, vehicular movements, construction logistics, financial procurement, air rights, retail merchandising and the public realm.

In the Spring Term, students will continue the investigations begun in the Fall Term and apply them to a rapidly expanding decentralized urban metropolis with unique topographic and climatic conditions.

By choreographing and designing the experiences embodied within these issues, students will develop a sense of the tough-mindedness, flexibility and sensitivity required to organize a 24/7 Mixed-Use City amidst the politics, power plays, surprises, misinformation and propaganda that operate behind the stories and glories of Making Metropolis.



# TIMELINE

## Making Metropolis 2017

The studio will be organized in two phases. Initially the students will build a context site model of the site area and research Good Space. Then project design will commence. Each week each team will receive regular desk critiques. There will be a Mid-Term Review and a Final Review. Reviews will be with IIT faculty and practicing professionals from outside the school.

### Schedule:

- Week 1 Introduction: Team formation; Site Walk; Update base site model; Begin Good Space studies
- Week 2 Good Space studies
- Week 3 Begin Project Design
- Week 4 Continue Project Design
- Week 5 Continue Project Design
- Week 6 Continue Project Design
- Week 7 Prepare for Mid-Term Review
- Week 8 Mid-Term Review
- Week 9 Assess Mid-Term Review
- Week 10 Adjust Project Design
- Week 11 Adjust Project Design
- Week 12 Adjust Project Design
- Week 13 Prepare for Final Review
- Week 14 Prepare for Final Review
- Week 15 Final Review



Jane Addams



Richard J. Daley

# TIMELINE

## Making Metropolis 2018

The studio will be organized in two phases. Initially the students will build a context site model of the site area, make a field trip to the site and research site context. Then project design will commence. Each week each team will receive regular desk critiques. There will be a Mid-Term Review and a Final Review. Reviews will be with IIT faculty and practicing professionals from outside the school.

### Schedule:

- Week 1 Introduction: Team formation; Begin base site model
- Week 2 Complete base site model
- Week 3 Context Studies; Field Trip
- Week 4 Continue Field Trip; Begin Project Design
- Week 5 Continue Project Design
- Week 6 Continue Project Design
- Week 7 Continue Project Design
- Week 8 Prepare for Mid-Term Review
- Week 9 Mid-Term Review
- Week 10 Spring Break
- Week 11 Adjust Project Design
- Week 12 Adjust Project Design
- Week 13 Adjust Project Design
- Week 14 Prepare for Final Review
- Week 15 Prepare for Final Review
- Week 16 Final Review



William Mulholland



Eric Garcetti

# REQUIREMENTS

## Making Metropolis

The studio will meet three times a week (M/W/F) from 2 PM to 6 PM in Crown Hall. In addition to these 12 hours per week, an additional 24 hours per week (minimum) will be required to perform work in an adequate manner. Teamwork will be essential to success in the studio.

Attendance in all classes is mandatory. Two unexcused absences will result in a drop of a letter grade. Three unexcused absences will result of two letter grades. Four unexcused absences will result in failure of the course.

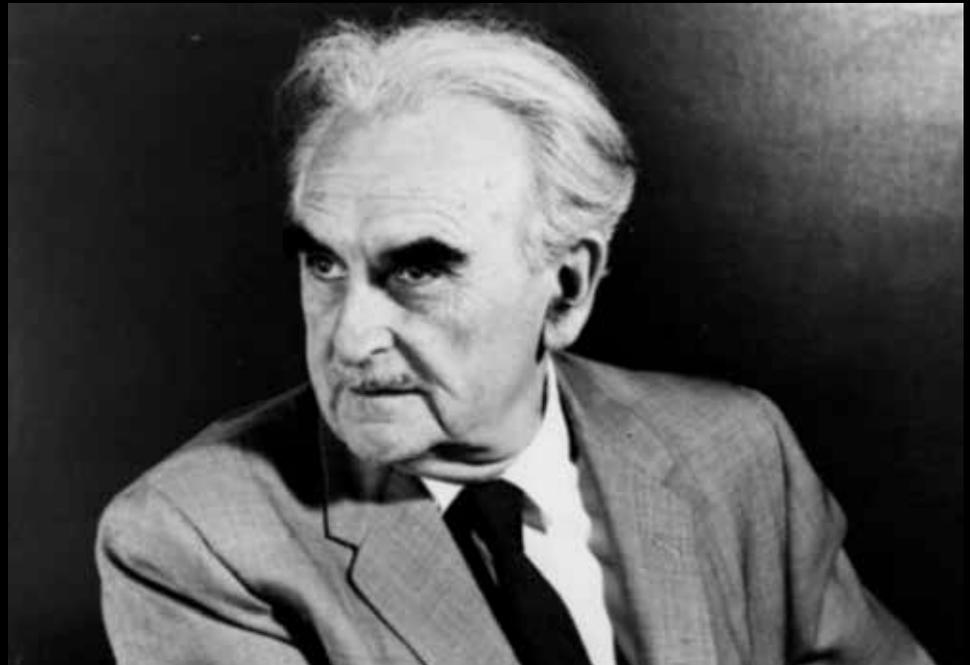
Completion of all deliverables at both Mid-Term Review and Final Review is mandatory to receive a passing grade. Final grades will, however, ultimately be based on performance at Final Review. Please refer to the graduate bulletin for official IIT university grading policies.

This studio require continuous and intense efforts. The projects are ambitious and complex in their comprehensive nature, their urban issues and their place-based path of embodied discovery.

***AMERICANS WITH DISABILITIES ACT (ADA): Reasonable accommodations will be made for students with documented disabilities. In order to receive accommodations, students must go through the Center for Disability Resources office. The CENTER for DISABILITY RESOURCES (CDR) is located in Life Sciences Room 218, telephone 312 567.5744 or @iit.edu.***



Louis Sullivan



Richard Neutra

## EXPERTISE / KNOWLEDGE GAINED

### Making Metropolis

The following Bibliography will form the philosophical basis of research, critique and commentary throughout the year.

- Baird, George, 2015. *Writings on Architecture and the City*. Artifice Books on Architecture.
- Banham, Reyner, 1972. *Banham Loves Los Angeles*. <https://vimeo.com/22488225>
- , 2009. *Los Angeles: The Architecture of Four Ecologies*. University of California Press.
- Basso, Keith H., 1996. *Wisdom Sits In Places*. University of New Mexico Press
- Bloomer, Kent C. and Moore, Charles W., 1977. *Body, Memory, and Architecture*. Yale University Press
- Brothers, Cammy, 2008. *Michelangelo, Drawing, and the Invention of Architecture*. Yale University Press.
- Calvino, Italo, 1972. *Invisible Cities*. Harcourt
- Daalsgard, Andreas, 2012. *The Human Scale*. DVD Kimstim
- Damasio, Antonio, 1999. *The Feeling of What Happens: Body and Emotion in the Making of Consciousness*. Harcourt
- , 2003. *Looking For Spinoza: Joy, Sorrow, and the Feeling Brain*. Harcourt
- Frampton, Kenneth, 1995. *Studies in Tectonic Culture*. MIT Press
- , 2002. *Labour, Work and Architecture*. Phaidon
- , 2016. *A Genealogy of Modern Architecture: Comparative Critical Analysis of Built Form*. Lars Muller
- Goldhagen, Sarah Williams, 2017, *Welcome To Your World: How the Built Environment Shapes Our Lives*. Harper Collins
- Huizinga, Johan, 1950. *Homo Ludens: A Study of the Play Element In Culture*. Roy Publishers.
- Jacobs, Allan B., 1993. *Great Streets*. The MIT Press

# COLLAGE CITY



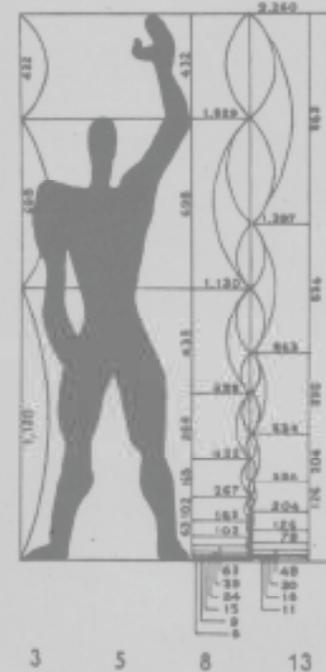
Colin Rowe and Fred Koetter

## EXPERTISE / KNOWLEDGE GAINED

### Making Metropolis

- Jacobs, Jane, 1961. *The Death and Life of Great American Cities*. Random House
- Jencks, Charles, 1993. *Heteropolis: Los Angeles: The Riots and the Strange Beauty of Hetero-Architecture*. Academy Editions/Ernst & Son
- Lynch, Kevin, 1960. *The Image of the City*. The MIT Press & Harvard University Press
- Mallgrave, Harry, 2010. *The Architect's Brain: Neuroscience, Creativity and Architecture*. Wiley-Blackwell
- , 2013. *Architecture and Embodiment: The Implications of the New Sciences and Humanities for Design*. Routledge
- McCarter, Robert, 2015. *Aldo van Eyck*. Yale University Press
- and Pallasmaa, Juhani, 2012. *Understanding Architecture*. Phaidon
- Neutra, Richard, 1954. *Survival Through Design*. Oxford University Press
- Pallasmaa, Juhani, 2005. *The Eyes of the Skin: Architecture and the Senses*. John Wiley & Sons
- , 2010. *The Thinking Hand: Existential and Embodied Wisdom in Architecture*. John Wiley & Sons
- , 2011. *The Embodied Image: Imagination and Imagery in Architecture*. John Wiley & Sons
- Rasmussen, Steen Eiler, 1959. *Experiencing Architecture*. MIT Press
- Rowe, Colin and Koetter, Fred, 1978. *Collage City*. MIT Press
- Scully, Vincent, 1991. *Architecture: The Natural and the Manmade*. St. Martin's Press
- Speck, Jeff, 2012. *Walkable City: How Downtown Can Save America, One Step at a Time*. Farrar Strauss & Giroux
- Zumthor, Peter, 1998. *Thinking Architecture*. Birkhauser
- , 2003. *Atmospheres*. Birkhauser

# EXPERIENCING ARCHITECTURE



STEEN EILER RASMUSSEN

# EVALUATION CRITERIA

## Making Metropolis

Only letter grades will be given and these will be based on a curve.

Grades will be issued for each project and these will be based on the following criteria:

- Conceptual sophistication and critical thinking
- Sophistication and extent of project investigation and development
- Sophistication and quality of presentation material (drawings and models)
- Participation in class and critiques

A final letter grade will be compiled from all assignments.

The School policy on grading is as follows:

- A: Excellent work that is on time and complete
- B: Above average work that is on time and complete
- C: Average work that is on time and complete
- D: Below average work, late work, or incomplete work
- F: Unacceptable work

Please refer to Graduate Bulletin for official IIT university grading policies

It is expected that all students will put considerable time, thought and effort into their work. However, those factors do not of themselves guarantee any particular grade. On time and complete work is needed for a grade of A, B, or C, but timeliness and completeness alone do not constitute or guarantee a passing grade. When work is on time and complete, quality in both thought and production are the primary considerations for the grade.

**Excellent Work:** Demonstrates an ability to identify and develop a unique line of inquiry derived from, yet extending, the basic proposition of the assignment or course. Exceeds the expectations of the faculty and the assignment in the quality of thought and production.

**Above average work:** Excels in understanding and development of work relative to assignment scope. Demonstrates an ability to assess feedback and respond thoughtfully in the further development of the assignment.

**Average work:** Meets the basic expectations and requirements in terms of assignment scope as outlined in assignments or stated by the instructor.

**Below average work:** Does not meet all of the basic expectations and requirements. Does not consistently demonstrate a basic understanding of primary course objectives and concerns and/or an ability to respond to feedback and guidance by the instructor. Is inconsistent in its production and development, and is frequently late and/or incomplete.

**Unacceptable work:** Does not meet the majority of basic expectations and requirements. Seldom demonstrates a basic understanding of primary course objectives and concerns and/or an ability to respond to feedback and guidance by the instructor. Is inconsistent in its production and development, and is consistently late and/or incomplete.

# CURRICULUM VITAE

## Making Metropolis

### Steven Brubaker

An Arthur Lehmann Scholar while at Harvard's Graduate School of Design, Mr. Brubaker has received over a dozen AIA Design Honor Awards. Well published, for many years he was a Design Principal with Hellmuth Obata + Kassabaum where he designed and had built over 10,000,000 SF in dense urban sites across the world. His work includes several landmark buildings: the Federal Reserve Bank of Cleveland, the Anaheim Convention Center across from Disneyland, the Thomas Eagleton Federal Courthouse in St. Louis, Tuntex Tower in Kaioshung, Taiwan and the Phoenix Convention Center. In 2003 he was the Ruth and Norman Moore Visiting Professor of Design at Washington University in St. Louis and in 2005 the Van Sante Visting Professor of Design at South Dakota State University. Now with his own practice in Chicago Mr. Brubaker continues to participate in conceiving large urban developments as well as designing several higher education facilities and specialty projects.

*Instructor: Steven Brubaker ([shbrubaker@sbcglobal.net](mailto:shbrubaker@sbcglobal.net))*





# MAKING METROPOLIS

*Rivers and Rails*