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Notes:

The Under Line:

An Enormous Public Microclimate

Project Location:
South Phoenix AZ
between N. 16th
Ave and N. Laurel
Ave under the
Papago Freeway
overpass

Stamp:
MLA Applied Project

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MILLER**

Date: Spring 2017



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Zeitgeist

Acknowledgements

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Landscape architects are in a good position to address issues of environmental justice in manners that can restore and enrich natural systems, educate, and advocate for communities. As Cole and Foster say in their publication, From the Ground Up, “It is difficult to trace back the emergence of the environmental justice movement to one single event, as the movement grew organically out of dozens, even hundreds, of local struggles and events.” While this is true, a common thread that underlies and unites these struggles and events is that environmental degradation negatively impacts quality of life.

Environmental degradation is synonymous with poor and minority neighborhoods. These areas are often the dumping ground for or within reach of toxins that have ill effects on the land, water, air and ultimately the residents. An unhealthy environment puts people at many disadvantages beyond their physical health. Confidence and feeling safe are lost in unhealthy environments and this profoundly effects social justice. Landscape architects have the knowledge and knowhow to repair most of these sites. Planting design and soil engineering can clean while grading and drainage can manage water flow and together, these functions help restore ecosystem services that naturally maintain the environment. Designing for the implementation of low impact development tools that visually demonstrate systems functions and stimulate the imagination can strengthen peoples’ connections to their environment. “As applied to environmental struggles in poor communities and communities of color, these techniques can help to redefine both ecological awareness and the meaning of the environment itself”. (Cole)

Sustainability is a goal we are striving to achieve as a species and is hopefully the most important and largest collaboration taking place today. Landscape architects are well positioned to positively influence the three pillars of sustainability. Engineered ecosystems can be measured for their performance and data collected catalyzes advancements in technologies. This process increasingly brings built systems closer to natural systems. Cultural ecosystem services are closely related to the built environment and with this comes policy. The same methods landscape architects use to design urban ecosystems can also be used to drive policy which, in turn, strengthens the cause for environmental justice.

“Like the Civil Rights Movement, the grassroots anti-toxics movement also brought the experiential base of direct action into the Environmental Justice Movement. It further contributed both the experience of using (and, when need be, discrediting) scientific and technical information and the conceptual framework that pushed pollution prevention and toxics use reduction as policy goals.” (Congressman John Lewis). Landscape architects generate valuable hard and soft data in the design, implementation, and performance of their work. This is the type of social, scientific and technical information to which John Lewis is referring. It can be used to create sustainable landscapes as well as to advocate for human rights. Environmental justice and social justice, working together.

In The Sustainability Discourse and Sustainable Communities, Julian Agyeman calls to mind what Evans and Boyte (1986:xix) call “Free Spaces.” These non-physical spaces are the discourse and interpretation of broad-focus civic environmentalism. They are “settings which create new opportunities for self- definition, for the development of public and leadership skills, for a new confidence in the possibilities of participation, and for wider mappings of the connections between movement members and other groups and institutions “. What is being described here is the type of discourse that landscape architects are having every day. What landscape architects can do is design and build physical spaces that turn the discourse into reality.



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When asked:
Why this specific sight under the Papago Freeway a block east of Grand Avenue in Phoenix , AZ?

Miller replied:
“Life threatening heat for almost four consecutive months in the summer, a highway that in 1990 divided and polarized a 70 year old neighborhood, and La Luz del Mundo Catholic church being designed, funded and constructed by their congregation of immigrants are a few of the opportunities on my site. Science and site visits allow me to scale multiple passive cooling systems and use the mass of the overpass to create a mass(ive) microclimate with a goal of being 30 degrees cooler than the surrounding air. Low impact development tools and proper planting design will allow the park to mostly maintain itself. It’s a place where architectural elements and landforms can be combined to encourage interactive and educational experiences. Social science is a real component of this type of design and can provide valuable qualitative and quantitative data. My methods for this include Geographic Information System (GIS) research, anonymous Q and A surveys with residents of targeted apartment complexes, and holding charrettes with members of La Luz del Mundo church. One apartment complex, Oasis on Grand, is home to working studio artists, and the park will be an extension of their studios for the public to see. Strategic location of the park activates an unused urban space and it punches through the I-10 barrier to begin reuniting neighbors almost 30 years after being separated.”

“My Vision is...

Underpasses Provide Much Needed Public Space in Urban Landscapes.

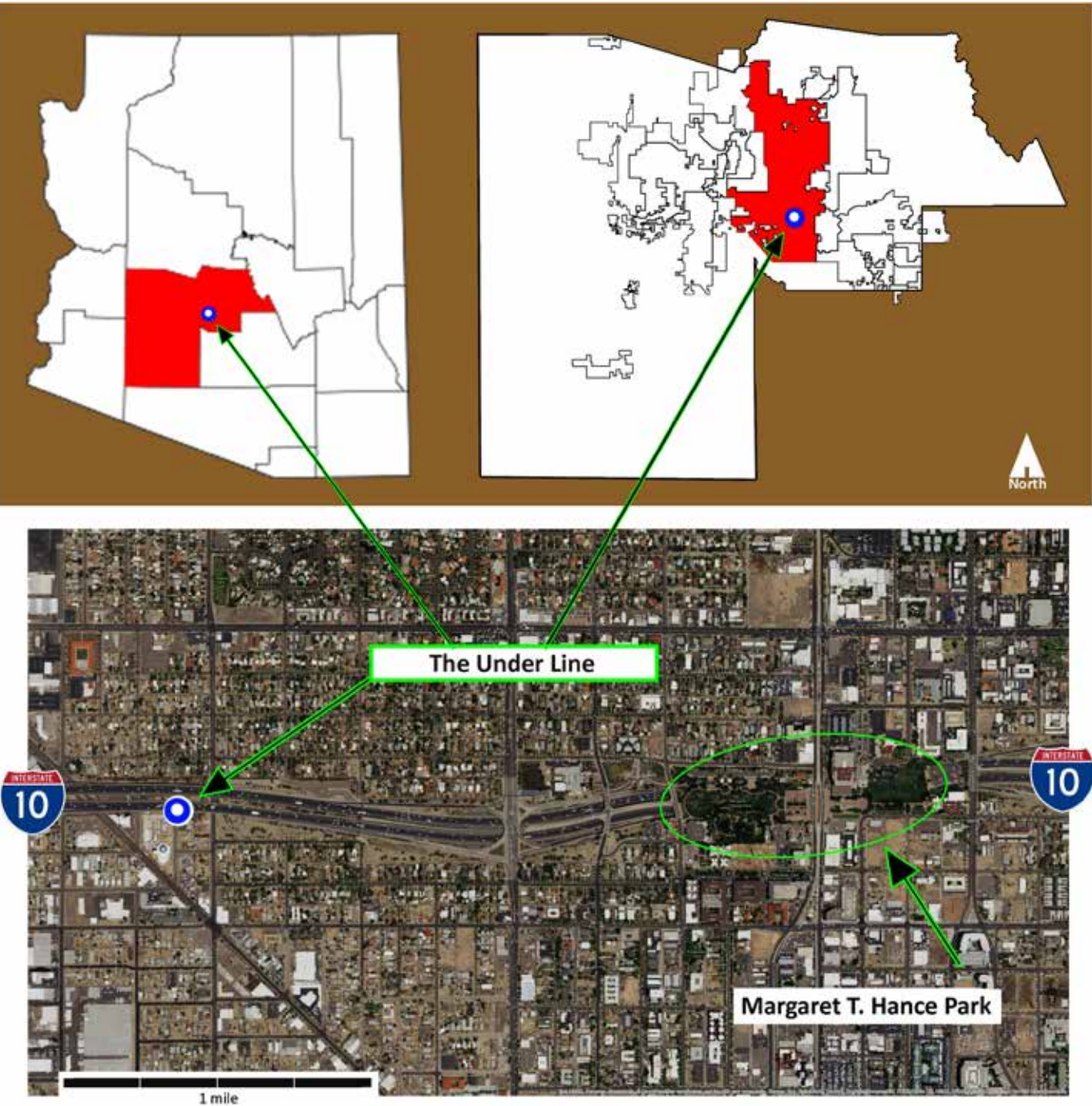
In 2067 your personal robot is also your teacher and cities are PACKED. Because of this the need for public spaces supersedes the need for places to learn. Therefore, public spaces become flexible gathering places to tell stories, think and invent.

In 2067, meeting places are any outdoor site where it is free, legal to gather, and void-able of technological plug in capabilities. Roadway underpasses are a popular destination. Each meeting place provides analog context for story-telling and a visceral connection to the urban fabric. Story-telling and social gathering in outdoor spaces is cultural research and development without a beginning or end...The way we understand it is to be a part of it. This is a function of cultural in 2067 and landscape architects are charged with the honorable duty of extracting these outdoor spaces from unique yet plentiful urban left overs. Underpasses have become foundations for social equity in their communities.

My Goals are to:

1. Construct an enormous public microclimate with a wide array of amenities.
2. Reconnect the Neighborhood which was divided by the Papago Freeway 27 years ago.
3. Celebrate local artists and Ecosystem Services.

Vicinity: South Phoenix, Arizona. Underneath the I-10 freeway, AKA The Papago Freeway.



The Under Line – Its Origin and Future

“Doctors, we are told, bury their mistakes, planners by the same token embalm theirs, and engineers inflict them on their children’s children.” - Robert Moses –

The Federal Aid Highway Act of 1956 authorized the construction of the United States’ interstate highways. By 1956 many American cities had developed a firm foundation of infrastructure, commerce, circulation patterns, and neighborhoods. At the same time, road congestion in cities was increasing and city to city connections via automobile could mean enduring bumpy gravel roads for absurd amounts of time by today’s standards. Two different developers, Harland Bartholomew and Robert Moses, were instrumental in shaping the interstate system and, in turn, reshaping the communities that the interstates connected. What was a good idea then has become a problem today. Understanding the cause for and results of designing roads for efficiency over designing for humanity can justify design solutions for today. Solutions which can improve communities that have been negatively impacted by the interstate system.

Roadway as community asset and landscape architecture is a philosophy that Bartholomew and Moses shared before the 1950’s. The roads that Moses built in the 1920s and early 1930s were parkways with extensive landscaping and a great deal of aesthetic beauty. He prepared a 1930 arterial highway plan for New York in which he proposed the same "road-as-landscape-architecture" treatment for hundreds of miles of parkways throughout the region. (Brown 2002)



Palisades Parkway, New York


Bartholomew was an advocate for the interstate system because he saw it as an opportunity to tie communities together and as something that could generate economy and jobs locally. He pressed for the inclusion of social and land use criteria in freeway planning. (Brown) As cars improved in performance and speed, the goal of highway as landscape became increasingly difficult and expensive to achieve safely. This drove Bartholomew and Moses in different directions. Bartholomew argued strongly for local as opposed to state and federal highway department-control over freeway design and planning decisions. He believed that local officials understood the workings of their communities better than state or federal government officials. Local officials would be able to determine the best (not necessarily the fastest) route for a highway passing through their city. "Neighborhoods, in so far as conditions permit, must be preserved and protected from the annoyances of heavy traffic movements. Major thoroughfares should follow the borders of new neighborhoods rather than splitting them into several parts" (Bartholomew 1954). Bartholomew was steadfast in his beliefs that highways should serve the people on more levels than simply getting from point A to point B.

Robert Moses was also a proponent of designing what’s best for the people, but his philosophy morphed as the 1950’s approached. He came to believe his duty as a designer was to eliminate traffic congestion in cities. He was one of the first designers to fight the Sisyphean battle of preventing grid lock and road rage. Moses’ solution was to make the interstates separate from cities. They would still pass through cities, but their connections would be minimal. On top of this, Moses was able to shed his belief that landscape architecture should be integral to his designs. This freed him up to design for the straightest paths possible from point A to point B.

This transformation of Moses’ ideology jived well with the engineers and bureaucrats of the day and this is why many of the roads we drive on today were designed by him and people who thought like him. The enormous scale of the Federal Highway Act meant a lot of money was going to be spent. Everyone involved was concerned with being as economic as possible. Therefore; the economy of motion guided decision making on all levels. In most cases a straight-line highway was the most economic in terms of money, materials and the circulation of people and products. In the end, the traffic-service vision of the engineers emerged victorious as a result of state and federal highway finance decisions, and this victory has carried with it a high price for many American cities. (Brown)

The interstate system was completed in 1991 and it consists of nearly 48,000 miles of roadway. Many neighborhoods across America experienced a permanent “division by interstate” during the 37 year construction project because the straightest path was the only path as far as anyone involved was concerned. In fact, the government applied eminent domain as needed and in some cases it was less expensive to remove hundreds of families and destroy hundreds of homes than to add an extra mile or two to the road. (Fromm 2012). Dividing neighborhoods rarely, if ever, fortified them. Most of the time neighborhoods went into decline and few have recovered because the interstates are constant, large and unwelcoming barriers. “In some places freeways, once championed by planners as tools for urban renewal, have created swaths of blight through the inner-city neighborhoods they traverse” (Lewis 1997).

As early as the 1960’s interstates were dividing communities across America. We can look at examples of this and data collected to illustrate the detrimental effects of some highway projects. Interstate 71 was constructed in 1961-62. It cut through the Milo-Grogan neighborhood in Columbus, Ohio. Families were displaced, homes destroyed, and the commercial sector fell apart. Cleveland Avenue, the prominent shopping and commercial avenue of years past, is directly adjacent to the interstate. The loss of homes, population, and the stress of the interstate contributed to a forty-five percent storefront business loss on this avenue alone (Dunham 67). These were the more immediate results of constructing I-71, but these interstates are permanent and have lasting effects, some of which might take years to manifest. For example, by 1973, female householders increased (male incarceration rates soared), high school incompleteness increased, unemployment began to exceed citywide rates, mean incomes fell to half of the city wide mean income rate, twenty-five percent of families were below the federal poverty line, crime was twenty percent that of the city rate, and students were significantly behind in school compared to other Columbus students (Dunham 68-70).



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What was happening in Columbus, Ohio in 1973 was happening in communities across the country. In this same year, regional planners in Phoenix, AZ proposed several interstates cutting through the Salt River Valley. One of these was the Papago Freeway which would be the last link to complete the coast to coast I-10. It seems as if designers and developers were aware of the problems associated with dividing neighborhoods with highways because they originally proposed an elevated structure, rising 100 feet through the central city. Helicoil interchanges would connect the city to the interstate and a public park would be developed under the entire structure. Community members did not see this as an improvement. They revolted and forced a vote on the project. The result was almost a resounding vote of “NO”. The project was stopped and the neighborhood was saved, until the nineties. Progress continued to put pressure on the need for a continuous I-10 from coast to coast and in 1990 the Papago Freeway (I-10) became one of the last sections completed in the Federal Highway System.

Some credit is due to the developers for crafting a master plan sensitive to the needs of the community. As a compromise for dissecting the neighborhood; the road was designed to be below grade for over a half mile and the Margaret T. Hance public park now sits above this section of road-way. While this compromise may have had good intensions, the reality is that the Papago Freeway displaced families and destroyed homes for more than two miles through the city. While the park may be located at the geographic center of Phoenix, it is not equidistance from residents in the communities it is supposed to serve. This perpetuates the decline in social equity amongst residents near the interstate because some have a park within walking distance while most do not.

In 2013 the Maricopa Association of Governments (MAG) conducted the Central Phoenix Transportation Framework Study which produced a technical memorandum for the freeway system plan. “The Technical Memorandum provides information on an analysis undertaken to examine the feasibility of limiting new construction within a prescribed footprint for freeways making up the “Central Core” of the Phoenix metropolitan area. It presents recommendations regarding this proposed action based on the results of the analysis” (MAG). In April a workshop was held with residents of the communities along the I-10 and I-17 “Spine” which includes the Papago Freeway. Evidence from the workshop indicated concern over building consensus on the vision and path forward for improving the Spine Corridor. Photograph documentation from the workshop reveals that most of the participants were of an age to remember the community before and after the Papago Freeway came to town. It is hardly surprising that they have concerns in terms of highway expansion. On one of my site visits to the community I saw four or five houses, next to the Papago overpass, which looked like they were being repaired and restored. One can only imagine the effects imminent domain would have on these homesteaders.

Officials representing the Federal Highway Administration, Arizona Division expressed concern regarding public perception, particularly for the Interstate 10 portion of the Spine Corridor. After ten years of executing the planning and environmental review process as part of the Interstate 10 Corridor Improvement Study (State Route 51 to Santan Freeway), the public may be concerned about a new direction for the corridor. Workshop participants concurred that a long-term vision would be beneficial to achieving a fiscally constrained solution for the Interstate 10 and Interstate 17 segments of the Spine Corridor. However, concern was raised that more environmental analyses might be required to get some near-term improvements implemented in order to assure the public that some progress was being made to improve the corridor (MAG). This is a huge opportunity for the conceptualization, design, and construction of The Under Line. A public space which incorporates the root of the problem, where most of the infrastructure already in place and has potential to enrich people’s lives who do not live close to Margaret T. Hance Park.



Hance Park was finished in 1992 and covers roughly 30 acres on top of the Papago Freeway. The park was built as a sort of compromise to the people that would soon be living with the I-10 in their backyards. In 2016 a consortium of city officials, parks and recreation officials, Hance Park citizen advisory groups, and six master plan design teams published a new vision for Hance Park. In my experience and those of others I’ve asked, the park often feels empty or unwelcoming and does little to work with the extreme summer heat. Over the last 25 years, Hance Park has never quite reached its goal of being a uniting centerpiece of Phoenix. A recent survey completed by ASU showed most Phoenix residents don’t know where it is (HPMP report) even though hundreds of thousands of people drive under it every day. A rethinking of the park is long overdue and as of March, 2016 Phase 1 has begun to take shape.



The master plan calls for three stages of implementation; the “Canyon”, the “Plateau”, and the “Valley.” The Valley is the third phase and western most portion of the park. It will be years before the Valley is even started. This excites me because there might still be time to include The Under Line in the master plan as phase 4: the “Caves”

I believe the concepts behind the new master plan would welcome the addition of The Under Line Park in the Caves, further to the west, bringing social equity where it is needed. The following excerpt comes directly from the master plan, it is one of many that expresses genuine passion for bring the area to life:

PARK INTEGRATION

Connectivity: Expansion of edges towards and into adjacent neighborhoods inviting residents to visit and enjoy. Previously isolated elements are embraced.

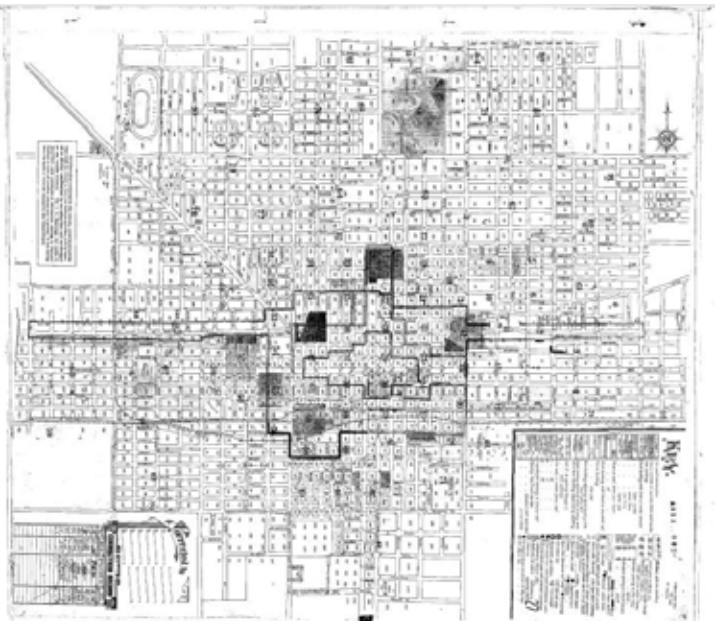
Visibility: Plazas and edges define and announce the park presence to those passing by.

Identity: Abstract butte and mound landforms paired with architectural shade structures create interest and attraction easily recognizable as being synonymous with Hance Park.

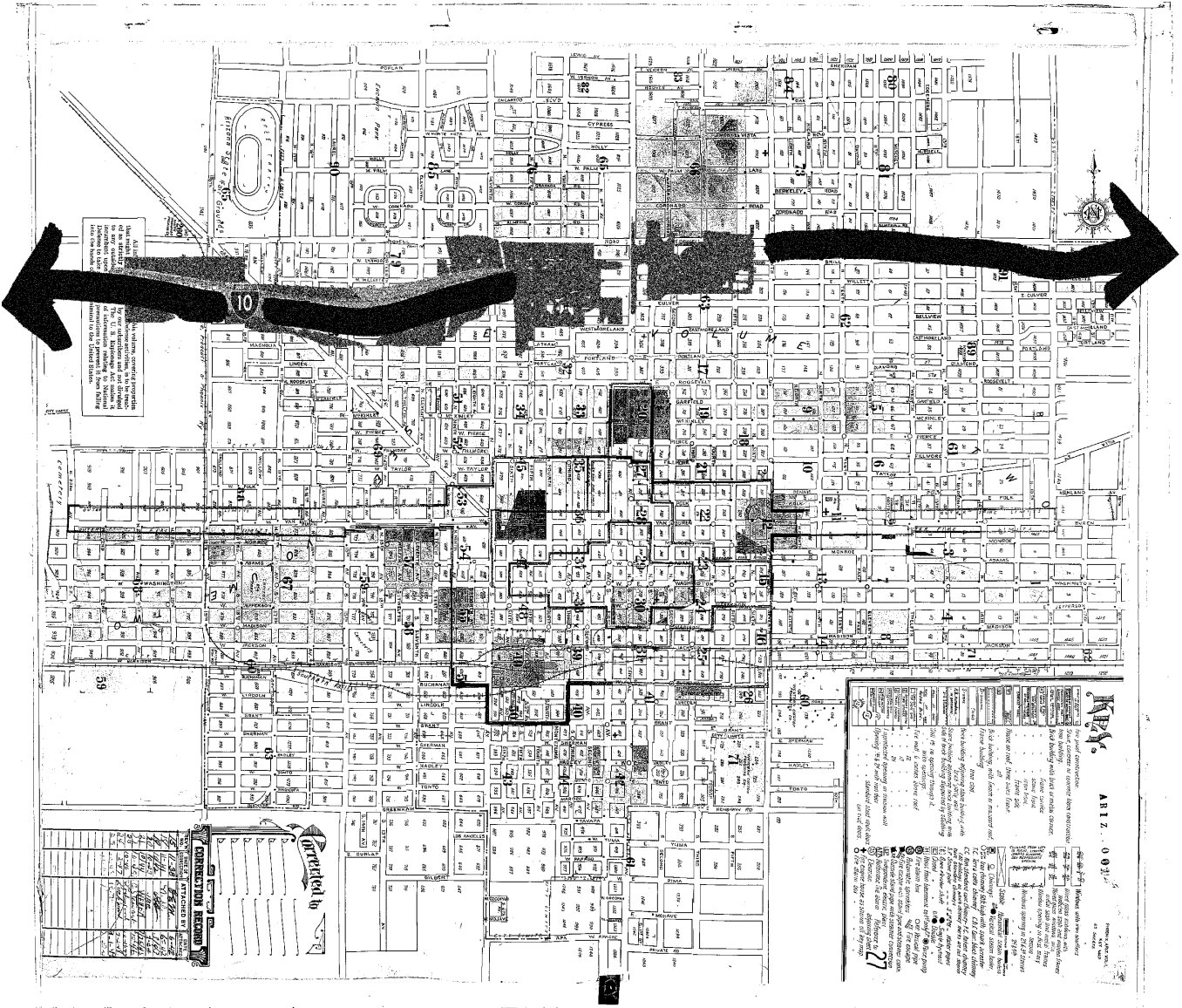
To correlate their plan with mine:

- Connectivity. The Under Line is a stepping stone to the rest of the neighborhood on both sides of the overpass. Galleries and restaurants already established in the area have an eclectic flare for visitors to discover.
- Visibility. The Under Line can be considered one room in a hallway with dozens of rooms. Plazas and edges have an opportunity to run free under the highway. The potential for myriad rooms with almost unlimited programming options is high. The Under Line is the first room in a hallway that will evolve over time. The park will respond to cultural shifts and act as a sort of museum of current events. (tell the tale of my Basquiat elevator shaft in Brooklyn?)
- Identity. Landforms are an essential component of The Under Line as rethinking the ground plane in order to maximize light and airflow is a must. The Under Line is designed to be 30 degrees cooler than the surrounding air during the summer. Imagine how popular The Under Line will be for people trying to beat the heat and be outside at the same time.

What is happening in Margaret T. Hance Park won’t be too visible to the people further west where the Papago rises above ground. Acknowledging that the community has been heard with the gesture of building The Under Line will benefit a larger portion of the community and set an example for other cities that are looking for places to connect people, make them visible, and identify with their home.



The Sanborn map above shows a continuous urban fabric in 1915. Below, the Papago Freeway and Margaret T. Hance Park (1992) have been drawn on the same map.



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Case Study



Project Name – Underpass Park
Location – Toronto, Ontario, Canada
Date Designed/Planned – Planning began in the winter of 2007
Construction Completed – Phase 1 opened July 16th 2012 and was dedicated on August 12th 2013. Phase 2 was completed in August 2015.
Cost - \$9,577,535
Size – irregularly shaped approximately 2.5 acre site
Landscape Architect(s) – Vancouver-based PFS Studio and The Planning Partnership, “A combination of Canadian firms and individuals with a mutual passion for all aspects of community building.”
Client – City of Toronto, province of Ontario and the national government of Canada
Consultants – The Planning Partnership and Archeological Services Inc.
Managed by – Waterfront Toronto and City of Toronto

Context:

Underpass Park is the most extensive park to be built under an overpass in Canada, and the first ever in Toronto. The park’s design is defined by the massive overpass structures. In the early days of Toronto, the area was amongst the first to become heavily industrialized. A railroad was constructed and the river was straightened to accommodate the growing city’s trade needs. Factories produced goods there until the 1980’s when businesses folded and the area became another casualty of industry. This derelict and unused space sat for decades as an unused stinking unhealthy landscape. When Toronto was first settled, the area was set aside for a public park because it is located in what was an inspirational natural setting in the heart of town.

Today, after a history of overuse and neglect, the area is experiencing a renaissance including the construction of new parks. Underpass Park’s site has been transformed into a community park as the first stage of an ongoing effort to transform pockets of neglected urban spaces on the Don River waterfront into valuable cultural amenities, particularly under the network of overpasses in Toronto. The now vibrant site unites the West Don Lands (a new neighborhood bordered by the Don River) and other emerging neighborhoods. A new light rail links the park to people and destinations throughout Toronto. The overpass structure is a defining architectural element that is being celebrated through the park’s landscape and lighting designs. Toronto is growing at a fast pace and easily accessible public spaces are becoming increasingly important for urban residents. A park flowing underneath the overpasses accommodates multiple regions for different types of recreation. It’s linear characteristic also provides stimulating circulation from one region to another both in the park and surrounding neighborhoods. One of the most significant contributions to Toronto is that the park links miles of parks throughout Toronto to Lake Ontario. The potential for areas under the overpasses has been discovered and is now being proven to be a wildly popular place for locals and tourists to gather and take part in a multitude of programs designed for all ages.

Site Analysis:

Under and around the Eastern Avenue and Richmond/Adelaide overpasses, south of King Street between Cherry Street and Bayview Avenue. The park is bordered on the southern edge by Old Eastern Avenue. On the northern edge, the park is bordered by the new east/west ‘woonerf’ that runs on the south side of the new Toronto Community Housing complex and Urban Capital’s River City. St. Lawrence Street and the newly extended River Street, traverse the park, providing access from several locations. About half of the park (1.2 acres) is covered by the overpasses. The covered area is the more active zone within the park and benefits from the weather protection provided by the overpasses. New residential buildings for families and young professionals have been recently opened to locals. These buildings and others in the vicinity were constructed for the 2015 Pan Am/ Parapan Am Games. Repurposing these buildings for residential and mixed use rather than letting them fall down like their warehouse and factory predecessors provides economic and health benefits for the community.

The eastern-most section of the park, east of River Street, includes two basketball half-courts, an extensive skatepark featuring a series of obstacles, rails and ledges, and flexible open space for programming or community events. The playground is located in the middle section of the park, between St. Lawrence St. and River Street. This part of the park features a teeter-totter, hopscotch, 4-square, swings and playful climbing structures for all ages. It also includes a series of ribbon walls and park benches, and flexible community space that can be used for markets, festivals and seasonal public events. A dense grove of 54 salt and drought resistant trees, grass and other plantings add a natural element to the park and the area. The plant palette uses native plants which improves the local urban ecology and is resilient to shocks in ecosystem services.

Project Background and History:

Originally the site was part of the Old Town of York, established by John Graves Simcoe in 1793. "The Park," as it was referred to on early maps, extended from Berkeley Street to the Don River as far north as Queen Street. It remained intact until the 1830s when it was subdivided and sold to finance the new provincial hospital. The detail below from an 1842 massing of Toronto shows the newly developed parcels starting to fill with houses and factories.

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A historical map of the West Don Lands area in Toronto. The map shows a grid of streets and various industrial sites. A prominent feature is the Gooderham & Worts Distillery, which is labeled. Other areas shown include brick yards, lumber yards, and various industrial buildings. The map is oriented with the Don River to the east.

The Park was connected to the larger Garrison Reserve to the west by a shoreline promenade known as the Walks & Gardens. The only evident industrial uses dating to this period were the earliest brickyards. The first non-government building on the West Don Lands portion of the park reserve was Gooderham’s 1832 windmill (see map above) that evolved into the Gooderham & Worts Distillery. Associated uses followed such as cattle byres, harness making, and cooperages. Enoch Turner’s brewery on Taddle Creek near Parliament was an employer that attracted a considerable work force, and housing was quickly established in the surrounding area. The arrival of the railways in the 1850s hastened the industrialization of the eastern waterfront. Maps from this period show refineries, rail yards, roundhouses, work yards, abattoirs, foundries, lumber yards, and a large number of houses.

Over the years, the Don River which ran through the area was straightened, Taddle Creek was buried, marshes were filled in and land was levelled. The 20th century brought refineries, rail yards, cement works, scrap yards, steel fabricators, salt storage, varnish factories, foundries, lumber yards, and automotive uses. With the pressure of railway expansion in the area, most of the residential uses left the site. As the city continued to expand, many of the industries relocated to the suburbs, or closed, leaving behind a number of buildings that are recognized today for their heritage value and large amounts of open space. Open space that is being transformed into safe public space.

The provincial government took title of the area in 1996 and began the large restoration project which is still underway today. Underpass park is one of 18 parks in and around the site that are being developed in the 2,000 acre waterfront redevelopment project directed by Waterfront Toronto.

Genesis of Project:

Waterfront Toronto is a public development corporation with jurisdiction over the area. They are cleaning up brownfields all along the waterfronts of Don River and Lake Ontario. Then they develop community oriented, mixed use and diverse demographic neighborhoods. The 2,000 acres being transformed are exemplary of a trend happening in dozens, if not scores, of municipalities nationally and internationally. That is to seek out urban spaces which are centrally located, divisive, but that can be cleaned up and transformed into valuable community assets. In many instances underpasses meet these requirements and are perfect for this.

The railroad that once carried freight for departing and arriving ships has been transformed into a light rail and tied into the city’s transit system which has been a boom for fresh, developing enterprises. Even with all the positive transitions happening at and around the waterfront there was still a sense of division in the emerging neighborhoods. Previously ignored spaces under overpasses populated with rats, needles and burnt out cars were recognized to be the culprit. For Cristopher Glaisick, Waterfront Toronto’s vice president for planning and design, it became clear that “ something had to be done to make the spot lighter, brighter, and less threatening so that people feel comfortable. walking and biking through it.”

Design, Development and Decision Making Process:

The park was developed in two phases with a budget of \$9,577,535. Phase 1 was completed on July 16th, 2012. It covered a total area of 1.63 acres. Costs for this phase were \$6,077,535 and were split between the provincial and federal government. \$5,528,132 and \$549,403 respectively. Phase 2 is 1.1 acres. It was expected to open in Spring of 2012, but was actually completed in summer 2015 at a cost of \$3,500,000 paid in full by the federal government. Phase 2 added much needed green space to the park. A dense grove of salt and drought resistant trees, grass and other plantings add a natural element to the park. Robust community gardens make up a significant part of the southwestern edge of the park.

When planning the overarching public art strategy for the West Don Lands, Underpass Park was identified as a high priority public art opportunity. In late 2009, Waterfront Toronto launched its first ever artist competition to select artwork for the park.

One of the park’s key design features is a series of long, narrow ribbon-like strips made from a palette of concrete and extremely durable and long-lasting lpe wood. These ribbons, located throughout both the covered and uncovered areas of the park, rise from the ground creating informal park benches and gathering spaces for visitors. Influenced by both the physical infrastructure of the overpasses and the natural qualities of the nearby Don River, the ribbons are illuminated by colorful lights at night.

To ensure the area is safe and inviting at all times of day, the design places a strong emphasis on lighting ensuring the park is safe and inviting. The park is lit using a combination of LED lighting on the columns, in-ground and in-wall lights and illuminated concrete ribbons. Diffuse LED spotlights are also strategically placed to colorfully light the more than 50 overpass columns.

Underpass Park is part of Waterfront Toronto’s Stage 1 Gold certification under the LEED for Neighborhood Development pilot program. Some of the sustainability best practices incorporated into the park’s design include energy efficient LED lighting; drought, salt and shade tolerant planting for minimal maintenance and irrigation; recycled content on play surfaces, and the use of reclaimed granite cobblestone.

Role of Landscape Architects:

PFS Studio and the Planning Partnership worked closely with Waterfront Toronto and Toronto policy makers and citizens to design and develop the park. It is part of a ubiquitous, ten year, urban renewal project in the downtown area. The LA’s were tasked with connecting existing programming and opening the door for future public and green spaces. Waterfront Toronto’s CEO, John Campbell, said of their collaboration with the landscape architects, “By viewing the space under the overpasses as an opportunity, we turned a potential liability into a great neighborhood asset, one that helps connect the community and raises the bar for urban space.” This illustrates the landscape architects’ success in completing their mission.

Program Elements:

PUBLIC ART - Mirage, by Toronto-based artist Paul Raff, is an installation of 57 octagonal mirrored (Doug Aiken House) stainless steel surfaces that have been applied to the underside of the Richmond/Adelaide overpasses. It draws inspiration from the definition of a mirage as an optical illusion by atmospheric conditions. Each of the panels is slightly different in size and spacing to create a subtle sense of movement. The artist uses the unusual site conditions of a park beneath an elevated roadway to blur the horizon lines between earth and sky. The surface area of the piece is approximately 3,000 square feet.




A sizeable playground is located in the middle section of the park, between St. Lawrence St. and River Street. With a teeter-totter, hopscotch, 4-square, swings and playful climbing structures, the playground offers something for all ages. The area also includes a series of park benches and flexible community space that can be used for markets, festivals and seasonal public events. The eastern-most section of the park, east of River Street, includes two basketball half-courts, and an extensive skatepark featuring a series of obstacles, rails and ledges. There is also a flexible open space that can be used for community events.

- Hardscape consists of saw cut concrete in a linear pattern; historical granite cobblestones excavated from the area reused throughout the park.
- Concrete ribbon walls rising out of the ground topped with IPE wood to provide interesting and comfortable seating.
- A series of IPE benches with armrests and back support.

- The park is designed for community members of all ages and is fully accessible, with flush paving conditions to provide access to ribbon walls and playground equipment.
- The design of the park places a strong emphasis on lighting to ensure the area is safe and inviting at all times of day.
- The columns and underside of the overpasses were inspected and reinforced by the City of Toronto prior to the park opening.
- Pigeon netting has been installed in the playground and art areas to prevent roosting and bird droppings. In the play area mesh has been affixed to the overhead girders. In the art area wires are strung along the outside perimeter, based on the same system employed for the perimeter of building ledges. The interior spaces each have their own customized grill of fine wires that are inserted and secured to the backside of the artwork.





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Notes:


The Under Line:
Case Study

Project Location:
South Phoenix AZ
between N. 16th
Ave and N. Laurel
Ave under the
Papago Freeway
overpass


Stamp:
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Date: Spring 2017



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Notes:

MODEL
MAKING..
SENSE OF
SPACE/SCOPE


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While conducting this case study I built a flexible model to begin understanding various spatial challenges inherent with a site under a freeway. View sheds, circulation and entry points guide my strategies.



Maintenance and Management:
City of Toronto Parks Department

User/Use Analysis

The park was highlighted for the World Cities Day Challenge in 2014. Paul French of Diamond Schmitt Architects was there and conducted some interviews with users of the park. He found that people are proud to call it a part of their neighborhood and many of them use it daily for recreation and or commuting. Increasing the percentage of people spending time outside and walking to work should show signs of increasingly healthier residents.

Teenagers and young adults enjoy the park for its recreational exercise options and 24-hour access. One teenager observed that the colorful lighting made it possible for he and his friends to hang out someplace “fun and cool” at night. Designed by artists and originally installed for security, the lights have gone beyond making the place secure to making it a safe and desirable place to gather at night.

A video online (<https://www.youtube.com/watch?v=CBs4RhB7M1>) shows many people using the park for skating, biking, climbing and jamming together. One skater mentions how much he loves that the park is across the street from his house. A few of the users in the video highlight the advantage of having a park under the overpass as being able to continue your activities even when it is pouring down rain. The park is not very old and it seems to already be a hit with users who have visited it from around the world.

Peer Reviews:

To put it mildly, Underpass Park is a hit amongst landscape architects, city officials, citizens and tourists. Before it was completed in 2015 it was already garnering attention from respectable publications, organizations and peers. Some of the reviews and related press include:

- Toronto’s Underpass Park Will Change the City Forever; “Tree Hugger” magazine; June 2011
- If Trump Wants to Fix Infrastructure, He Has to Look at These Projects; “Wired” magazine; Nov. 2016
- A Virtual Reality film of the park produced by the ASLA in October 2016
- Low Overhead; “Landscape Architecture” magazine; February 2017. The park was also featured on the cover for this issue.

The most impressive and recent review of Underpass Park to date is being awarded the 2016 ASLA Professional Award of Excellence.

Criticism:

While the park has demonstrated its success in providing multiple valuable improvements for the community, including improved health and safety, it does have critics who are concerned with a couple of potential threats. These are pollution and noise from cars. When residents near the park/overpasses were asked about the noise from cars, some response was that the noise isn’t a problem or the area was always noisy and you get used to it. Other residents feel that the park is less noisy and others think that the noises made by park users mask the road noise and are more pleasant to hear.

As far as pollution from cars is concerned, the debate is ongoing, but evidence is mounting that proximity to highways is related to asthma rates. Environment & Human Health Inc. (EHHI), a North Haven, Connecticut, nonprofit organization dedicated to protecting human health from environmental harm, released The Harmful Effects of Vehicle Exhaust in 2006. The report tried to alert the public to dangers that, according to researchers, are more serious than many people recognize. Robert Freedman, Toronto’s director of urban development has been recorded to have said, “I don’t think in the past we have looked closely enough at air quality in terms of all kinds of planning — whether for pedestrians on busy streets or creating cycling lanes.” That said, all studies thus far concerned with

peoples’ proximity to busy roads have looked at their ground plane proximity, not proximity along the “Z” axis. Nonetheless, users of Underpass Park are close to car exhaust and that is a concern. However, there are myriad methods for pollution mitigation that have been employed on the site and more can be added to improve the atmosphere, but Freedman’s preference boils down to common sense: “I’d like to see emissions reduced — rather than parks eliminated.”

Significance & Uniqueness of Project

Underpass Park has revealed the potential of developing underpasses into public parks. It has converted dangerous un-utilized spaces into places of recreation and connectivity. The communities around the park have expressed a real pride in it that stems from the perspectives of young and old users. Significantly, the context of the park exists in cities all over the world. Underpass Park is a typology that can be easily adapted to improve the urban fabric and ecosystem. As room for public spaces becomes increasingly rare in urban settings, the Underpass Park typology could potentially solve that problem. A few dozen other parks exist underneath busy roads elsewhere in the world and they all share a unique characteristic: They reactivate disruptive derelict urban spaces to become vibrant environments that provide recreation for and connection to their cities.

Limitations:


Without an overpass this park or any park like it would not be possible. Underpass park has ceilings as low as 13 feet in some sections and in the opinion of the landscape architects, 13 feet feels low. The height of the overpass will have an effect on shading and weather protection. While a higher overpass may provide less cover from weather events, more light will be let in and planting design can be more robust.

Generalizable Features & Lessons

The Underpass Park process and design offers several lessons for the design of similar park projects. The process used in the restoration and transformation of the space into a park is a model for similar projects. Underpass Park is an example of how environmental analysis and clean-up can be combined with thoughtful design to create successful public spaces. The park was lucky to have such a large budget. Most projects are more modest in budget and scope. However, the principles are the same; get people involved, do careful social, economic and environmental analysis, and programming and management are critical.

Future Issues/Plans

Waterfront Toronto plans on creating new residential communities linked to the lake, downtown, parks, infrastructure, public art and the thousands of acres of additional public parkway throughout the city. The “Bentway” is a major project inspired by Underpass Park underway now. When finished it will be a 1.75 kilometer long park under the Gardiner Expressway overpass in Toronto. The “Bentway” master plan describes the project as, “Stretching from Strachan Avenue to Spadina Avenue, this 1.75 km trail and series of public spaces will knit together seven neighbourhoods – Exhibition Place, Liberty Village, Niagara, Fort York Neighbourhood, Bathurst Quay, Wellington Place and CityPlace – and become a gateway to the waterfront, while providing access to important attractions and destinations – from the Molson Amphitheatre to the Rogers Centre and Harbourfront Centre. This dynamic new urban corridor will activate the community with a continuous multi-use trail providing access to year-round activities and events, including gardens, a skating rink, recreational amenities, public markets, public art, special exhibitions, festivals, theatre and musical performances and more.”



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Notes:


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Case Study

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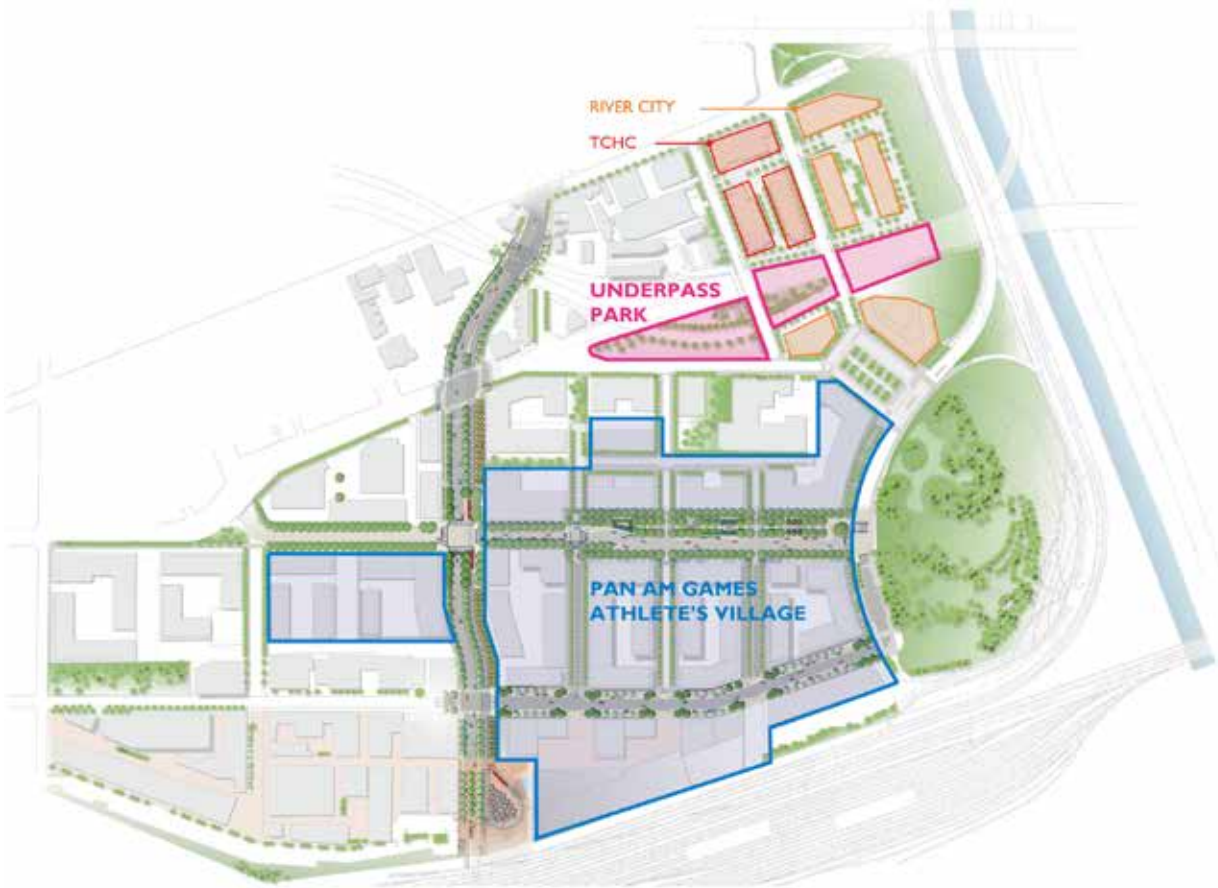
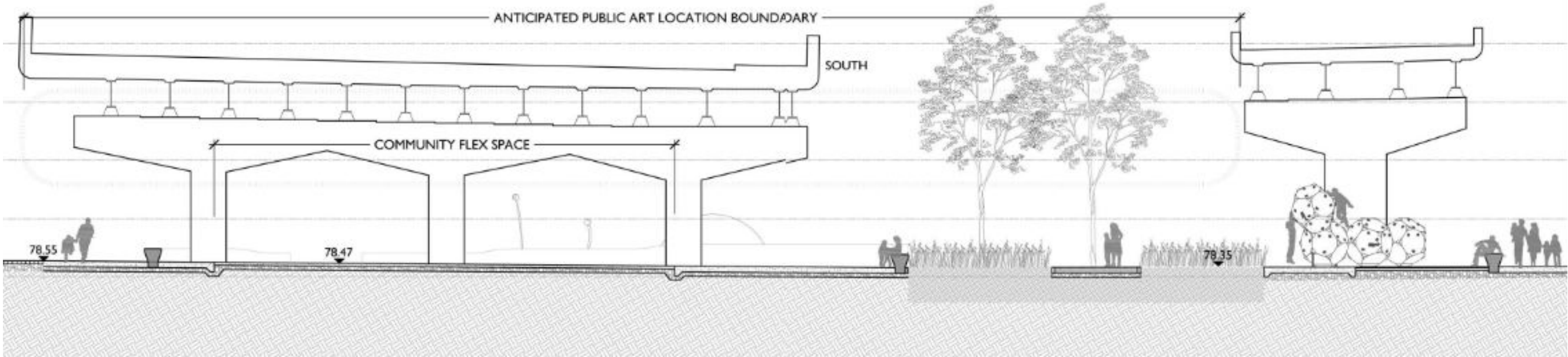
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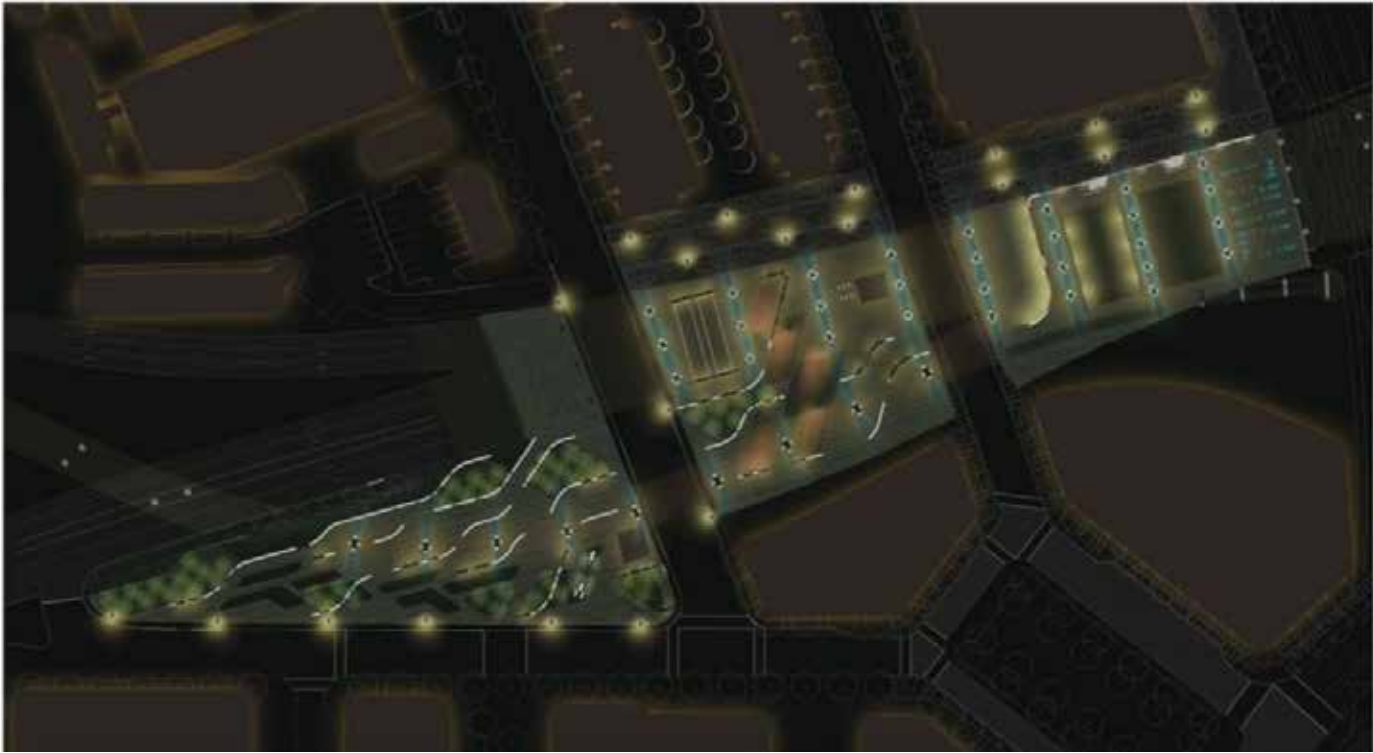
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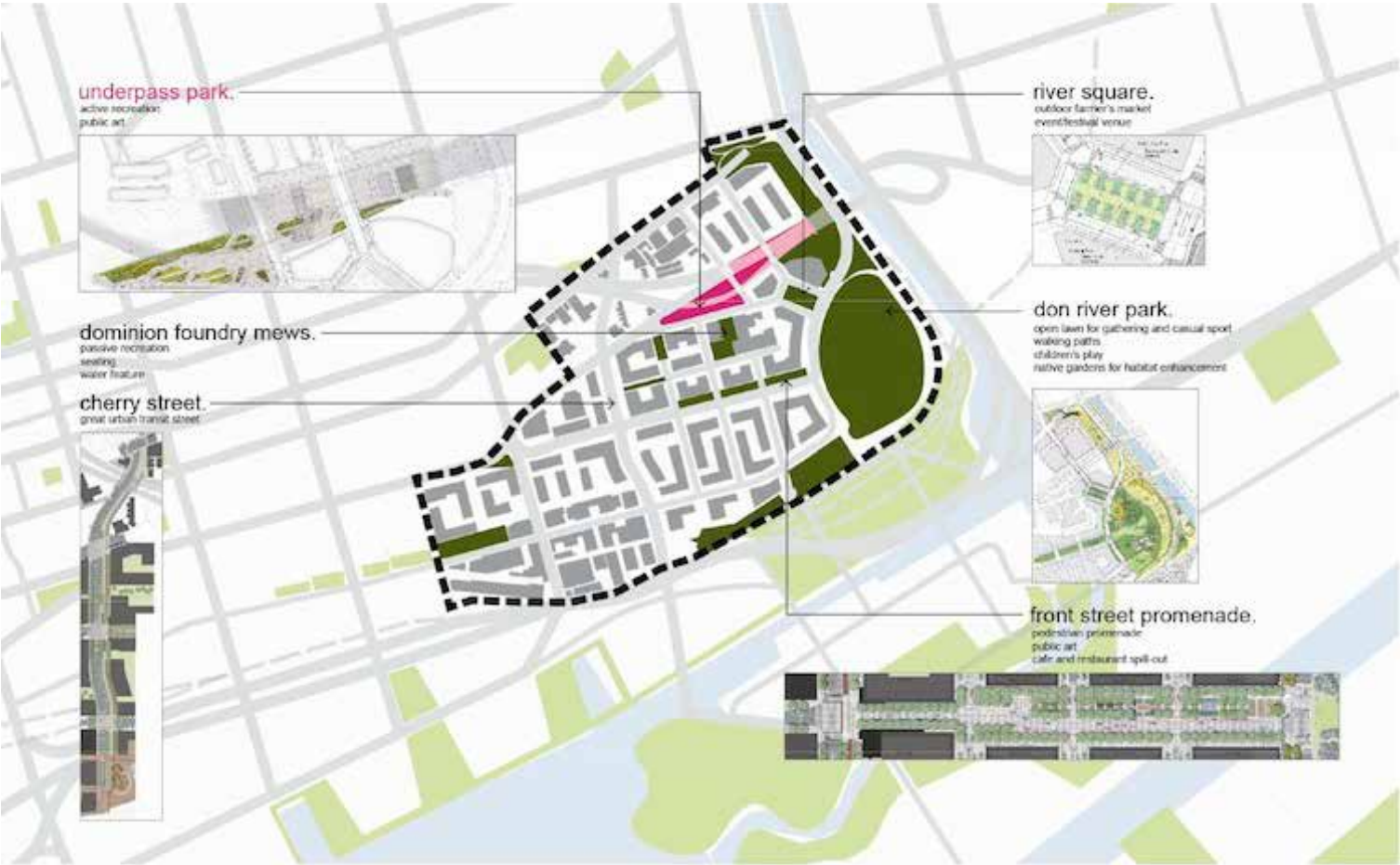
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LIGHTING PLAN





UNDERPASS PARK CONTEXT

WEST DON LANDS PUBLIC REALM

RIVER CITY | OCTOBER 2010 | PHILLIPS FAREVAAG SMALLENBERG | THE PLANNING PARTNERSHIP | PAUL RAFF STUDIO



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THE UNDER LINE

"THIS SITE IS PERFECT FOR A UNIFYING PUBLIC PARK"



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Notes:
JANUARY
4
2017

The Under Line
Public Park

Project Location:
South Phoenix AZ
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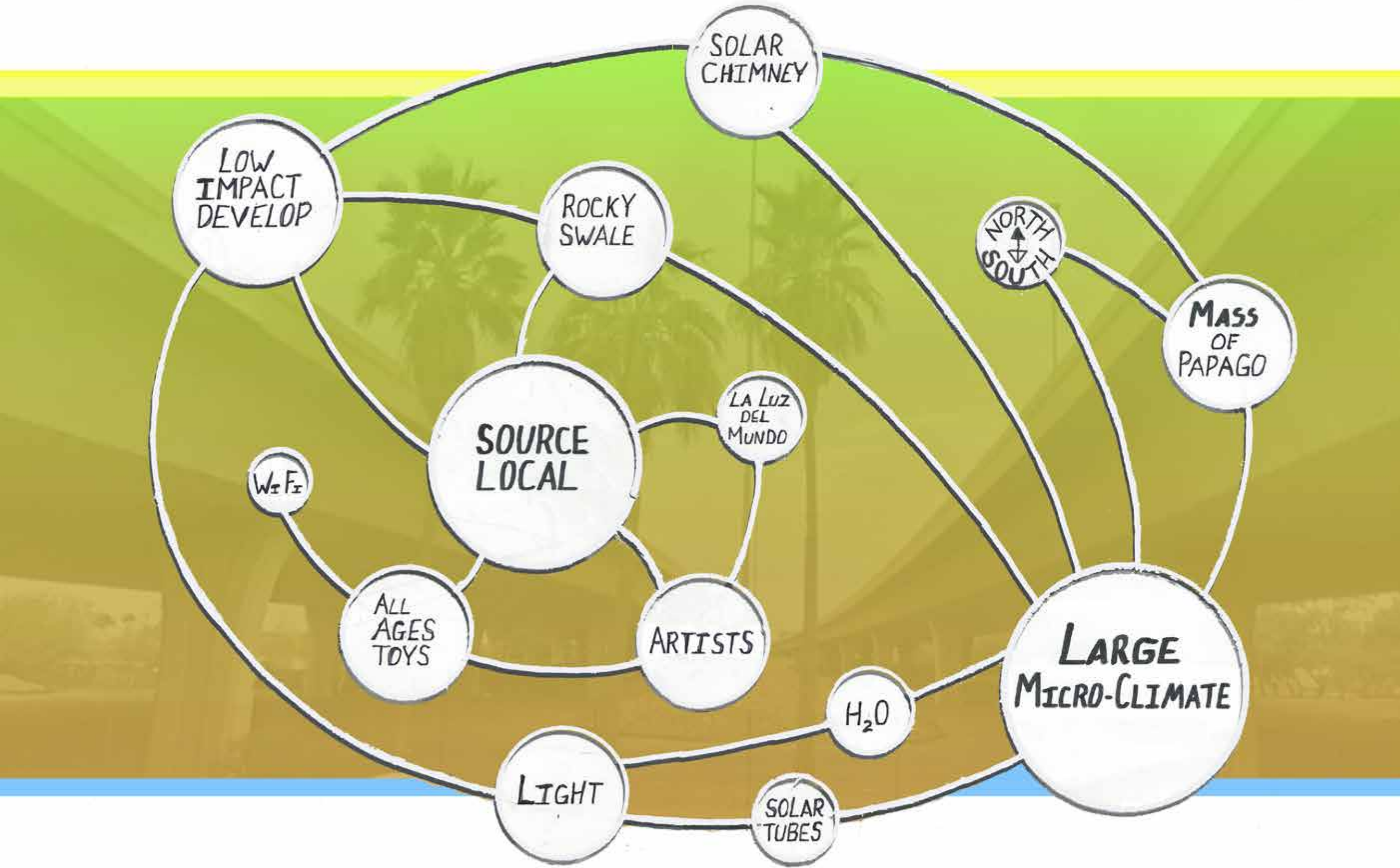
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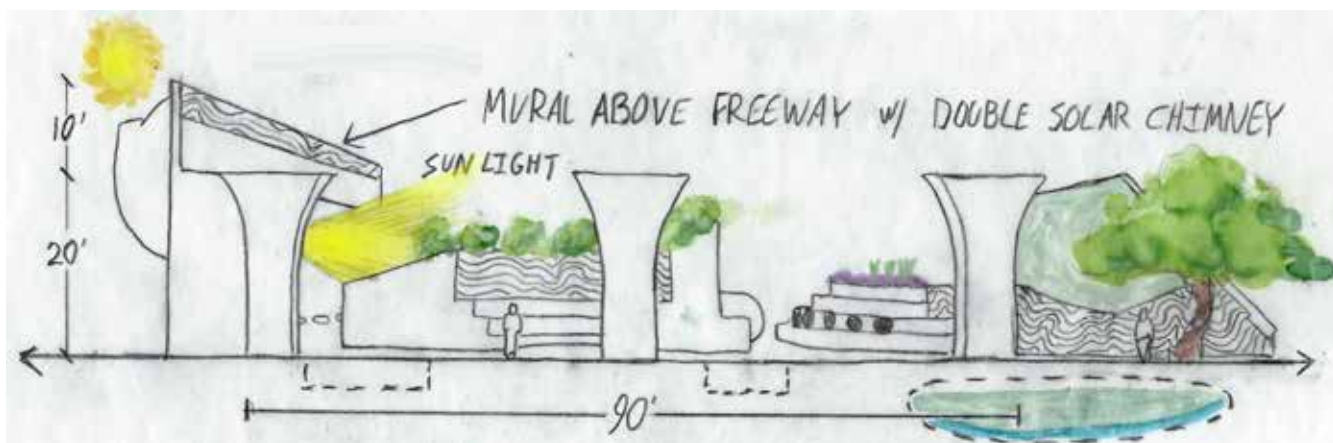
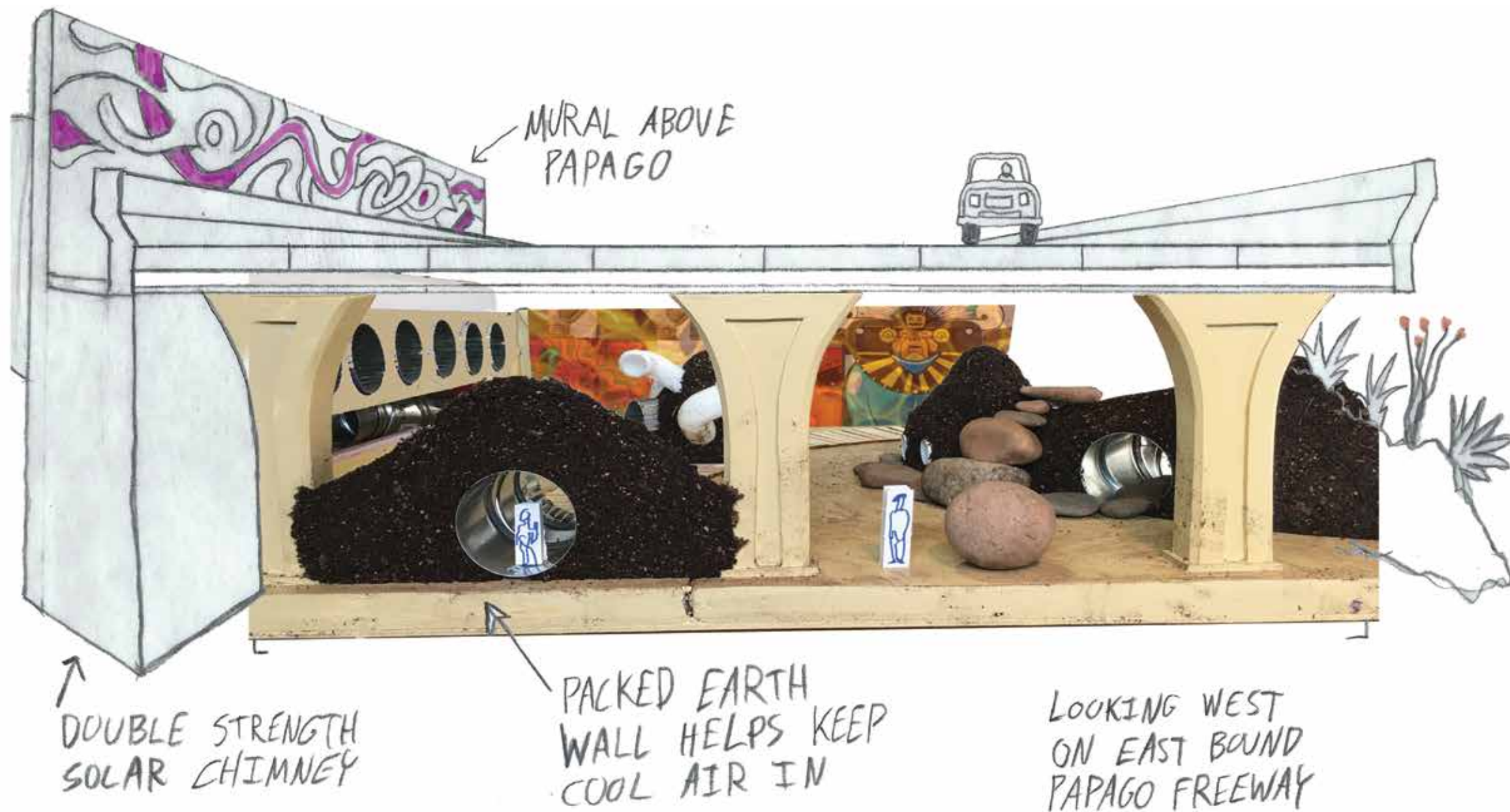
Project Location:
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Notes:

SEEING
ART FROM
THE ROAD
ABOVE

The Under Line:
Looking West

Project Location:
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Notes:

WORK WITH
ECOSYSTEM
SERVICES

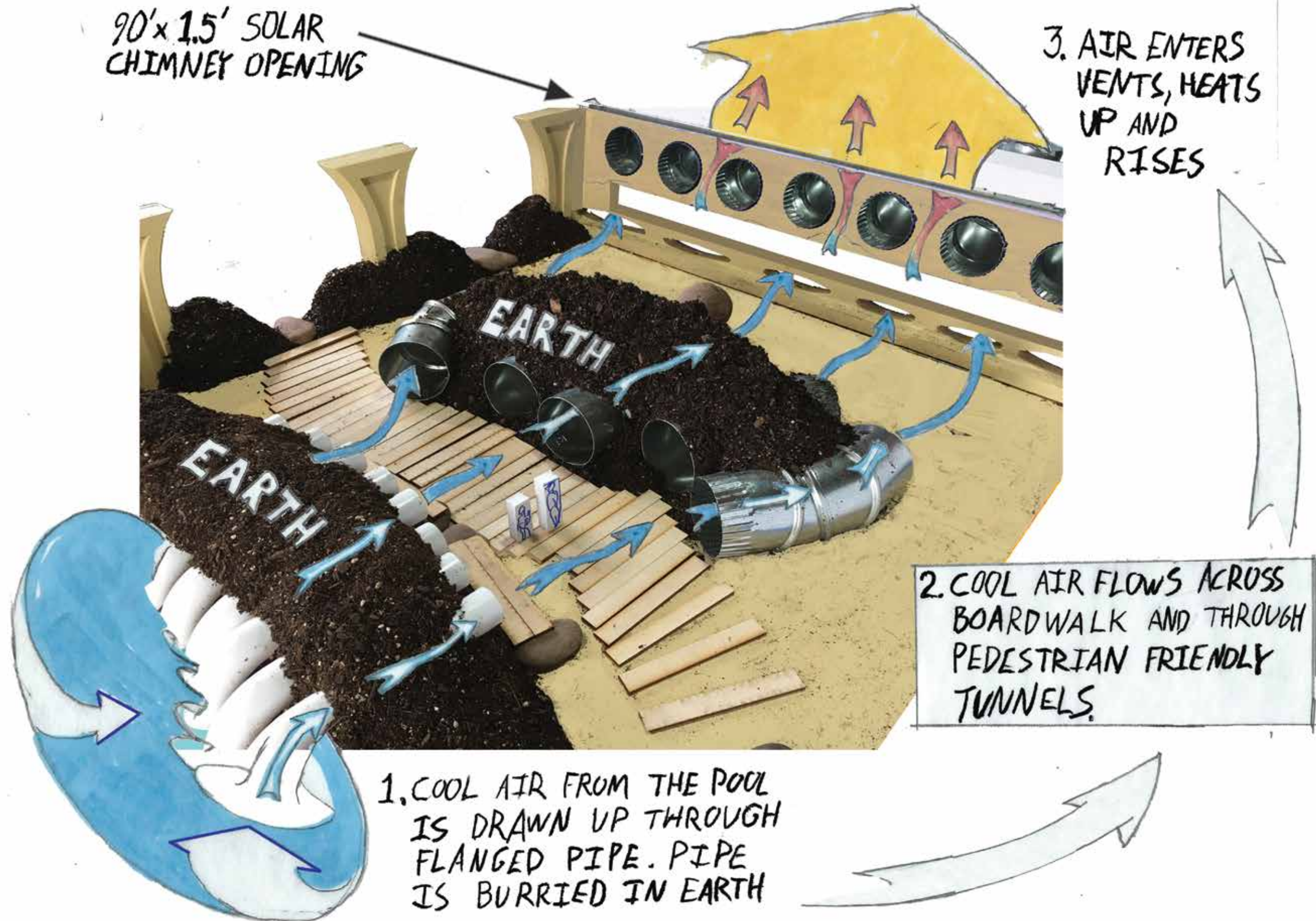
The Under Line: Passive Cooling

Project Location:
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Notes:

The Under Line: Conceptual Models

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Notes:

ALL
GOOD
PEOPLE

The Under Line:
Site Visits

Project Location:
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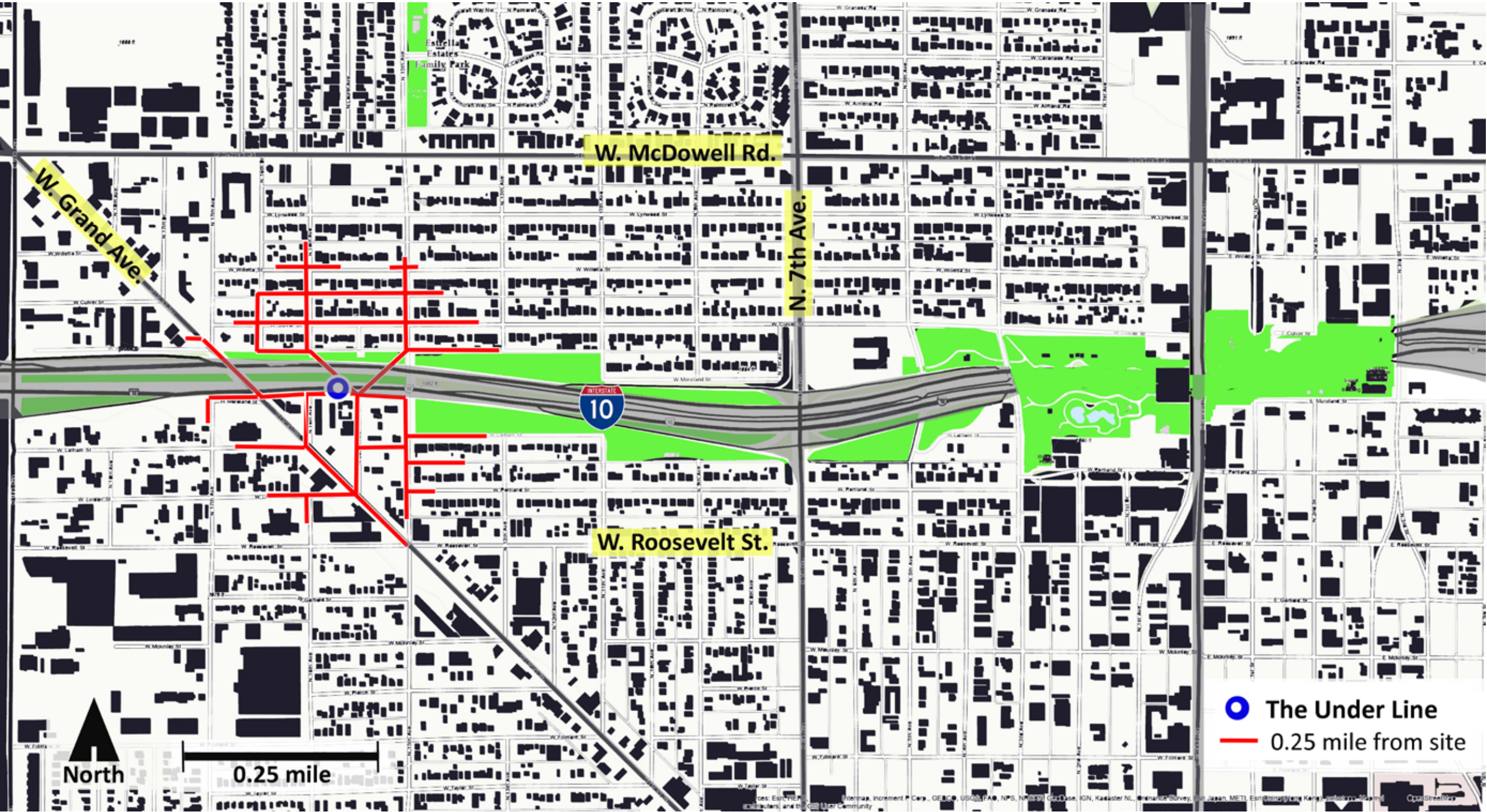
Date: Spring 2017



The Oasis on Grand apartment complex is a mixed use building that includes a hair salon, a few eclectic curiosity shops and the Grand Art Haus art gallery. In January 2017 my wife, Meredith Drum, and our friend in NYC, Roxanne Jackson, hatched an idea to hold an any artist welcome, fund raising group show to benefit Planned Parenthood. The show was a huge success. It happened in ten cities around the world. The Phoenix show raised \$19,000 over two weekends of readings, performances and fun. While attending Nasty Women I met many of the local artists in the neighborhood. Hundreds of people were in the gallery and outside around it at times so I took the opportunity to tour the neighborhood. This is when I first spent quality time with my site and I immediately realized potential benefits of turning the space under the Papago Freeway into a public park. Since then I have become a regular visitor to the area and continue to discover more reasons and potential for the Under Line.



La Luz Del Mundo is a unique church that occupies two large lots adjacent to the Under Line. The church is undergoing an expansion which is being designed, funded, and constructed by its congregation. I have visited the church several times and was given a tour one day of the inside to see the handmade stained glass windows and skillful wood work that is pulling their dream together. I was asked not to take photos of the unfinished work and I can repeat that. Talented and spirited people of La Luz are an inspiration for the Under Line.



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Notes:

The Under Line:
GIS Map - Massing

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Date: Spring 2017



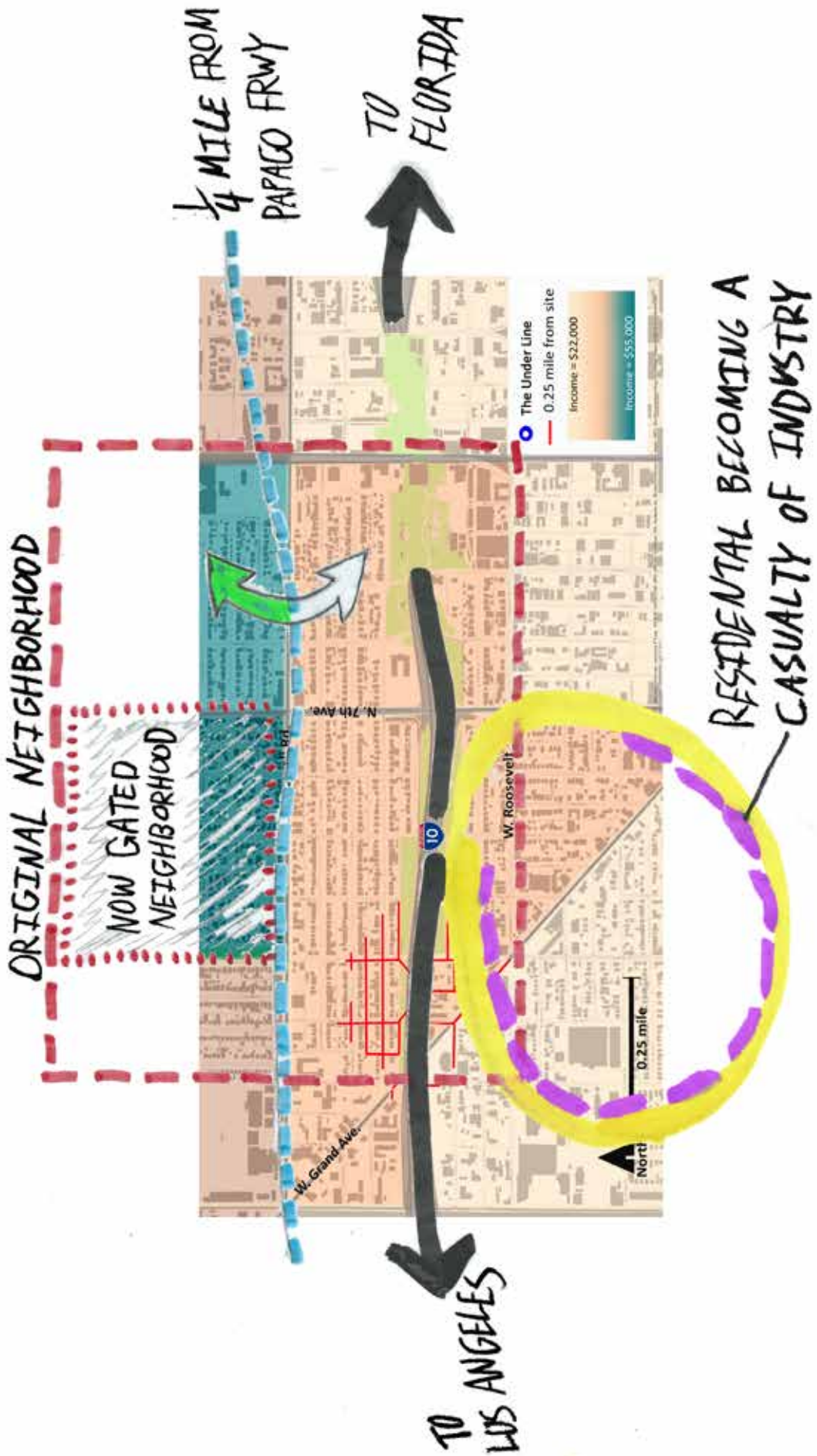
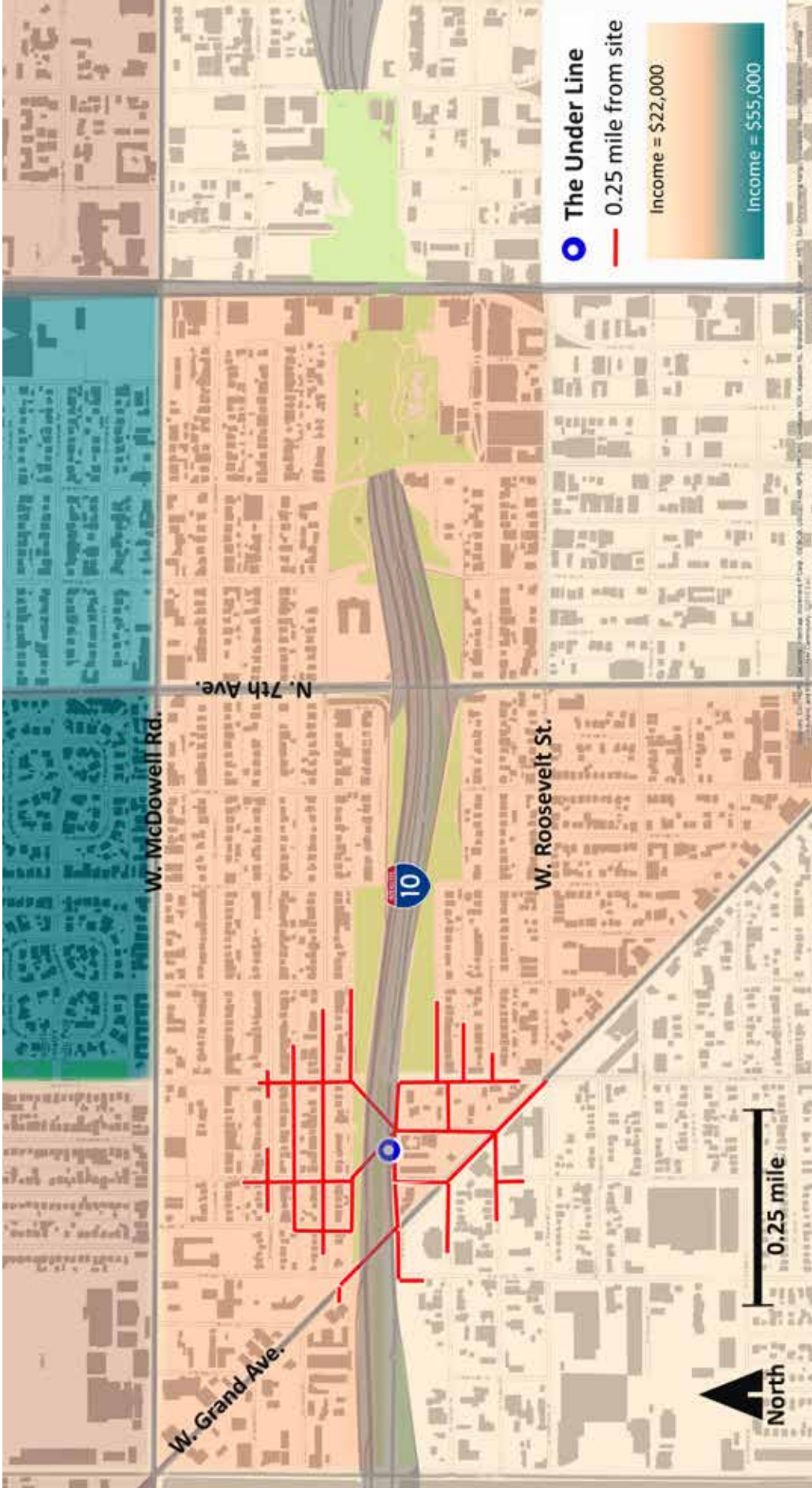
The Under Line:
GIS Map - Income

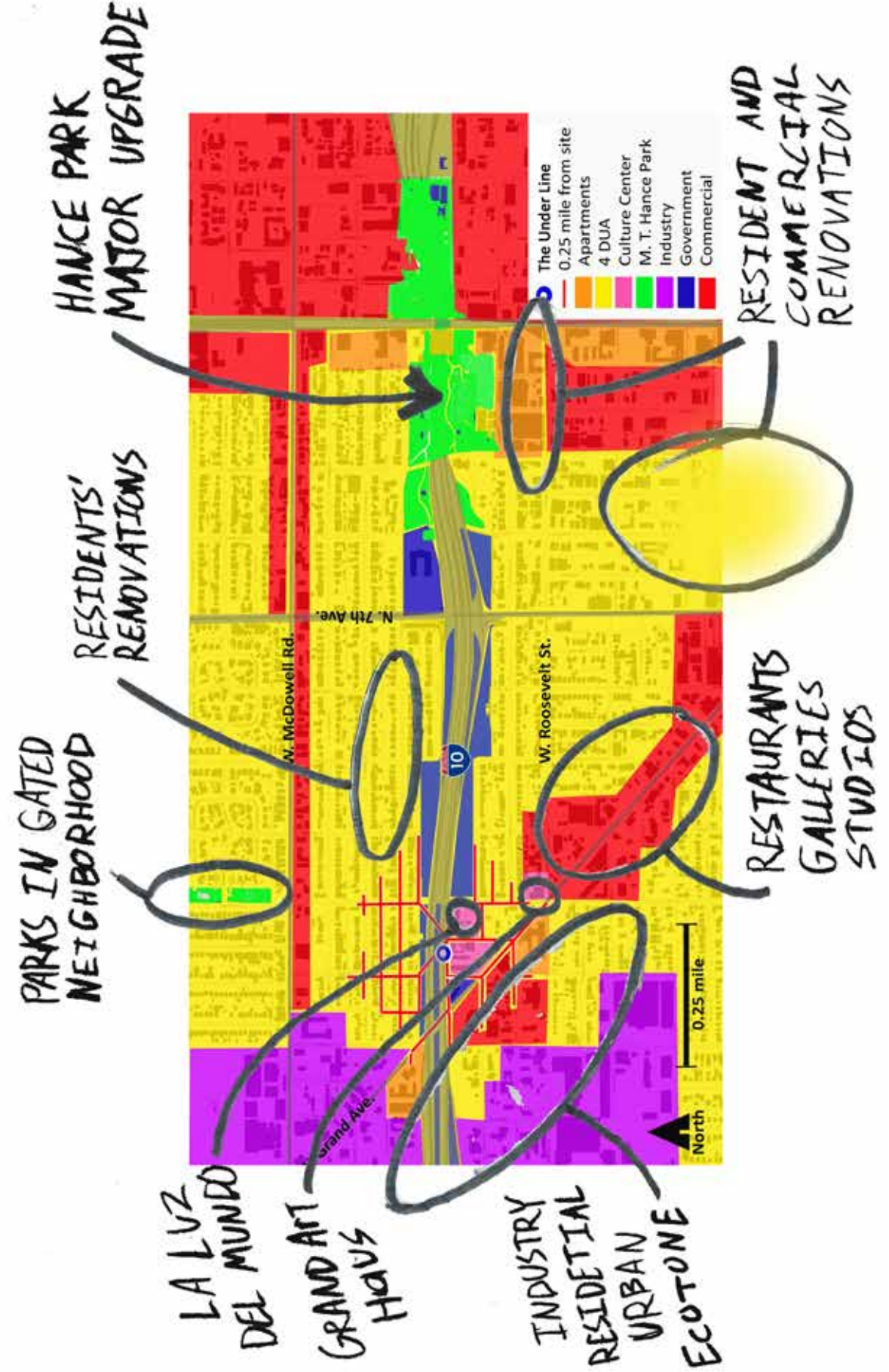
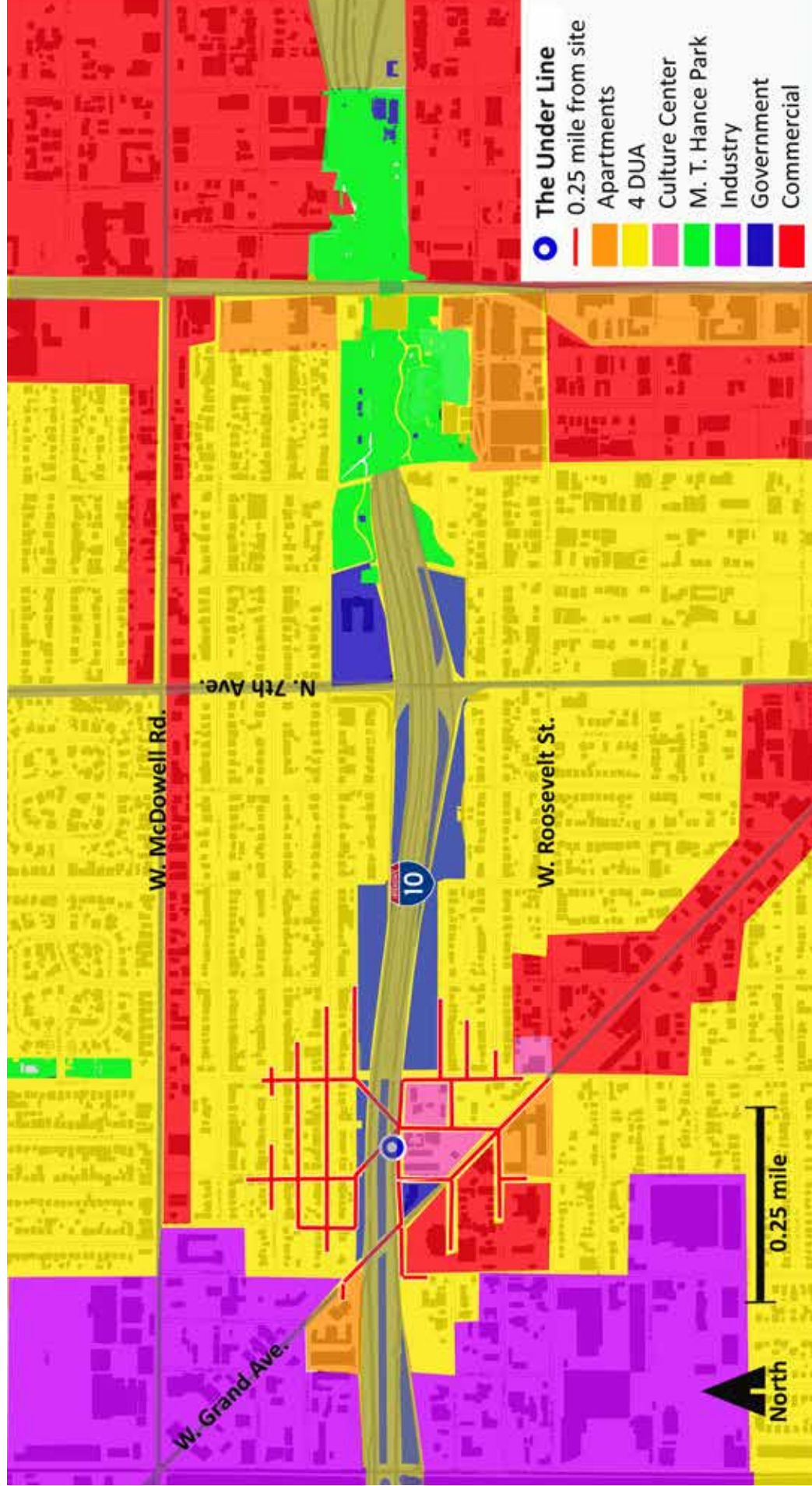
Project Location:
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The Under Line: GIS Map - Land Use

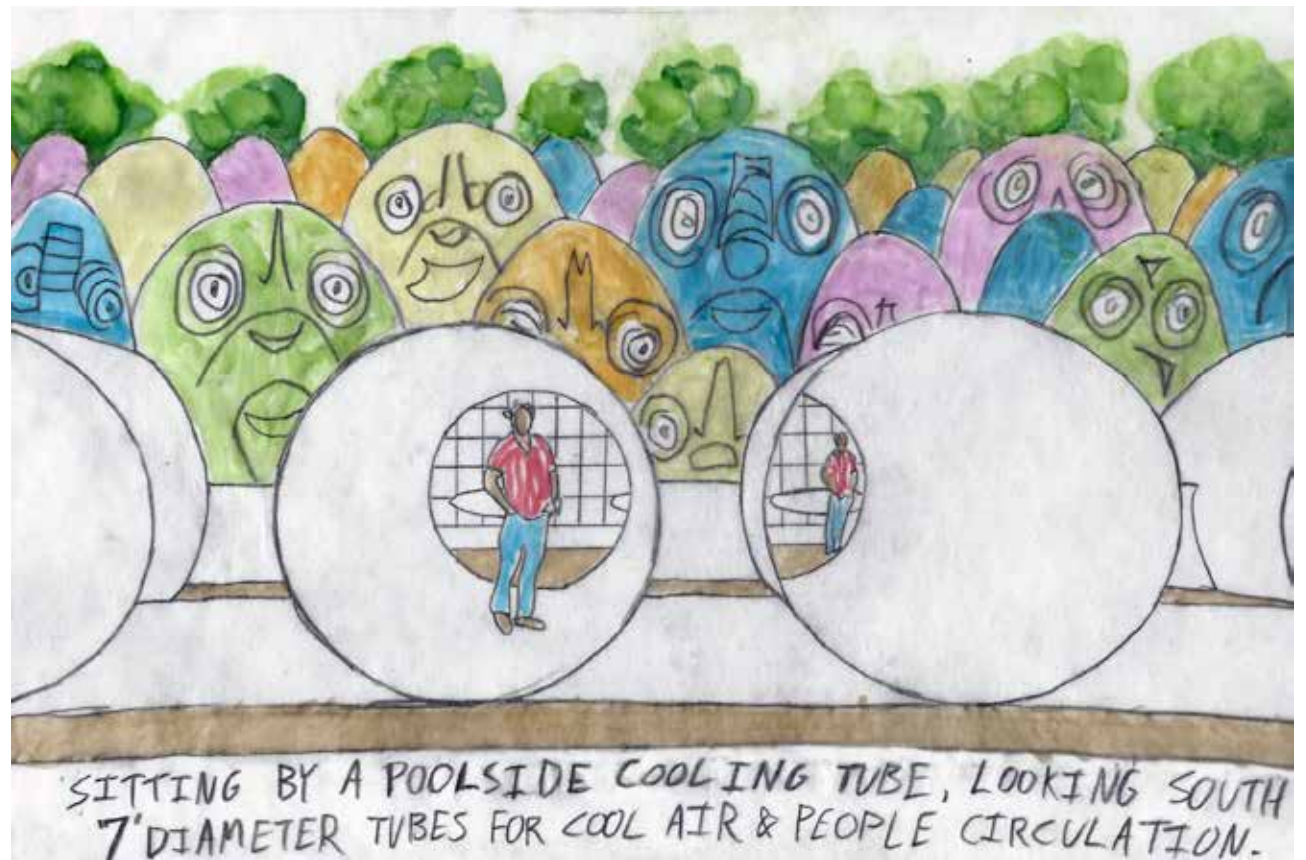
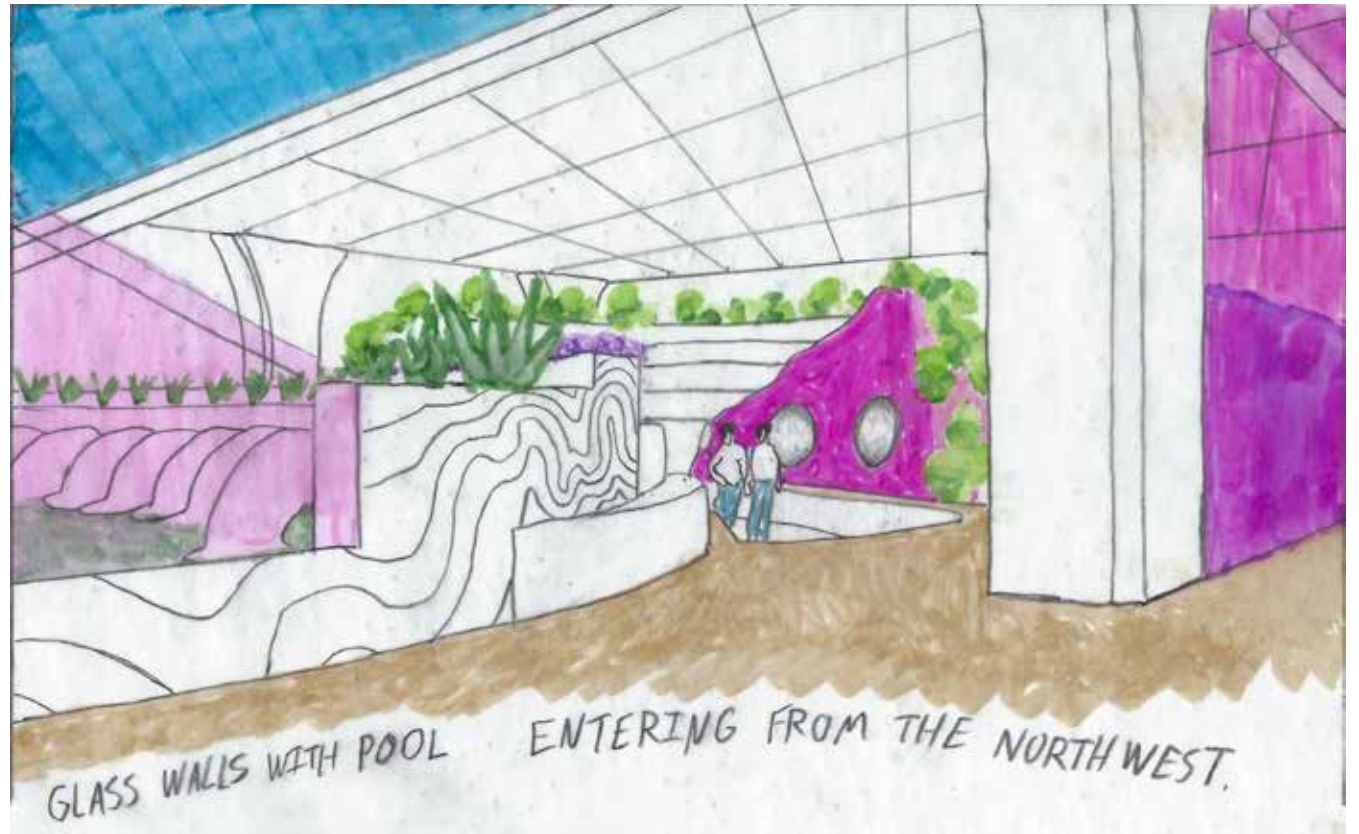
The Under Line: Conceptual Drawings

Project Location:
South Phoenix AZ
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Stamp:
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Date: Spring 2017



Please return to the Manager’s Office

Help design
a public park
near You!

A FREE and short
survey.




Please return to the Manager’s Office

Dear Oasis on Grand Resident,

A design for a public park underneath the 1-10, within walking distance of your home, is being composed at Arizona State University in the Landscape Architecture Department. Your insight would be greatly appreciated. Would you please take a couple of minutes to answer the questions below for this anonymous survey. Your input will guide the design based on your interests and concerns. Thank you in advance for your help.

Please drop off your completed survey at the management office.

1. If you make art, please briefly describe the work you make and what inspires it.
2. Would you want to showcase your work as part of a public park under the I-10?
3. Do you have a website that showcases your work? If so, please include its URL.
4. Would you walk to a park under the I-10 during the summer if it were 30 degrees cooler?
5. Would interactive water fountains be more likely to attract you to such a park?
6. Where do residents here currently congregate for BBQ’s, to play music, etc.?
7. Do you walk anywhere in the neighborhood? How often?
8. What types of programming would you like to see in a park near you? For example, movie screenings in the evening or a skate park or technological connections and free wi-fi. Anything you can imagine, please write it down.



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Notes:

1970 OF
THESE
WERE
RETURNED


The Under Line:
Anonymous Survey

Project Location:
South Phoenix AZ
between N. 16th
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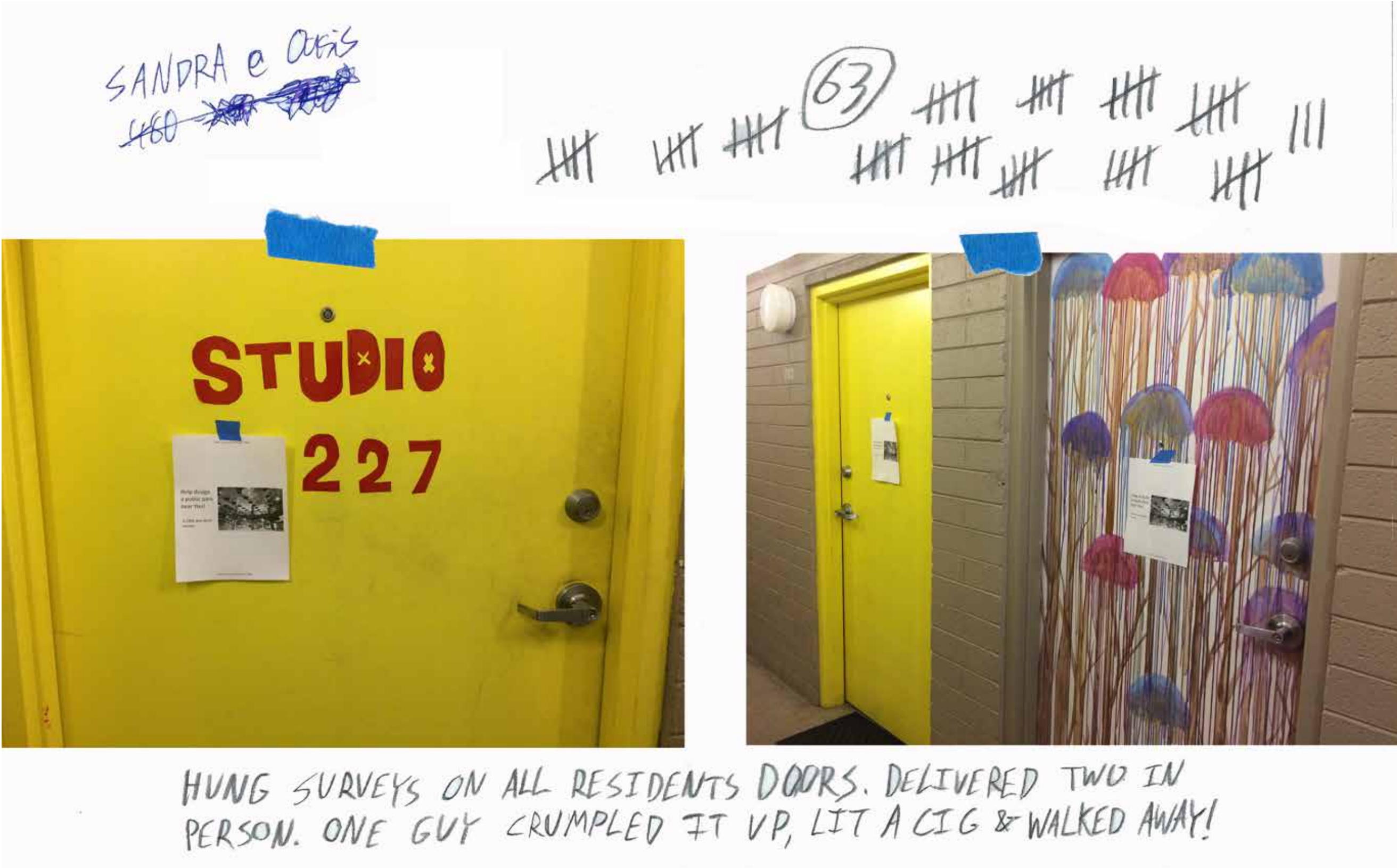
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Notes:
NICE
STENCIL
WORK

The Under Line:
Anonymous Survey

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Notes:
*Love
that
poster!*

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Please drop off your completed survey at the management office.

1. If you make art, please briefly describe the work you make and what inspires it.

n/a

2. Would you want to showcase your work as part of a public park under the I-10?

If I was, I would.

3. Do you have a website that showcases your work? If so, please include its URL.

n/a

4. Would you walk to a park under the I-10 during the summer if it were 30 degrees cooler?

Yes, and even after the heat ^{cools} off

5. Would interactive water fountains be more likely to attract you to such a park?

I think so.

6. Where do residents here currently congregate for BBQ's, to play music, etc.?

Parks

7. Do you walk anywhere in the neighborhood? How often?

Yes, I do! weekly

8. What types of programming would you like to see in a park near you? For example, movie screenings in the evening or a skate park or technological connections and free wi-fi. Anything you can imagine, please write it down.

Music festivals, art exhibits, sport events, outdoor movie screenings, etc. Wifi spots for professors & students areas would be great as well.

Dear Oasis on Grand Resident,

A design for a public park underneath the I-10, within walking distance of your home, is being composed at Arizona State University in the Landscape Architecture Department. Your insight would be greatly appreciated. Would you please take a couple of minutes to answer the questions below for this anonymous survey. Your input will guide the design based on your interests and concerns. Thank you in advance for your help.

Please drop off your completed survey at the management office.

Hannah I. Walsh

1. If you make art, please briefly describe the work you make and what inspires it.

Sculpture, costuming, drawing, found object mixed media.
I am inspired by Phoenix, birds, mysticism, & ancient history.

2. Would you want to showcase your work as part of a public park under the I-10?

I could possibly contribute sculptural work depending on the type of installation.

3. Do you have a website that showcases your work? If so, please include its URL.

<http://www.hannahirenewalsh.com>

4. Would you walk to a park under the I-10 during the summer if it were 30 degrees cooler?

Yes; it's closer than Encanto, and I love to birdwatch.

5. Would interactive water fountains be more likely to attract you to such a park?

No. (Don't those things waste water?) Regular drinking fountains are great though.

6. Where do residents here currently congregate for BBQ's, to play music, etc.?

Here at Oasis; downtown Roosevelt; Thirdspace

7. Do you walk anywhere in the neighborhood? How often?

I walk to Tres Leches & Thirdspace most often (twice a week)

8. What types of programming would you like to see in a park near you? For example, movie screenings in the evening or a skate park or technological connections and free wi-fi. Anything you can imagine, please write it down.

— Movie nights are great.
— "Art in the park"-type events w/ craft + food vendors.
— Group plein-air painting events.
— Fenced-in dog park (don't have a dog, but pups always need a place to run free!)



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Notes:

THERE IS
NO
SUBSTITUTE
FOR THIS
FEEDBACK

The Under Line: Anonymous Survey

Project Location:
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between N. 16th
Ave and N. Laurel
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Notes:
SO MUCH
LOST,
SO MUCH
TO GAIN...

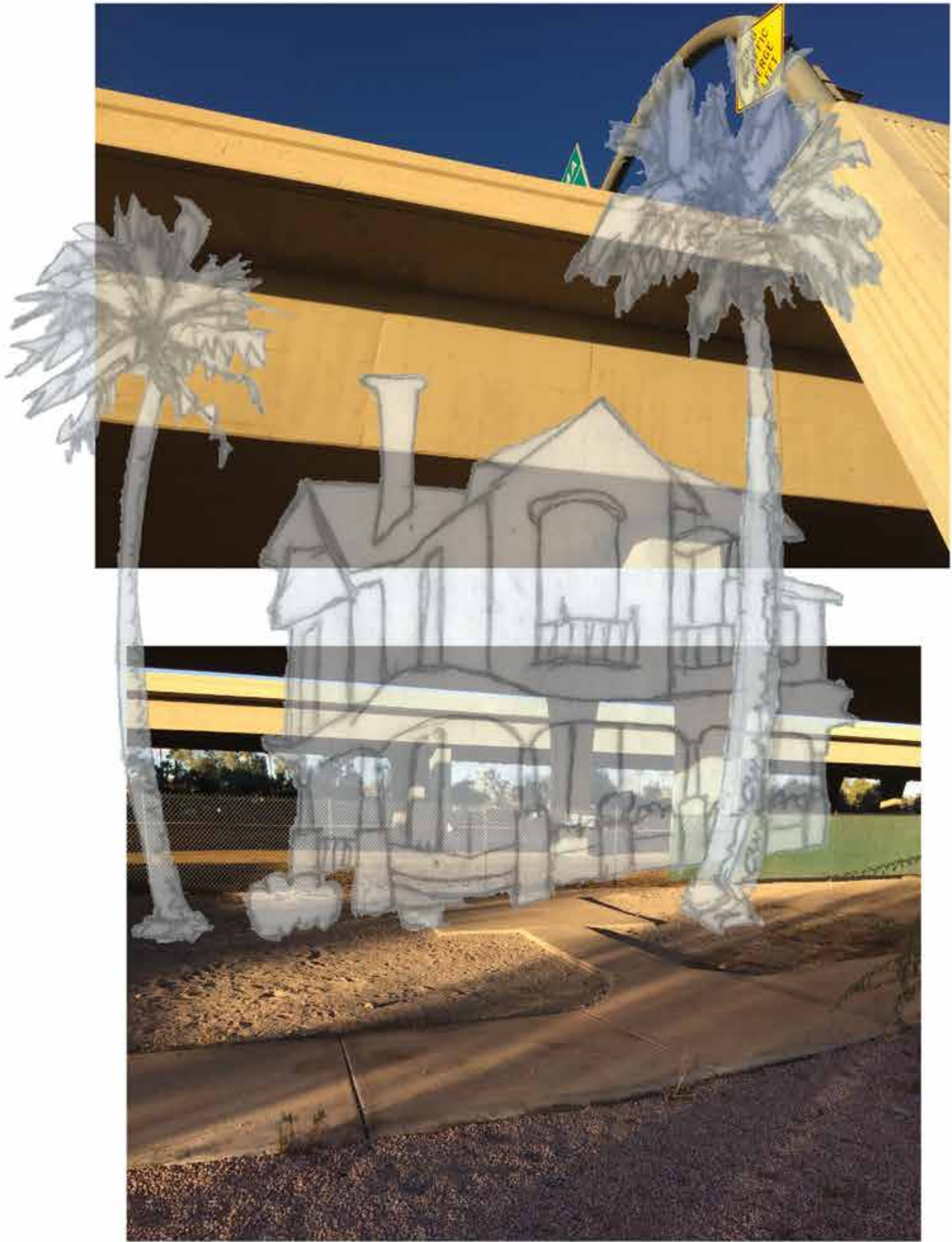
The Under Line:
Site Visits

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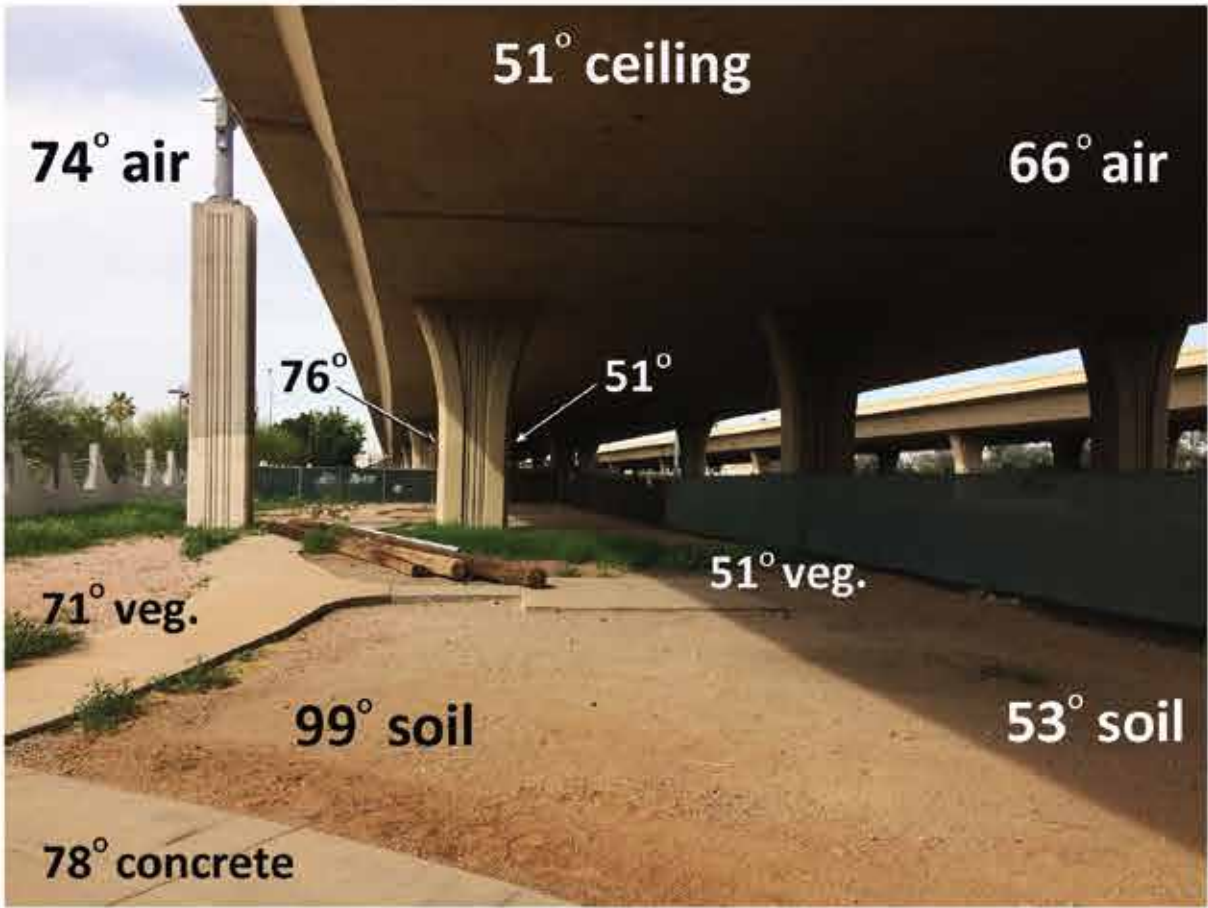
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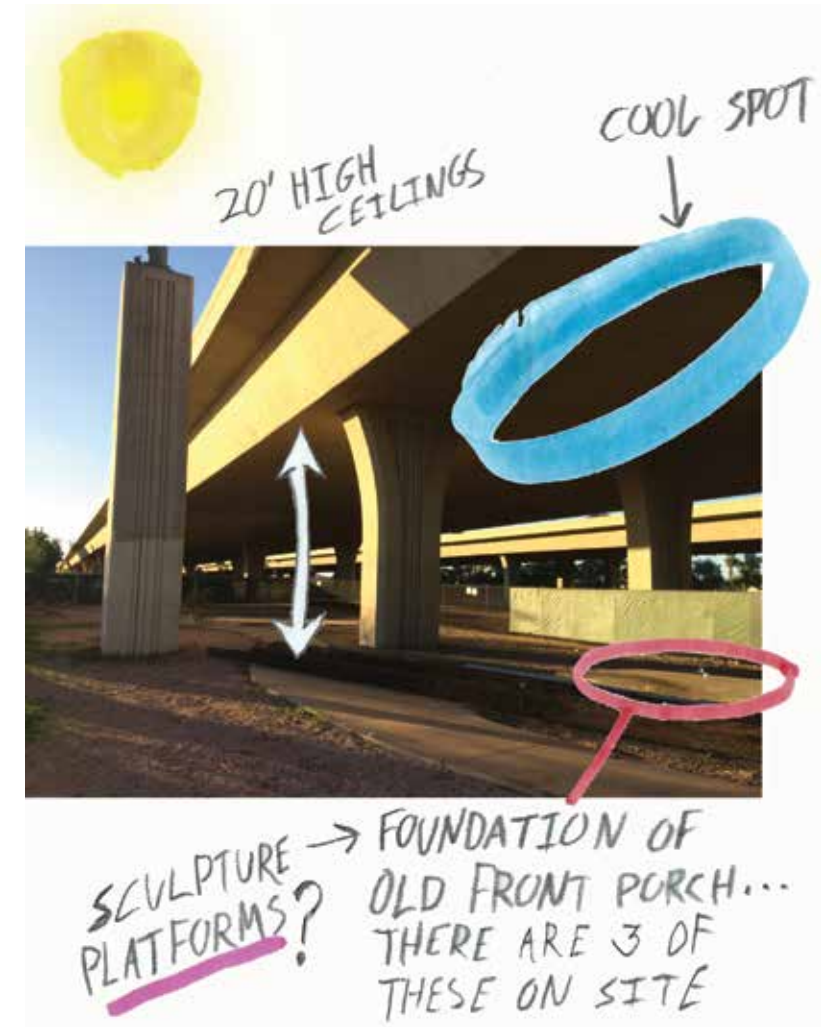
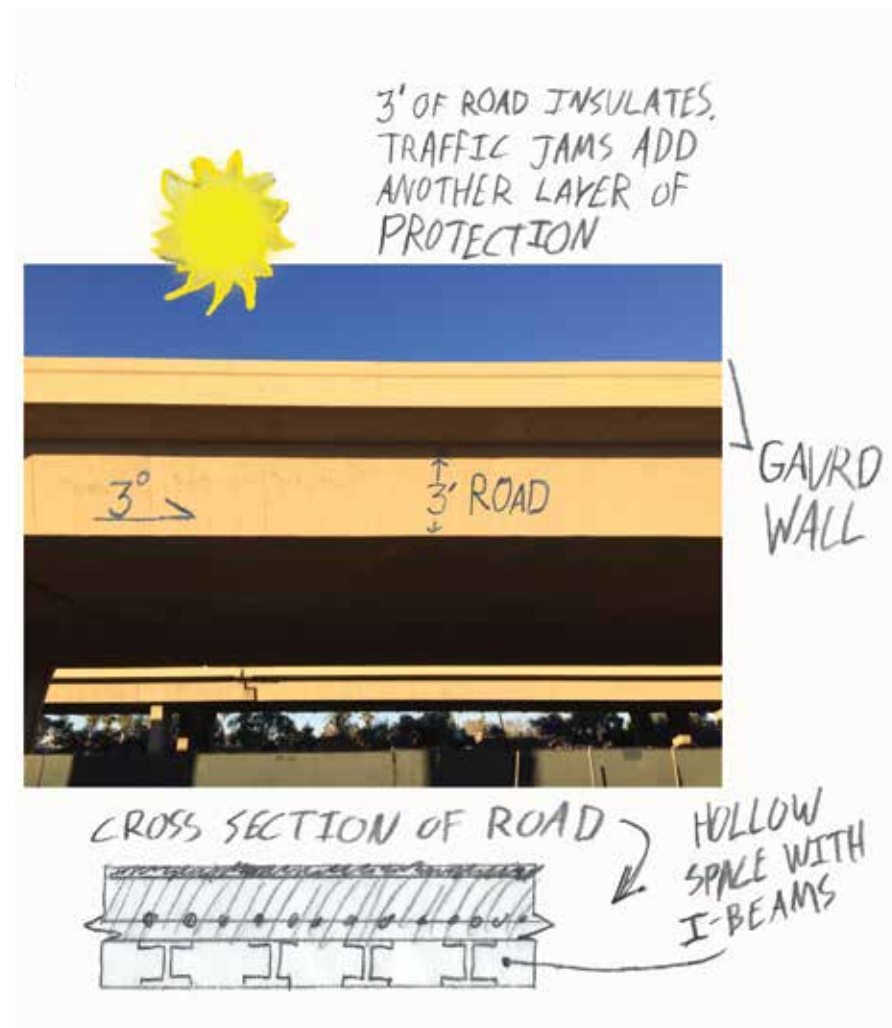
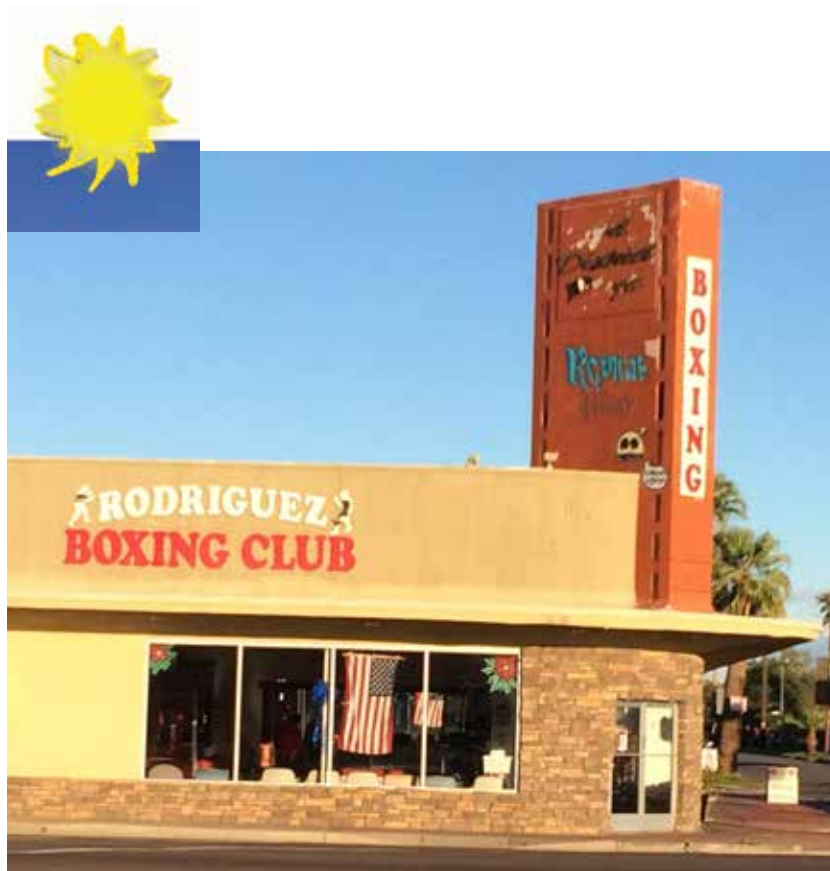
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Date: Spring 2017



AVERAGES OVER FOUR DAYS ↘





The Under Line: Site Visits



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mitchmillerswork.com

Notes:
4,800 FT²
OF PLATES=
ACOUSTIC
SOFTENERS

The Under Line: Local Artists

Project Location:
South Phoenix AZ
between N. 16th
Ave and N. Laurel
Ave under the
Papago Freeway
overpass

Stamp:
MLA Applied Project

**MITCH
MILLER**

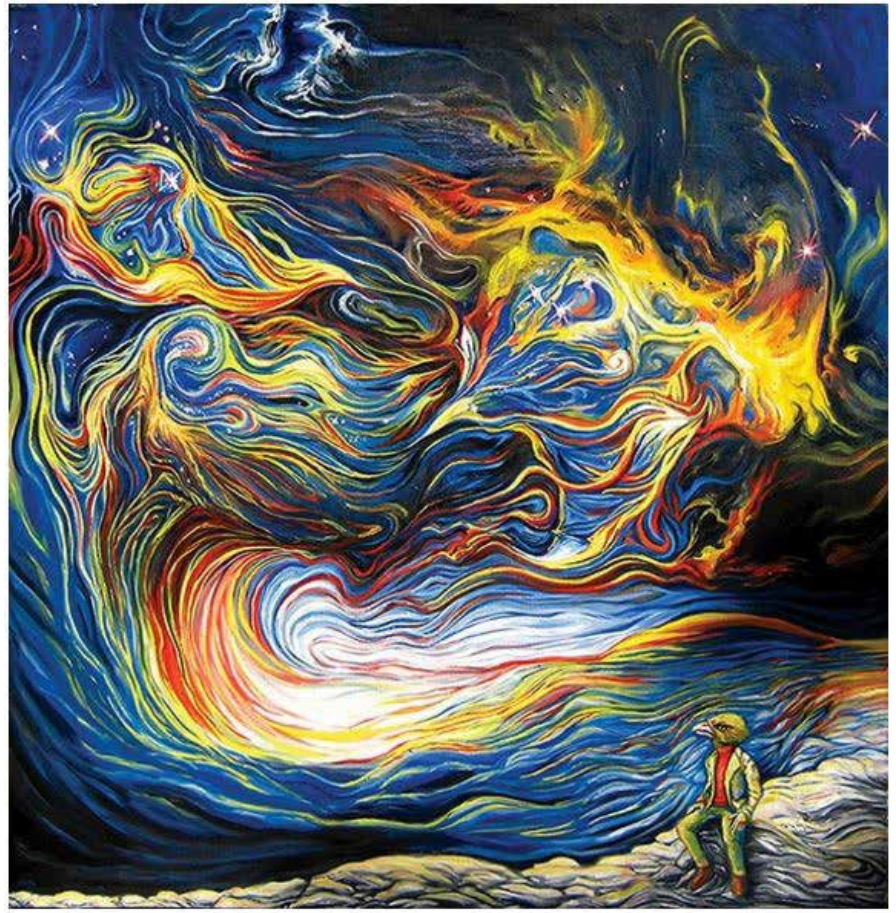
Date: Spring 2017



Alvin Pace, a Chandler native, has a long history with art in Chandler. Alvin earned an MFA from Arizona State University. He was the head of the Art Department at Chandler High School for forty years followed by six years as ceramic instructor at Chandler-Gilbert Community College.

He worked diligently to help the City of Chandler develop and maintain its public art collection as a member of the Chandler Art Commission for over 15 years. He currently serves on the board of the ASU Art Museum Ceramics Research Center.

Al's work is part of the prestigious Herberger, Dial Collections, City of Scottsdale, City of Chandler, Chandler-Gilbert Community College, Arizona State Ceramics Museum and is represented exclusively by Quan'tum Art, Inc in the Scottsdale Art District at 7077 E. Main Street.



Hannah Irene Walsh was born and lives in Phoenix, Arizona, and is a multimedia artist and writer. Her visual narratives of invented mythologies interweave with representations of herself and other empowered female bodies and their animal alter-egos.

Her drawings explore the shameless sensuality and primal aspect of womanhood, lavished with hand-carved frames, altar constructions, video installation, and sculptures made from natural and man-made items. Images and objects, imbued with the artist-magician's touch, come together in a ritual space that serves as a stage for her creative and meditative processes.

She is currently a third-year Drawing/Painting MFA candidate at Arizona State University. Her graduate thesis exhibition, Altar Spaces/ Alter Egos, will be at the Harry Wood Gallery from April 3-7, 2017.





Lauren Lee is a Phoenix based painter and muralist who has been celebrated for her iconic mural “Three Birds” on the side of GreenHAUS Gallery and Boutique as well as her sold out art shows throughout downtown Phoenix. She has been featured on the cover of Echo Magazine as well as featured in Java Magazine and named one of Phoenix’s Top 100 Creatives by the Phoenix New Times.

Lauren graduated in 2007 from Arizona State University with a Bachelors in Fine Art and from there went on to teach art for five years at The New School for the Arts and Academics in Tempe, Arizona. She currently is a full time freelance artist, dividing her time between gallery shows and murals.



MATA RUDA (Karl Miller Espinosa) (b. 1989) is a Latin-American artist and muralist who was born in San Jose, Costa Rica and lived in Caracas, Venezuela until he was 11 years old when he moved with his family to the United States. In 2012 he graduated from MICA (Maryland Institute College of Art) with a BFA in Painting and is currently attending The University of Arizona teaching undergrad illustration seeking his MFA and is due to graduate Spring 2019 . Using iconography from both sides of the border, he creates a variety of murals and paintings that empower overlooked communities, illustrate local cultures, and speak upon contemporary social issues. **Many of his murals and projects also lend a special focus on humanity’s relationship with the environment and how understanding one’s surroundings and rediscovering nature can be mind opening and spiritual healing.**



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Notes:
SITE
SPECIFIC
INTER
ACTIONS

The Under Line: Local Artists

Project Location:
South Phoenix AZ
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Papago Freeway
overpass

Stamp:
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MILLER**

Date: Spring 2017



Notes:

QUICK
SKETCHES
IN PLAN

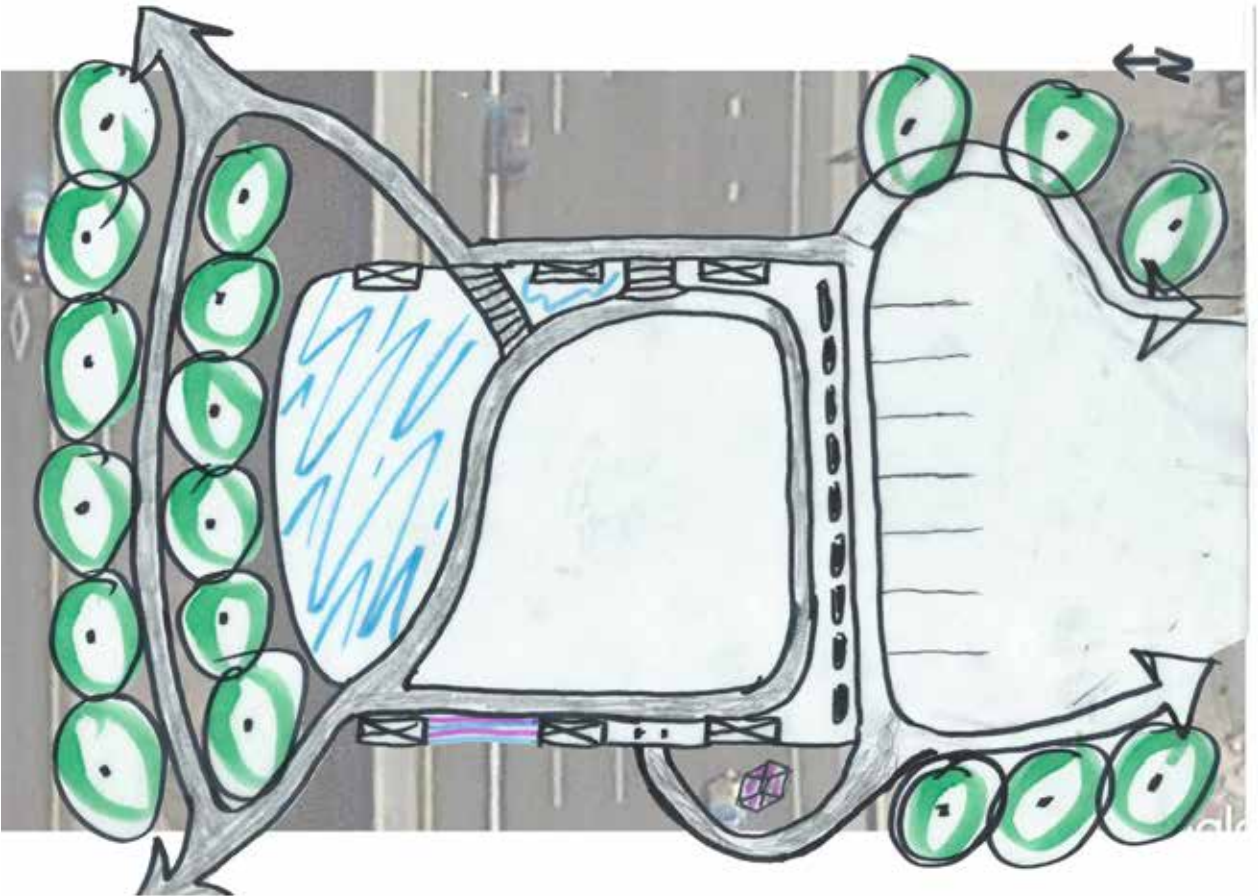
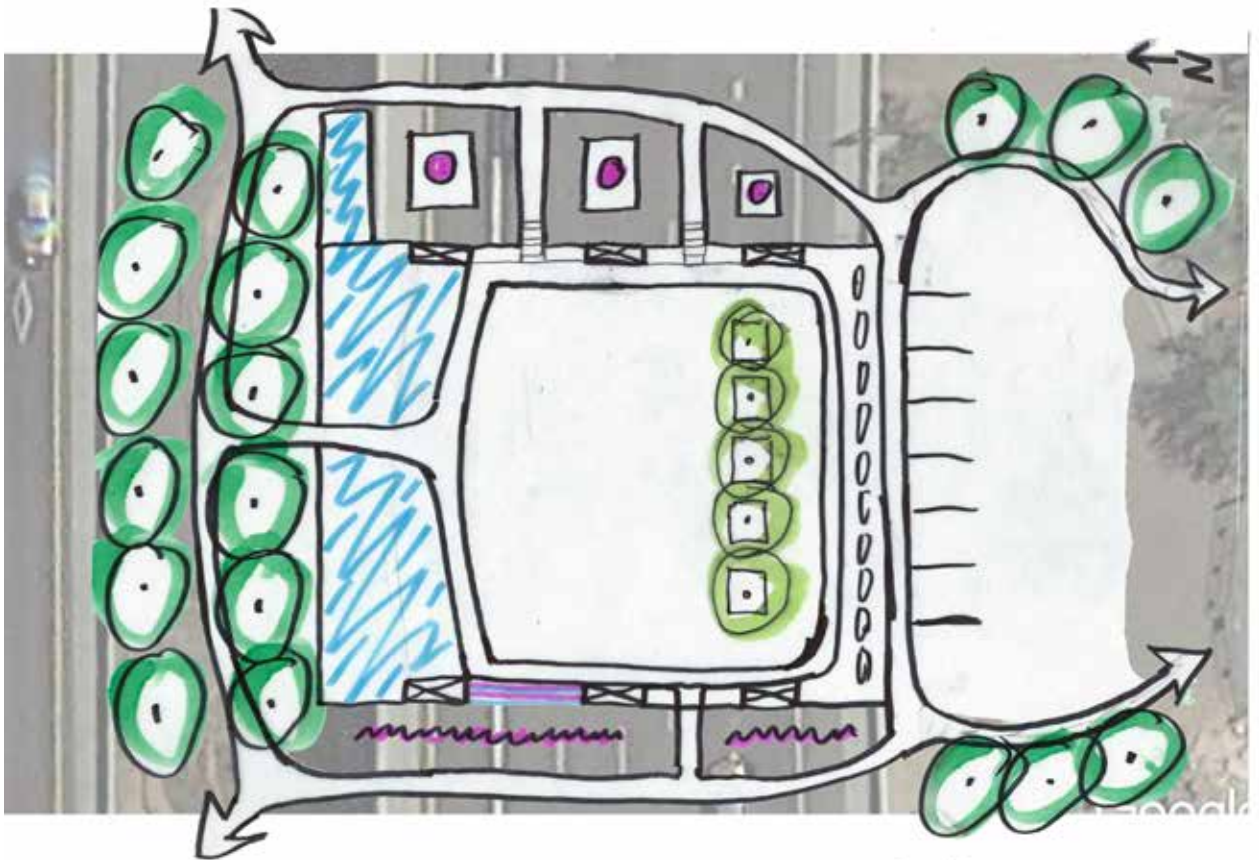
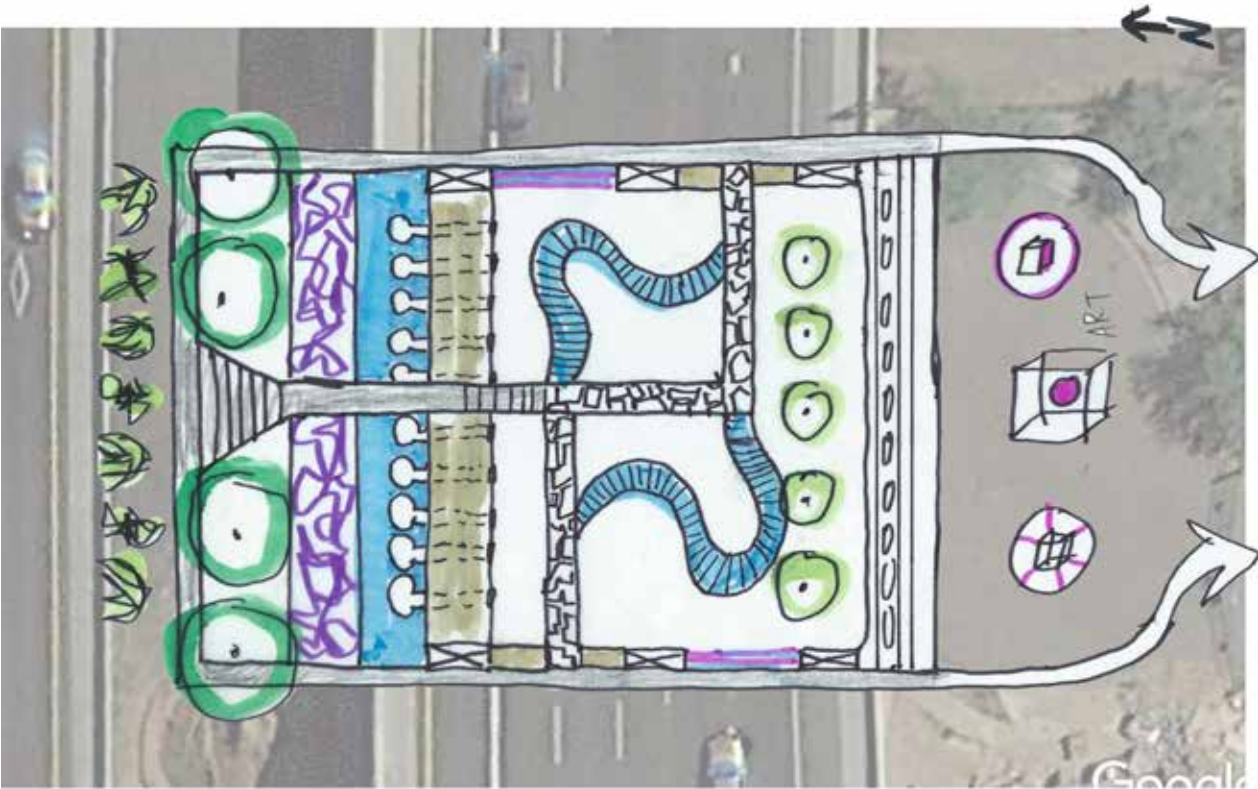
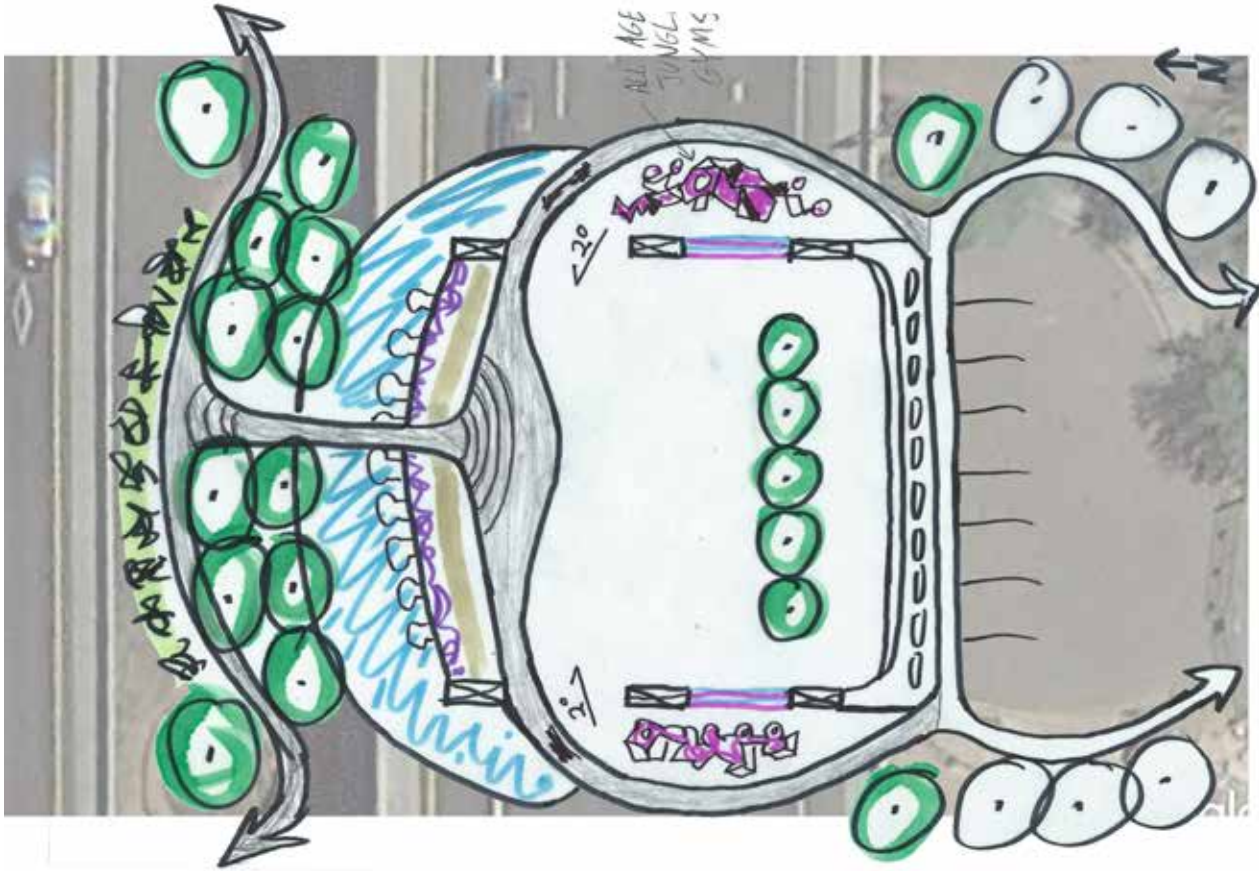
The Under Line: Conceptual Drawing

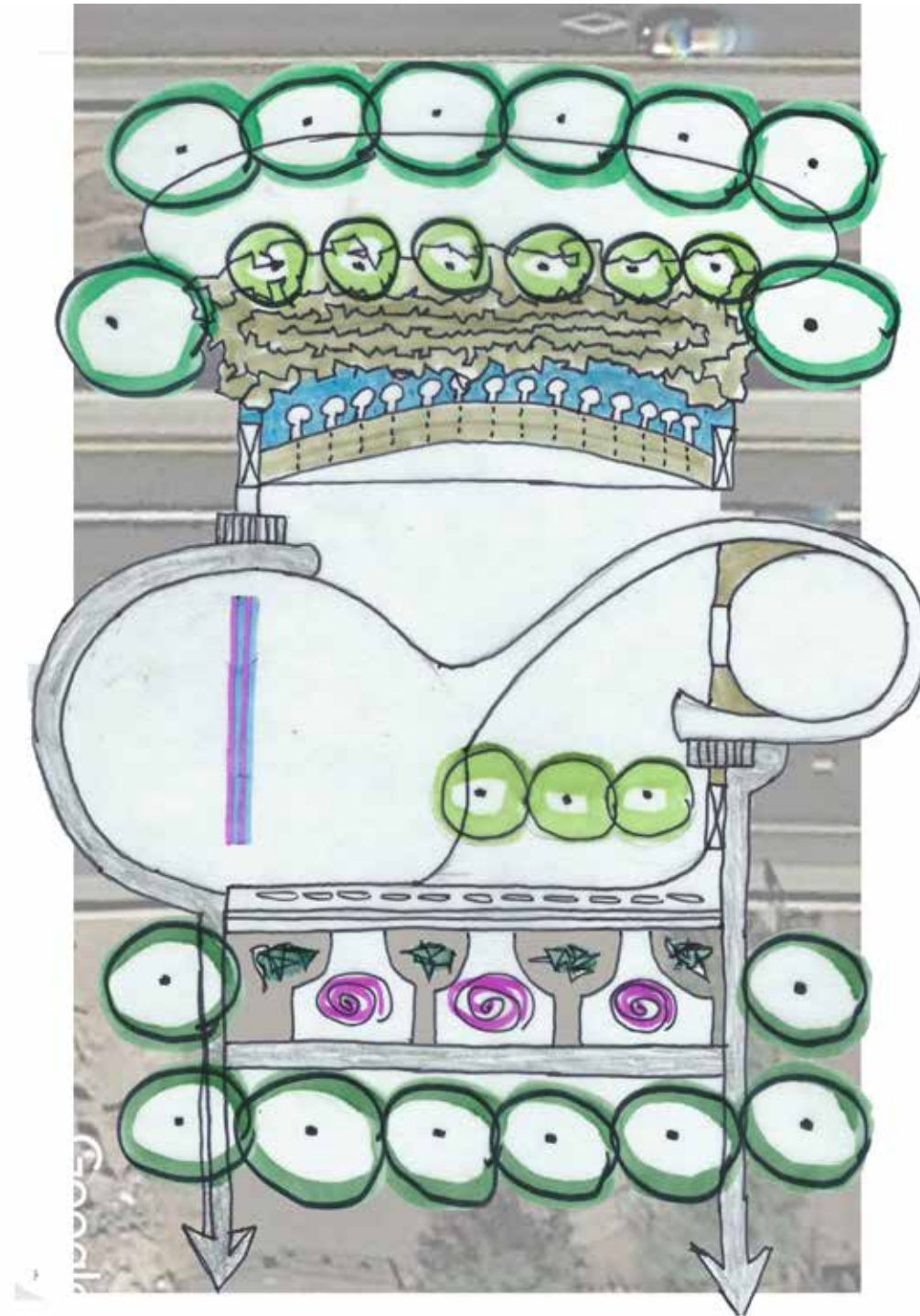
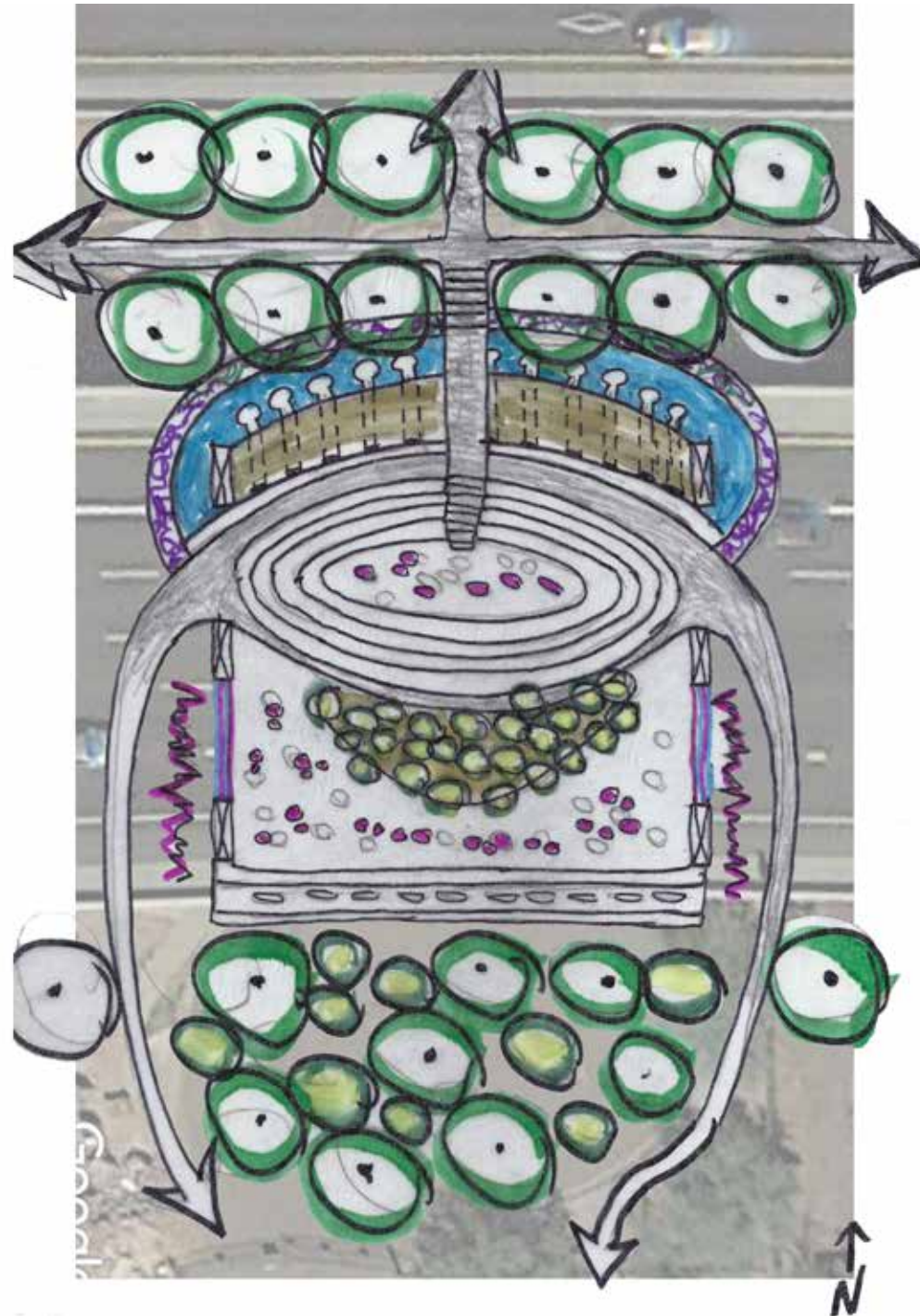
Project Location:
South Phoenix AZ
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overpass

Stamp:
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Date: Spring 2017





Notes:

SKATING
& MOVIES,
THEATER
& ART

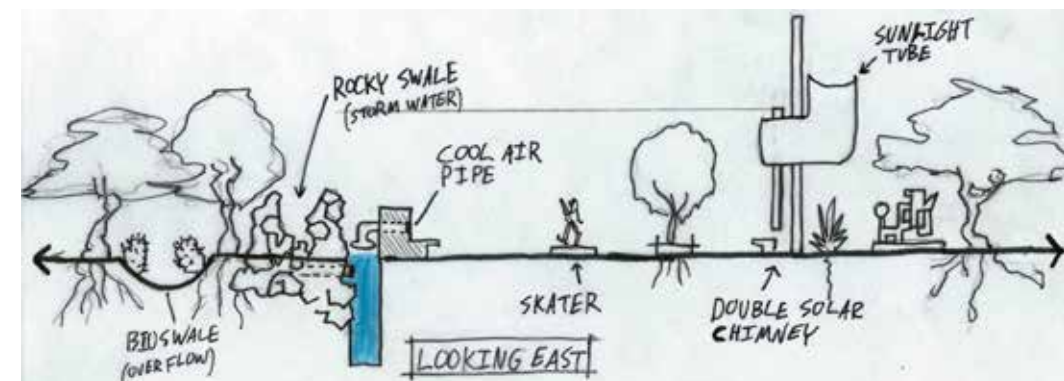
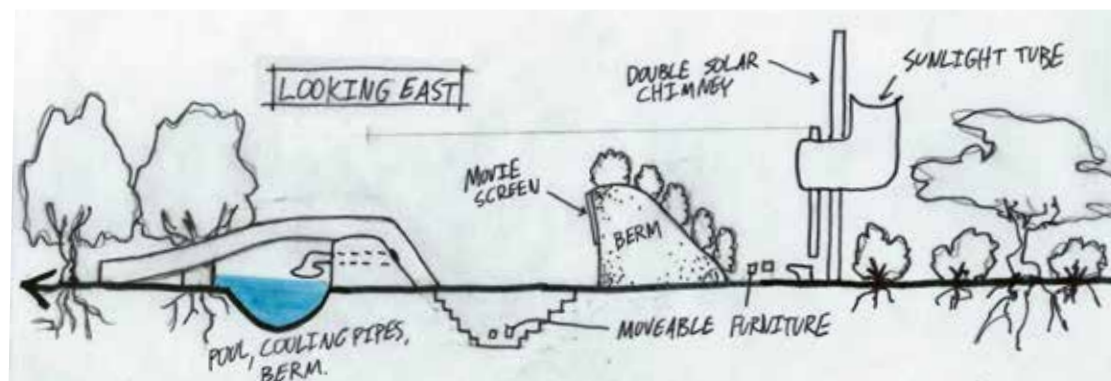
The Under Line:
Conceptual Drawing

Project Location:
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Date: Spring 2017





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Notes:
COOLING
POOLS &
UNIFICA-
TION

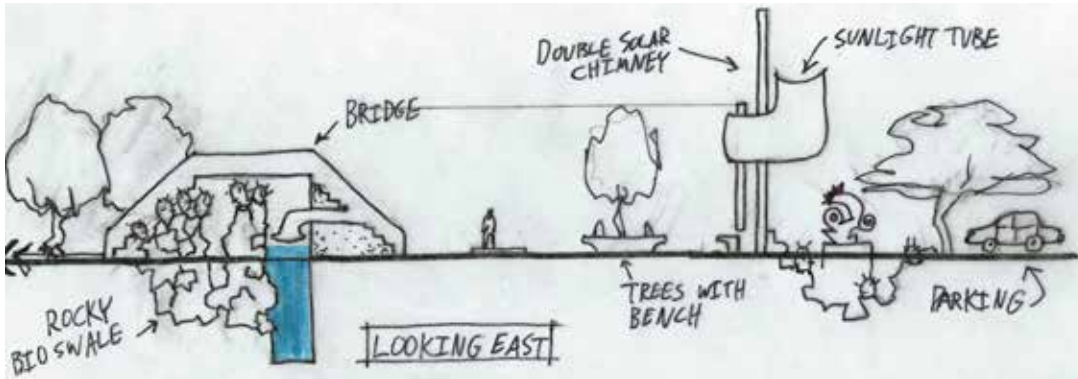
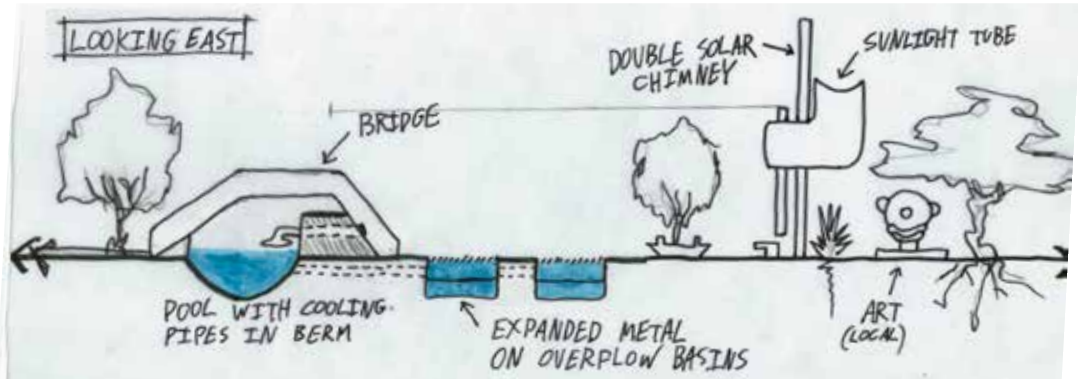
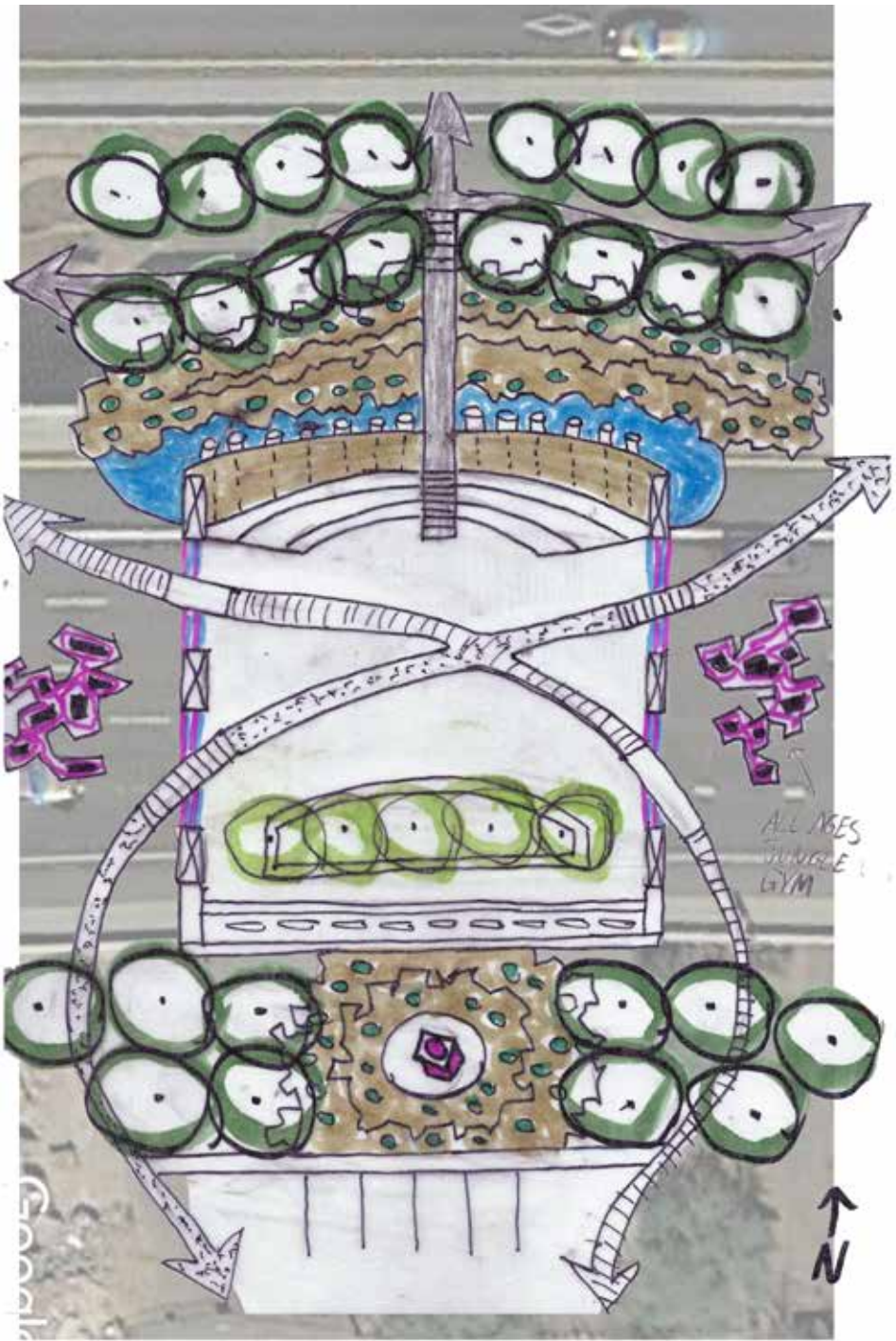
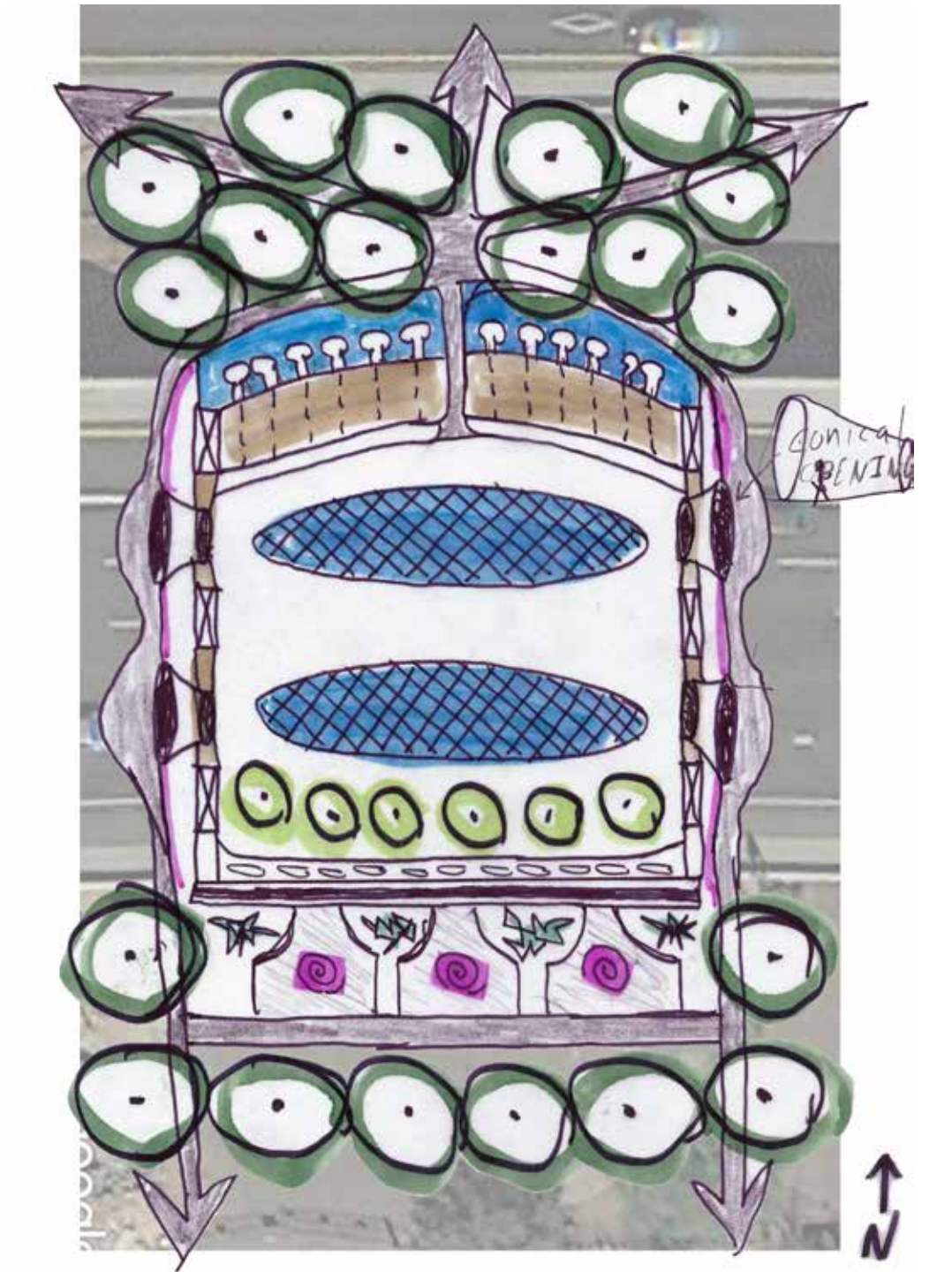
The Under Line: Conceptual Drawing

Project Location:
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overpass

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MLA Applied Project

**MITCH
MILLER**

Date: Spring 2017



April 1, 2017: Studio visits and talking about designs and programming with locals...

General overall excitement about Murals
columns could be a forest/forest plants like *ocotillo* or saguaro, pines...

sure shot v. cliché

revisit Hybrid form/function?

What about the ceiling?
I like it... Alvin's plates might have weird acoustics

Southwest chapel feel

STALAG TIGHTS

300

narrative
History
fiction
future
blend

Hammer stalag-tights? → could go real well could be a disaster

Titanium Dioxide
there is a lot of potential surface area = lots of paint

stained glass
YES!

T₂ = \$\$\$

Gaunts - Paint sponsor
Toronto?

Graffiti and Vandalism are a concern...
Make it good w/ one will BURN...

making stuff that is meant to climb on.
YES it is a good idea to do this so that pressure is off

300

Climbin' on sculpture - good deal

Jungle Gym
NOT HERE? POOL(S)

J.G. Bridges
slides
poles, ropes
parachutes?

Rocks
Fake Rocks
tunnels
climbing
skating

Bubly*

Trampolines!!!

BOING!

Foam Pits
Go karts
Bump cars
lets over foam pits
climb
scooter
steering
cleaning...

SAFE LANDING

skating
Bridge
Trampolines w/ Fake Rocks

more minimalist - some are said

Donald Judd
Bridges
Riley
cildo
Mierle

Big Rocks on poles

CHURCH Ladders

Pool

Yeah why not have all this stuff in the parking lot?

SAATH SIDE

ART

FOOD

SHADE

BENCHES
SHADES
Tables
Chairs

1 2 3 4

4,1,2,3 SOUTH

1 2 3 4 5 6

IF BERNI

ROOM

6. Paper

7. speakers

Lights?: LED's
• strips, tiles
• constellations
• tracking →

Miniature town
HPS or LED

Look at CMT tonight

LED's or a village in PLANTS



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Notes:
ARROW SIZES
= PROJECTED
TRAFFIC
FLOW RATES

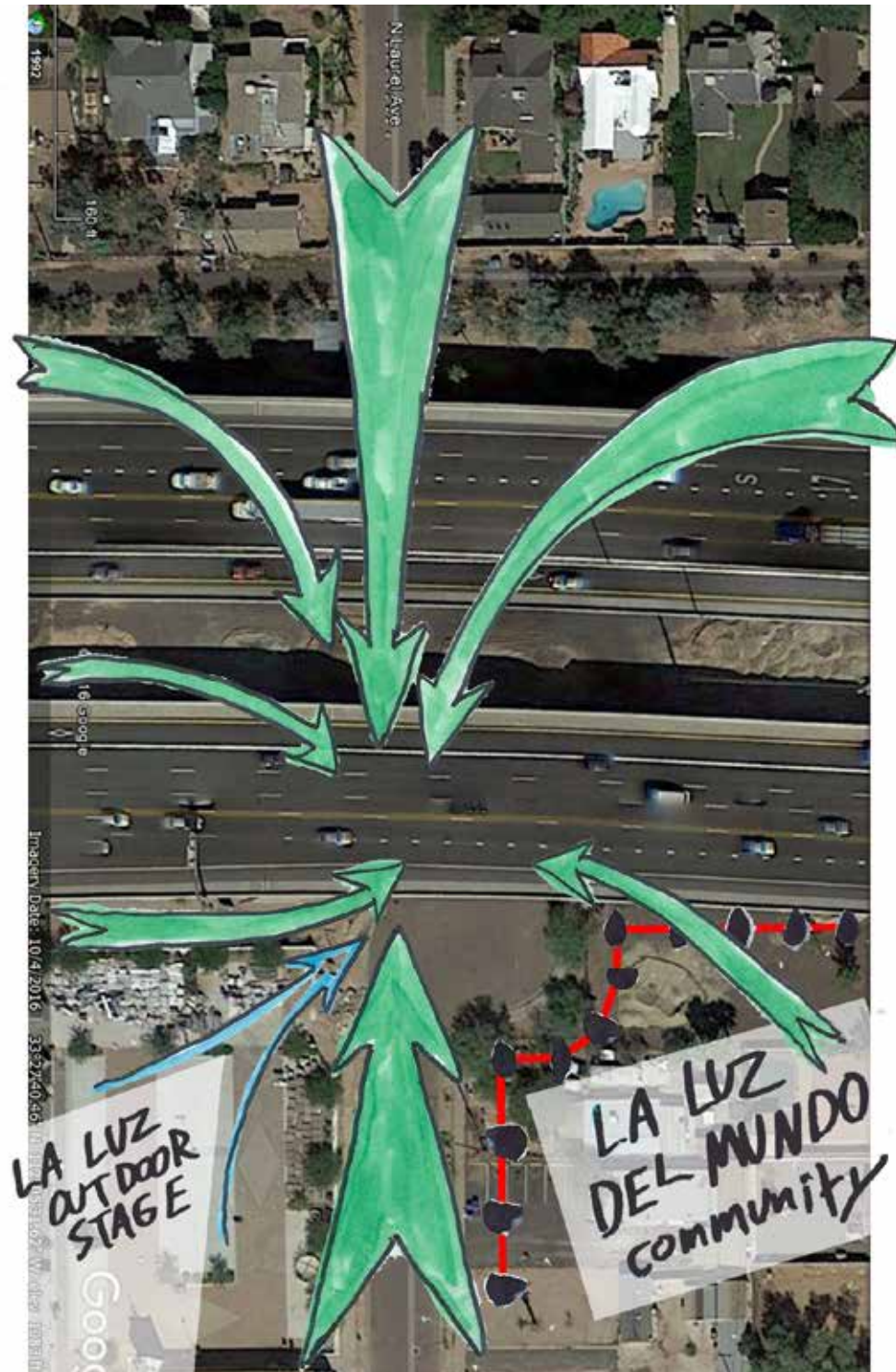
The Under Line: Take Aways

Project Location:
South Phoenix AZ
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Ave under the
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overpass

Stamp:
MLA Applied Project

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Date: Spring 2017

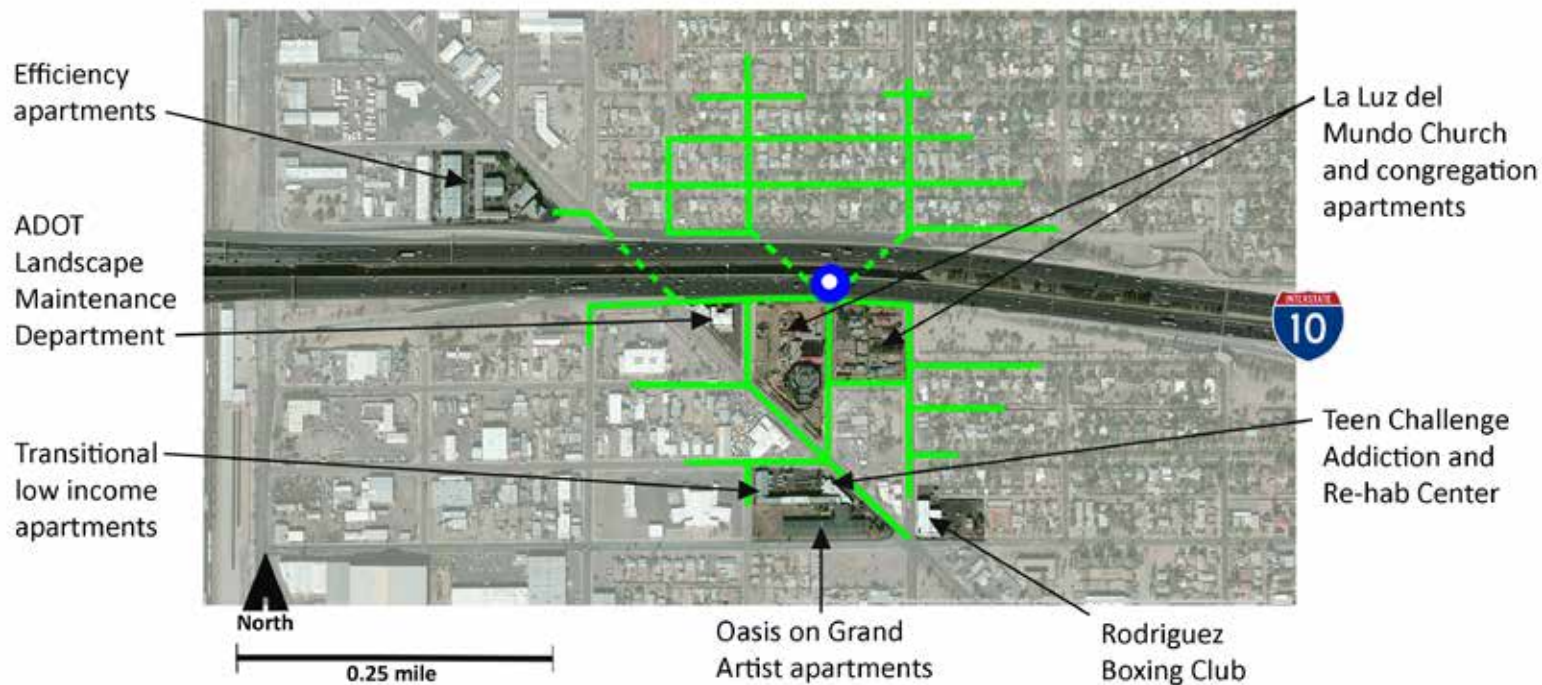


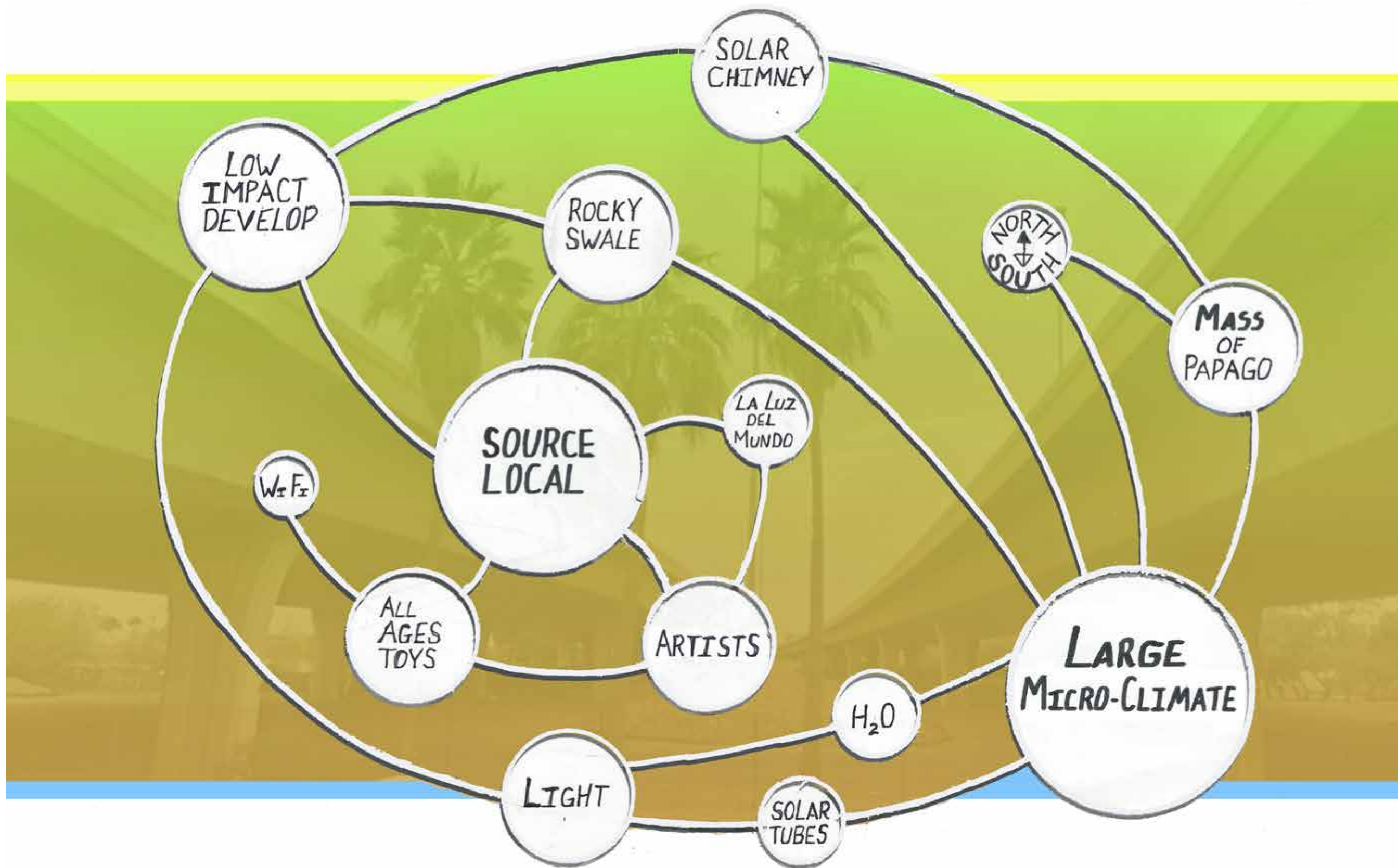
My site visits included meandering walks at different times of day and night, collecting data, going to art openings, finding flea markets, and garage sale hopping all within a quarter mile from the Under Line's future location. I met a lot of residents, faithful devotees, and a handfull of merchants as well. My observations and interactions have been inspiring and will guide my design process.

Elements To Incorporate:

- Diverse population of artists who want to help build and adorn the Under Line.
- La Luz Del Mundo's outdoor theater likes the idea of potlucks after plays.
- Multiple access points to encourage use from both sides of the Papago.
- Kids and Adults expressed a need for a skatepark and/or recreational structures.

- LED lighting is necessary for safety, security and character for night time use.
- The mass of the freeway, a solar chimney, storm water run-off and earth for passive cooling.
- The area between the east and west bound sides of the freeway
- Existing cauldesac on the south side of the Under Line.
- Wi-fi and adaptable spaces for small and large gatherings.
- Solar light tubes.
- Storm water mitigation for 5.2 acres of freeway.
- On site water storage, cleaning and reuse.
- Low impact development tools such as rocky swales and titanium dioxide paint for murals.
- Low-maintenance landscape architecture and resilient planting design.
- Sustainability practices such as using local materials (recycled or repurposed first) and builders.





The Under Line: Design Diagram

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Notes:

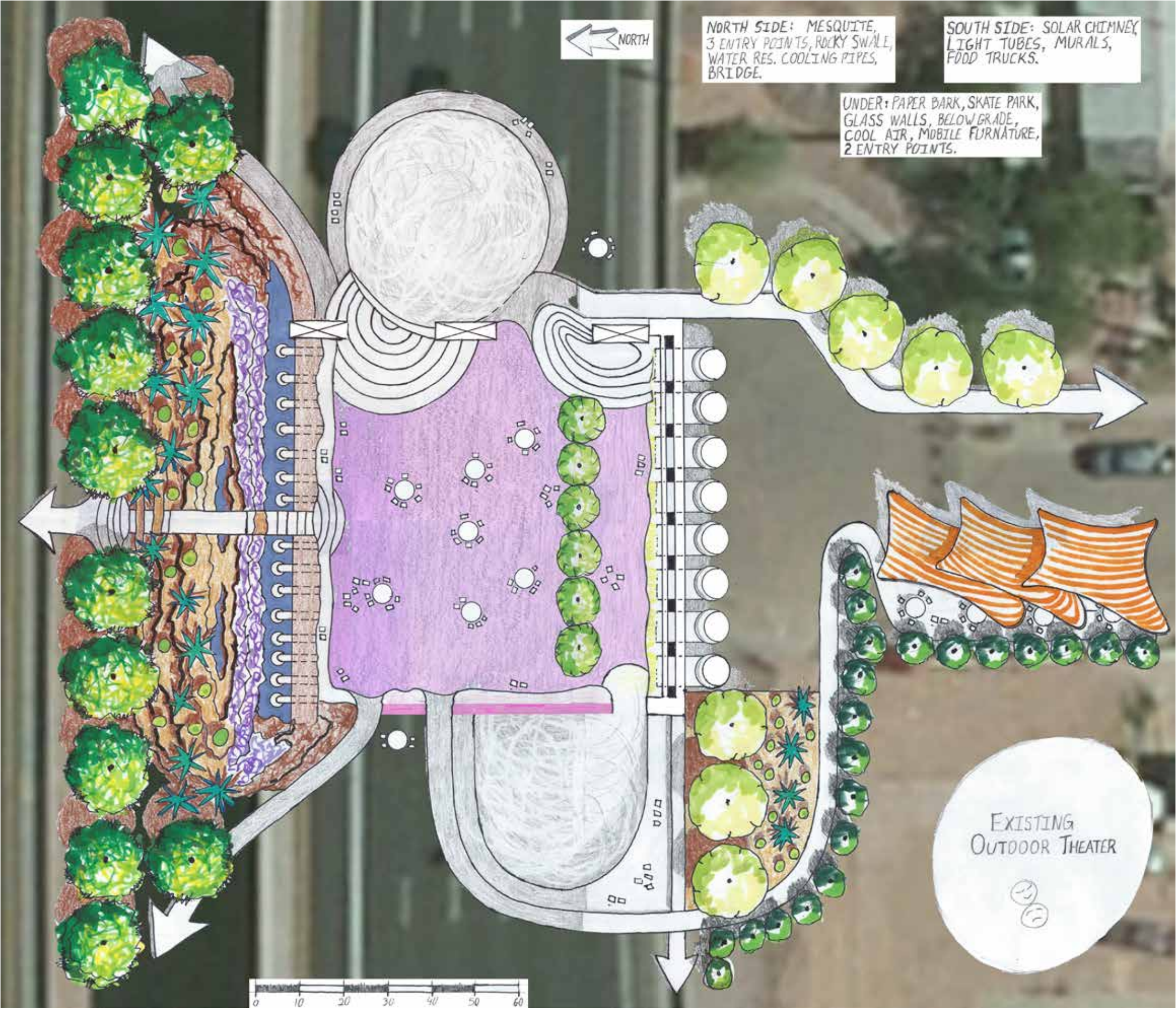
The Under Line: Master Plan

Project Location:
South Phoenix AZ
between N. 16th
Ave and N. Laurel
Ave under the
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overpass

Stamp:
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Date: Spring 2017





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Notes:

The Under Line: Master Plan with Papago

Project Location:
South Phoenix AZ
between N. 16th
Ave and N. Laurel
Ave under the
Papago Freeway
overpass

Stamp:
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Date: Spring 2017

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THE ARTS

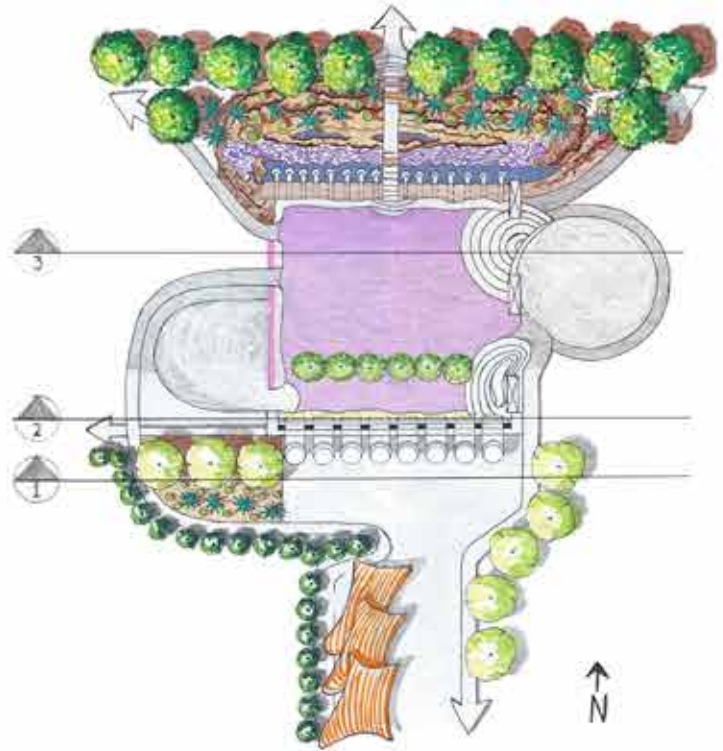
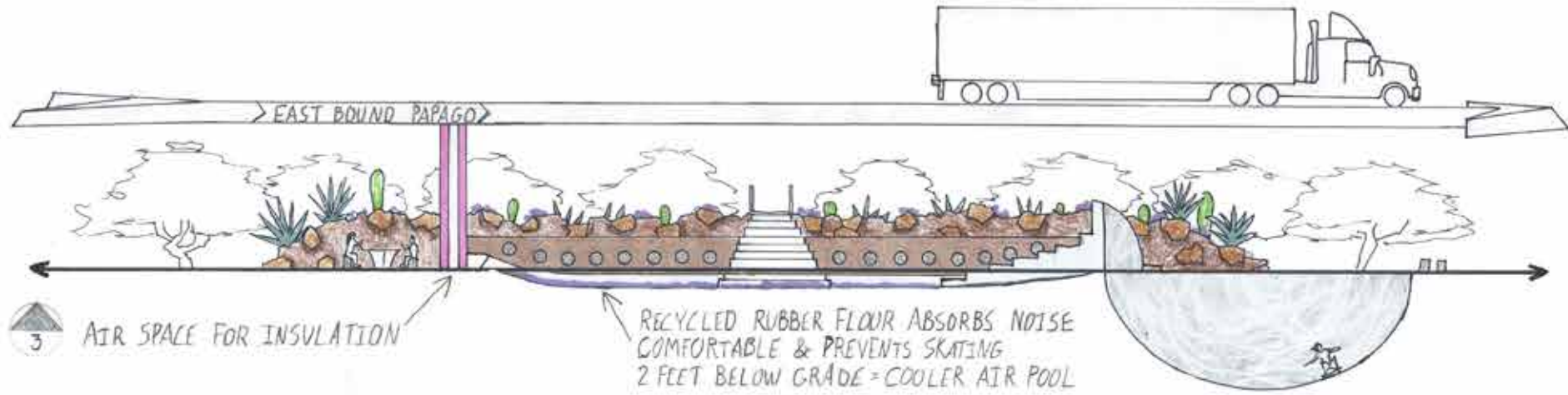
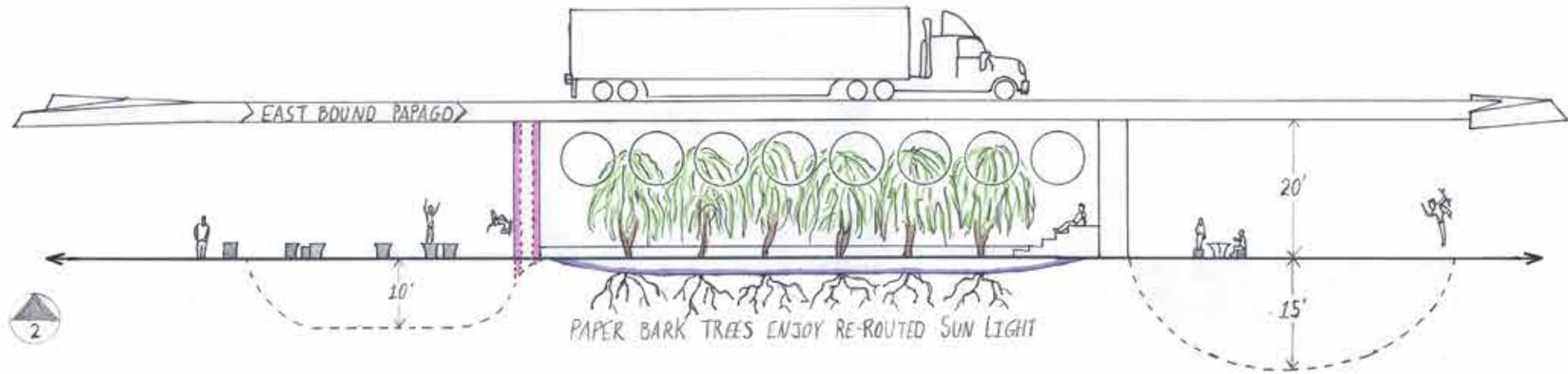
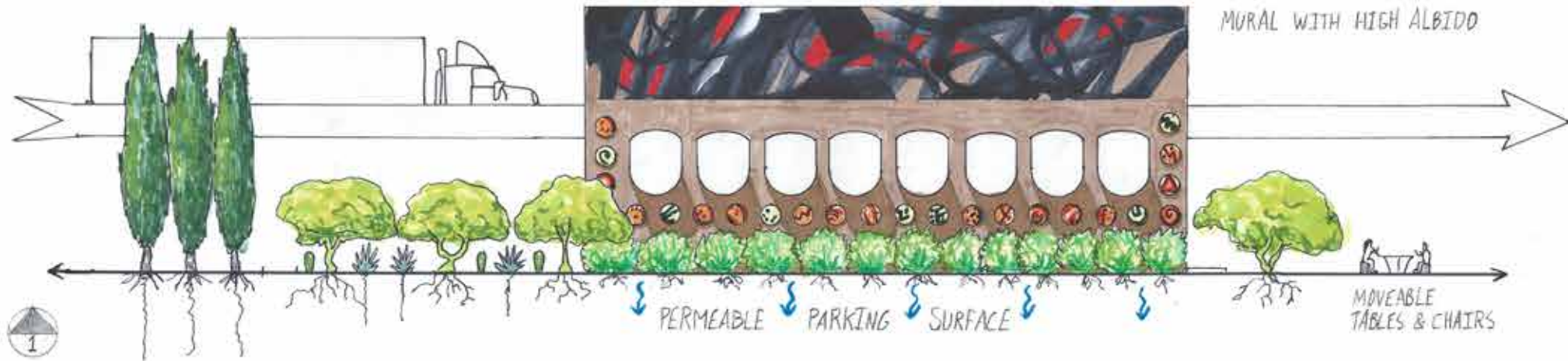
The Under Line: Section Drawings

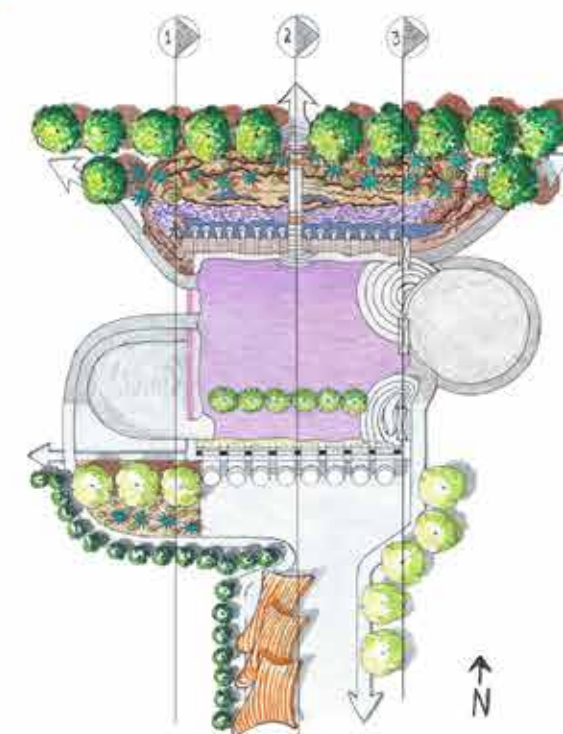
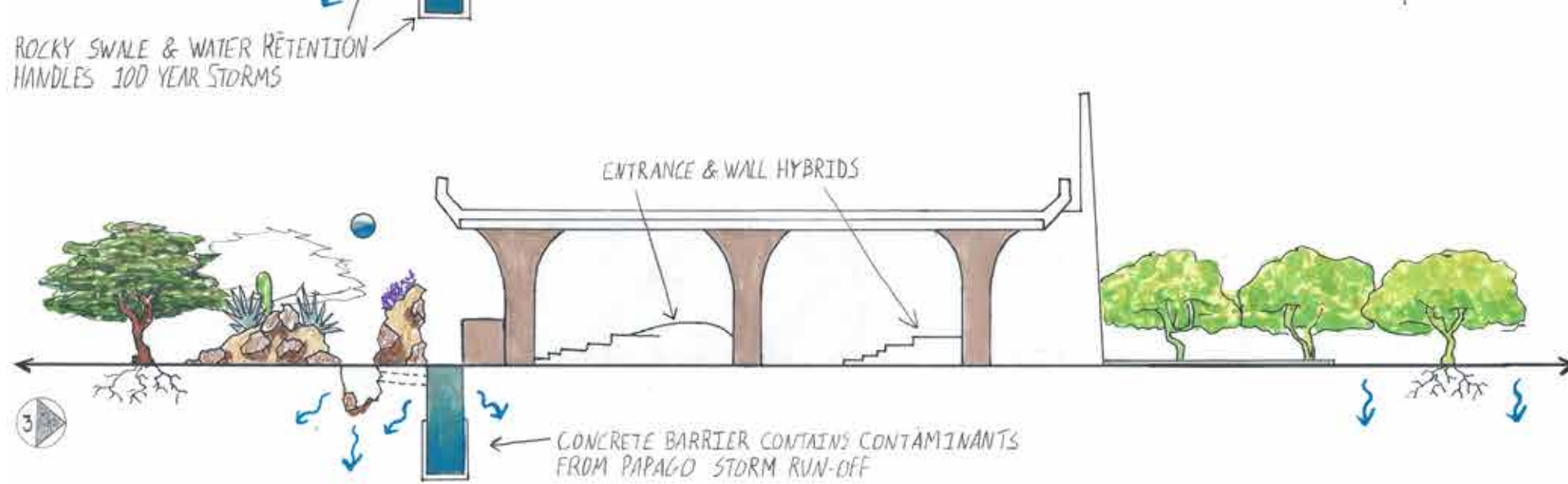
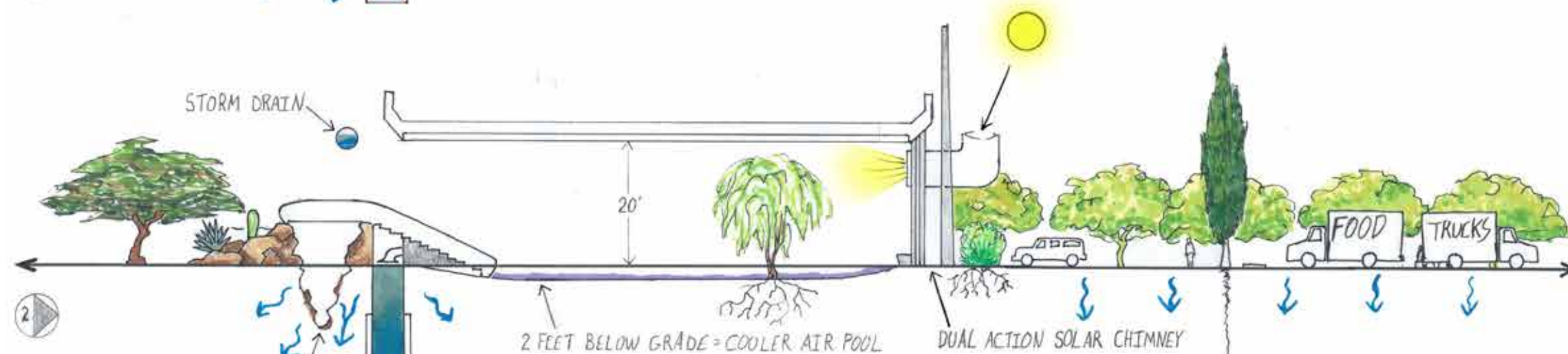
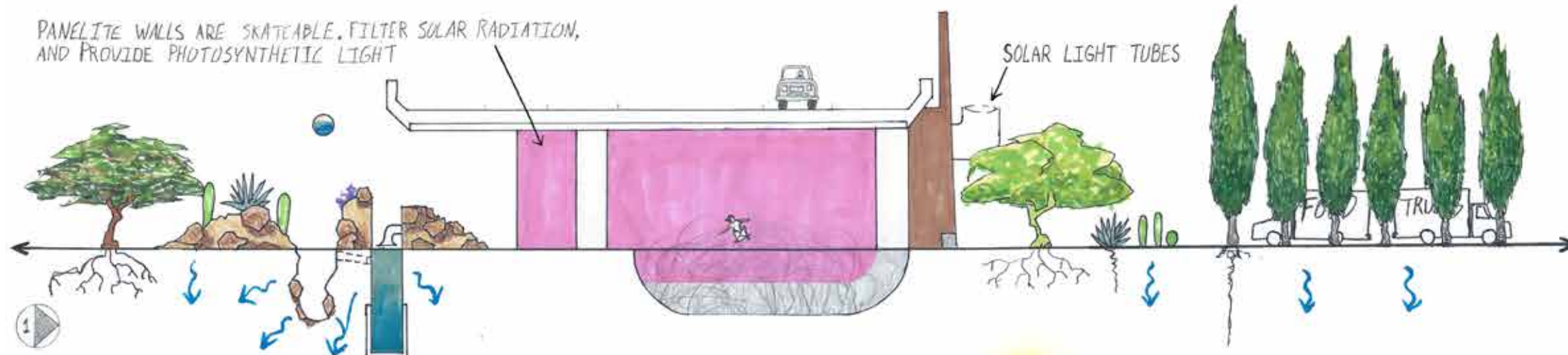
Project Location:
South Phoenix AZ
between N. 16th
Ave and N. Laurel
Ave under the
Papago Freeway
overpass

Stamp:
MLA Applied Project

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Date: Spring 2017





The Under Line: Section Drawings

Project Location:
South Phoenix AZ
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Date: Spring 2017



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Notes:

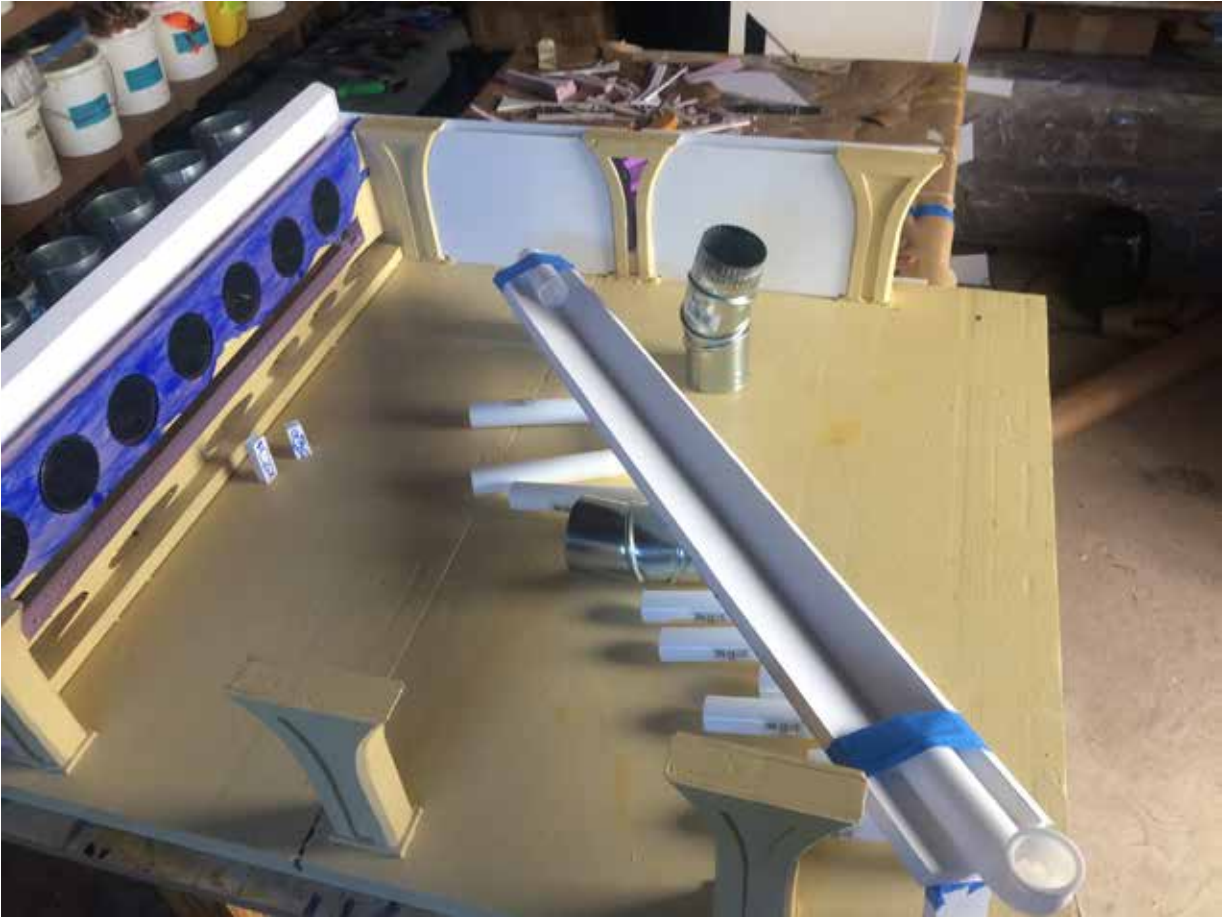
The Under Line:
Conceptual Modeling

Project Location:
South Phoenix AZ
between N. 16th
Ave and N. Laurel
Ave under the
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overpass

Stamp:
MLA Applied Project

**MITCH
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Date: Spring 2017





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Notes:

The Under Line: Conceptual Modeling

Project Location:
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Stamp:
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**MITCH
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Notes:

The Under Line:
Conceptual Modeling

Project Location:
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**MITCH
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Date: Spring 2017





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Notes:

The Under Line: Final Model Construction

Project Location:
South Phoenix AZ
between N. 16th
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Ave under the
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Stamp:
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**MITCH
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Date: Spring 2017





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Notes:

The Under Line:
Northeast Corner

Project Location:
South Phoenix AZ
between N. 16th
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Ave under the
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Stamp:
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**MITCH
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Date: Spring 2017





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Notes:

The Under Line: Northwest Corner

Project Location:
 South Phoenix AZ
 between N. 16th
 Ave and N. Laurel
 Ave under the
Papago Freeway
 overpass

Stamp:
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Date: Spring 2017





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Notes:

The Under Line:
Southeast Corner

Project Location:
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Ave under the
Papago Freeway
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Stamp:
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**MITCH
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Date: Spring 2017





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Notes:

The Under Line:
Southwest Corner

Project Location:
South Phoenix AZ
between N. 16th
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Ave under the
Papago Freeway
overpass

Stamp:
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Date: Spring 2017





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Notes:

The Under Line:
Model with Papago

Project Location:
South Phoenix AZ
between N. 16th
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Ave under the
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Stamp:
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Date: Spring 2017





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Notes:

The Under Line: Model Details

Project Location:
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Stamp:
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**MITCH
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Date: Spring 2017



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Notes:

The Under Line:
Performance Evaluation

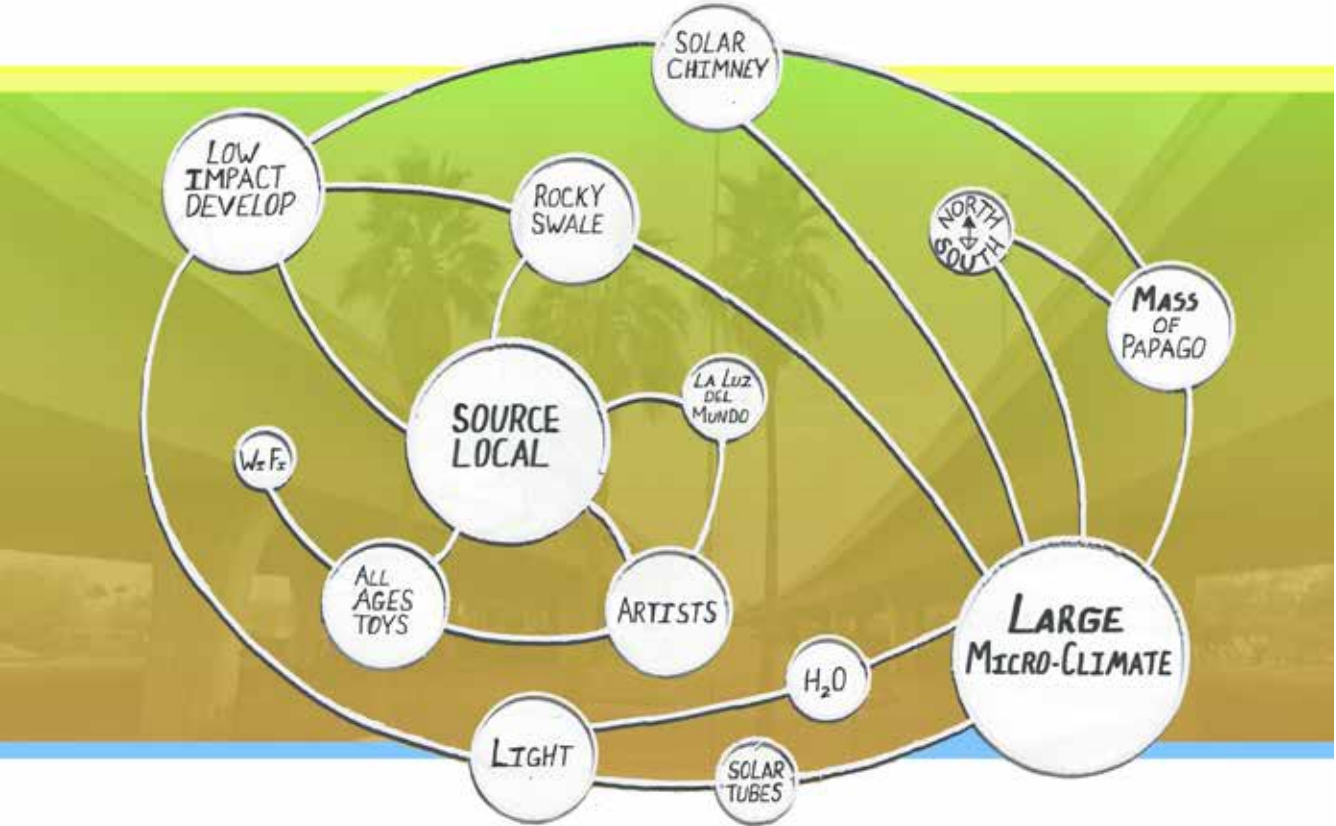
Project Location:
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MILLER**

Date: Spring 2017

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Performance Evaluation:

- Rocky Swale retains 1 inch per hour of storm water runoff from 5.2 acres of road.
 - Water from road is tested as it flows through *waterfall* drainpipe.
 - Vacuumed sludge samples compared to inflow samples.
- “Inside” and Outside climate data collection.
- Moveable furniture senses time, touch and location to reveal duration and patterns of use.
- Wi-Fi usage.
- Food truck best seasons and success rates.
- Interactive video channel for Skaters.
- LIDs lower administration costs = art and design grant money.

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Notes:

The Under Line:
Zeitgeist

Project Location:
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**MITCH
MILLER**

Date: Spring 2017

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The above screen shot of my phone shows correspondence between myself and one of the locals near my site. He grew up in Miami and is an avid skater. I sent him a text of the model in progress which features the big bowl.

Then I sent him this link:
<https://www.theunderline.org/> so he could see that his dream is going to come true.

The photos to the right show before and after scenerios for the Underline in Miami. Cities across the United States and abroad are discovering the potential of these previously invisible urban areas. The Underline in Miami is being designed by the same team that designed the Highline in NYC.

Photos to the right are courtesy of The Friends of the Underline organization in Miami.

“The Underline (Miami) will connect communities, improve pedestrian and bicyclist safety, create over a hundred acres of open space with restored natural habitats, encourage a healthy lifestyle, provide an easily accessible place to exercise, create a mobility corridor that integrates transit, car, biking and walking, provide a 10-mile canvas for artistic expression, attract development along US1, and generate significant economic impact.” -Meg Daly, Founder and President of Friends of the Underline Organization-



MPath Brickell now.



Underline Brickell Backyard after.



Underline Douglas Metrorail station before



Underline Bike Repair Kiosk after

In the April, 2017 edition of Architectural Digest (the same month that I am writing this) is a featured article in the Innovated Design section of the magazine. The article is titled *Boston Is Now Building Public Parks Under Interstate Highways*.

The project is being designed by Landing Studios. Co-founding partner, Marie Adams was quoted in the article, saying;


“This area under the highway is a very dramatic space that has been off-limits for many years, so a major objective for us was simply to create access to this infrastructural landscape in a dynamic way. Visitors can take advantage of everything from public art walls and a dog park to a night market and pop-up food and beverage experiences. The space will also offer a bike storage facility and 175 parking spaces, as well as a 205-room Marriott hotel. The project is a new model for how infrastructure can be multifunctional. Instead of being a marginal or forgotten space in the city, a highway viaduct can provide new public spaces for recreation, greater urban connectivity, and also manage storm water runoff through the design of the landscape,”

Landing Studio’s philosophy about the space and the programming they have planned parallels my thoughts about, approach to, and desired outcomes for my site under the Papago Freeway.



All renderings on this page illustrate the finished park. Renderings are courtesy of Landing Studios.





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Notes:

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Notes:


The Under Line:
Zeitgeist

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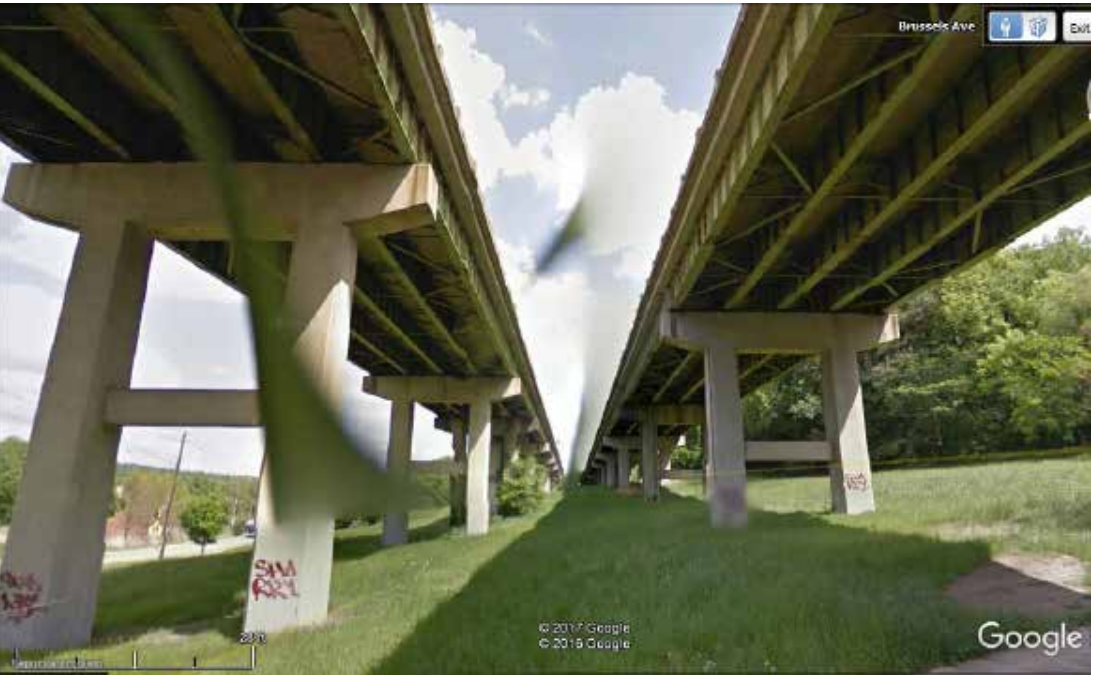
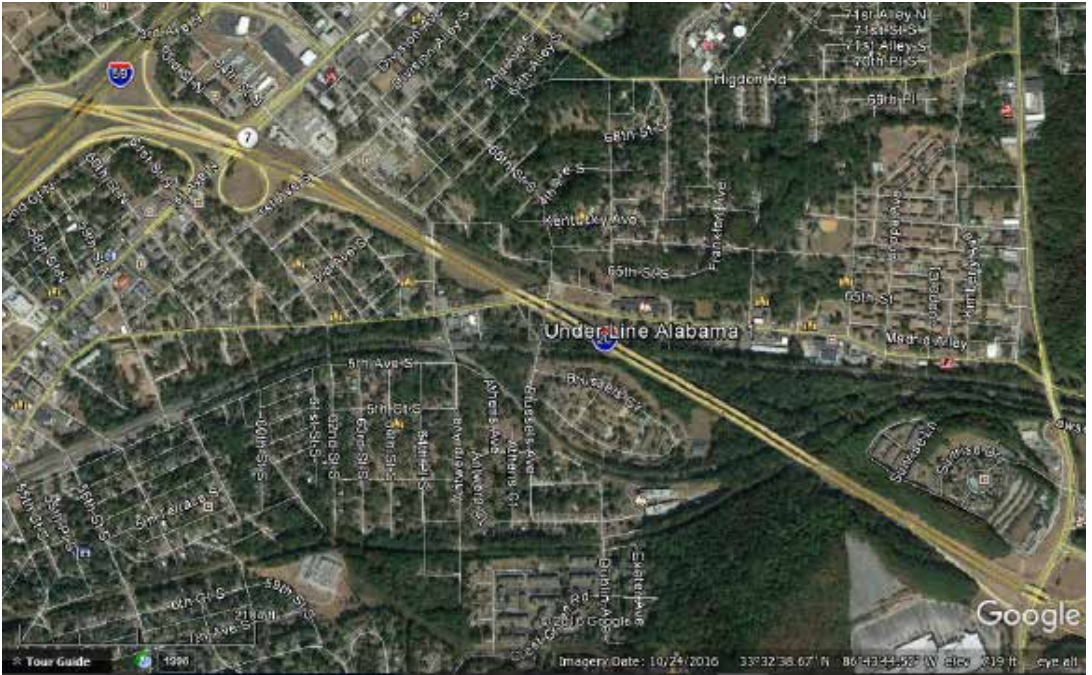
Stamp:
MLA Applied Project

MITCH MILLER

Date: Spring 2017



On May 24, 2016 National Public Radio host, Diane Rehm, posted a piece on her blog titled *Your Stories: How Urban Freeways Divided America’s Neighborhoods*. In her piece she talks about Highway 20/59 in Birmingham, Alabama which bisects several African American neighborhoods. I turned to Google Earth to investigate the current situation and found that the highway is elevated for 3/4 of a mile in one section of the neighborhood. I also discovered that there is a large apartment complex on the South side of the overpass in this section. An Under Line park here has the potential to serve many people and bring the community back together. The images below are taken from Google Earth. The aerial shows the divided neighborhood and the Google Street views provide some context in order to imagine what a park might look like under the highway.



My project puts me firmly in the current landscape architecture zeitgeist. Underpass parks are being designed and built at a steady pace and the phenomenon is just getting started. Cities and municipalities are discovering that overpasses provide excellent opportunities to bring people together. The framework is already there to build parks that serve dense populations. Landscape architecture such as this is an effective tool for social justice. By building public parks in previously derelict urban spaces social justice can be fortified for massive amounts of people around the world. My design is particularly adapted for extremely hot climates. As the world heats up I imagine my underpass park typology being implemented in cities large and small. Summers in Birmingham Alabama can get quite hot and uncomfortable. Underneath the I 59/20 overpass appears to be a perfect candidate for my next Under Line design.

Acknowledgements

My pursuit of a Masters in Landscape Architecture from Arizona State University has been an enlightening three years. It has been a privilege to work with a diverse pool of colleagues at a university focused on a climate as extreme as the Sonoran Desert.

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Notes:


The Under Line:
Acknowledgements

Project Location:
South Phoenix AZ
between N. 16th
Ave and N. Laurel
Ave under the
Papago Freeway
overpass

Stamp:
MLA Applied Project

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