The Invisible Divide:
Bridging the LA River Through the Arts

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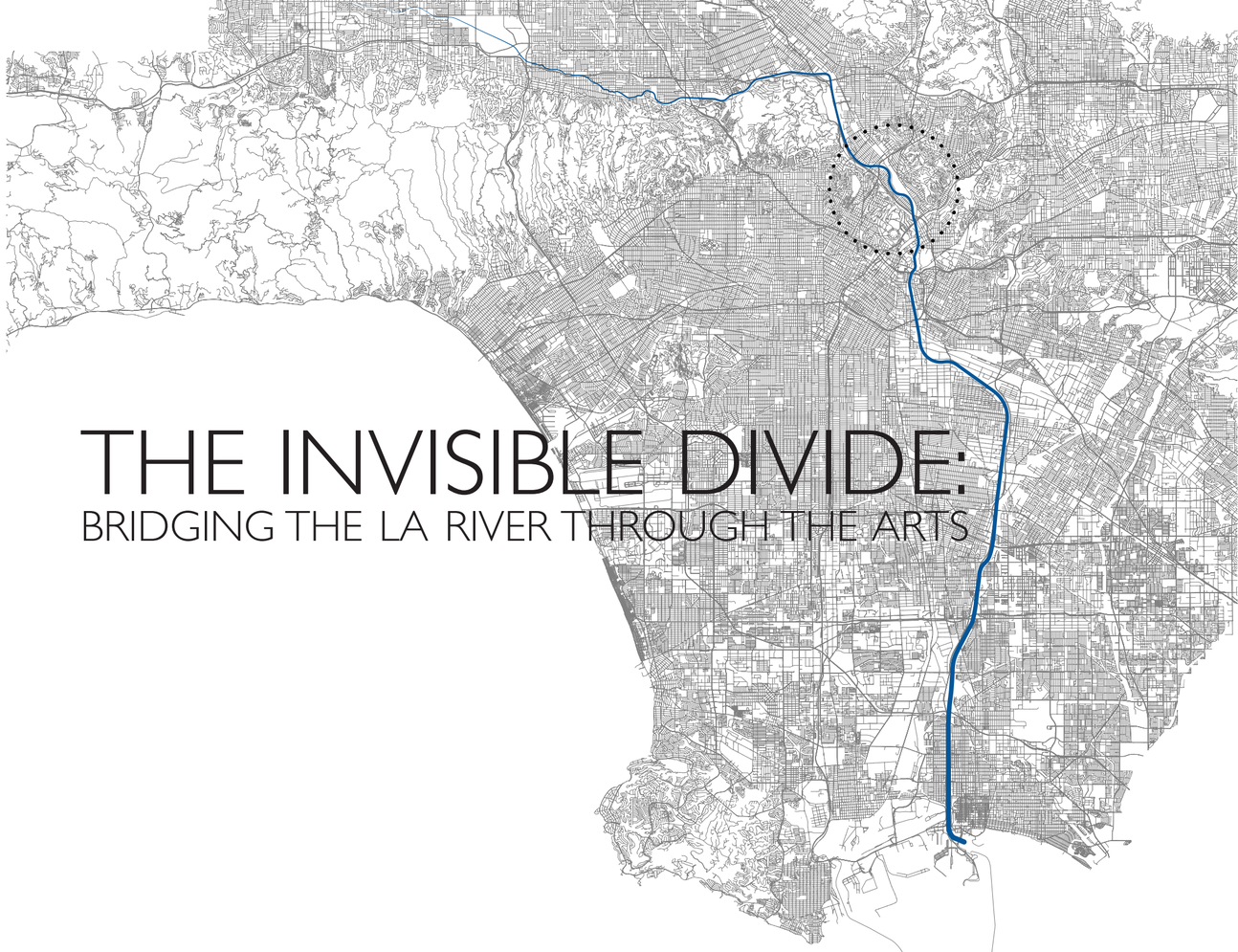

THE INVISIBLE DIVIDE:

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To my advisors, Gundula Proksch, Elizabeth Golden, Rick Mohler and Louisa Iarrocci, thank you for your guidance and insight.

And to Bri, for always being there.

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INTRODUCTION

Cities around the world are recognized for distinct geographical features, water in particular, as a means of access or instrumental in the founding of the first settlements. London has the Thames, its importance documented from the Romans and the early Briton tribes. Boston Harbor is iconic for both the Tea Party and dramatic environmental cleanup of the last few decades. Los Angeles has...a drainage ditch?

The recent history of Los Angeles is that of man overcoming nature, the search for water to thrive in an an arid valley and manipulating the earth and concrete to move from for point A to B in record time. Cell phone towers planted on every other block unconvincingly disguised as palm trees and oil rigs in dense city blocks hidden behind faux facades are just a few examples of this infrastructure dominated city. The Los Angeles River in its assimilated form is part of this network. Engineered to protect citizens from flooding, all fifty-one miles from the source to the sea is entombed in concrete to flush floodwaters away from city streets as quickly and safely as possible. If the waters filled this trench like the Seine, with stone edges creating a popular promenade and respite from the maze of Parisian streets above, perhaps we would think of the River as a waterway, but this is not the case. As an arid river, the flow is seasonal and most of the time it resides in the lowest depths of the channel, far from a scene of picturesque tranquility or a bustling urban river. The identity of the Los Angeles river is further eroded as map makers such as Rand McNally classify the river as dried up or nonexistent.[1]

The utilitarian form of the river is a recent phenomenon and with the breakneck pace of demolition and turnover in Los Angeles, the city's natural past and reliance on the river as sole water source for centuries is all but forgotten. Perhaps the only lasting clue to this history is the seemingly random location of downtown. Far from the famous beaches or the high-stakes studio lots,

figure 1. Los Angeles and the river. (cover page)

figure 2. Kayakers near the Sixth St bridge. (opposite page) A dozen boater navigated the length of the river on a three day trip declaring the river a navigable waterway, ensuring continued protection from the EPA and Army Corps of Engineers.

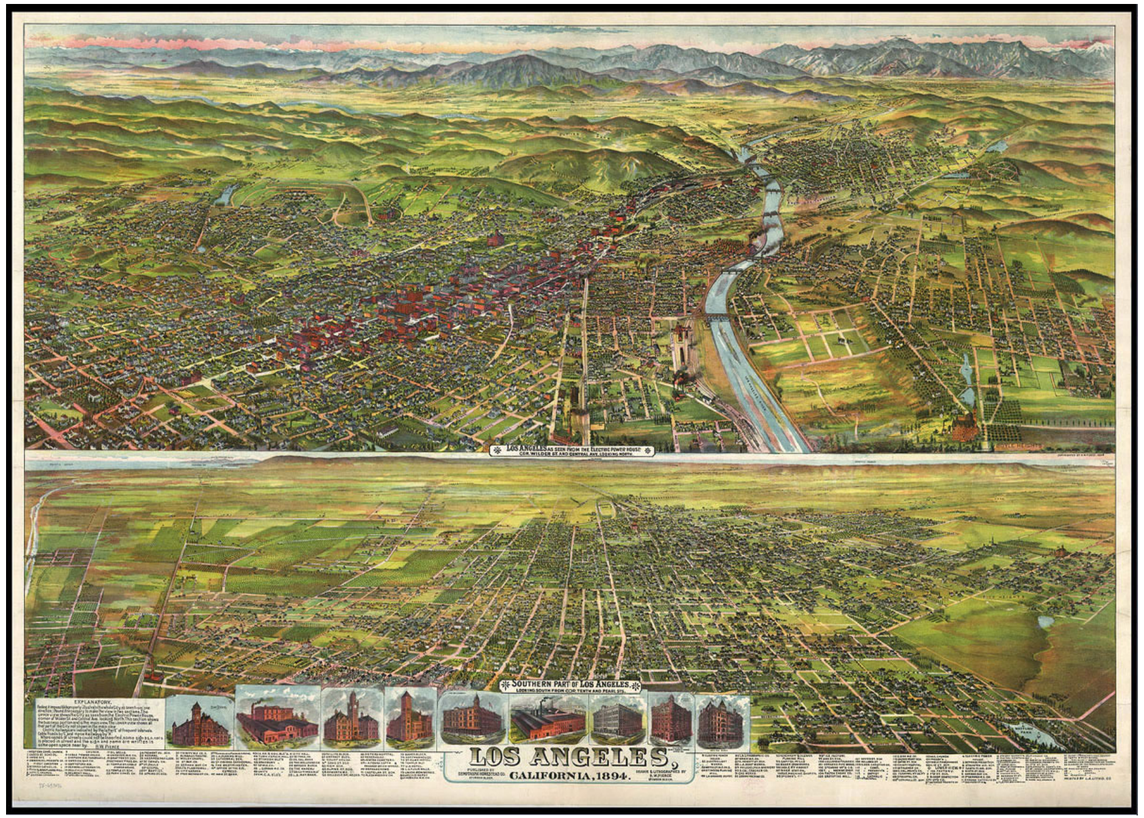
the original city was settled far east of the Pacific, along the marshy banks the Los Angeles River. Before aqueducts satiated the city's growing thirst or industry was valued over farmland, the original agrarian settlement needed the river to survive. Even just a century ago, children played in the river and rumored to float stolen watermelons from nearby patches down the stream, an image unimaginable today.[2] Now few venture to descend down to the river bottom. This dead zone of concrete is not only off limits but also a haven for transients and illicit behavior. Los Angeles artists are the exception to the rule however, scaling fences and using the dystopic scenery as a backdrop, their work is a glimmer of possibility in in an otherwise hopeless place.

Forgotten about for decades, the river is entering a new renaissance of public opinion as residents want their waterway back. Fear of flooding is always present, but the current barren wasteland nearly every day of the year is a reminder that there needs to be a better way. In May 2013 a kiosk travelled the northeast communities along the river and asked residents to fill in the blank "I want my LA River to be_____." Unsurprisingly with over 500 replies the responses were overwhelmingly for a real river with answers such as: accessible, beautiful, natural, sustainable, and connected.[3] Several citizen groups are already in the process of making this a reality. The 'Friends of the LARiver' host annual clean-up days and seek legislation with the intent of reestablishing river habitats.[4] and a 'Los Angeles River Revitalization' envisions a complete overhaul of the watershed to riparian flood plains.[5] While these large scale efforts are gaining momentum, the city is experimenting with small interventions. A portion of the river with concrete sides, but a sandy bottom in this northeast corridor is open to the public for the first time for the summer of 2013, allowing kayakers to navigate a 2.3 mile portion in an experimental trial. A cumulative spectrum of interventions could have a profound effect on this neglected waterway.

Building on this momentum, I examined an intervention nestled in the northeast Los Angeles community. The dilemma in this corridor are dense urban neighborhoods compactly nestled in a valley with limited recreational outlets for citizens. The river itself bisects this area, and leaves very few opportunities for neighbors to bridge its banks and meet. With abandoned industrial lots adjacent to the river, the area is ripe with possibility for opening green space for residents, reestablishing the lost riparian ecologies the city was founded on and connecting communities to the water and each other. Besides a place solely for outdoor recreation, this is an opportunity to welcome the artists to the river. Providing artists a place to share on its banks and opening the river to future works both legitimizes their creations and brings public awareness.

This design thesis aims to make three forms of connection within the northeast neighborhood Elysian Valley: reestablishing a connection to the waterway, bridging the banks of an area with too few means of access and proposing an art center establishing formal ties between the artists and the public in an already burgeoning art scene.


RIVER
National
Cold Storage



RIVER AS LANDSCAPE

In stark contrast to the barren, desert impression of Southern California, prior to the last century this region was dense with thickets and woods, supporting a diverse array of wildlife species.[6] In its natural state the Los Angeles River wandered wide across alluvial plains, beginning in the San Fernando Valley and often changing course with storm events. The arid land absorbed most of the water into its rich soil before it could reach the ocean, nourishing vast thickets of cottonwood and willow trees.[7] In the dry season, shallow streams crisscrossed each other over marshy tule patches, with the majority of the flow underground in the sand or pooling in artesian basins. Winter rains lasting a few days transformed the shallow streams into flash torrents, seeping out onto the adjacent plains.[8] The two extremes in flow defined the desert river. After each flood, new lakes were created by receding waters and the location of the river's mouth drastically altered.[9] Collecting water from seven tributaries, today the river's 834 square mile watershed begins in the Santa Monica and San Gabriel Mountains, travels east through the San Fernando Valley and turning south by downtown Los Angeles before reaching the Pacific Ocean.[10]

The city of Los Angeles began and thrived on the river, relying on it for drinking water, and irrigation. The meandering river first supported the indigenous tribes of the Gabrielino in some of the largest concentrations found in North America. Aware of the changeable nature of the river, these hunter gatherers always occupying high ground close to the water source, where they would safely relocate with the shifting floods,[11] a practice which baffled early European settlers.[12] Spanish explorers arrived late to the area at the end of the eighteenth century, but rapidly displaced the Gabrielinos along the banks of the Los Angeles River.[13] Recognizing the potential for settlement at the river, expedition member Father Crespi described the rich land in 1769 as "capable of producing every kind of grain and fruit which may be planted,"[14] In 1781, Spanish authorities founded the agricultural

figure 3. Present day Los Angeles River near downtown (previous page)

figure 4. Los Angeles 1894. (opposite page)

pueblo north-west of the river, that would become modern day downtown Los Angeles. Its terraced location providing protection from flooding and using lowlands to the south for farming.[15] They Created an irrigation system branched out in a regulated manner to ensure equal water access though larger “zanja” canals from the river, itself called “zanja madre” or “mother ditch.”[16] The flood plains recharged annually with silt and minerals from winter flooding that slowly seeped over the plains, removing salt and other contaminants as well as providing nutrient enriched soil.[17]

Early in the next century Los Angeles became the most important agricultural settlement on the Pacific Coast; however still remaining small due to its geographic isolation with no large port such as Monterey or San Diego. The settlement produced surpluses of wheat, corn, barley and bean crops while also raising the greatest number of livestock in the Pacific.[18] Provided with fertile soil and ample water from the river, farmers diversified into oranges and grapes and other exotic fruits and nuts; new crops that would bring prosperity to the growing semi-tropical paradise.[19] In 1863 John S. Hittel published his view of life at the river, one that would not endure:

> Luscious fruits, of many species and unnumbered varieties, loaded the trees. Gentle breezes came through the bowers. The water rippled musically through the zanjas. Delicious odors came from all the most fragrant flowers of the temperate zone. The general impression upon my mind, after spending the last week in September in the place, is that it is one of the most pleasant places in the world.[20]

With California entering statehood in 1850 and the discovery of gold in Sacramento in 1848, Los Angeles’s value as a center of agriculture was overshadowed by its importance as a regional trading post.[20] Spurred by industry and gold mining a population surge in the late 1800s quickly drained the river of its potable water.[21] As newcomers prioritized domestic use of water over

figure 5. Agricultural fields along the LA River Elysian Valley circa 1900

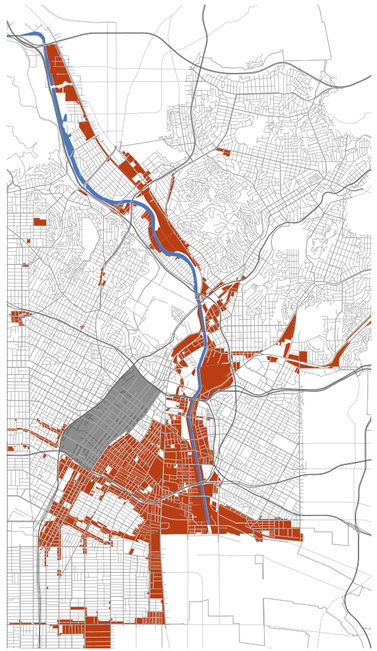


figure 6. Industrial areas of present day Los Angeles. Areas shaded in red clustered along the river are industrial sectors of the last century. Downtown is shaded in grey for reference.

agricultural, demanding direct piping to residences and straining the river's supply for the first time.[22] By the end of the nineteenth century the city began digging for usable aquifers.[23]

Los Angeles's new trade role became permanent with the construction of railroads that connected San Francisco's Pacific port to the east through Los Angeles in 1876.[24] Cross country lines owned by the Southern Pacific Railroad and the Atchinson, Topeka, & Santa Fe[25] laid tracks on the flood plains immediately adjacent to the river,[26] effectively locking the river into a fixed path. With the railroads came large industry and another population boom,[27] rising from 100,000 residents in 1900, to 1.2 million residents in 1930.[28] Real estate values skyrocketed, as city lots sold for ten times their value a year prior, orange groves and corn fields were sold and plowed over. Commercial buildings and residential development constructed along the rail tracks for convenience, used the river as a dumping ground polluting what little potable water remained.[29]

Ignoring warnings of the high risk of winter flooding, the lush flat plains were now teeming with industrial activities and the remaining trees and vegetation which naturally slowed the waters removed. The river itself was quarried for gravel to the extent that the practice threatened the stability of bridge footings.[30] The soil removal forced the waters into a deeper, concentrated channel that posed a new dangerous potential for flooding, fully realized in the flood of 1938. After five days of rain, water barreled down the river, much faster than the predictable slow seeping across the plains to which residents were accustomed. Low trestle bridges acted as damns against the torrent, becoming clogged with debris until finally giving way and creating a powerful surge.[31] The event is still considered California's worst flood with over 115 lives lost and 6,000 homes destroyed or damaged.[32]

figure 7. LA River levee breach flood of 1938

Two important political decisions finalized the change in the Los Angeles River from a natural waterway to the utilitarian structure it is today: the Owens Valley Aqueduct and the Flood Control Act of 1936. Desperate for drinking water at the turn of the century, Los Angeles needed another water source besides the river to support its explosion in population and began funneling water from Owens Lake, a sparsely inhabited valley between the Sierra Nevada and Inyo Mountains 250 miles away. [33] The Owens Valley Aqueduct opened in 1913 with Chief city engineer William Mulholland announcing "There it is. Take it!" The Los Angeles Department of Water and Power purchased ninety-

eight percent of Owen's Valley, providing ten times the amount of water as the river and creating the means for another population surge.[34] The creation of the aqueduct emphatically marks the clear privileging of urban life over rural, wealth of urban industry over agricultural communities.[35]

No longer necessary for sustaining the population, the Los Angeles River was only now seen as a threat from flooding. After the disaster in 1938, the Flood Control Act authorized the Army Corps of Engineers to undertake an unprecedented overhaul of the river system.[36] The Corps modeled the waterway to optimize the flow of water and its confluences for maximum capacity while minimizing turbulence and other potential hazards. The result of the study was a straighter, much deeper river, encased in a concrete chute. Occurring over two decades the construction required 3.5 million barrels of cement, 147 million pounds of reinforced steel and over 460,000 tons of stones. Along with the Los Angeles River, tributaries were also overhauled, retrofitting an additional 278 miles of waterways in concrete. The extension of street runoff directly into the river completed its conversion from river to drainage ditch.[37] The final construction cost was[38] far higher than the less expensive option of relocating the still relatively small settlements on the flood plains, valuing yet again the burgeoning urban landscape over that of the agrarian.[39]

figure 8. Boy fishing on the LA River circa 1940s (top left)
figure 9. River transformation: Natural (top right)
figure 10. River transformation: Digging (lower left)
figure 11. River transformation: Paving (lower right)

RIVER AS INFRASTRUCTURE

By the 1950's the transformation of the Los Angeles River was complete, as its natural riparian and aquatic ecosystems were replaced by a "concrete trapezoid"[40] scar, removing the last large scale open parkland in the gridded parcels of the city's growing urban fabric. The formerly shallow, easily traversed riverbed extending up to a mile wide was carved out into a channel that is up to 30 feet deep in some places,[41] bisecting neighborhoods with an unnatural barrier and requiring more than 300 bridges to be built throughout the watershed.[42] The mid-century arrival of interstate highways with the rise of automobiles also took over the surrounding flat plains. Along with the railroads, four new freeways, the Arroyo Seco Parkway,[43] Ventura Freeway, Long Beach Freeway and Interstate 5, all travel parallel[44] to portions of the river, and a total of 12 freeways cross the waterway.[45]

The man-made channel begins at an enormous concrete wedge in the San Fernando Valley, training two smaller streams together. Designed for maximum efficiency, sloped walls convey flows to the Pacific, preventing blockages at bridges and spill over at the edges.[46] With each new confluence, the required floodwater capacity increases. Beginning with a flat bottom and vertical walls, this trench becomes deeper as more volume is needed. The walls widen to three hundred feet and taper at forty-five degrees to glide the turbulent waters safely away from city streets above, deepening, and widening in anticipation of flow increases moving downstream.[47] An exercise in value-engineering, the central trench concentrates the dry season flow, increasing the speed to flush sediment and limit wear to a single path.[48] In contrast to the natural meandering of a trickling stream, the water resembles a narrow, black ribbon cutting down the center of the vast planes of concrete.

While stripped of its identity as a waterway and remaining hidden to many residents and tourists the river moves 88 million gallons per day,[49] through its low flow trench, only apparent

figure 12. The Infrastructural River (opposite page)

figure 13. Soft-bottom hybrid river at Atwater Village

during high volume winter rain storms. In many regards the dry season flow is nearly as artificial as the concrete riverbed. As Los Angeles taps underground aquifers at the source, the concrete bed prevents the soil and underground lakes from recharging. Water tables drop as this cycle continues, resulting in the disappearance of the wild species relying on the water source.[50] Today's baseline flow is supplemented by three sewage treatment plants, that contribute 55 million gallons per day,[51] purified three times making it cleaner than any other urban river;[52] however, this is only a recent practice. The channel was marred with "heavy accumulations of black, decomposing organic material" as the post-war suburban boom strained the waste water system and sewage emptied into the river to prevent overflow on city streets. [53]

Of the 51 miles of river infrastructure, 82 percent is fully channelized with only three sections remaining of "soft-bottom" natural river. At the Sepulveda Basin, Glendale Narrows and Willow Street Tidal Estuary, ground water pressure from underground aquifers prohibits a concrete base and allows the ecosystem of vegetation and animal life to persist.[54] In these areas the river resembles a hybrid of the once free river and utilitarian conqueror. And almost as though the concrete was cut away, rapids appear with rock projections and even trees. Once the concrete bottom resumes, all animal and plant life abruptly halts at the edge where the two conditions meet as the water is again compressed into the central flow trench.

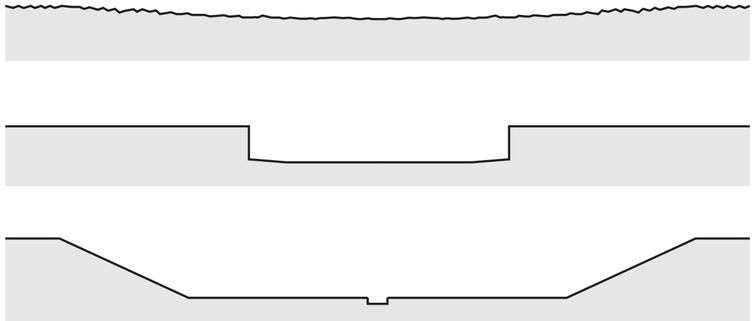


figure 14. River sections. The top section represents the natural riverbed, shallow and wide. The bottom two sections are accurate to the beginning and end of the LA River today. Starting out at 100 feet wide and 8 feet deep the river gradually widens to 300 feet across and 30 feet deep.

The balanced ecology once teeming with life is reduced to a "freakology," as non-native species are introduced through the storm drains or by accident.[55] Islands of ornamental plants are "populated with tree-of heaven from China, eucalyptus from Australia, the castor bean plant from Ethiopia, the ubiquitous Mexican fan palm, passion flower vine from Brazil, and the extremely aggressive giant reed from Nepal." Every continent is represented with the exception of Antarctica. Some steelhead trout still spawn upstream but invasive carp are now mostly present,[56] and parrot colonies escaped from the now closed Busch Gardens menace the skies.[57] A "sludge mat," thick green algae thriving in pools of shallow water that spills out of the central sump trench, gives the channel bottom a microscopic ecosystem of its own.

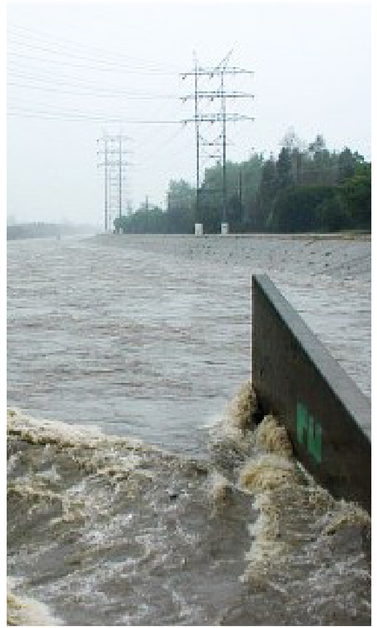


figure 15. High waters near Griffith Park in 2003.

The concrete channel is an all or nothing approach to an annual, meteorological phenomenon, with little regard to the much altered landscape. With other natural catastrophes plaguing the southern Californian region, flooding was the one natural event city officials and engineers could finally control. By embracing catastrophe theory, the design of the concrete river left little room for deviation in the desired results: expedite water as rapidly as possible to the sea.[58]

In stark contrast to its nearly empty benign state in the dry season, the Los Angeles River still experiences winter flash floods that are a natural danger to be reckoned with. Intense storms can reach flows as high as thirty-six billion gallons per day, with water levels rising from 4 inches to twenty-four feet in less than five hours,[59] at speeds of 45 miles per hour.[60] The majority of the year the river acts more as a drainage ditch than its original role as life source of the city. The permanence of the tons of concrete may seem to be the perfect defense in the event of flooding, but danger still exists during storms. Like many other utilitarian systems such as sewage and energy, the flood control system in Los Angeles is relatively new and relies on a short-set of historical data. The annual floods are an inescapable reality, reminding citizens of existence of the river as a natural force and their dependence on its containment for survival.

figure 16. Drag race in the river. Still from the film Gease.

RIVER AS IMAGE/ICON/CANVAS

"It hasn't any whitecaps.
It hasn't any fish.
Just to see one Ripple,
Would be my fondest wish."[61]

In a 21 part series for the Los Angeles Times in 1985, writer Dick Roraback took on the comedic role of the "Explorer," recounting his journey from the mouth of the river upstream to its source. Three decades after the Corps finished their flood control channel, the identity of the river was lost on the next generation of Angelenos, and Roraback set out to answer "What is the LA River?" and "Where does it begin?" Beginning upbeat, he describes the soft-bottom Long Beach outlet as resembling a real river, but changes his tune as concrete dominated nature further upstream. "For the last time, the Explorer looks out, at the real Los Angeles River. A heron-like bird, easily 4 feet tall, stands motionless in the stream, gracefully and haughty."[62] The portion of the river passing through downtown, once the agricultural center applauded for its Eden-like beauty is now dominated by industry, he reports as a "desolate vista, a wasteland...just a threadbare coat of unspeakable slime."[63]

The apocalyptic landscape of the littered, barren concrete channel provides a popular backdrop for films requiring a deviant or criminal setting. The river is portrayed as an escape route, drag raceway, or a futuristic utopia, the underbelly of the perfect city where the unwanted and poor are discarded. Director John Carpenter chose the river to film scenes for both 1981's Escape from New York and its follow-up Escape from LA in 1996. While each film portrayed a different city under vastly different circumstances, one a prison and the other a gang infest island, the concrete wasteland suited both needs.[64] These dystopian readings of the infrastructural environment support the conspiracy theory that the channel was created

figure 17. Body in the LA River 2-17-1955. Located Under the Broadway bridge just downstream from Elysian Park.

not to control floodwaters but to provide an emergency escape route in case of nuclear attack.[65] In contemporary television shows, the river is the scene of the crime, sadly an occurrence which happens in real life. The river is a well used location in Southland, a crime-drama depicting LA's police force and loosely based on true events.[66]

Pollution from city streets is the most damaging element in the river today. With the watershed covered in impervious surfaces such as buildings, parking lots and roads,[67] approximately eighty percent of rainwater during storms is flushed into the river[68] carrying contaminants like fertilizers, pesticides, household chemicals, ammonia, and lead. The southern half of the river is plagued with dumping of physical trash such as shopping carts, mattresses, plastic bags, clothing and abandoned cars, further eroding the river's image into that of a perpetual dumping ground. In one study twenty-five carts were counted in a single sixty-five foot diameter area. A phenomenon called "Los Angeles moss" refers to the multitude of colored, plastic shopping bags trapped in surrounding trees.[69]

While the threat of flood only occurs several days of the winter season, chain link fence and no trespassing signs block admittance to the river year-round. The majority of residents obey the stern signs threatening a five-hundred dollar fine and six months in jail,[70] but hidden in plain view the river bed is home to transients and illicit behavior. Camps of humans have made homes in the infrastructure of the barren concrete portions, making drain culverts into sleeping areas and collecting recyclable debris for income.[71] Safe from the threat of flooding most of the year, the dangers are inflicted by fellow residents as community violence occurs often and is mostly unreported. In an article describing the frustrations of solving a five person homicide of river dwellers in 2009, the Los Angeles Times described the river as "a lawless no-man's-land populated by hard-core addicts, the mentally ill and uncountable others, broke or

figure 18. Bridges over the LA River. Orange represents surface street and footbridges accessible to pedestrians. The black lines are crossings limited to freeway or railroad travel. Circled in the center is Elysian Park just north of Downtown with an apparent gap in pedestrian crossing in a densely inhabited area.

hiding."[72] This hidden zone and its community is an architecture of transgression, the artificial river no longer belongs to the common city resident, "underneath the maps and outside the discourse, which have tried and failed to cover the whole territory of the city, worlds exist full of unwritten history, overlooked communities, unseen possibilities, a world with a different order."[73]

The more than one hundred bridges crossing Los Angeles River are the only interaction with the river most experience. Crossing high enough to avoid flood waters, cars navigate the the bridges with only a view of the horizon, not knowing the conditions below. Only crossing the soft bottom portions, such as at the Hyperion Ave bridge, do the tops of the trees cross the driver's line of sight. The other experience is from the air. The river and its tributaries blend in with the highways from above, except for the distinguishable thread of dark water through the center.

One community to embrace the river and enter the river bed, illegally in most cases, is that of the city's artists. Between the single-minded focus on flood protection, and the transgressive dwellers lurking in the shadows, artists have occupied this middle ground and connected to the citizens standing on the bridges above. Louis MacAdams first trekked down into the Los Angeles riverbed in 1986 in a performance piece that would symbolize change for the community and the river as an utilitarian entity. Armed with wire cutters, MacAdams, poet, performer and activist, breached the fence at one of the threatening no trespassing signs, and descended the steep slope. Declaring that the river was still alive beneath its heavy concrete form he continued, "We asked the river if we could speak for it in the human realm. We didn't hear it say no."[74] beginning his tireless crusade in bringing awareness to the river as his "40 year art project."[75]

Painted on the east side of the river at the Tujunga Wash is 'The Great Wall of Los Angeles,' a mural

figure 19. "Great Wall of Los Angeles." Judy Baca standing in front of a portion of her creation during restoration in 2011.

depicting the history of Los Angeles beginning in 20,000 BC. The work of muralist Judith Baca, cofounder of The Social and Public Art Resource Center (SPARC), the one half mile long work of art was painted in five summers from 1976 to 1983 by four-hundred local youth with the help of thirty-five other artists. Beyond the process of actively joining a community on the river during those summer months, cumulative work of artists, ethnologists, community members, historians and scholars, the piece is regarded nationwide as a lasting tribute to inter-racial harmony.[76]

Viewed from the bridges above, foreign objects washed up or inserted into the river's expanse catch the passerby's eye. Artist Calder Greenwood and his partner used objets d'art in the LA River to draw interest to this dead zone, and other unused spaces through out Los Angeles. A paper mache surfer was dropped into the shallow stream of the LA River to pique interest towards the otherwise invisible water system and its pollution.[77]

Street graffiti, beyond the jargon and repetitive tags, draws interest and stirs imagination on the concrete river. Chicano activist, river enthusiast, and one of the city's most famous street artists, Leo Limón has been painting his 'l. a. river catz' on the interestingly shaped storm-drain covers for the past 35 years. Growing up in East Los Angeles, Limón was familiar with the river and a series of cats painted by Jackie Meyer. As the originals faded he continued the series, drawing attention to the river. Now permitted by the city to enter the river, Limón argues for the legitimacy of street art and for others to be allowed to draw creativity from the river.[78]

For most residents, interaction with the water is not considered possible. The image of the river is the first barrier. By lacking any visual queues or sense idyllic scene of a natural river, the waterway is no longer a river. The thin channel of water in the concrete basin is too foreign to encourage interaction. Access is another contributing issue.

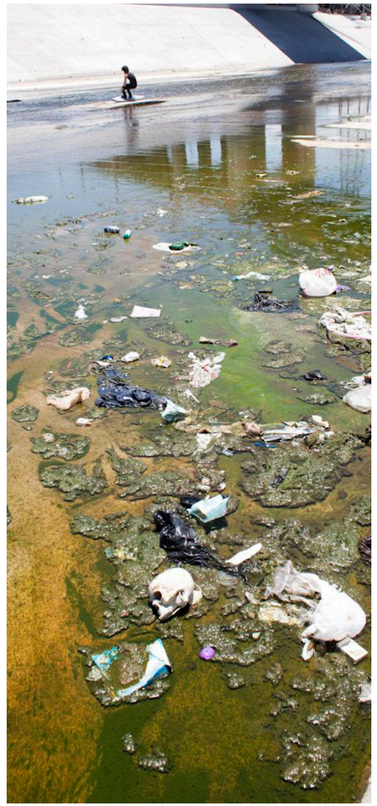
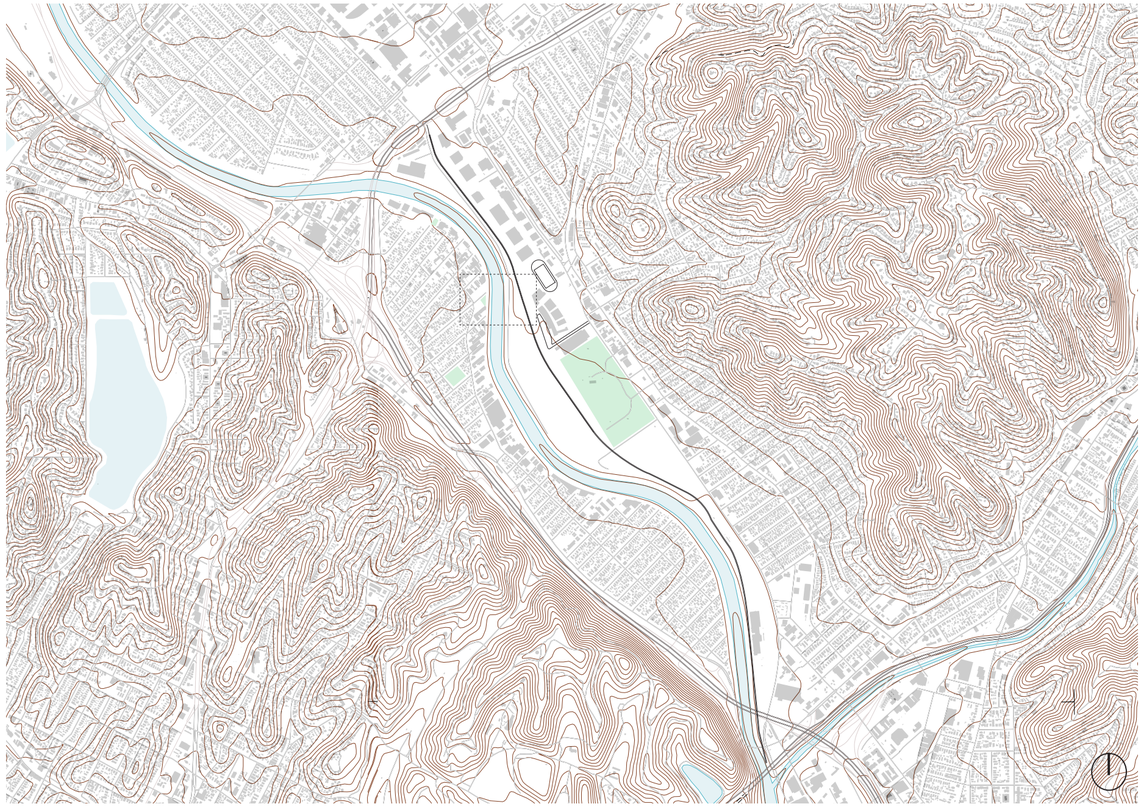


figure 20. Paper-Mache Surfer, LA River.

The city's fences and signs portray this as an unwelcome and dangerous zone, and removing the fence does not immediately alleviate that negative stigma. The banks of the river itself lack any language of accessibility to the bottom. Last, perceptions of the water, safety and pollution are prohibitive to simply jumping in, and given the river's history, rightfully so.

figure 21. 'l. a. river catz'

FOCUS



SITE

> "The things that make [Los Angeles] most attractive are the very ones that are the first to suffer from changes and deteriorate through neglect."
>
> -Frederick Law Olmsted Jr[79]

In the rapid urbanization of Los Angeles, as city planners turned over ecosystems for infrastructure and private lots, they failed to preserve the original village's praised charms. As agricultural society was paved over with new streets, the seemingly infinite green spaces also disappeared. In Hollywood, the citrus "orchards looked like private parks inside the city. They're bouquet seemed to make parks irrelevant," until they all vanished in a matter of two years.[80] With a city founded on green space, there was no consideration for its replacement.[81]

The last remaining parkland at the beginning of the 20th century was the now polluted yet not permanently altered river. Landscape architects and planners Frederick Law Olmsted Jr and Harland Bartholomew reported the dire situation of the city's green space in their report 'Eden by Design.' At the conclusion of the mass privatization of the city, only .6% remained as parks in 1928, and public beach frontage was reduced to one half inch per citizen. To simultaneously increase the urban open space and control flooding, Olmsted and Bartholomew proposed a massive reclamation of the wetlands to be declared a "hazard zone," a buffer to flooding but mostly used as a recreational parkland. An idealistic approach to the problem; however too late and costly for its time.[82] Consistently prioritizing the private land owner, Los Angeles today has the least park space per capita in the united states, and statistically echoing this imbalance, the city is home to the most millionaires and yet ranks 41st in philanthropy.[83]

figure 22. Soft-bottom section of LA River and LA Greenway at Elysian Valley

figure 23. Area site plan Elysian Valley and Taylor Yard (opposite page)

Dense, poor and predominantly immigrant neighborhoods are the most park-starved in the city. Besides shortages of community space, these residents lack the means to access mountain parks outside of the city and own the least private green space.[84] The arrival of freeways further compounded these neighborhood issues. White middle- and upper-class neighborhoods with political sway redirected automobile routes away from their homes and through urban poor neighborhoods instead. The massive incisions in the urban fabric created new boundaries and compromised the community.[85]

Like a freeway, the paved river creates an impasse and "a boundary point between East and West, Latino and Anglo, black and white;"[86] and First District City Council member and trained city planner Ed Reyes proposes to dissolve this barrier by transforming the river into parkland. His predominantly Latino district is "rivaling Manhattan in density" and lacks recreational spaces for residents. Reyes sees the LA River as an opportunity for renewal, not only providing much needed green space but also encouraging commercial investment and community involvement. Reyes's mantra: "We've been treating the river as the city's backyard. It's time we make it our front yard."[87]

At fifty-one miles long and intersecting such distinct and varied urban conditions, analyzing the river in one mile segments would most likely produce fifty-one very dissimilar results. The river itself changes in section as it proceeds downstream. Urban conditions and the river's adjacent properties change almost as drastically. From schools to film studios, residences and industrial warehouses, how each interacts with the river's edge is different. In some instances a park or equestrian center appears seemingly integrated with the river, but upon closer inspection, walls and barriers disintegrate the connection. Interstates follow the river's path and further downstream railroads approach and line up along the river, removing the possibility of safe passage to the stream beyond.

In choosing a site, it is understood that it is going to be inaccessible in its current state, but what are the characteristics that make it desirable at that location to enter? Joe Linton of the Friends of the LA River and regional bike advocate describes how interaction with the river changes when the car is taken out of the equation, "We're so used to going so fast through LA that we don't notice places, you see different ways that nature in the city can be found, but that's not all. You discover pathways and neighborhoods and streetscapes you never knew where there before. You just have to get out of the car, get up on a bike, or learn to walk, slow down."[88] Is there a network of layers of movement, or is it linear until a condition changes? By researching the questions of how one moves under, through and over the river, conditions of occupancy become apparent.

By analyzing the diagram of bridges crossing the river, one location just 2.5 miles north of downtown stands out as an area with limited mobility across the waterway. With 2 miles of uninterrupted riverfront, the one mile square Elysian neighborhood is densely inhabited and isolated by infrastructure of the last century. The area itself is enclosed by three freeways: the Glendale Freeway to the north, Interstate 5 on the west and the 110 Parkway on the south, isolating the residents from the rest of the city on a pedestrian scale. A bike path runs parallel to the river, but is separated from the residential areas by a block deep band of industrial warehouses limiting views and access. Streets either terminate into the industrial zone or dead end at a large concrete barriers and storm drains.

Of the 8,000 Elysian residents, the neighborhood averages high for household occupancy and among the highest of grade school children aged between 11 and 18. Yet the neighborhood only has one

small elementary school enrolling 313 students grades K-6. Additionally, with limited outdoor recreation space, the river is the neighborhood's greatest asset. Nicknamed Frogtown for the evening sounds of the river, this stretch of riverbed is unpaved and the hybrid river is already teeming with riparian vegetation and wildlife. The sloped concrete bank and tall railing are a continuous barrier prohibiting active entry into the river. The Elysian neighborhood, now constricted by its highway borders and the concrete river, would have the opportunity to breathe by opening up to the river it hugs along its length.[89]

Across the water from Elysian, Taylor Yard is one of the largest unoccupied sites along the Los Angeles River, uniquely positioned to be a significant site for river restoration and community involvement. Covering nearly 250 acres, at the base of Cypress Park and Glassell Park, active from the 1920s into the 1970s, it is estimated that nearly 75% of the local households had someone employed at Taylor Yard as one of the major employers in northeast Los Angeles.[90] Closed in 2003 and the myriad of tracks and rusting maintenance sheds removed,[91] the city of Los Angeles and the Army Corps of Engineers agree the abandoned site is an opportunity to return green space to the neighboring communities, reverse the devastating effects of the railroads along the river in the past century, and provide a connection point across the river.

The rail yard today is divided into seven different parcels with multiple owners, bisected down the center with a single active rail line, with boundaries of the river on the west and North San Fernando Road on the east. A mix of privately owned and city parcels on the east with road frontage are already in the process of development with the LA Media Tech Center office park, Sonia Sotomayor School Zone, a regional Fed-Ex Facility, the city developed 40 acres Rio de Los Angeles State Park, and a residential development under construction. The

figure 24. Elysian Valley facing north prior to development in the 1920s. Railroads already present on opposite bank.

figure 25. Taylor Yard facing south circa 2010

figure 26. Taylor Yard flood plain as proposed and rendered by the Army Corps of Engineers in 2013

remaining two parcels are bounded by the river and the railroad, and offer the potential of 62-acres of unrestricted river access. Legal action organized by river activists 'The River Project' in 2001 blocked the railroads from transferring ownership of the site for continued industrial purposes. With Los Angeles's real estate and industrial history, it is no surprise that transferring this land back to the community has been a struggle. Eighteen acres of the site, the narrow, northernmost portion, are owned by the State Parks Department and river restoration awaits on the fate of the larger southern parcel. Pending a feasibility study, state legislature set aside 45 million dollars for the purchase of the site from the current owner, Union Pacific Railroad.[92]

Releasing a report in August 2013, the Army Corps of Engineers studied 11.5 miles of riverbed Los Angeles River ARBOR (Area with Restoration Benefits and Opportunities for Revitalization), with the riverside parcels at Taylor Yard playing a key role in restoring the river. The ARBOR plan entails restoring both brownfield parcels as public park space, the larger southern section to be fully stripped of its concrete edge to establish a broader flood plain and riparian habitat. The last remaining active railway will be depressed, allowing surface passage and connection to the schools and residential neighborhoods beyond.[93] This particular site is important for the long term restoration of the river and could signify the first of many major changes in the river's current state. Access to the water is a key issue as most of the river entering downtown is straitjacketed by rail lines on both sides. On the Elysian side of the river, the unused rails have already been replaced with the Los Angeles River Greenway Trail, with plans to connect to downtown in the future . The closure of Taylor Yard allows for unobstructed waterfront access not seen in a century. The scale of the site is also a crucial factor. Any changes to the river must still provide flood control with safety being the top priority. The depth of the parcel from the river's edge permits a greater flexibility in reconfiguring the river, removal of concrete, creating watershed flood zones and reintroducing riparian habitat without reducing flood capacity. Unlike most city parks nestled in the urban grid, the river has the potential to be a valuable ecological resource.

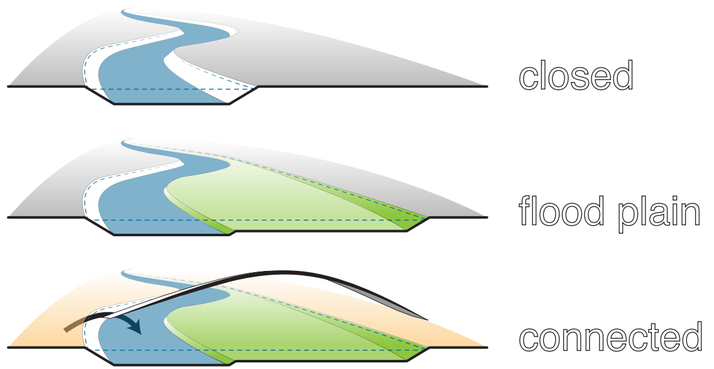


figure 27. Diagram of river transformation. Closed: the river is a prohibitive zone with concrete banks. Flood Plan: proposed plans to create a flood plain at Taylor Yard would create and open parkspace on one side, but leave Elysian isolated and closed on the opposite bank. Connected: Further investigationa dn intervention is neccessary to connect the banks and waterway.

METHODS

With the extent of the river restoration focused on the Taylor Yard side in the ARBOR reach, the Elysian neighborhood remains isolated and removed from the river. The dual layer of industrial large-scale steel warehouses and concrete bank left intact block both the visual and direct benefits of the restoration plan from the interior of the neighborhood. This thesis proposes an entry point, connecting the resident to the river and the flood plain beyond.

The industrial history of the site prohibited access across the river, dividing the surrounding areas the two mile length of the river. Reaching the other side is further complicated by the two freeways surrounding the site. In order to reach the other side on foot, one must pass underneath one of the massive elevated freeways to reach the nearest bridge. On the edge to the north, only Ripple St. in the Elysian neighborhood crosses under the Glendale Freeway overpass without circumnavigating the Glendale Freeway-Interstate 5 interchange, and requires crossing under the Glendale Freeway a second time to reach the adjacent river neighborhood. And to the south, one must pass under Interstate 5 twice in order to reach the destination.

Situated at the end of Knox Avenue, Elysian Valley Gateway Park occupies a small triangular lot nestled between warehouses, junk cars and the river, not quite living up to its name. While the street terminates on a concrete barrier, turning into the park off of Knox guides the pedestrian onto the Greenway path. The park is not visible from the block corner at the end of rows of houses, effectively hiding this gate to the river. Introducing an architectural intervention and art center at the dead end of Knox Avenue opens up a more visible path and legitimate gateway to the river beyond. Stemming from the street, divergent paths must connect, descend and cross.

Introducing an architectural intervention as a

figure 28. Preliminary sketches of site proposal

figure 29. Flyer for Frogtown Artwalk 2013. The greenway along the river is used as a navigational path for galleries within the warehouses.

means of descent breaks through barriers to the water below. Removing the railings and facilitating the descent to water overrides hesitation from the negative imagery of the river. Finally physically entering the soft-bottom section with islands of sentiment and lush riparian fauna, the concrete edge is forgotten.

By proposing this intervention on the Elysian bank and not the Taylor Yard site for development beyond, the art center is planted firmly within a burgeoning center of Frogtown artists. As industry wanes along the river and the warehouses remain, local artists have begun to inhabit the large, low rent spaces as artists studios. Now in its eighth year, the Frogtown Artwalk invites the public to enter the refuge of this artists collective once a year, to witness the work typically shrouded behind the solid corrugated steel walls.[94] The path of the art walk embraces the river, traversing the greenway as a navigational guide between galleries. The art center is an in-residence artist community supporting local Los Angeles artists with a connection to the greater community. The center provides additional studio spaces with the role of the artist to continue the connection between the art, the river and viewer. Classroom studio spaces join the artist with the public creatively year round and a gallery presents the finished work. Whereas previously, the connection was limited, shaped and often illegal, the public are now able to cross that threshold and interact and participate.

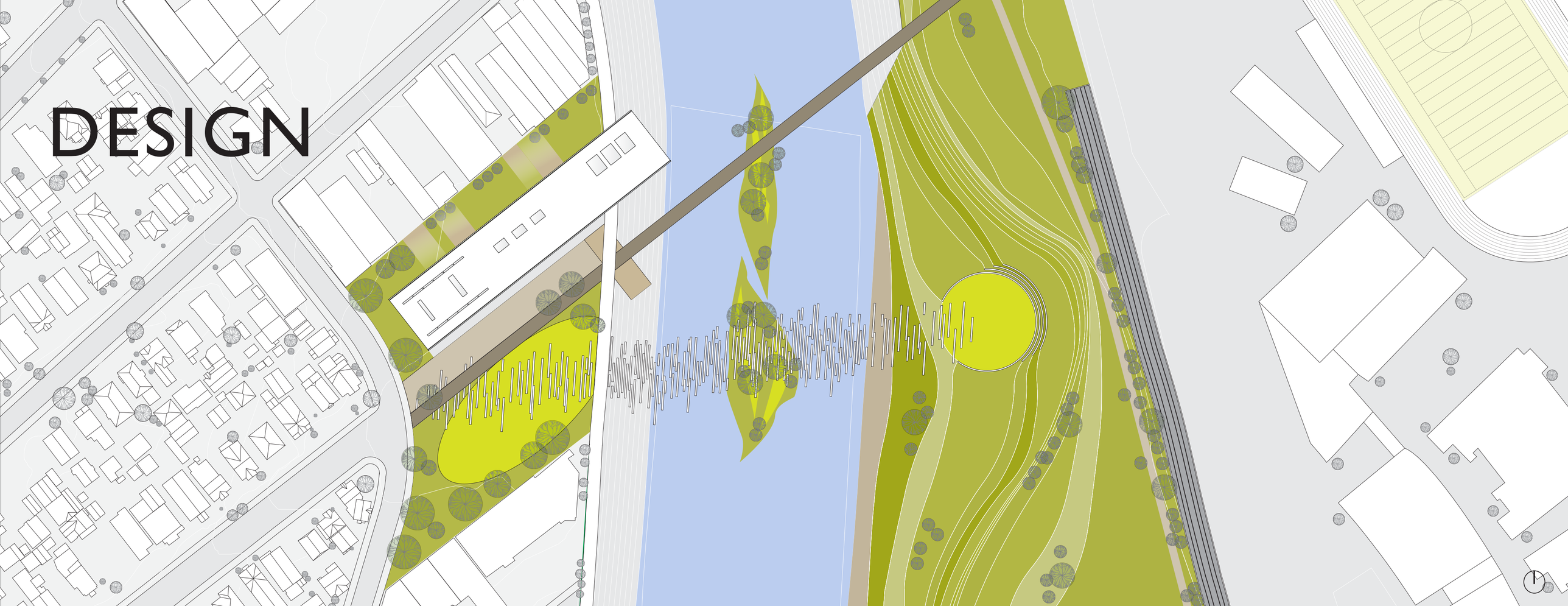
With the railroad lines predating the development of the Elysian Valley, bridging the banks was inhibited by rail traffic, until now. Connection to the new parkland and flood plain is an immeasurable asset and natural resource offering breathing space to the densely knit to a community. Directly across from this gateway beyond the flood plain, the new Sonia Sotomayor School zone houses a campus of 5 charter and pilot schools in the art and sciences opening up new possibilities within reach for the many teenagers in the district. Conversely, the bridge connects the students across the way and the Cyprus and Mt. Washington neighborhoods with the creative enclave in Frogtown.

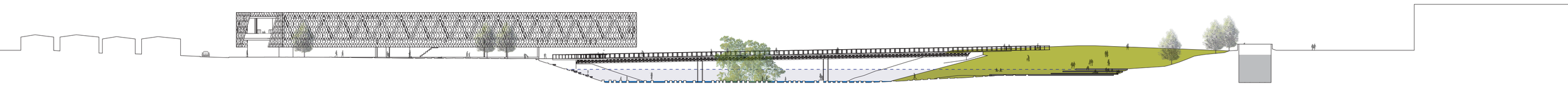
figure 30. Knox Avenue facing the storm concrete barrier at the river.

figure 31. LA Greenway Path along the river. Five-foot high railing and concrete bank on the left. To the right are the solid faces of the warehouses.

figure 32. River below Knox Avenue. This hybrid section of river contains both concrete banks and lush riparian vegetation growing from the soft-bottom river bed.

DESIGN





This thesis intervention connects the neighborhood to the river, the parklands and the arts. By slicing through the fabric of the industrial stretch, a window to the river is opened and the art center is a focal point as well as a connection between local artists and the community. The dead end road is transformed into a pedestrian street, no longer leading to a concrete barrier but a bridge to the banks beyond. Located at the start of the proposed flood plain, the intervention is merely a slice of the larger master plan designated by the city and the Army Corps of Engineers. Where the concrete pulls away into the riparian landscape, the crossing extends at a pivotal moment in the transformed landscape. Crossing the river, one experiences two very different rivers on either side. Looking on one side is the infrastructural river, as it has been for nearly a century, and on the other side, the man-made topography.

The band of industrial warehouses is carved open with the residential blocks opening to the art center, path and park, all directing from the street towards the river. The previously hidden Gateway Park is stretched towards Blake Ave, living up to its name with green vegetation visible as one rounds the bend, instead of a rusting steel panelled wall. The art center, encompassing aspects of both art studios and community center, is institutional in scale compared to other structures on the bank, rising taller than the surrounding warehouses. Much like the extended greenspace of the park as a signifier of the river gateway, the scale of the center stamps out the importance of the slice in the fabric of warehouses, while also relating to the scale of the Sonia Sotomayor School complex across the river. The building itself is divided into three sections, allowing passage from the path onto the north work yard and beyond into warehouses retrofitted into larger artist studios.

Two paths diverge from the street towards the river, crossing over or delving into the water. The dry path and bridge extend from the city grid in a linear shot, rejoining the urban fabric on the opposite side, stitching the divide of the river together. The descending path deviates from the grid, staggering down to the water in a series of stepping stones, made of concrete recycled from the rehabilitated bank.

figure 33. Site plan (previous page)
figure 34. Site section (above)

ENTRY

From the edge of Blake Ave, the entry to the river is now open and inviting. The pedestrian-only passage now offers unobstructed views to the river and parklands beyond, free of the cluttered cars and opaque facades previously lining the street.

Different materials used throughout the landscaping transition from the asphalt of the street to the change in pace of the park, center and path. A boardwalk of linear planks extends from the street to the bridge, demarking a clear line of movement, slightly elevated off of the ground surface, and the decking eases into a quality of lightness on the truss-supported bridge. Between the art center and boardwalk the avenue is covered with a sandy gravel. The loose surface marks a slower progression and meeting place, with chairs spilling out of the cafe and neighbors stopping to peer in at the artists' latest creations.

figure 35. Perspective of Entry on pdestrian Know Avenue towards the river.

GATEWAY PARK

Extending between the street to the edge of the greenway at the river, Gateway Park is a breathing space for the neighborhood and a passageway to the riverbed beyond. Removed from the reaches to the flood waters by the remaining concrete bank, the park is more formally landscaped with sunning lawn, flower beds and pruned trees.

Beginning at the edge of the sidewalk, crossing the Art Center's boulevard and passing under the boardwalk, the recycled plinths cross through the park leading to the descent beyond. Protruding from the lawn, the stones will sink and wear as time progresses.

figure 36. Perspective of Gateway Park

RIVERBED

From Gateway Park, the concrete slabs break for the gateway path and resume as steps on the face of the sloped concrete bank down to the water's edge. Continuing across the open riverbed, the now stepping stones cross the shallow depths of the river during most of the year, reconnecting the visitor to the water and nature.

A viewing platform above immerses the passerby in the natural landscape beyond and provides a safe view to witness the churning waters when the river floods.

figure 37. Perspective of river bed

AMPHITHEATER

Reaching the flood plain beyond, the concrete path dissolves into the soil and terminates at an open amphitheater. Carved out of the sloping hillside of the flood plain, the tiered amphitheater creates a visual focal point from the art center and an opportunity for impromptu performances, continuing the tradition of performance art on the banks of the river.

The concrete amphitheater is the last extension of the man-made cutting into the restored flood plain beyond.

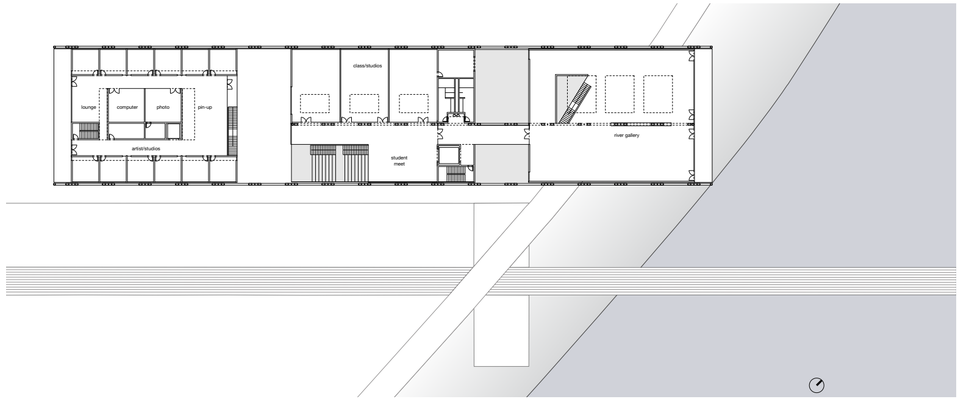
figure 38. Perspective of Amphitheater and flood plain

ART CENTER

The building is similar to the rectangular footprint of the warehouses, but does not bear the solid walls, blocking views to the outsider. A wrap-around screen filters the harsh sunlight, and the corrugated steel sides of the industrial sector are transformed into a light perforated metal screen.

The first floor contains public programming for all, with passageways and visually-open expanses of glass. A theatre walled with horizontally-orientated, board-formed concrete anchors at the street and neighborhood, for use by the artists and the community. A cafe opens onto the pedestrian street and the glass art gallery entrance connects to the art walk beyond.

Resting on the plinth of the theater and cantilevering out over the river, the truss structure contains the artist's level. Over the theater 12 artist studios look out over the path and neighborhood. Each studio is used as a workspace or a starting point for artists wishing to work directly in the river. At the core of the studios are communal pin-up spaces and shared computer and photo labs. The joining of public curiosity and the artists' expertise occurs in the larger classroom/studios in the central portion of the building. Equipped for traditional arts and print making, the classroom are spacious enough to be flexible for modern techniques. Classrooms on the first level open up to the north work yard for grittier pieces and to work in conjunction with the adjacent artist warehouses, while the upper level is equipped with skylights and ventilation. The art center stretches the length of the path and culminates in the gallery, perched over the river and extending out towards the opposite bank.



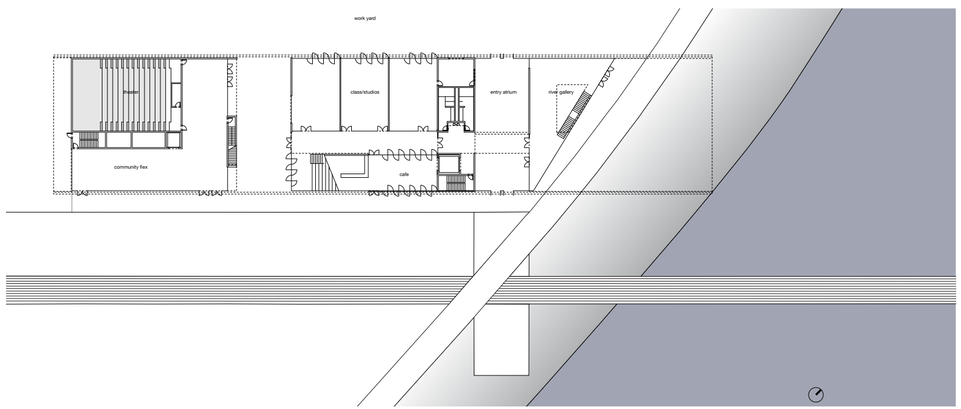


figure 39. Art Center second level plan (top, opposite page)
figure 40. Art Center street level plan (bottom, opposite)

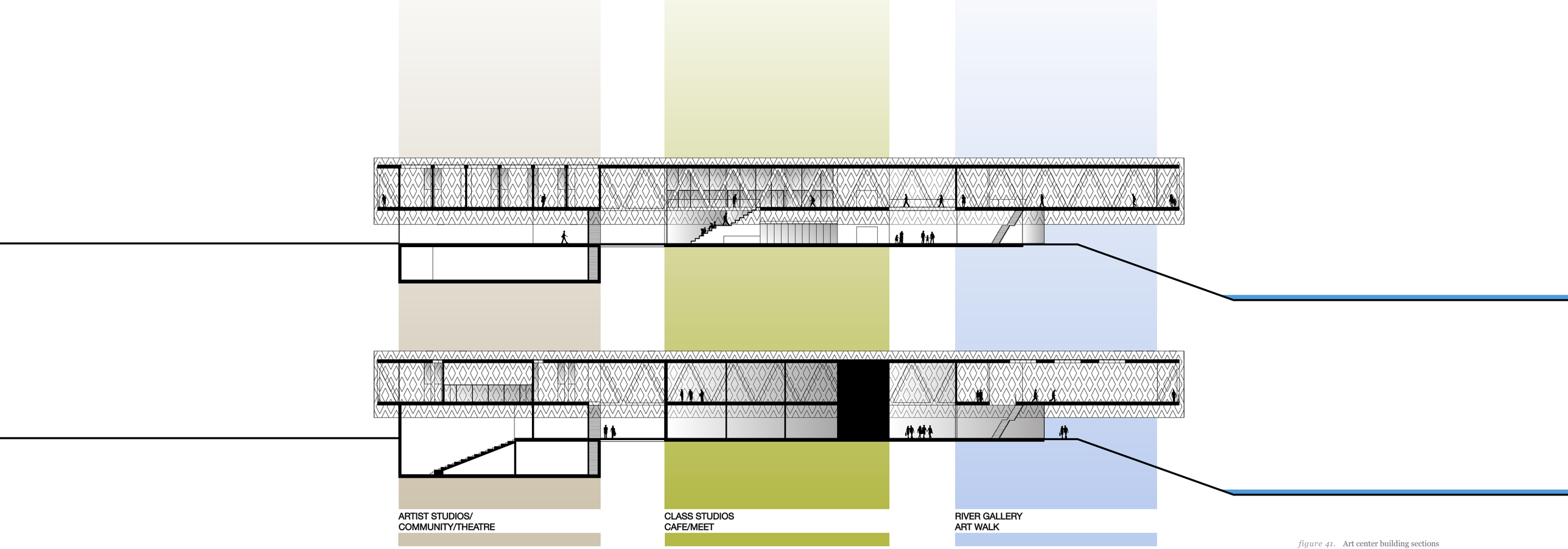


figure 41. Art center building sections

ART CENTER ENTRANCE

The open passage connecting the theater and classroom studios leads to outdoor work space beyond, and seating steps open up the space for people-watching, and meetings between artists and students.

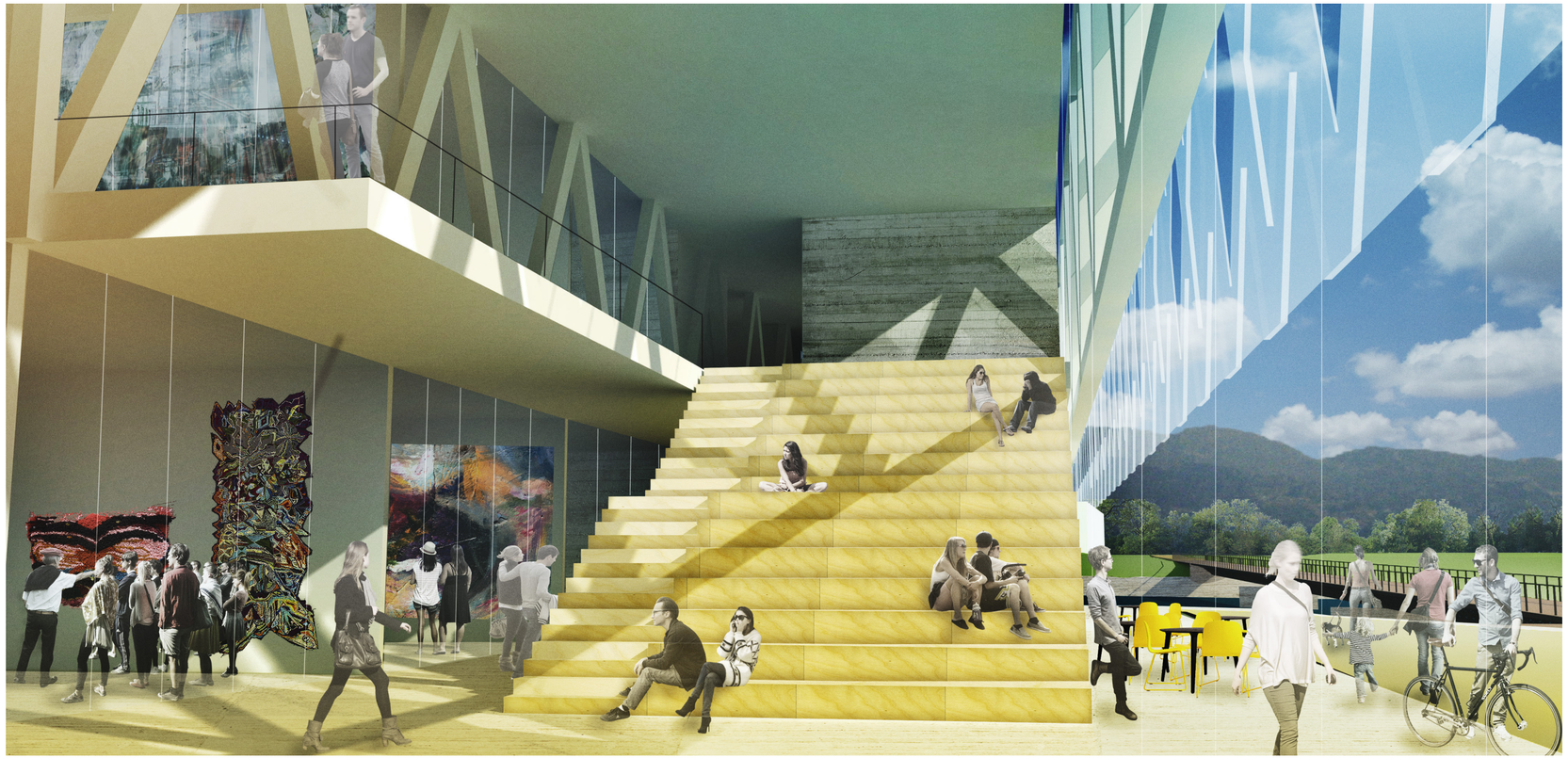


figure 42. Perspective of Art Center entrance

GALLERY ATRIUM

An atrium and elevated walkway connect the art center classroom studios and the river gallery. The smaller lower gallery is shaped by river edge, parallel to the water course still in its concrete form. Doors along this face open to the Artwalk and stairs lead up to the main gallery above. Walls of glass and transparent panels filter the view through the lower gallery to the movement on the path and river beyond.

The atrium cuts through the building connecting the north work yard and warehouses to the elevated viewing platform over the water, the gallery centering the juxtaposed landscapes. The entrance of the atrium and gallery is at the meeting point of bridge path, art center boulevard and Greenway with priority of movement ceded to those moving along the river edge.

figure 43. Perspective of river gallery atrium

RIVER GALLERY

Floating above the river and cantilevering towards the parkland beyond, the main gallery is the final space in the procession from street to river, artist to creation. With opaque gallery walls for sun control and programming, the terminal end of the space opens to an expanse of glass and viewing balcony towards the north. The filtering metal screen wraps the corners of the building, reducing east-west glare. Skylights filtering ultra-violet rays and directing the light straight down provide natural light for the gallery, while protecting the artwork.

The art work on display ranges from traditional studio arts to representations of art taking place in the river beyond. The center and gallery do not intend to capture or replicate the art of the river, but act as an interface for the public. Acting as a means of accessibility for those unable to delve into the river bed and celebrating its legitimacy.

figure 44. Perspective of River Gallery

GREENWAY PASSAGE

As viewed from the Greenway/Artwalk along the river, the cantilevered gallery occupies the space above as one passes under. Rounding the corner heading towards downtown the projecting space dominates the view and opens to reveal the bridge and park beyond as you move closer. The Greenway and bridge are one level with the canopies sprouting from the riverbed, but the gallery rises above the highest branches. Reflecting sunlight and illuminated at night, the art center acts as a beacon and gathering point from the banks and flood plains afar.

figure 45. Perspective of Greenway heading south

CHANGED PERSPECTIVE

This open landscape creates an alternate perception of danger during flood events. While still too dangerous to enter the river during a storm, the rushing water can be witnessed from the high terrain. The bridge and viewing platform allow crossing and hovering above at safe heights. And visiting the gallery facing out to the gushing water is perhaps a draw to venturing out on a rainy LA day.

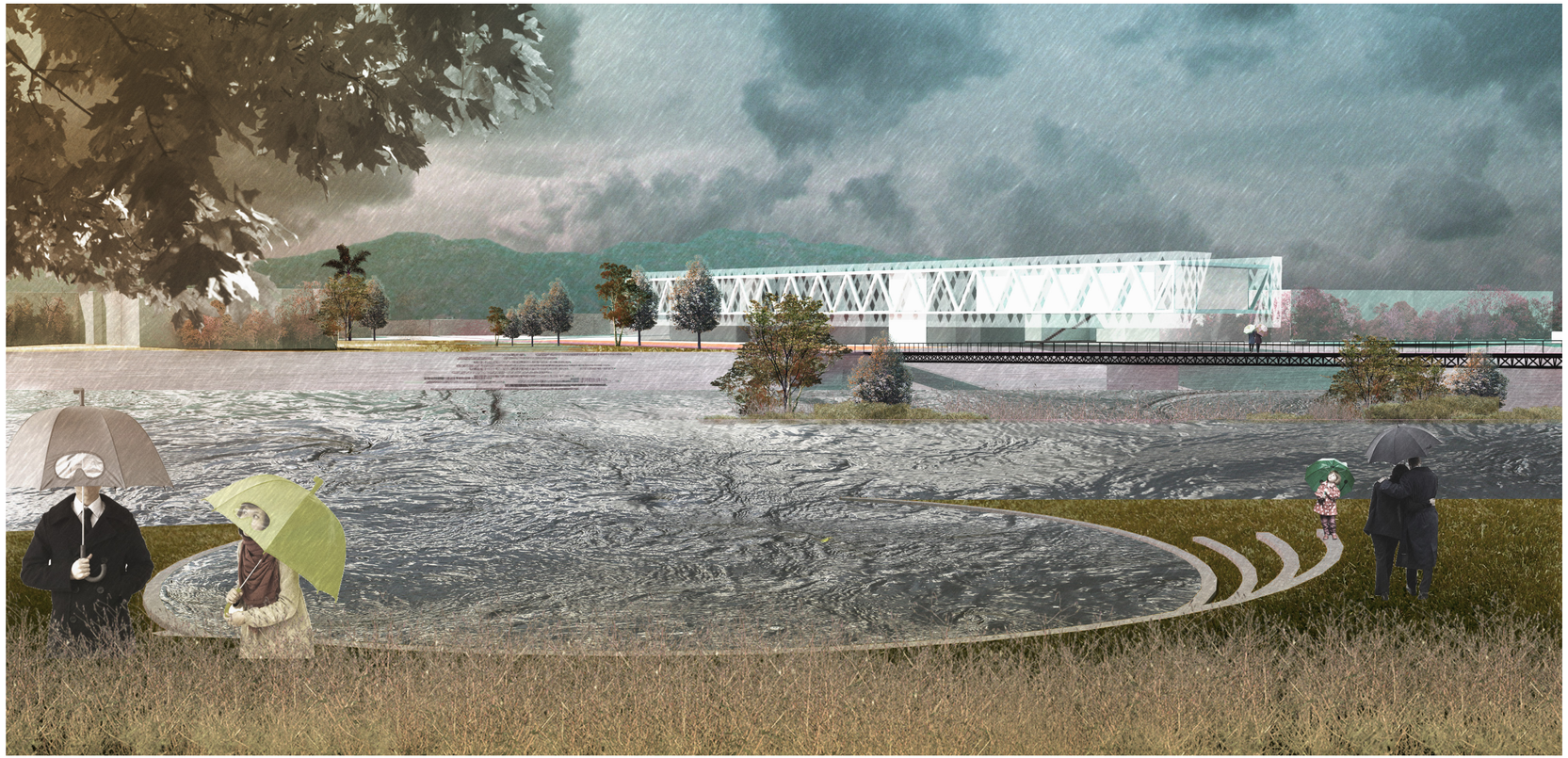


figure 46. Perspective of Amphitheater and flood plain during flood event

CONCLUSION

This thesis began as a personal fascination with the utilitarian enigma that is the present day LA River. Crossing one of its many bridges for the first time years ago, I noticed the bright blue sign signifying the waterway below. Upon peering over the edge I was astonished to see how different the riverbed was to this idyllic image of a heron perched in a marsh. The concrete underneath did not resemble any ecological landscape I had previously experienced.

Restoration of the LA River is a topic with strong political and public backing, but for a project of this magnitude patience will be necessary. While channelization was completed in only a few decades, river revitalization requires much more time, with continued community and financial support. In transforming the river from something hidden in the back yard to a civic space at the forefront of Los Angeles, the scale and effect of each urban planning move must reflect and sustain adjacent community values. Not to mention that the infrastructural channel is vitally necessary during flood events and as sections are pulled away and it altered, it still must fulfill this crucial task.

The interventions proposed in this design thesis sought to connect two banks while also connecting adjacent communities at their point of intersection. While the project may be viewed as too large for the scale of the neighborhood, I argue that the institutional scale of the art center is necessary. Physically the structure is stamping out a footprint among the band of industrial buildings and relating to the scale of current developments across the river. But on a civic level, the center is taking a head-start approach to a resurgence of interest in northeast Los Angeles communities. As revitalization of the river is implemented, I believe the recreation and creative outlets developed will continue to draw attention from the long dominant institutions and beaches of the west side.

figure 47. LA River Sign

ENDNOTES

1 Charlie LeDuff, "Los Angeles Journal; Los Angeles by Kayak: Vistas of Concrete Banks," The New York Times (8 December 2003); http://www.nytimes.com/2003/12/08/us/los-angeles-journal-los-angeles-by-kayak-vistas-of-concrete-banks.html (accessed 14 March 2013).

2 Norman M. Klein *The History of Forgetting, Los Angeles and the Erasure of Memory* (New York: Verso, 2008) 84.

3 Alvaro Parra, "'I want my LA River to be...' Kiosk Travels Through Northeast LA" KCET (10 June 2013); http://www.kcet.org/socal/departures/nela/news-and-notes/i-want-my-la-river-to-be-kiosk-travels-through-nela.html (accessed 12 June 2013).

4 "About FoLAR," Friends of the Los Angeles River; http://folar.org/?page_id=84 (accessed 14 March 2013).

5 "LA River Revitalization Master Plan," City of Los Angeles: Los Angeles River Revitalization; http://www.lariver.org/5.1a_download_publications_LARRMP.htm (accessed 14 March 2013).

6 Blake Gumptrecht *The Los Angeles River, Its life, Death and Possible Rebirth* (Baltimore, MD: Johns Hopkins University Press, 1999) 20.

7 Blake Gumptrecht *The Los Angeles River, Its life, Death and Possible Rebirth* (Baltimore, MD: Johns Hopkins University Press, 1999) 9.

8 Blake Gumptrecht *The Los Angeles River, Its life, Death and Possible Rebirth* (Baltimore, MD: Johns Hopkins University Press, 1999) 12.

9 Blake Gumptrecht *The Los Angeles River, Its life, Death and Possible Rebirth* (Baltimore, MD: Johns Hopkins University Press, 1999) 17.

10 David Fletcher, "Flood Control Freakology, Los Angeles Watershed," in *The Infrastructural City: Networked Ecologies in Los Angeles,* ed. Kazys Vernelis. (New York: Actar, 2008) 38.

11 "History of the River," Los Angeles River; http://www.thelariver.com/about/history-of-the-river/ (accessed 14 March 2013).

12 Blake Gumptrecht *The Los Angeles River, Its life, Death and Possible Rebirth* (Baltimore, MD: Johns Hopkins University Press, 1999) 29.

13 Blake Gumptrecht *The Los Angeles River, Its life, Death and Possible Rebirth* (Baltimore, MD: Johns Hopkins University Press, 1999) 35.

14 Railroads: A Form of Expansion and Destruction," USC Dornsife: Natural History of Southern California; http://dornsife.usc.edu/natural-history-ca/?paged=2 (accessed 14 March 2013).

15 Blake Gumptrecht *The Los Angeles River, Its life, Death and Possible Rebirth* (Baltimore, MD: Johns Hopkins University Press, 1999) 42.

16 David Fletcher, "Flood Control Freakology, Los Angeles Watershed," in *The Infrastructural City: Networked Ecologies in Los Angeles,* ed. Kazys Vernelis. (New York: Actar, 2008) 26.

17 Blake Gumptrecht, "Who Killed the Los Angeles River," in *Land of Sunshine: An Environmental History of Metropolitan Los Angeles,* ed. William Deverell and Greg Hise. (Pittsburgh, PA: University of Plttsburgh Press, 2005) 130.

18 Blake Gumptrecht *The Los Angeles River, Its life, Death and Possible Rebirth* (Baltimore, MD: Johns Hopkins University Press, 1999) 47.

19 Blake Gumptrecht *The Los Angeles River, Its life, Death and Possible Rebirth* (Baltimore, MD: Johns Hopkins University Press, 1999) 53.

20 Blake Gumptrecht *The Los Angeles River, Its life, Death and Possible Rebirth* (Baltimore, MD: Johns Hopkins University Press, 1999) 56.

21 David Fletcher, "Flood Control Freakology, Los Angeles Watershed," in *The Infrastructural City: Networked Ecologies in Los Angeles,* ed. Kazys Vernelis. (New York: Actar, 2008) 26.

22 Blake Gumptrecht *The Los Angeles River, Its life, Death and Possible Rebirth* (Baltimore, MD: Johns Hopkins University Press, 1999) 56.

23 David Fletcher, "Flood Control Freakology, Los Angeles Watershed," in *The Infrastructural City: Networked Ecologies in Los Angeles,* ed. Kazys Vernelis. (New York: Actar, 2008) 26.

24 Blake Gumptrecht *The Los Angeles River, Its life, Death and Possible Rebirth* (Baltimore, MD: Johns Hopkins University Press, 1999) 83.

25 Yingyu Hung, "1938 Flood and Channelization of Los Angeles Rivers" IDEASWA (30 July 2012); http://www.ideas.swagroup.com/1938-flood-and-channelization-of-los-angeles-rivers/ (accessed 14 March 2013).

26 Blake Gumptrecht, "Who Killed the Los Angeles River," in *Land of Sunshine: An Environmental History of Metropolitan Los Angeles,* ed. William Deverell and Greg Hise. (Pittsburgh, PA: University of Plttsburgh Press, 2005) 125.

27 Yingyu Hung, "1938 Flood and Channelization of Los Angeles Rivers" IDEASWA (30 July 2012); http://www.ideas.swagroup.com/1938-flood-and-channelization-of-los-angeles-rivers/ (accessed 14 March 2013).

28 Yingyu Hung, "1938 Flood and Channelization of Los Angeles Rivers" IDEASWA (30 July 2012); http://www.ideas.swagroup.com/1938-flood-and-channelization-of-los-angeles-rivers/ (accessed 14 March 2013).

29 Blake Gumptrecht *The Los Angeles River, Its life, Death and Possible Rebirth* (Baltimore, MD: Johns Hopkins University Press, 1999) 83.

30 Blake Gumptrecht, "Who Killed the Los Angeles River," in *Land of Sunshine: An Environmental History of Metropolitan Los Angeles,* ed. William Deverell and Greg Hise. (Pittsburgh, PA: University of Plttsburgh Press, 2005) 128.

31 Railroads: A Form of Expansion and Destruction," USC Dornsife: Natural History of Southern California; http://dornsife.usc.edu/natural-history-ca/?paged=2 (accessed 14 March 2013).

32 Justin Cram, "Los Angeles Flood of 1938: Cementing the River's Future," KCET Departures (28 February 2012) http://www.kcet.org/socal/departures/landofsunshine/la-river/los-angeles-flood-of-1938-channelization.html (accessed 14 March 2013).

33 Dan Glaister, "LA Returns Water That Helped Make It a City" The Guardian (6 December 2006) ;http://www.guardian.co.uk/environment/2006/dec/07/water.usnews (accessed 14 March 2013).

34 David Fletcher, "Flood Control Freakology, Los Angeles Watershed," in *The Infrastructural City: Networked Ecologies in Los Angeles,* ed. Kazys Vernelis. (New York: Actar, 2008) 24.

35 David Fletcher, "Flood Control Freakology, Los Angeles Watershed," in *The Infrastructural City: Networked Ecologies in Los Angeles,* ed. Kazys Vernelis. (New York: Actar, 2008) 22.

36 Jeremy Rosenberg, "The Law That Killed the L.A. River," KCET Departures (4 June 2012);http://www.kcet.org/socal/departures/landofsunshine/laws-that-shaped-la/the-law-that-killed-the-la-river.html (accessed 14 March 2013).

37 Justin Cram, "Los Angeles Flood of 1938: Cementing the River's Future," KCET Departures (28 February 2012) http://www.kcet.org/socal/departures/landofsunshine/la-river/los-angeles-flood-of-1938-channelization.html (accessed 14 March 2013).

38 Sarah Rich, "The LA River," Inhabitat (29 March 2006); http://inhabitat.com/the-la-river/ (accessed 14 March 2013).

39 Lane Barden, "The River, Los Angeles River Picturing Los Angeles: Conduits, Corridors, and the Linear City, Part 1," in *The Infrastructural City: Networked Ecologies in Los Angeles,* ed. Kazys Vernelis. (New York: Actar, 2008) 78.

40 Sarah Rich, "The LA River," Inhabitat (29 March 2006); thttp://inhabitat.com/the-la-river/ (accessed 14 March 2013).

41 Lane Barden, "The River, Los Angeles River Picturing Los Angeles: Conduits, Corridors, and the Linear City, Part 1," in *The Infrastructural City: Networked Ecologies in Los Angeles,* ed. Kazys Vernelis. (New York: Actar, 2008) 82.

42 Justin Cram, "Los Angeles Flood of 1938: Cementing the River's Future," KCET Departures (28 February 2012) http://www.kcet.org/socal/departures/landofsunshine/la-river/los-angeles-flood-of-1938-channelization.html (accessed 14 March 2013).

43 "History of the River," Los Angeles River; http://www.thelariver.com/about/history-of-the-river/ (accessed 14 March 2013).

44 Lane Barden, "The River, Los Angeles River Picturing Los Angeles: Conduits, Corridors, and the Linear City, Part 1," in *The Infrastructural City: Networked Ecologies in Los Angeles,* ed. Kazys Vernelis. (New York: Actar, 2008) 80.

45 Sarah Rich, "The LA River," Inhabitat (29 March 2006); thttp://inhabitat.com/the-la-river/ (accessed 14 March 2013).

46 David Fletcher, "Flood Control Freakology, Los Angeles Watershed," in *The Infrastructural City: Networked Ecologies in Los Angeles,* ed. Kazys Vernelis. (New York: Actar, 2008) 44.

47 "The LA River" Friends Of Vast Industrial Concrete Kafkaesque Structures; http://seriss.com/people/erco/fovicks/ (accessed 14 March 2013).

48 David Fletcher, "Flood Control Freakology, Los Angeles Watershed," in *The Infrastructural City: Networked Ecologies in Los Angeles,* ed. Kazys Vernelis. (New York: Actar, 2008) 44.

49 David Fletcher, "Flood Control Freakology, Los Angeles Watershed," in *The Infrastructural City: Networked Ecologies in Los Angeles,* ed. Kazys Vernelis. (New York: Actar, 2008) 41.

50 Norman M. Klein *The History of Forgetting, Los Angeles and the Erasure of Memory* (New York: Verso, 2008) 83.

51 David Fletcher, "Flood Control Freakology, Los Angeles Watershed," in *The Infrastructural City: Networked Ecologies in Los Angeles,* ed. Kazys Vernelis. (New York: Actar, 2008) 41.

52 Lane Barden, "The River, Los Angeles River Picturing Los Angeles: Conduits, Corridors, and the Linear City, Part 1," in *The Infrastructural City: Networked Ecologies in Los Angeles,* ed. Kazys Vernelis. (New York: Actar, 2008) 86.

53 Anna Sklar *Brown Acres, An Intimate History of the Los Angeles Sewers* (Santa Monica, CA: Angel City Press, 2008) 113.

54 David Fletcher, "Flood Control Freakology, Los Angeles Watershed," in *The Infrastructural City: Networked Ecologies in Los Angeles,* ed. Kazys Vernelis. (New York: Actar, 2008) 44.

55 David Fletcher, "Flood Control Freakology, Los Angeles Watershed," in *The Infrastructural City: Networked Ecologies in Los Angeles,* ed. Kazys Vernelis. (New York: Actar, 2008) 42.

56 "Fishing," Los Angeles River; http://www.thelariver.com/guide/fishing/ (accessed 20 May 2013).

57 David Fletcher, "Flood Control Freakology, Los Angeles Watershed," in *The Infrastructural City: Networked Ecologies in Los Angeles,* ed. Kazys Vernelis. (New York: Actar, 2008) 44.

58 Mike Davis *Ecology of Fear: Los Angeles and the Imagination of Disaster* (New York: Vintage Books, 1998) 17.

59 David Fletcher, "Flood Control Freakology, Los Angeles Watershed," in *The Infrastructural City: Networked Ecologies in Los Angeles,* ed. Kazys Vernelis. (New York: Actar, 2008) 40.

60 "Virtual Tour," Los Angeles River; http://www.thelariver.com/about/virtual-tour/ (accessed 14 March 2013).

61 Robert Gottlieb *Reinventing Los Angeles, Nature and Community in the Global City* (Cambridge, MA: MIT Press, 2007) 136.

62 Robert Gottlieb *Reinventing Los Angeles, Nature and Community in the Global City* (Cambridge, MA: MIT Press, 2007) 135.

63 Robert Gottlieb *Reinventing Los Angeles, Nature and Community in the Global City* (Cambridge, MA: MIT Press, 2007) 136.

64 Ted Elrick *Los Angeles River* (Los Angeles:Arcadia, 2008) 87.

65 Sarah Rich, "The LA River," Inhabitat (29 March 2006); thttp://inhabitat.com/the-la-river/ (accessed 14 March 2013).

66 http://www.itsfilmedthere.com/2011/10/southland-season-1-episode-7-derailed.html

67 "Virtual Tour," Los Angeles River; http://www.thelariver.com/about/virtual-tour/ (accessed 14 March 2013).

68 "The History of the Los Angeles River," Los Angeles Education Partnership; http://www.laep.org/target/units/river/tour/hist.html (accessed 14 March 2013).

69 David Fletcher, "Flood Control Freakology, Los Angeles Watershed," in *The Infrastructural City: Networked Ecologies in Los Angeles,* ed. Kazys Vernelis. (New York: Actar, 2008) 42.

70 Robert Gottlieb *Reinventing Los Angeles, Nature and Community in the Global City* (Cambridge, MA: MIT Press, 2007) 136.

71 David Fletcher, "Flood Control Freakology, Los Angeles Watershed," in *The Infrastructural City: Networked Ecologies in Los Angeles,* ed. Kazys Vernelis. (New York: Actar, 2008) 42.

72 Christopher Goffard, "Fear sets up camp on a stretch of the L.A. River," The Los Angeles Times (24 November 2009); http://articles.latimes.com/2009/nov/24/local/la-me-river-killings24-2009nov24 (accessed 21 May 2013).

73 The Dead Zone - Architecture of Transgression

74 Robert Gottlieb *Reinventing Los Angeles, Nature and Community in the Global City* (Cambridge, MA: MIT Press, 2007) 136.

75 Robert Gottlieb *Reinventing Los Angeles, Nature and Community in the Global City* (Cambridge, MA: MIT Press, 2007) 137.

76 "The Great Wall of Los Angeles: The History and Art of the Great Wall," Judy Baca; http://www.judybaca.com/now/index.php?option=com_content&view=article&id=151&Itemid=98 (accessed 5 June 2013).

77 "Surfing the L.A. River: Street art hits urban waterway," Los Angeles Times: L.A. Now (6 June 2012); http://latimesblogs.latimes.com/lanow/2012/06/street-art-surfing-los-angeles-river.html (accessed 14 March 2013).

78 Tiara Chiatamonte "The Cat Man: Street Artist Leo Limón Raises Awareness Of The L.A. River Through Graffiti," Neon Tommy: USC Annenberg Digital; http://www.neontommy.com/news/2012/05/cat-man-leo-lim-n (accessed 6 June 2013).

79 Mike Davis *Ecology of Fear: Los Angeles and the Imagination of Disaster* (New York: Vintage Books, 1998) 62.

80 Mike Davis *Ecology of Fear: Los Angeles and the Imagination of Disaster* (New York: Vintage Books, 1998) 9.

81 Norman M. Klein *The History of Forgetting, Los Angeles and the Erasure of Memory* (New York: Verso, 2008) 84.

82 Mike Davis *Ecology of Fear: Los Angeles and the Imagination of Disaster* (New York: Vintage Books, 1998) 63.

83 Jennifer Price, "13 Ways to See Nature in LA," in *Land of Sunshine: An Environmental History of Metropolitan Los Angeles,* ed. William Deverell and Greg Hise. (Pittsburgh, PA: University of Pittsburgh Press, 2005) 234.

84 Jennifer Price, "13 Ways to See Nature in LA," in *Land of Sunshine: An Environmental History of Metropolitan Los Angeles,* ed. William Deverell and Greg Hise. (Pittsburgh, PA: University of Pittsburgh Press, 2005) 232.

85 Robert Gottlieb *Reinventing Los Angeles, Nature and Community in the Global City* (Cambridge, MA: MIT Press, 2007) 294..

86 Robert Gottlieb *Reinventing Los Angeles, Nature and Community in the Global City* (Cambridge, MA: MIT Press, 2007) 294..

87 Roger Kemp *Cities and Water* (Jefferson, NC: McFarland & Co., 2009) 100.

88 Robert Gottlieb *Reinventing Los Angeles, Nature and Community in the Global City* (Cambridge, MA: MIT Press, 2007) 157.

89 "Elysian Valley," The Los Angeles Times: Local; http://maps.latimes.com/neighborhoods/neighborhood/elysian-valley/ (accessed 30 October 2013).

90 "Taylor Yard/ Rio de Los Angeles State Park," The River Project; http://www.theriverproject.org/projects/taylor-yard-rio-de-los-angeles-state-park (accessed 6 June 2013).

91 "It's the End of the Line for Taylor Yard," The Eastsider LA; http://theeastsiderlahomehistory.blogspot.com/2009/10/end-of-line-for-taylor-yard.html (accessed 6 June 2013).

92 "Taylor Yard/ Rio de Los Angeles State Park," The River Project; http://www.theriverproject.org/projects/taylor-yard-rio-de-los-angeles-state-park (accessed 6 June 2013).

93 "Appendix A - Design" Army Corps of Engineers Los Angeles District; http://www.spl.usace.army.mil/Media/PublicNotices/tabid/1320/Article/17994/spl-2013-003-nlh-draft-ifr-for-la-river-eco-rest-study.aspx (accessed 14 October 2013).

94 "The Frogtown Artwalk," The Frogtown Artwalk; http://www.frogtownarts.com (accessed 30 October 2013).

BIBLIOGRAPHY

"The Great Wall of Los Angeles: The History and Art of the Great Wall," Judy Baca; http://www.judybaca.com/now/index.php?option=com_content&view=article&id=151&Itemid=98 (accessed 5 June 2013).

Lane Barden, "The River, Los Angeles River Picturing Los Angeles: Conduits, Corridors, and the Linear City, Part 1," in *The Infrastructural City: Networked Ecologies in Los Angeles*, ed. Kazys Vernelis. (New York: Actar, 2008)

Tiara Chiatamonte "The Cat Man: Street Artist Leo Limón Raises Awareness Of The L.A. River Through Graffiti," Neon Tommy: USC Annenberg Digital; http://www.neontommy.com/news/2012/05/cat-man-leo-lim-n (accessed 6 June 2013).

Justin Cram, "Los Angeles Flood of 1938: Cementing the River's Future," KCET Departures (28 February 2012) http://www.kcet.org/socal/departures/landofsunshine/la-river/los-angeles-flood-of-1938-channelization.html (accessed 14 March 2013).

Mike Davis *Ecology of Fear: Los Angeles and the Imagination of Disaster* (New York: Vintage Books, 1998)

Doran, Gil. "The Dead Zone and the Architecture of Transgression." City: Analysis of Urban Trends, Culture, Theory, Policy, Action 4.2 (2000): 247-63.

Ted Elrick *Los Angeles River* (Los Angeles:Arcadia, 2008)

David Fletcher, "Flood Control Freakology, Los Angeles Watershed," in *The Infrastructural City: Networked Ecologies in Los Angeles*, ed. Kazys Vernelis. (New York: Actar, 2008)

Dan Glaister, "LA Returns Water That Helped Make It a City" The Guardian (6 December 2006) ;http://www.guardian.co.uk/environment/2006/dec/07/water.usnews (accessed 14 March 2013).

Christopher Goffard, "Fear sets up camp on a stretch of the L.A. River," The Los Angeles Times (24 November 2009); http://articles.latimes.com/2009/nov/24/local/la-me-river-killings24-2009nov24 (accessed 21 May 2013).

Robert Gottlieb *Reinventing Los Angeles, Nature and Community in the Global City* (Cambridge, MA: MIT Press, 2007)

Blake Gumptrecht, "Who Killed the Los Angeles River," in *Land of Sunshine: An Environmental History of Metropolitan Los Angeles*, ed. William Deverell and Greg Hise. (Pittsburgh, PA: University of PIttsburgh Press, 2005)

Blake Gumptrecht *The Los Angeles River, Its life, Death and Possible Rebirth* (Baltimore, MD: Johns Hopkins University Press, 1999)

Roger Kemp *Cities and Water* (Jefferson, NC: McFarland & Co., 2009)

Norman M. Klein *The History of Forgetting, Los Angeles and the Erasure of Memory* (New York: Verso, 2008)

Jennifer Price, "13 Ways to See Nature in LA," in *Land of Sunshine: An Environmental History of Metropolitan Los Angeles*, ed. William Deverell and Greg Hise. (Pittsburgh, PA: University of PIttsburgh Press, 2005)

Sarah Rich, "The LA River," Inhabitat (29 March 2006); http://inhabitat.com/the-la-river/ (accessed 14 March 2013).

Jeremy Rosenberg, "The Law That Killed the L.A. River," KCET Departures (4 June 2012);http://www.kcet.org/socal/departures/landofsunshine/laws-that-shaped-la/the-law-that-killed-the-la-river.html (accessed 14 March 2013).

Anna Sklar *Brown Acres, An Intimate History of the Los Angeles Sewers* (Santa Monica, CA: Angel City Press, 2008)

Yingyu Hung, "1938 Flood and Channelization of Los Angeles Rivers" IDEASWA (30 July 2012); http://www.ideas.swagroup.com/1938-flood-and-channelization-of-los-angeles-rivers/ (accessed 14 March 2013).

"Appendix A - Design" Army Corps of Engineers Los Angeles District; http://www.spl.usace.army.mil/Media/PublicNotices/tabid/1320/Article/17994/spl-2013-003-nlh-draft-ifr-for-la-river-eco-rest-study.aspx (accessed 14 October 2013).

"The History of the Los Angeles River," Los Angeles Education Partnership; http://www.laep.org/target/units/river/tour/hist.html (accessed 14 March 2013).

"History of the River," Los Angeles River; http://www.thelariver.com/about/history-of-the-river/ (accessed 14 March 2013).

"It's the End of the Line for Taylor Yard," The Eastsider LA; http://theeastsiderlahomehistory.blogspot.com/2009/10/end-of-line-for-taylor-yard.html (accessed 6 June 2013).

"The LA River" Friends Of Vast Industrial Concrete Kafkaesque Structures; http://seriss.com/people/erco/fovicks/ (accessed 14 March 2013).

"Railroads: A Form of Expansion and Destruction," USC Dornsife: Natural History of Southern California; http://dornsife.usc.edu/natural-history-ca/?paged=2 (accessed 14 March 2013).

"'Sunbather' street artists wanted 'invisible' dirt lot noticed," Los Angeles Times: L.A. Now (26 May 2012); http://latimesblogs.latimes.com/lanow/2012/05/street-artists-sunbathers.html(accessed 5 June 2013).

"Surfing the L.A. River: Street art hits urban waterway," Los Angeles Times: L.A. Now (6 June 2012); http://latimesblogs.latimes.com/lanow/2012/06/street-art-surfing-los-angeles-river.html (accessed 14 March 2013).

"Taylor Yard/ Rio de Los Angeles State Park," The River Project; http://www.theriverproject.org/projects/taylor-yard-rio-de-los-angeles-state-park (accessed 6 June 2013).

"Virtual Tour," Los Angeles River; http://www.thelariver.com/about/virtual-tour/ (accessed 14 March 2013).

IMAGE CREDITS

Images by author unless noted otherwise

Figure 1	altered version of maps from http://egis3.lacounty.gov/dataportal/
Figure 2	Tom Andrews http://www.hcn.org/issues/41.2/non-navigable-river-blues/image_viewer
Figure 3	http://thesource.metro.net/tag/l-a-mayor/
Figure 4	http://www.fourth-millennium.net/family-travels/los-angeles-1894-panoramic-map.html
Figure 5	http://freeassociationdesign.files.wordpress.com/2010/04/la-river_farms_1900.jpg
Figure 6	altered from http://cityplanning.lacity.org/MapGallery/Image/Citywide/IndustrialZones.pdf
Figure 7	http://www.ideas.swagroup.com/1938-flood-and-channelization-of-los-angeles-rivers/
Figure 8	http://www.kcet.org/socal/departures/columns/la-river/glory-days-of-the-los-angeles-river.html
Figures 9-11	http://www.ideas.swagroup.com/1938-flood-and-channelization-of-los-angeles-rivers/
Figure 12	Dave Bullock http://eecue.com/p/31385/Seventh-Street-Viaduct.html
Figure 13	http://seriss.com/people/erco/fovicks/roll-09-08-01/pic00031-full.jpg
Figure 15	http://www.you-are-here.com/location/la_river.html
Figure 16	http://www.itsfilmedthere.com/2010/01/grease.html
Figure 17	http://laeastside.com/2009/04/body-in-repose-la-eastside/
Figure 18	altered version of maps from http://egis3.lacounty.gov/dataportal/
Figure 19	http://inthemorgue.wordpress.com/2011/09/19/judy-baca-and-the-great-wall-of-los-angeles/
Figure 20	Steven Zeigler http://blogs.laweekly.com/informer/2012/06/paper-mache_surfer_los_angeles_river_street-art_downtown.php
Figure 21	http://leolimon.com/
Figure 23	altered version of maps from http://egis3.lacounty.gov/dataportal/
Figure 24	http://www.theriverproject.org/projects/taylor-yard-rio-de-los-angeles-state-park/early-history-1700-1920
Figures 25 -26	http://buildinglosangeles.blogspot.com/2013/09/an-in-depth-look-at-453-million-la.html
Figure 29	http://www.frogtownarts.com/events/
Figures 30-32	Jeremy Wabiszczewicz 2013
Figure 48	http://sites.moca.org/rangers/2011/08/03/get-ready-for-heightened-river-fluency/