



BRIDGING I-95: CONNECTING THE COMMUNITY

CAP FEASIBILITY STUDY | Final Report | January 2023



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- U.S. Senator Thomas Carper
- U.S. Senator Chris Coons
- U.S. Representative Lisa Blunt Rochester
- FHWA
- State Senators: Sarah McBride, Elizabeth Lockman, Darius Brown
- State Representatives: Rep. Charles “Bud” Freel, Nnamdi Chukwuocha, Sherry Dorsey Walker
- Delaware Transit Corporation (DTC)
- New Castle County
- City Council members: Michelle Harlee 4th, Bregetta Fields 5th, Nathan Field 8th
- Neighborhood Planning Council: 4th, 5th, 8th
- Downtown Visions
- United Neighbors
- Westside Grows Together
- Latin American Community Center
- Bike Delaware
- West Center City Neighborhood Associations
- Westside Neighborhood Coalition
- Cool Spring/Tilton Park Neighborhood Coalition
- Trinity Vicinity Neighborhood Association
- Trinity Episcopal Church
- Hilltop Lutheran Church

PROJECT TEAM

WILMAPCO
DeIDOT/DTC
City of Wilmington Administration



Advisory Committee Letter of Support

The Advisory Committee guided WILMAPCO and the consultant team toward a consensus concept, hybridizing broad design approaches with specific and broad community input in the public process. Our committee members brought individual representative’s expertise and input to bear, shaping the overall concept, determined feasibility, and developed a deeper understanding of each participant’s organizational stance on the project. This committee affirms to move forward with the project as it progresses from the endorsed feasibility study toward design and implementation, continuing our guidance and constructive participation on the Bridging I-95: Connecting Communities Project.

U.S. Senator Thomas Carper
U.S. Senator Chris Coons
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FHWA
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Downtown Visions
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Coalition
Trinity Vicinity Neighborhood Association
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Feasibility Study Scope

This feasibility study sets forth a concept **vision for the future of a public space over I-95 in Wilmington**. Paired with traffic analysis, Planning and Environmental Linkages (PEL) information, and structural analysis, this report aims to **establish the viability** of a cap park in the study area as well as share a plan **shaped by the community**. This feasibility study is the first step in the process of bringing an idea to life, and will be followed by further in-depth studies, analysis, design development, and exploration of potential funding.





I-95 FEASIBILITY STUDY

Overview

Introduction

The Bridging I-95 Cap Feasibility Study seeks to envision the future of a public space over Interstate 95 between North Jackson and North Adams Streets and Delaware Ave and W 6th Street.

In the 1960s Interstate 95 was constructed through downtown Wilmington, dividing a once cohesive neighborhood fabric. The City of Wilmington, DeIDOT, and WILMAPCO set out to repair this division by capping over I-95 and adding a public amenity to the neighborhoods.

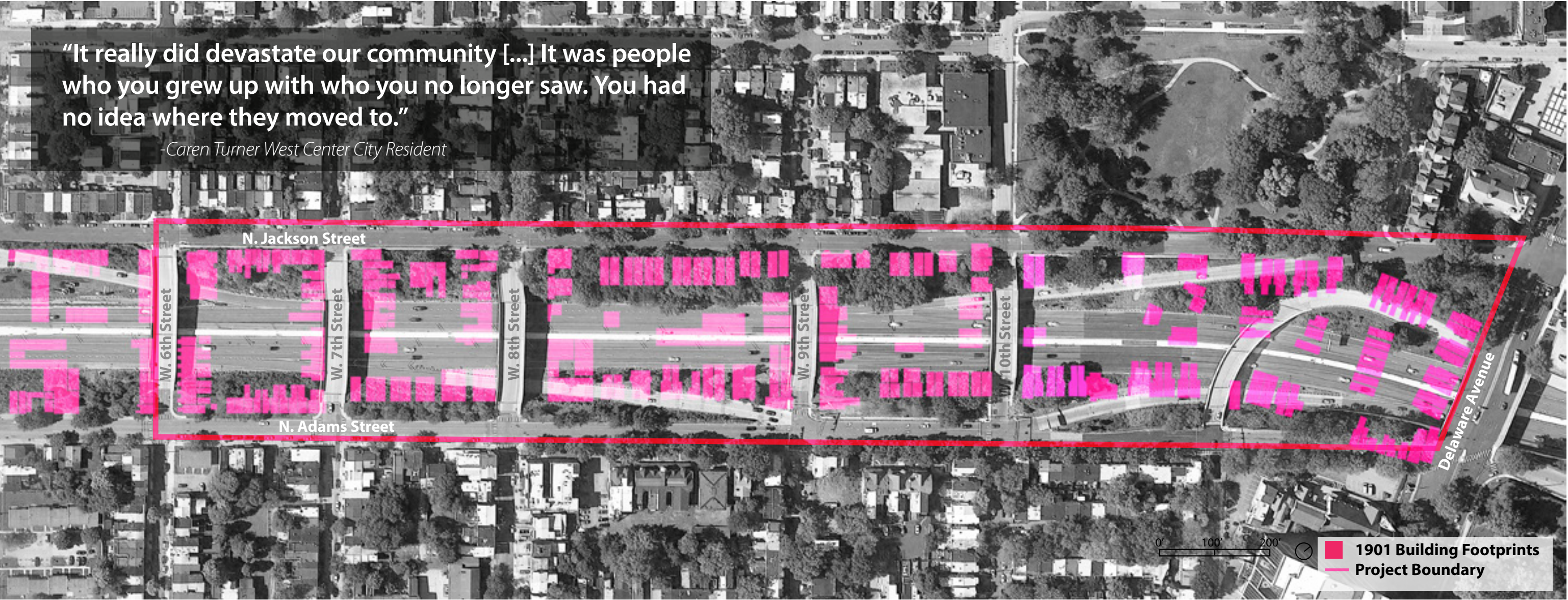
In 2021 The City of Wilmington, DeIDOT, and WILMAPCO engaged with Hargreaves Jones to study the feasibility of a park over present-day air space over I-95 in downtown Wilmington, Delaware. The planning process, which kicked off in August 2021 and spanned the subsequent 16 months, produced a vision for the future that is not only feasible, but developed in collaboration with and supported by the community. The project team worked closely with members of the public, as well as an advisory committee, to collaboratively design the proposed public space, ensuring that the very communities that would live adjacent to the cap park could see their own preferences and recommendations reflected in the proposed plan.



Introduction

For generations, the West Center City, Trinity Vicinity, Hilltop and Hedgeville were seamlessly connected by a residential-scale, neighborhood fabric. The construction of I-95 not only removed the connection of these neighborhoods, it also changed the scale of buildings and programs adjacent. The addition of I-95 through downtown increased traffic on North Jackson and Adams Streets, converting once-quiet neighborhood streets into busy connectors to I-95. What resulted were dangerous and unpleasant pedestrian conditions for community members connecting across the I-95 trench.

The affected neighborhoods were largely composed of middle class white families (80%) at that time with 23% being foreign born, similar to the City as a whole. Over time, the changes to Wilmington’s overall racial composition were amplified by the construction I-95 through these neighborhoods. Today, the area consists of a population that is 79% African American and minority, with the residents mainly considered as low income families.



Community Advocacy

Building on the community work of West Side Grows United Neighbors program, the cap vision builds on years of dreaming, collaborating, and advocacy.

The feasibility study builds off of the work done by West Side Grows Together United Neighbors, a nonprofit program that has advocated for recognition of the impact I-95's construction has had on the adjacent communities. The United Neighbors program has called for change over the I-95 corridor through public programs and activities, as well as mural painting events on the bridges over the highway. The feasibility study is the first step toward realizing the community's ideas for a shared green space near Wilmington's downtown area. Throughout the planning process, the project team recognized the importance of the opportunity at hand, and the need for a community-driven ideation process.

THIS IS AN OPPORTUNITY

Reconnect the neighborhoods divided by the construction of I-95 by working with the community and key stakeholders to **re-imagine the future of the Jackson-Adams Corridor** between the Delaware Avenue Bridge and the 6th Street Bridge.

THIS IS A COLLABORATION

Build on community efforts by engaging local leaders, community groups, stakeholders, and neighbors. Through workshops, surveys, and collective visioning this plan will represent the **ideas and aspirations of those who know the needs of the community best.**



WEST SIDE GROWS UNITED NEIGHBORS

Feasibility Study Goals

The feasibility study established four primary goals, as well as three ‘givens’, outlined below. The project goals are what helped shape the plan, while the “givens” are commitments to the community that the proposed cap will not require commercial or residential relocation, significantly impact the Level of Service (LOS) for cars traveling though the project area, and that there will be no significant reconfiguration to the Interstate.

- Reconnect** the neighborhoods divided by the construction of I-95 within the Jackson-Adams Corridor between the Delaware Avenue Bridge and the 6th Street Bridge.
- Support** neighborhood character, cohesion, and pride.
- Provide** equitable, safe, and connected access for pedestrians and people riding bicycles and using all modes of transportation.
- Create** inclusive, welcoming, vibrant public urban outdoor experiences through public realm & landscape amenities for residents of the adjacent neighborhoods.

GIVENS

- No commercial or residential relocations.
- Maintain an acceptable level of traffic flow through the project area balanced with a safe pedestrian oriented environment.
- No significant reconfiguration of I-95.

Existing Conditions

The study area is topographically complex, creating both constraints and design opportunities

Today, N. Jackson Street sits higher than North Adams, with the highest point at the Jackson/Delaware intersection and the lowest at the Adams/W 6th street intersection. The existing site’s topographical variation creates opportunities for utilizing the existing elevation changes between Jackson and Adams streets to create new views and a varied experience throughout the proposed park. The corridor, like much of Wilmington, has significant tree canopy, creating an experience that is unique among urban areas. The initial study area included 12 acres of present-day airspace, and assumed all cross streets would remain open. Any closure of cross-streets would increase the overall park acreage.



The W. 7th Street Bridge looking East at Adams

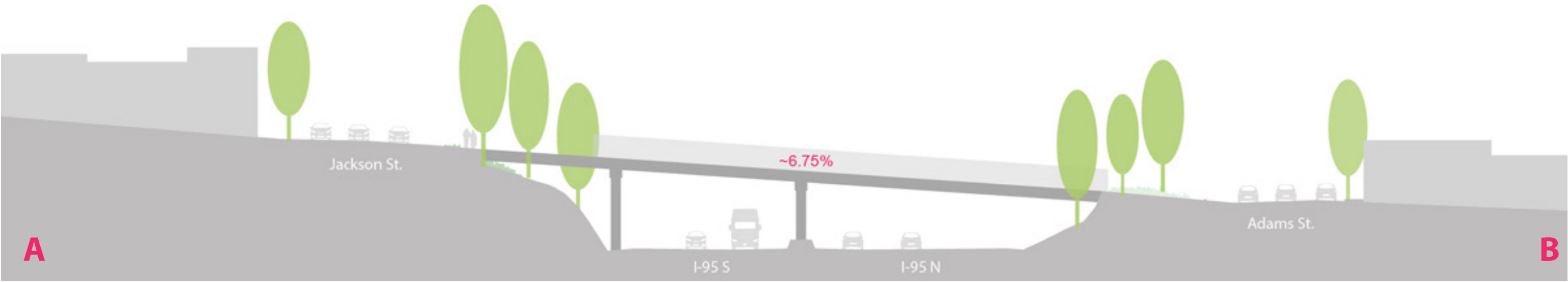


I-95 from the 9th Street off ramp

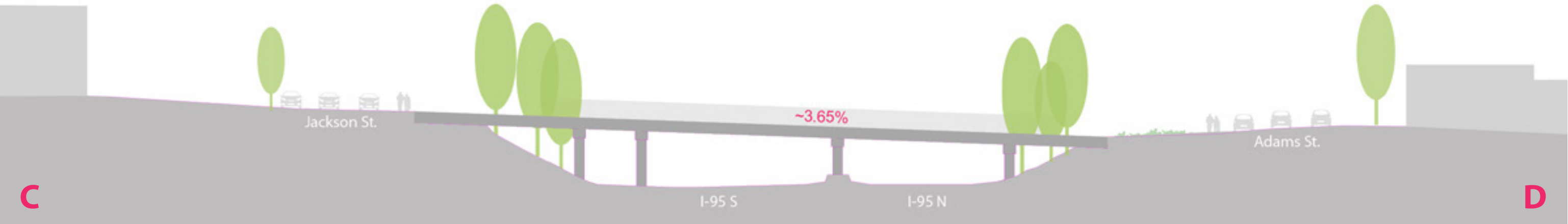


I-95 from North Adams

Existing Conditions

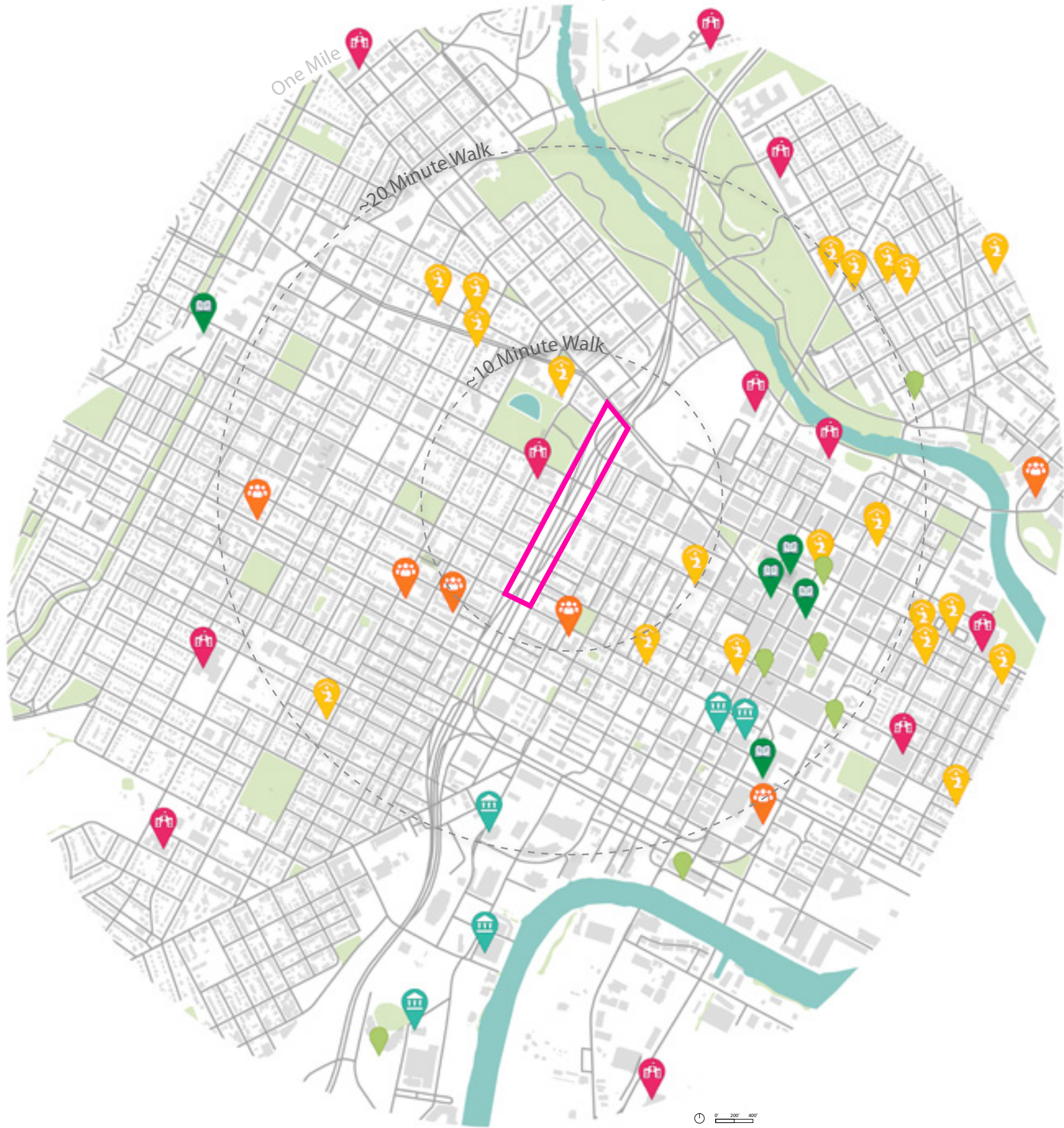


The 7th Street bridge has a slope of approximately 6.75%







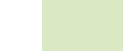


The 10th Street bridge is more level, and has a slope of approximately 3.65%

Existing Conditions - Community Anchors



Within One Mile Of The Project Site:

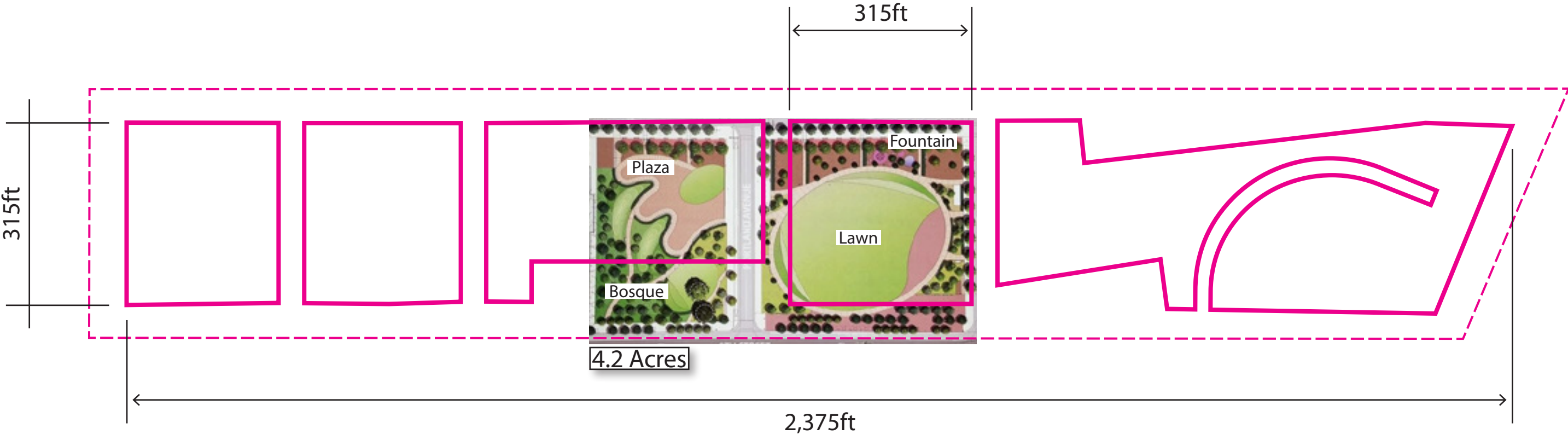
-  **5** Museums
-  **5** Libraries
-  **11** Schools
-  **20+** Places Of Worship
-  **4+** Community Centers
-  **7+** Landmarks
-  **~10** Parks



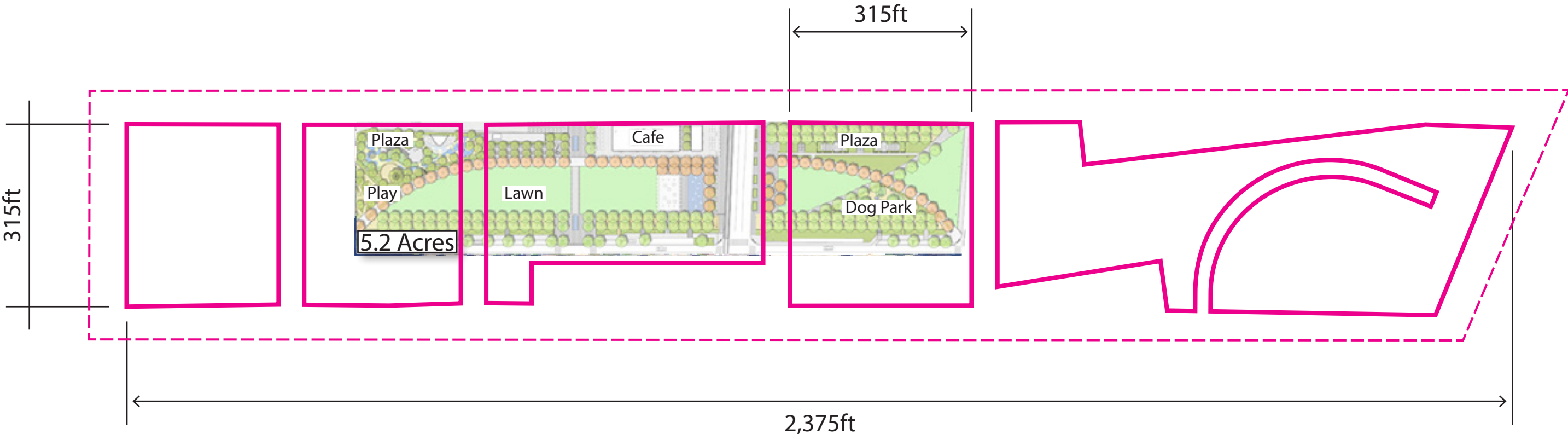
I-95 FEASIBILITY STUDY

Scale Comparisons

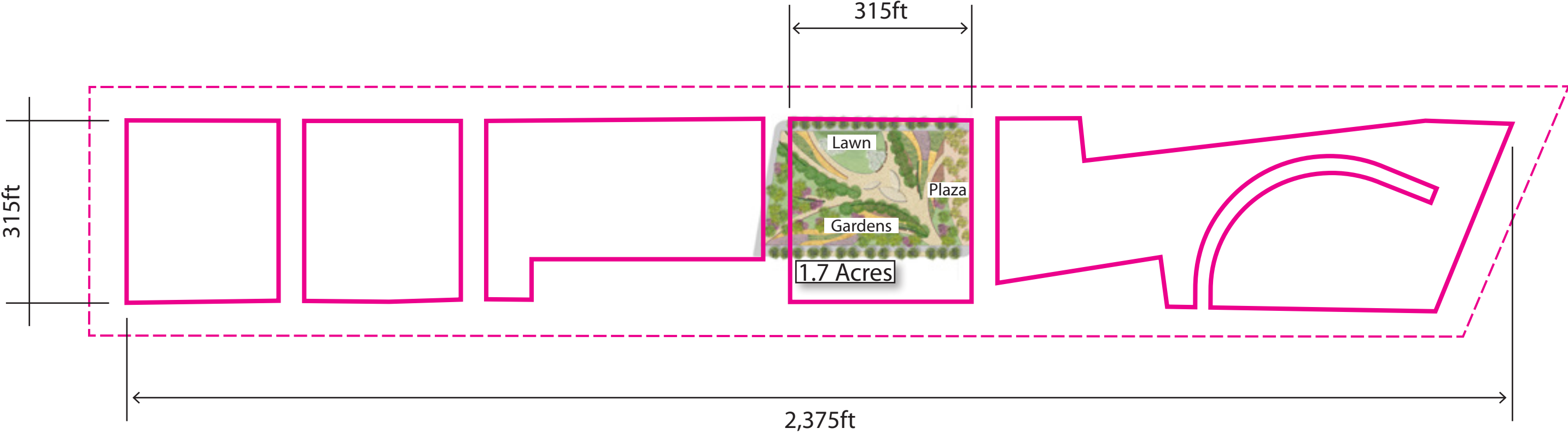
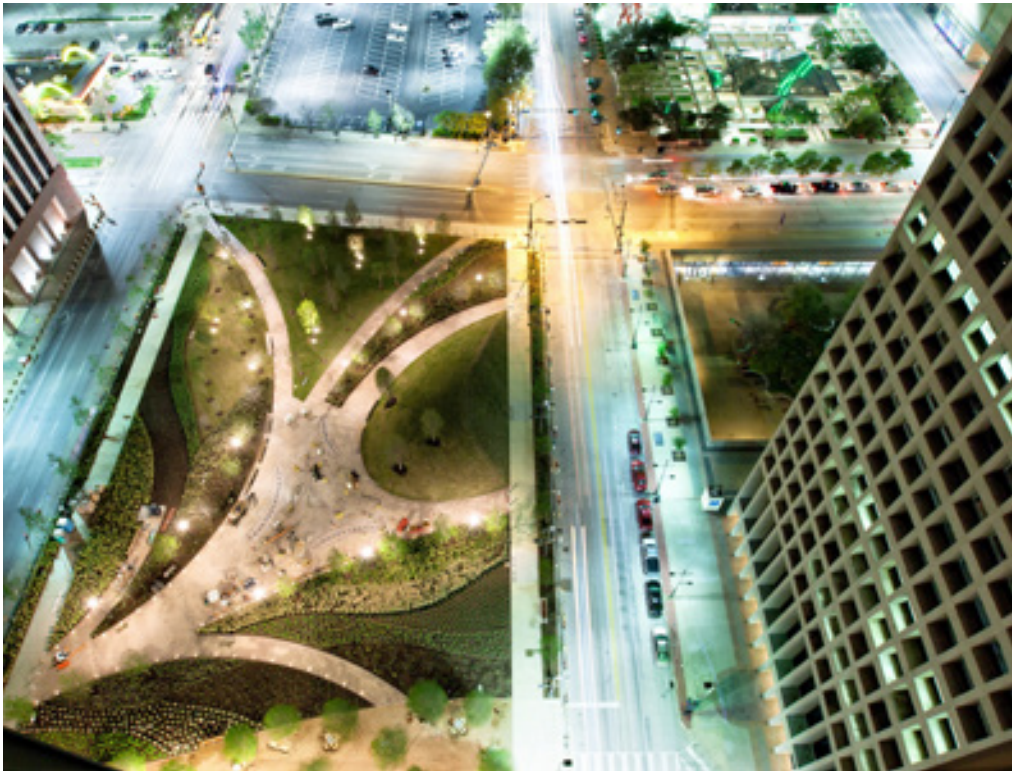
SCALE COMPARISONS | The Commons, Minneapolis, MN

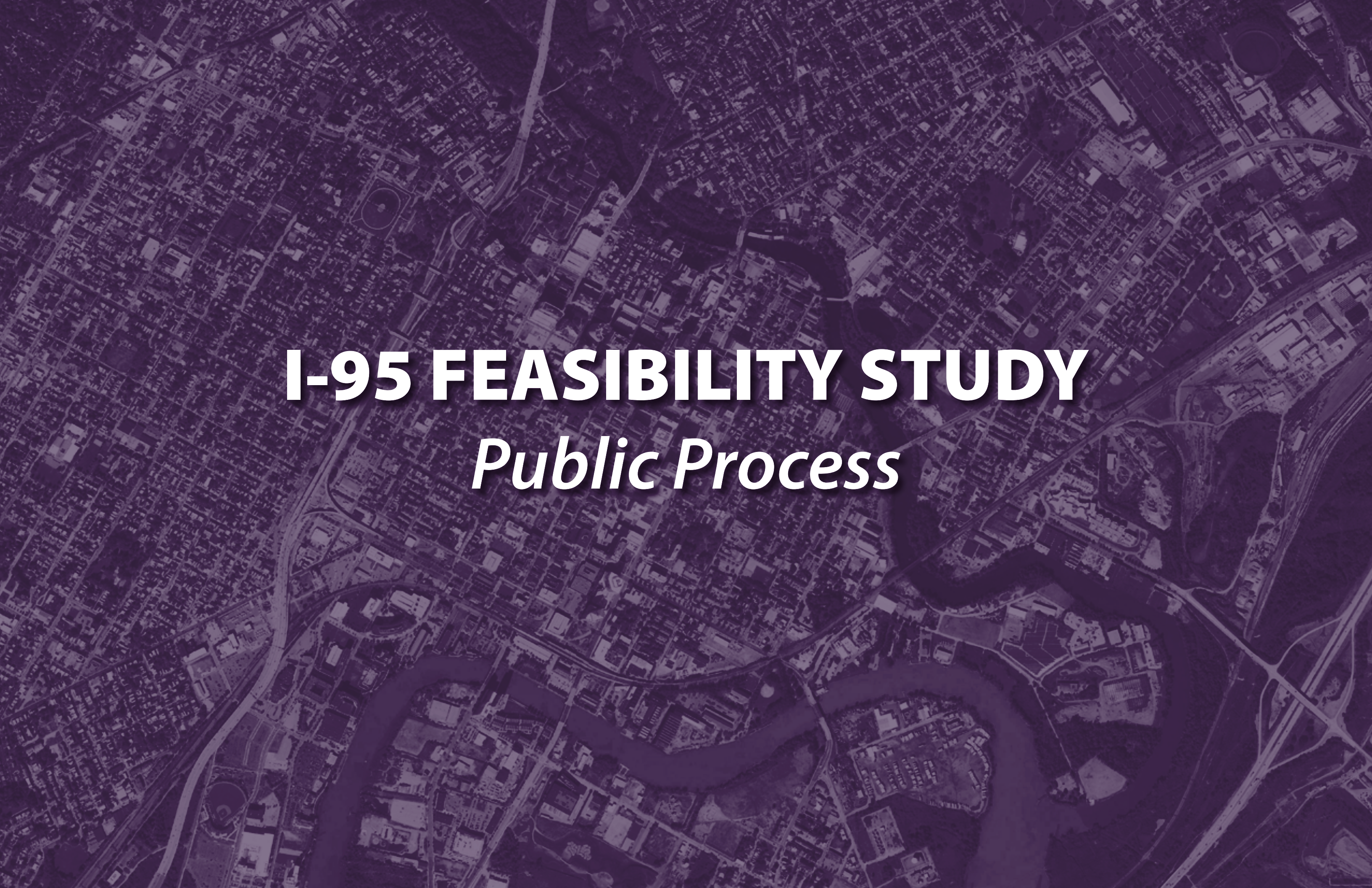


SCALE COMPARISONS | Klyde Warren Park, Dallas, TX



SCALE COMPARISONS | Civic Park, Dallas, TX





I-95 FEASIBILITY STUDY

Public Process

Public Process

The vision for the future cap was drafted in collaboration with the community

Over the course of 16 months, the plan was guided by the community's desired connections, preferred programs, design feedback, and visions for Wilmington's connected future. Community preferences were collected through in person and virtual workshops, a survey, and ongoing comment collection. Each workshop built upon the last, prompting the community to respond to updates, ask questions, and ultimately select concepts to move to the next round of ideation. What results is a plan in which the community can see their efforts reflected back in the design, programs, and recommendations of the draft concept.



Let's make a vision for the future of I-95

When I picture the future of this place, I envision...

*When picturing the future of this place, the community envisions **a place for everyone** that is **safe, walkable, and colorful**. This includes **well-lit, well-maintained programmed areas** that prioritize **sustainability, native plantings**, places for families and community members to **play** and **exercise** comfortably, and that **celebrates the history of the neighborhoods**.*

A vision for the future, collaboratively drafted at Workshop 01 and 01B

Community Workshop #1 + #1B: Program Feedback (November 2021-January 2022)

The community-selected programs shaped the proposed draft design

During two advisory committee meetings and two public workshops (one in person, one virtual), members of the public were asked to vote on their preferred programs for a future cap space. Participants were given a designated number of “I support this” and “this does not belong here” votes for each category to encourage decision-making on programs. The community was largely in consensus over which programs belonged in a future park, and showed a desire for flexible lawn spaces, pedestrian plazas, play, accessibility improvements, public art, traffic calming and more. Participants were less supportive of retail, parking, ride/scooter share, and general commercial development on the cap. See the appendix for more detailed outcomes of each workshop and survey results.



Program selection and mapping desired connections at Workshop 01 in November 2021.

Community Workshop #1 + #1B: Program Feedback (November 2021-January 2022)

Trees



Pedestrian-only zones



Shade



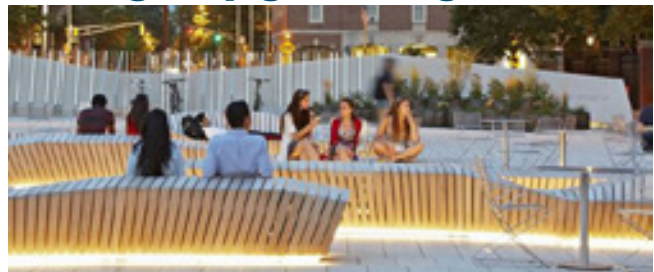
Multi-function landscape



Community gardens



Small group gathering



Embedded Lights:



Pollinator gardens



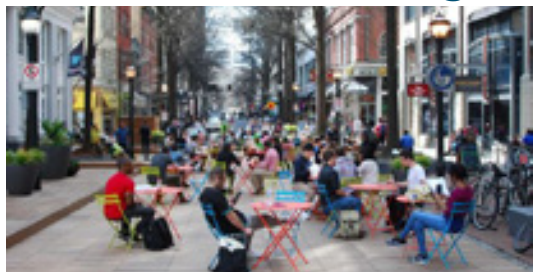
Traffic calming



Performance venue



Cafe/moveable seating



Flexible lawn



Protected bike lane



Accessibility Improvements



Playground



Desired program outcomes from Workshops 01 and 01B (virtual), and Advisory Committee Meeting 1

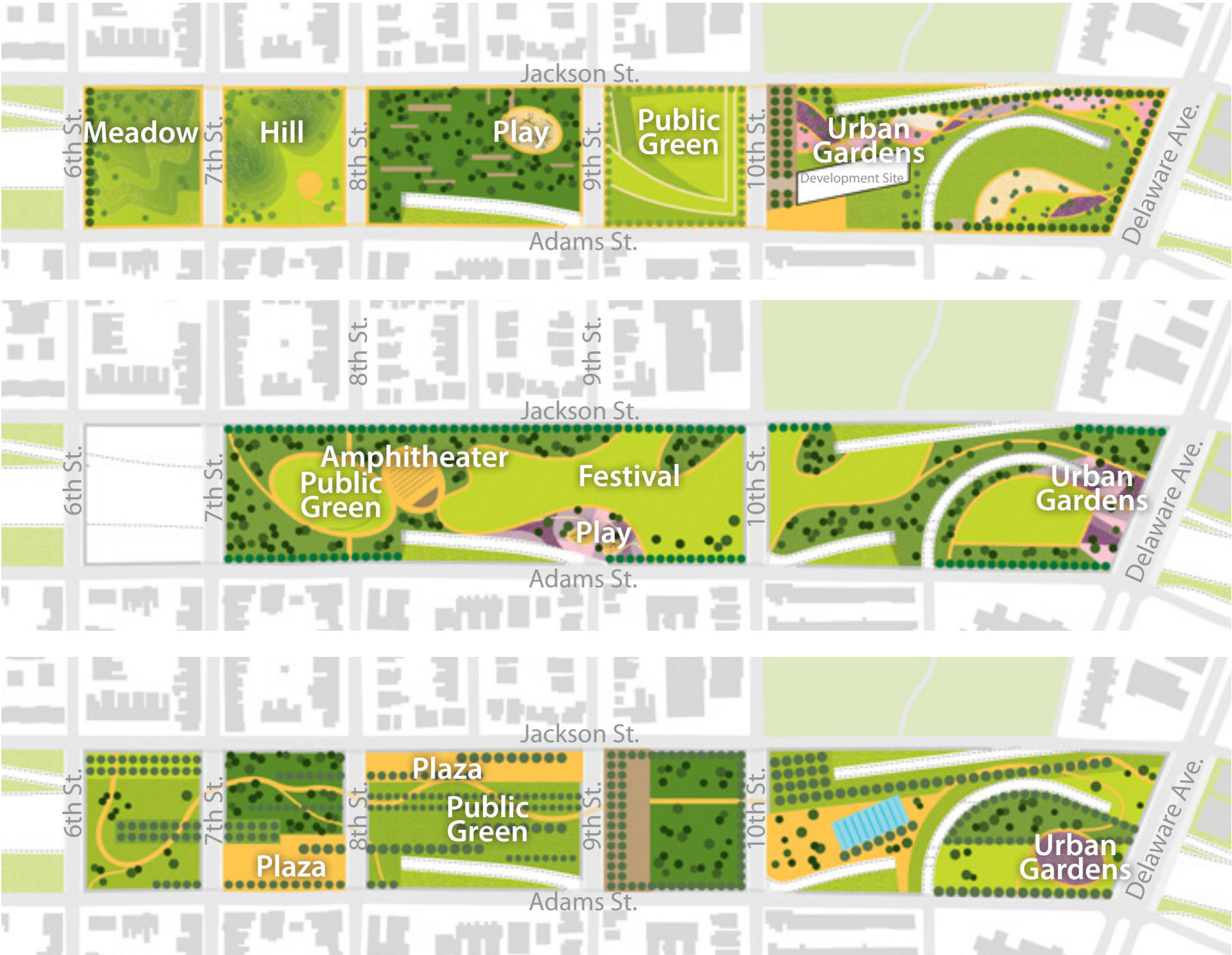
Community Workshop #2: Three Initial Ideas (April 2022)

Community members commented on the three initial ideas, preferring the concept that proposed closing streets to create a more contiguous park experience

In April 2022, community members came together to comment on the three initial ideas presented. This was the first time high-level concepts had been made public. The community commented on the design, programs, and elements of the three initial ideas: Outdoor Rooms, Greenway, and The Commons. Ultimately, the community showed a preference for Greenway, which proposed closing two bridges over the Interstate to create a more contiguous public green space. There was strong community preference for capping all available space and requested that the 6th/7th Street span be included in the final concept.

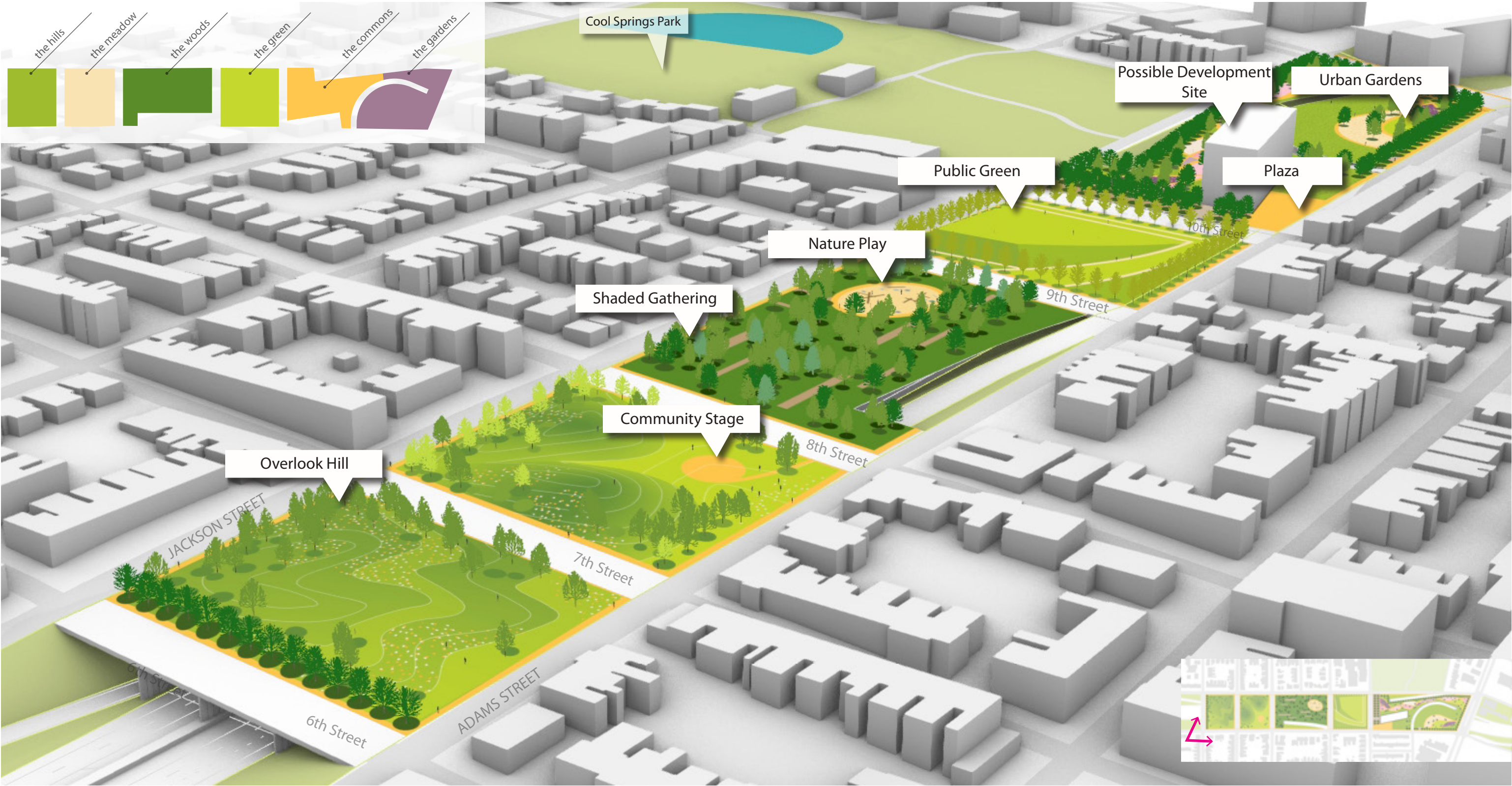


Members of the public comment on three 'Early Ideas' in April 2022



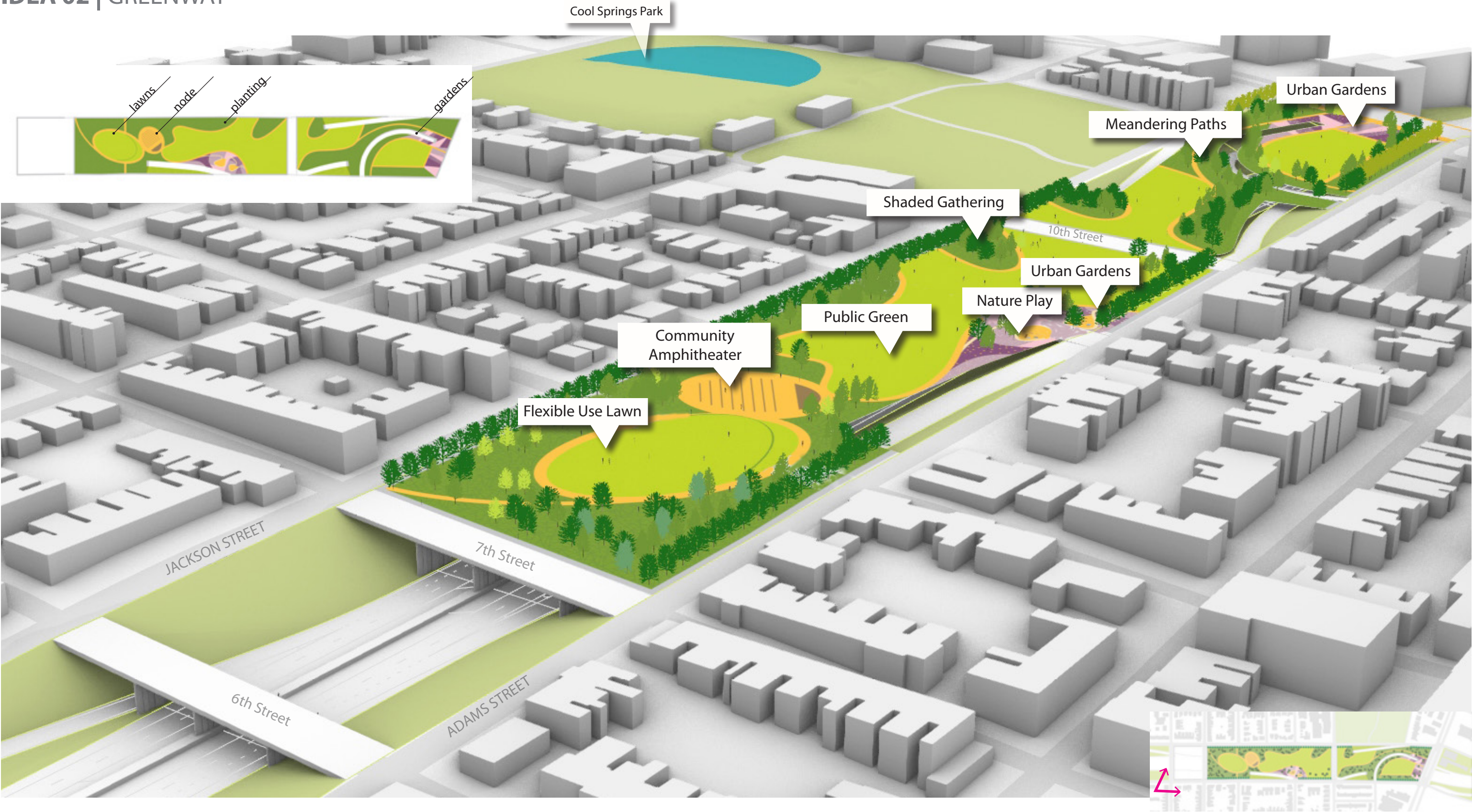
Community Workshop #2: Three Initial Ideas (April 2022)

IDEA 01 | OUTDOOR ROOMS



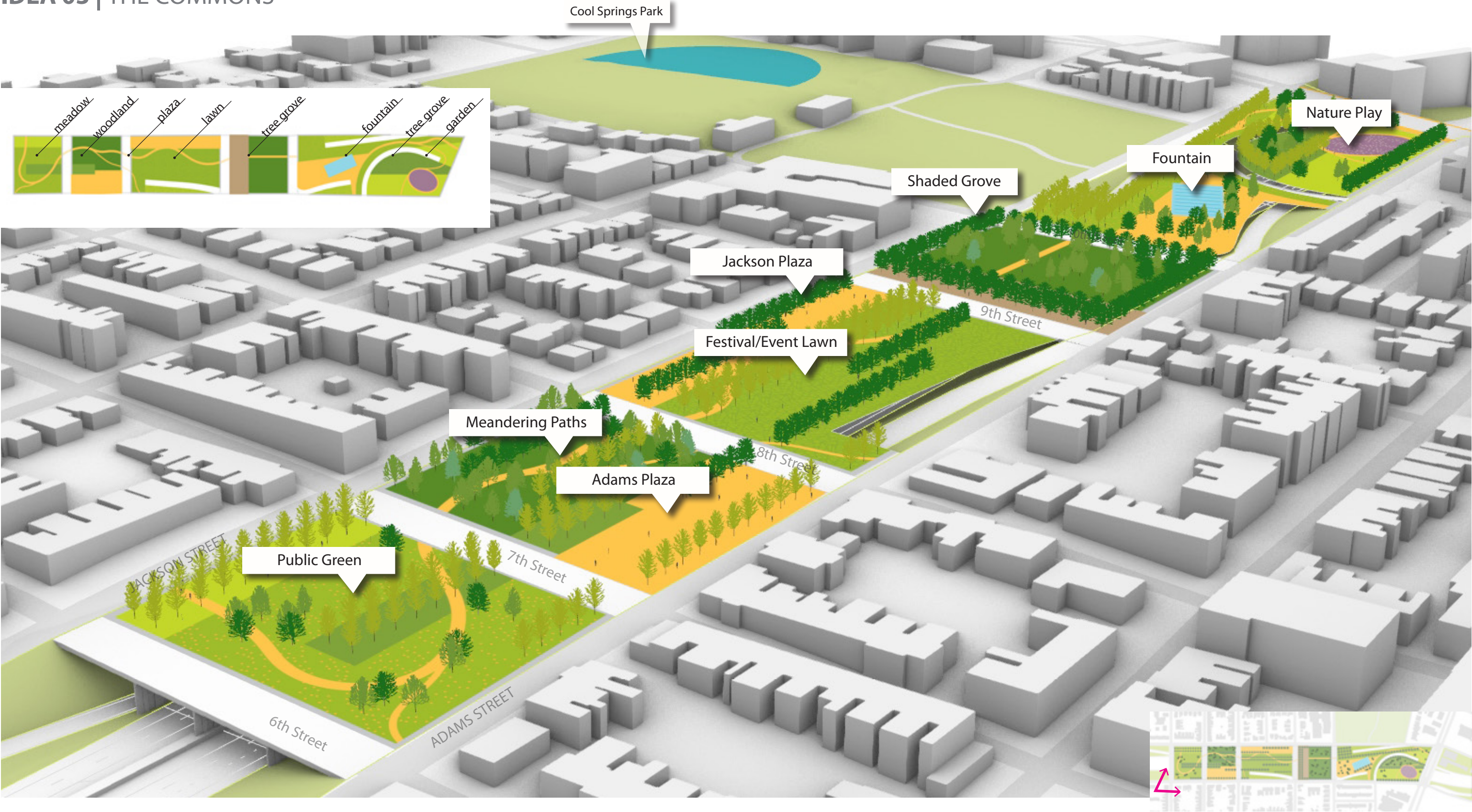
Community Workshop #2: Three Initial Ideas (April 2022)

IDEA 02 | GREENWAY

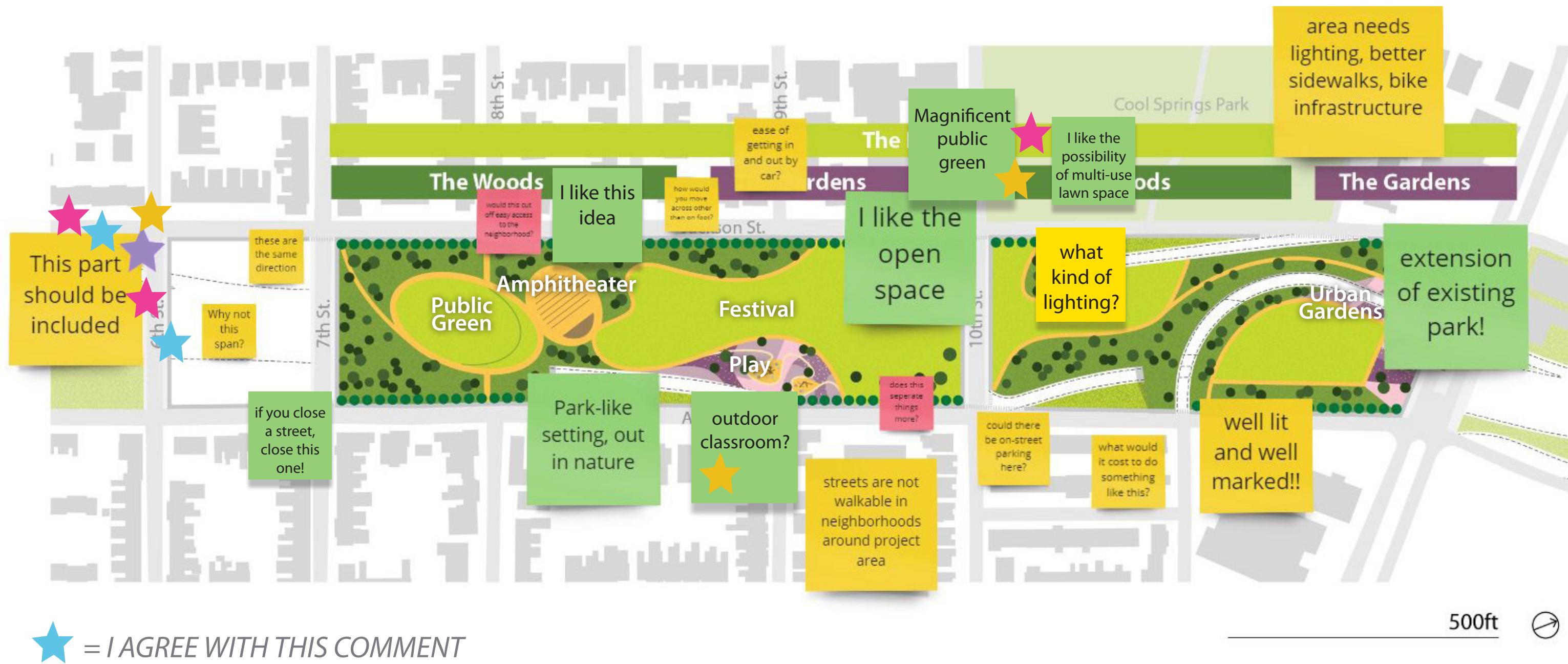


Community Workshop #2: Three Initial Ideas (April 2022)

IDEA 03 | THE COMMONS



Early Approach 2: Greenway
a contiguous public green



Feedback on Early Idea “Greenway”

Community Workshop #3: Concept Development (September 2022)

Members of the public select final programs and design elements for the preferred plan direction

Members of the public reconvened in September 2022 to comment on the three new iterations of the Greenway. Each draft concept closed two bridges (7th and 9th streets), creating more contiguous public space. Concepts varied in their play and plaza locations, whether or not they included a development space, as well as varied garden formality and size. One concept included a community amphitheater, which was popular among workshop participants.



The community provides feedback on three draft concepts, September 2022

CONCEPT A



CONCEPT B



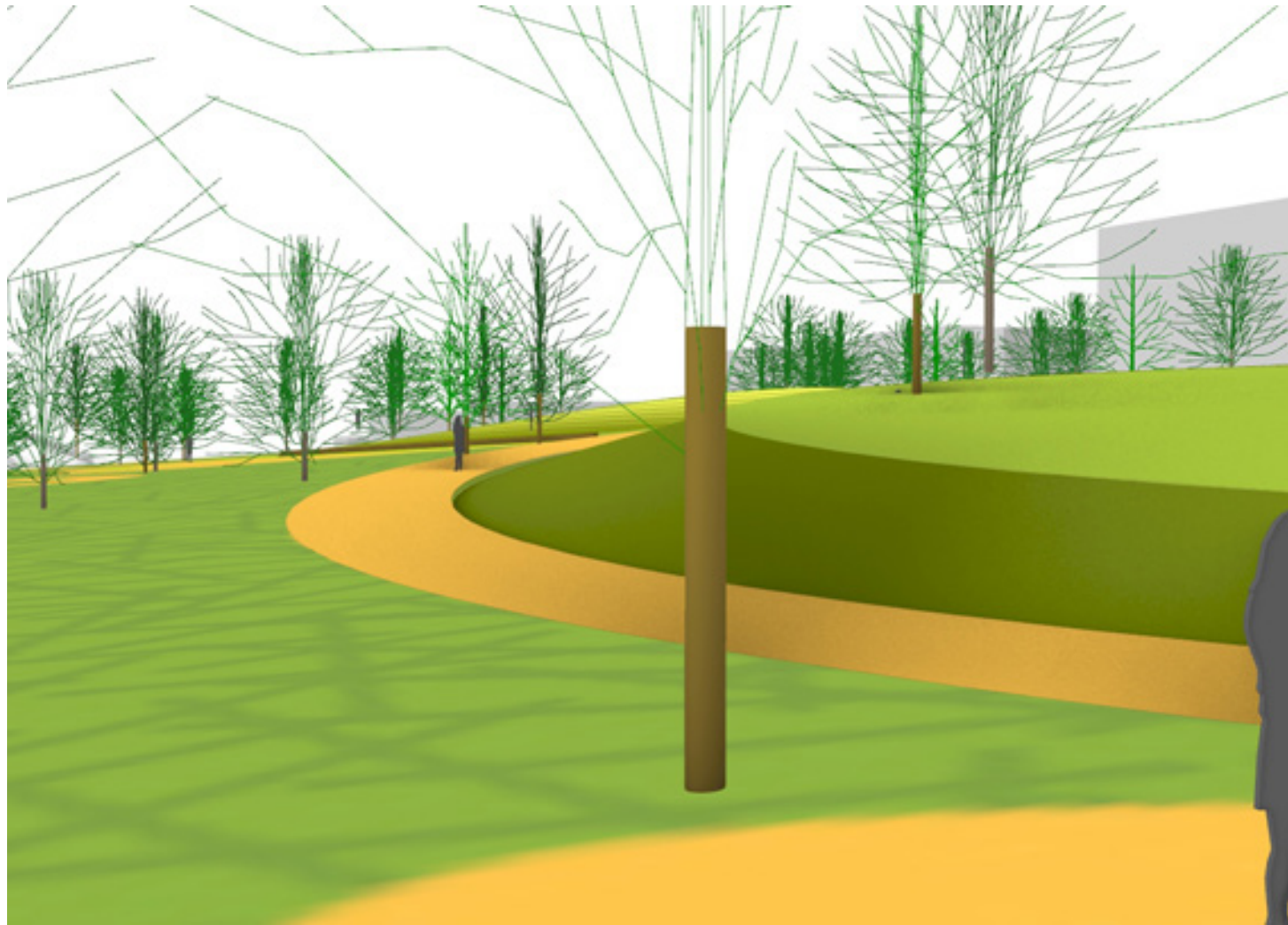
CONCEPT B1



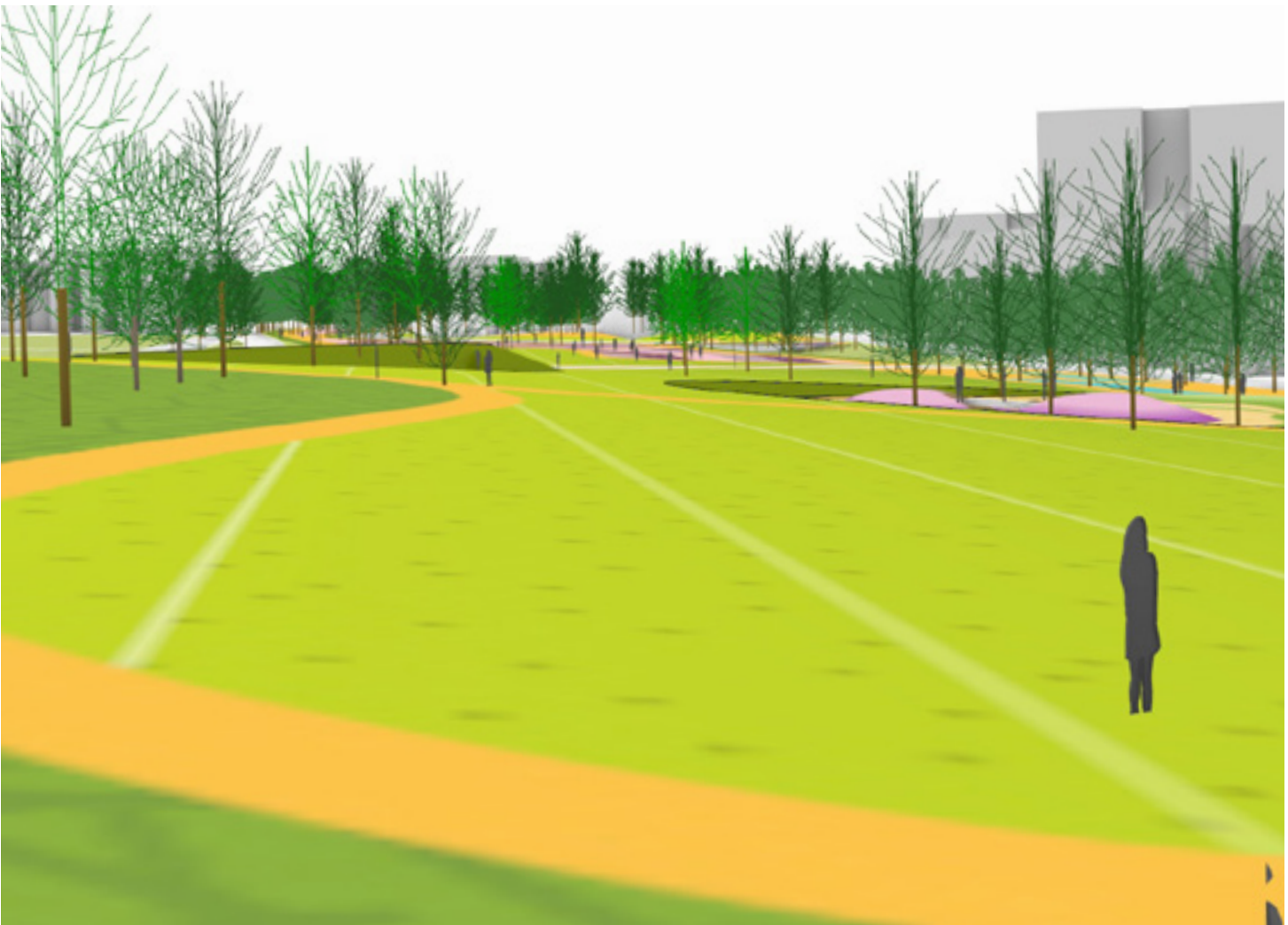
CONCEPT A | GREENWAY + DEVELOPMENT



CONCEPT A | GREENWAY + DEVELOPMENT



View 01: Shaded Park Setting Looking South



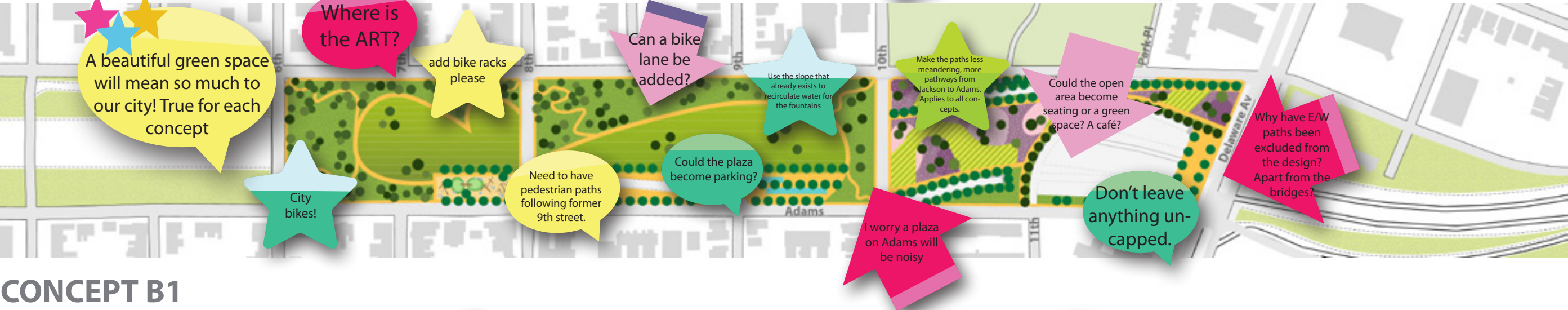
View 02: Public Green, Play, and Gardens looking North

Community Workshop #3: Concept Development (September 2022)

CONCEPT A



CONCEPT B



CONCEPT B1



Public feedback on three concepts

Community Workshop #3: Concept Development (September 2022)

ADDITIONAL COMMENTS

- Concerns with **development**
- Locate convenient **restrooms**
- **Pedestrian and bike connections**
- Propose **pedestrian-friendly** street connections
- Investigate **traffic calming** on N. Jackson and N. Adams streets
- **Dog park** desired
- **Community amphitheater** good, concern with major performance venue

Key takeaways from Workshop #3, September 2022

An aerial photograph of a city, likely Chicago, showing a dense urban landscape with numerous buildings, trees, and a prominent multi-lane highway (I-95) running diagonally across the frame. A baseball field is visible in the upper left quadrant. The image is overlaid with a semi-transparent dark blue filter.

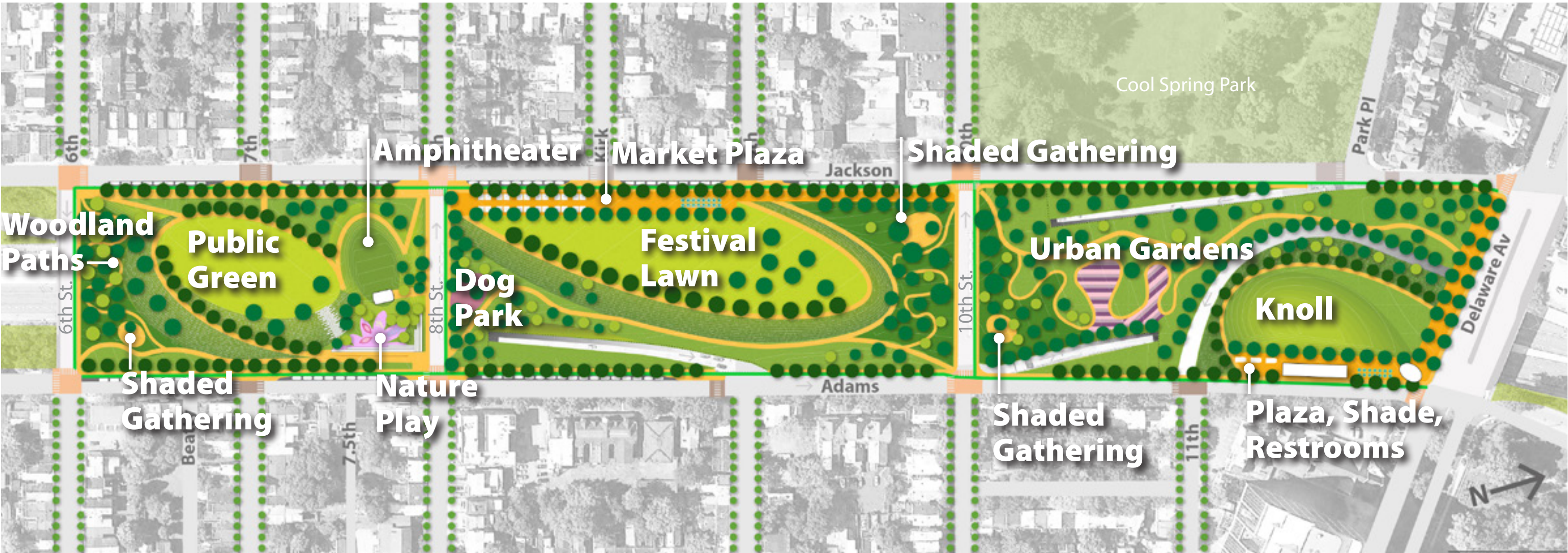
I-95 FEASIBILITY STUDY

Updated Concept

Design Concept

The future cap park provides amenities to the neighborhood as well as ecological services to the city

The final proposed draft concept pulls together the community program and design preferences into a cohesive, 15 acre vision for the future of a public park over I-95. The proposed park includes a public green, community amphitheater, nature play, gardens and shaded gathering woven into meandering woodland paths, dog play, activated plazas, and topographical changes to further emphasize the already impressive views to Downtown Wilmington and the surrounding neighborhoods. The proposed park also enhances pedestrian safety by suggesting traffic calming measures for N. Jackson and Adams Streets, as well as on the 8th and 10th street bridges. A new pedestrian plaza on Delaware Ave supports safer pedestrian connections and provides space for amenities such as food trucks. The numerous plazas provide opportunities for public art, pop-up markets, informal gathering, and rest. All together, the cap would increase area softscape by approximately over 12 acres, and add over 500 trees. This would not only improve the experience of the neighborhoods it will also contribute positively to stormwater management, reducing urban heat island effect, and providing habitat and other critical ecosystem services to the city. The plan is phaseable, and could be implemented over time, span by span, as funding becomes available.



The final proposed concept for the feasibility study includes programs desired by the community, bike connections, and traffic calming

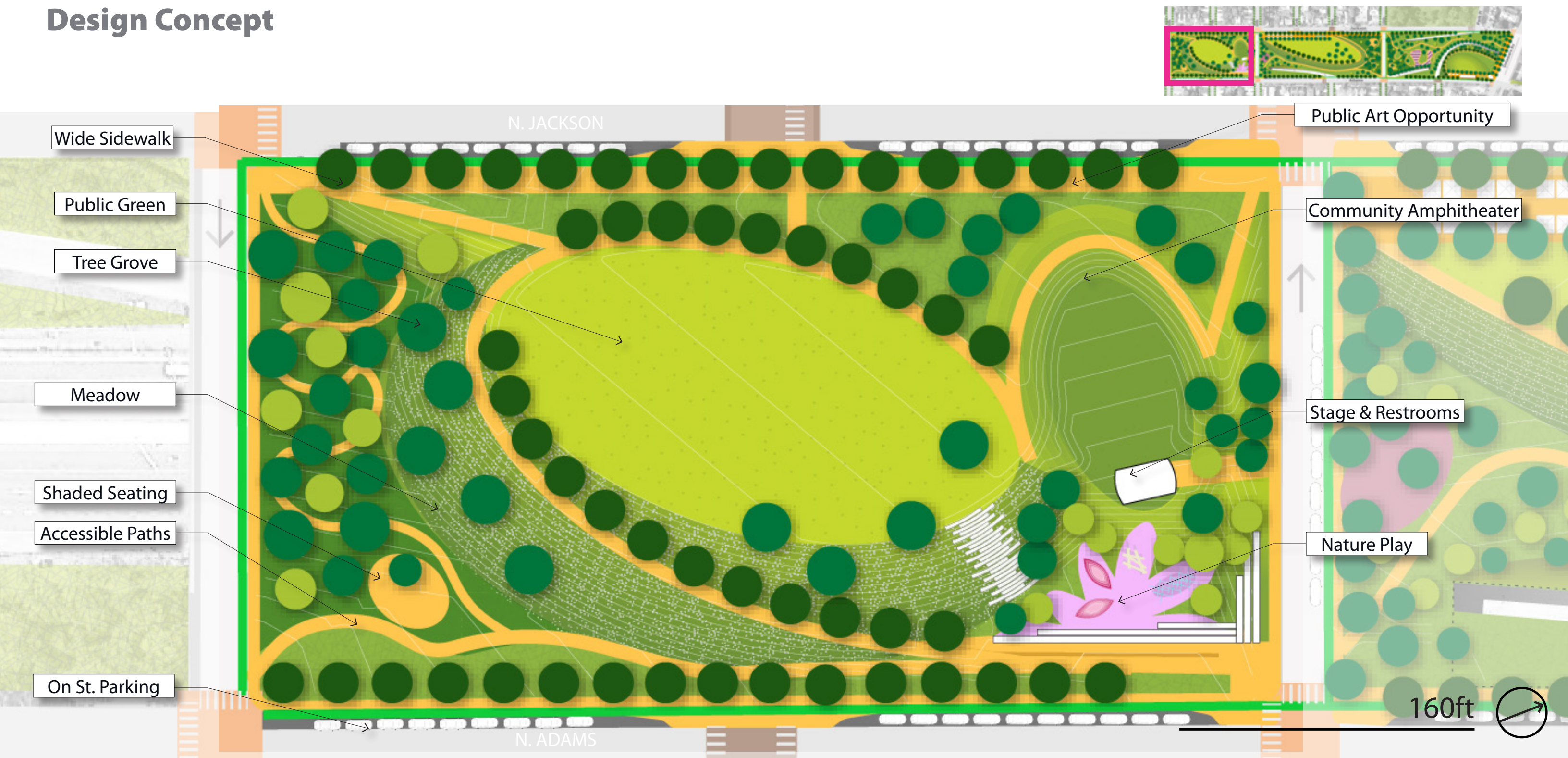
500ft

Community-Selected Programs in the Draft Final Concept



Programs selected by the community in the proposed plan

Design Concept



The southern-most portion of the proposed cap park features meandering, accessible public paths through a loose woodland tree canopy. Views to downtown can be seen from both the public green and the community amphitheater, which is suitable for small group gatherings and afternoon performances. The nature play is situated near the stage and restroom of the amphitheater, while enhanced traffic calming measures and street parking on Adams slows traffic and makes safer pedestrian connection between the neighborhoods and the park.

Design Concept



The central span of the proposed cap features a festival lawn, market plaza for pop up events, interactive water feature, dog park, and shaded seating. The plazas are also opportunities to showcase public art throughout the park. The off ramp from I95 to Adams St is screened by a subtle land form and planting, allowing park visitors to look from the festival lawn to downtown with uninterrupted greenery.

Design Concept



The northernmost span, from W. 10th St. to Delaware Ave is activated by civic spaces and more passive nature and landscape destinations. Winding garden paths bring visitors from 10th street toward Delaware, where plazas with shade, food trucks, and park support anchor the site at the intersection of Adams and Delaware. The Knoll allows visitors to get a new view of the park and the city, and creates a signature gathering space at the northern end of the cap.

Design Concept



Looking North-West toward Cool Spring

Design Concept



Shaded Park Setting Looking North at Adams

Design Concept



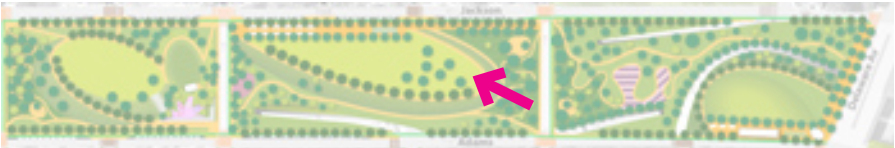
Activated Nature Play

Design Concept



Shaded Park Setting Looking North at Downtown

Design Concept



Festival Lawn Looking South

Design Concept



Looking South Over Delaware Ave

An aerial photograph of a city, likely Chicago, showing a dense urban landscape with numerous buildings, trees, and a prominent multi-lane highway (I-95) running diagonally across the frame. A baseball field is visible in the upper left quadrant. The image is overlaid with a semi-transparent dark blue filter.

I-95 FEASIBILITY STUDY

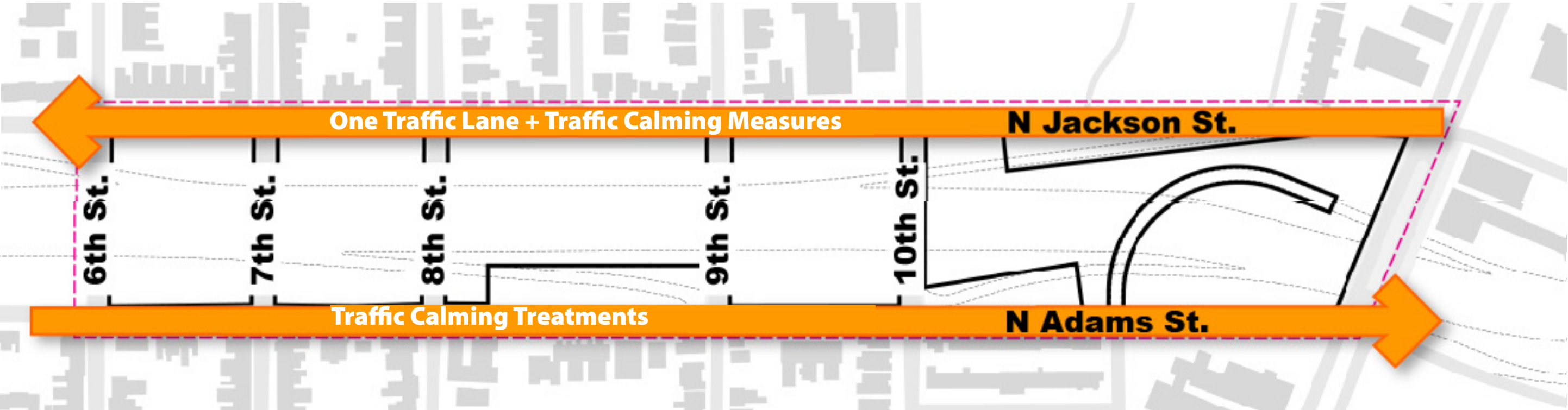
Circulation

- + Traffic Impacts
- + Road Diet / Traffic Calming
- + Parking
- + Bikes

September 2022 Traffic Analysis: Street Closure Feasibility

Closing two bridges over I-95 within the project site and adding traffic calming measures will not have adverse impacts on traffic flow

Traffic analysis found minimal impact to Level of Service if N. Jackson Street were reduced to one drive lane. Reducing N Jackson to one lane and adding traffic calming measures reduces speed of south-bound traffic near Cool Spring Park, William Lewis Elementary, adjacent residences, and the proposed cap. The study proposes similar traffic calming treatments on N Adams St. Based on preliminary analysis, with minimal impacts to Level of Service with the addition of traffic calming measures, however a more detailed analysis is still necessary. Traffic analysis confirmed that minor signal timing modifications would mitigate any impact to level of service if any two bridges were closed (W 7th St. and W 9th St. shown below). Wilmington emergency response services participated in this planning and does not anticipate a negative impact on response times if two bridges in the project area are closed to vehicular traffic.



Traffic Calming - FHWA Methods



Bicycle Lanes



Leading Pedestrian Interval



Crosswalk Visibility Enhancements



Walkways *[On the I-95 Side]*



Yellow Change Intervals



Lighting



**Road Diets
(Roadway Configuration)**



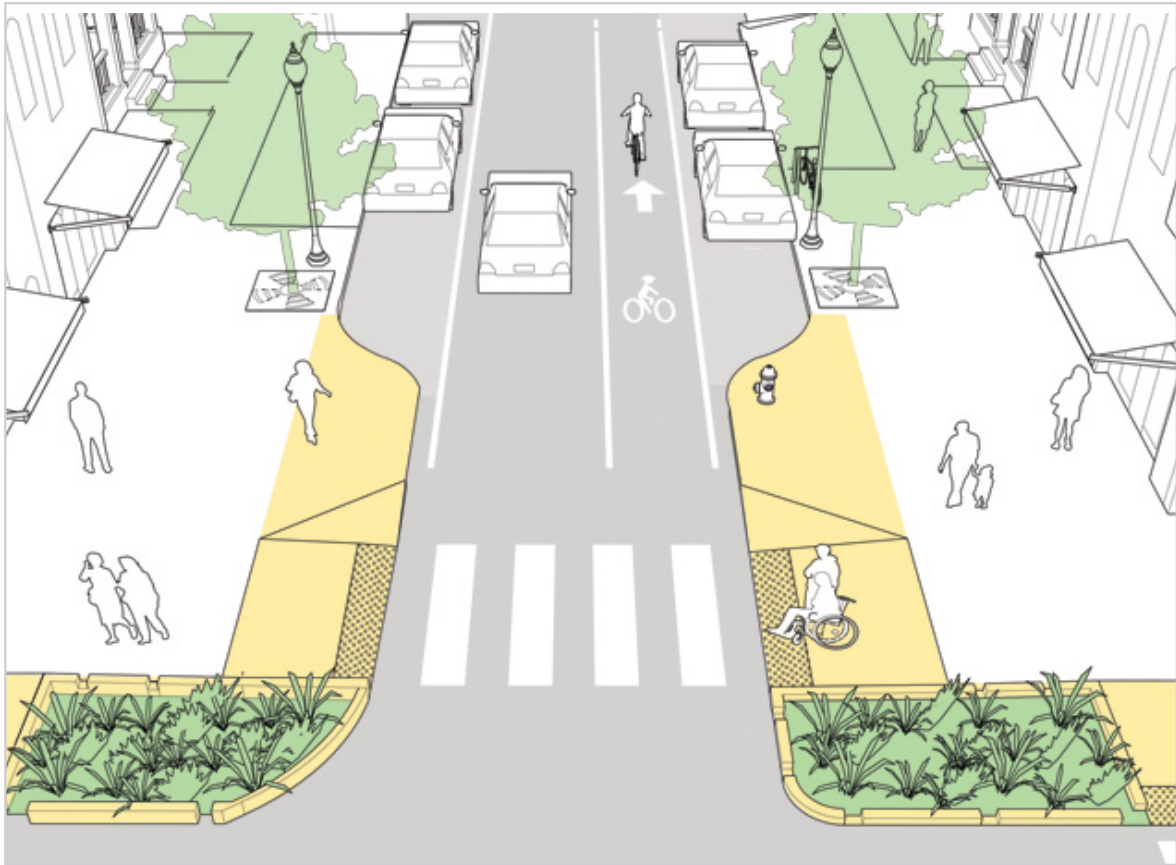
**Speed Safety
Cameras**



Road Safety Audit

All Images: FHWA

Traffic Calming: Road Diet (North Jackson / North Adams)



Bump Outs



Narrowing Streets



Raised Intersections



On Street Parking



Chicanes

All Images: National Association of City Transportation Officials

Traffic Calming: Bike Infrastructure



Raised Bike Lane



Bollards

Traffic Calming: Raised Intersection in Wilmington



Raised cross walk in Wilmington

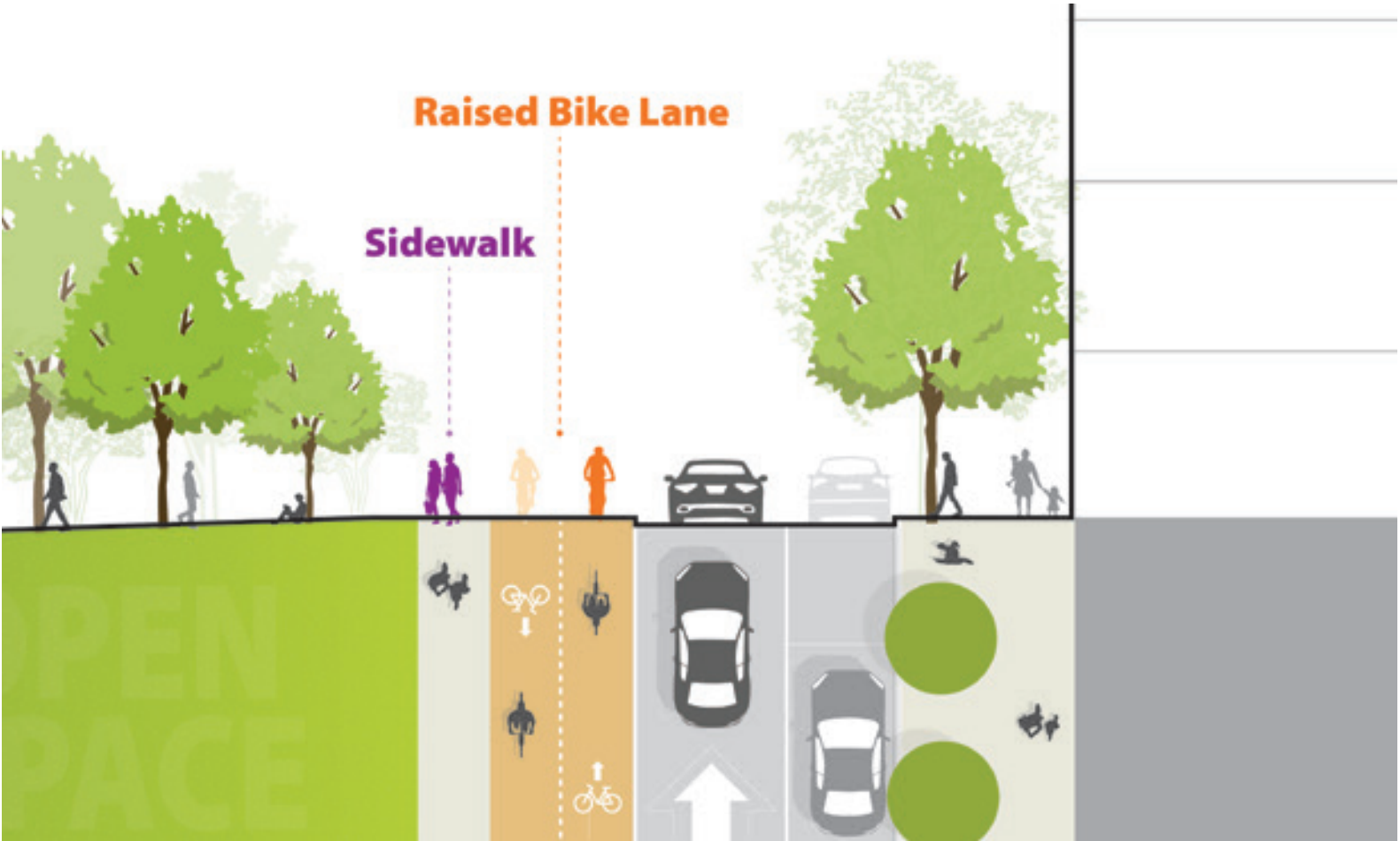
Road Diet on North Adams/North Jackson

Traffic calming and bike infrastructure methods can be phased in over time, as the cap is built.

Today, both North Jackson and North Adams are busy streets used to access I-95. Both streets are three lanes: two for travel and one for street parking. Community members have reported high speeds from cars traveling on Jackson and Adams due to their wide lanes, straight sight lines, and, on Jackson, downward slope. Shown here are conceptual sections that transition both Jackson and Adams to more pedestrian and bike friendly streets with bike lanes, improved sidewalks, and traffic calming measures.



Street condition with raised bike lane in park: one travel lane, two street parking lanes.



Street condition with raised bike lane: one travel lane, one parking lane.



Street condition with bike lane: one travel lane, one parking lane.

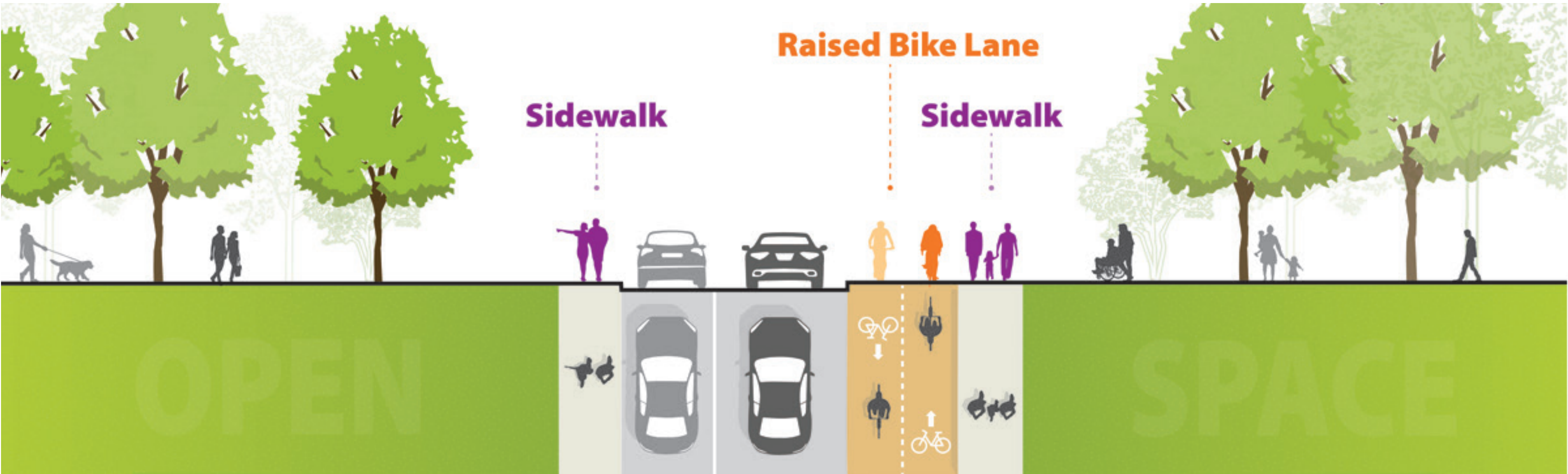
Road Diet on Cross Streets (6th, 8th, 10th)

Cross streets connect pedestrians, bicyclists, and cars East-West across the cap

The cross streets that remain open in the plan (6th, 8th, and 10th streets) connect neighborhoods east-west across I-95 through the cap. Within the project site, streets that remain open to vehicles will receive bike lane and pedestrian improvement treatments to ensure they are functional multi-modal connections for all users.



6th Street condition: one travel lane, one parking lane

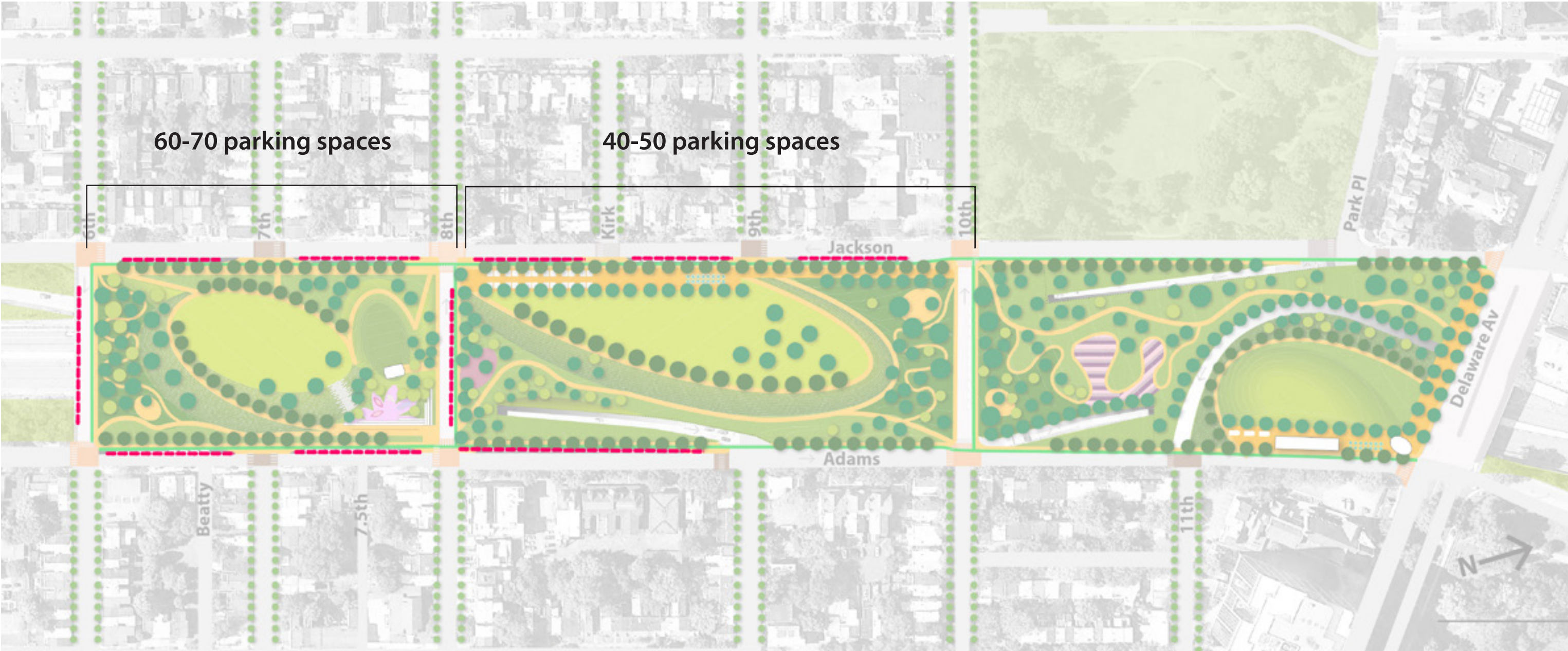


W. 8th and 10th Street conditions: one travel lane, one parking lane.

Parking

The study area and proposed public space over I-95 could reasonably accommodate +100 new parking spaces

Adding sufficient parking on the cap-side of the proposed park on both North Adams and North Jackson streets is feasible. The addition of spaces adjacent to the cap park would be suitable for daily, non-event visits to the park. Narrowing both Jackson and Adams streets and designating new on-street parking creates +100 new parking spaces, depending on how far north on-street parking is proposed within the study area. A detailed parking study is needed to determine event parking scenarios.



An aerial photograph of a city, likely Chicago, showing a dense urban landscape with numerous buildings, trees, and a prominent multi-lane highway (I-95) running diagonally across the frame. A baseball field is visible in the upper left quadrant. The image is overlaid with a semi-transparent dark blue filter.

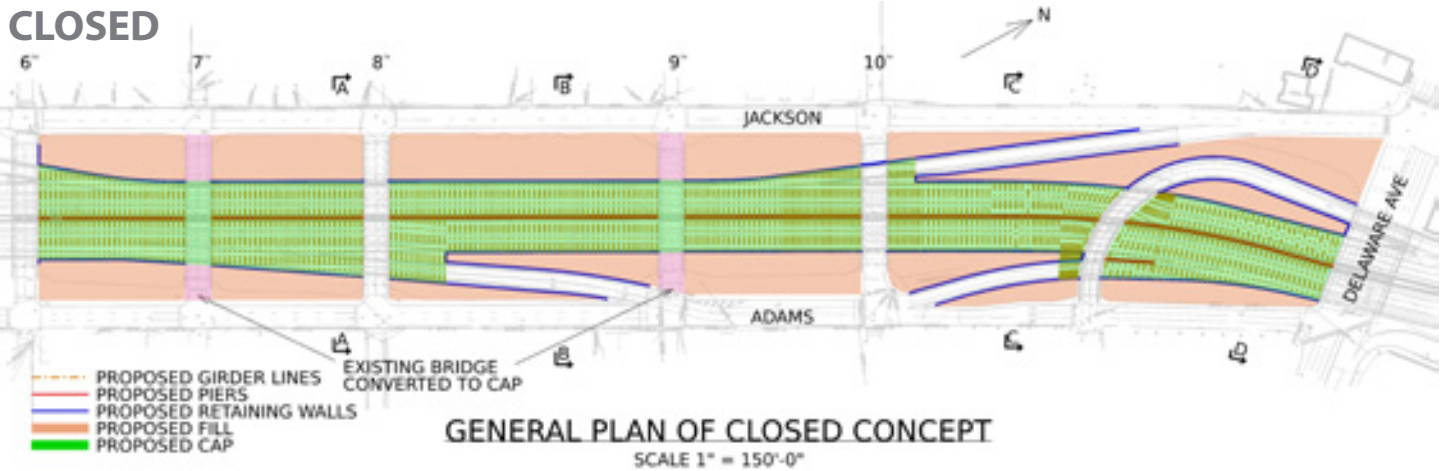
I-95 FEASIBILITY STUDY

Structural

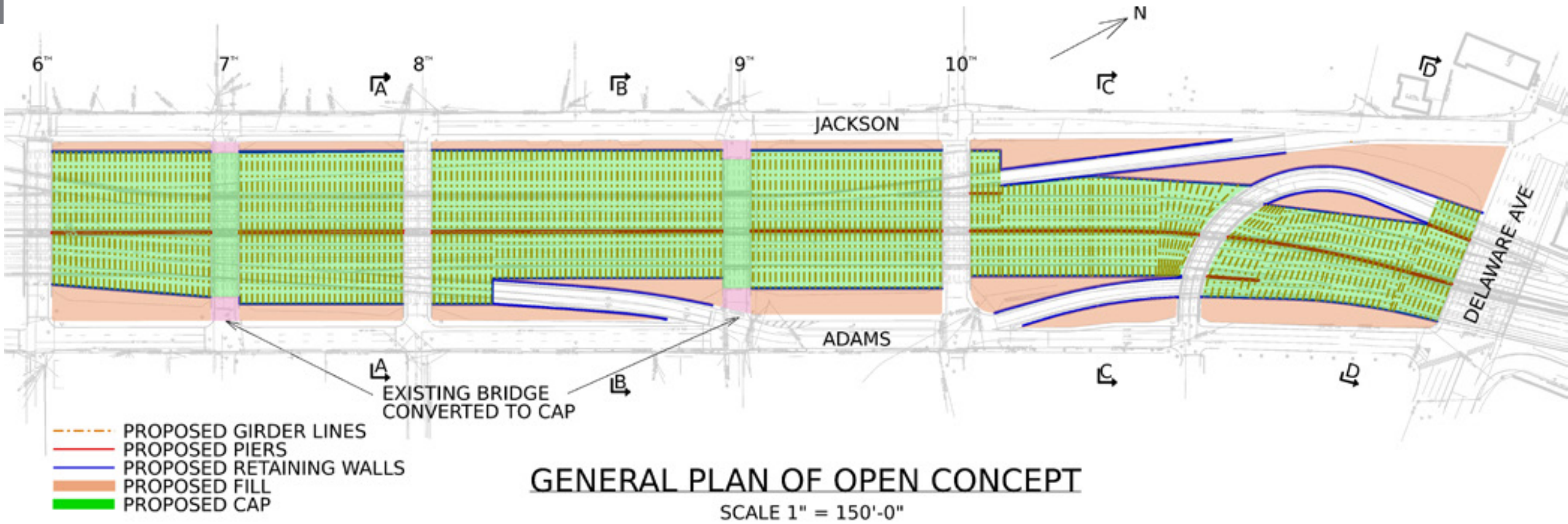
Cap Structural Considerations

Two methods of constructing the deck structure were explored

The project team explored two options for constructing the deck: a “closed” scenario and “open” scenario. The Closed option, shown right, establishes more filled area, or terra firma, resulting in less of the park is on a cap structure. The Open option maintains the current I-95 driving experience, filling only to the edge of existing piers.

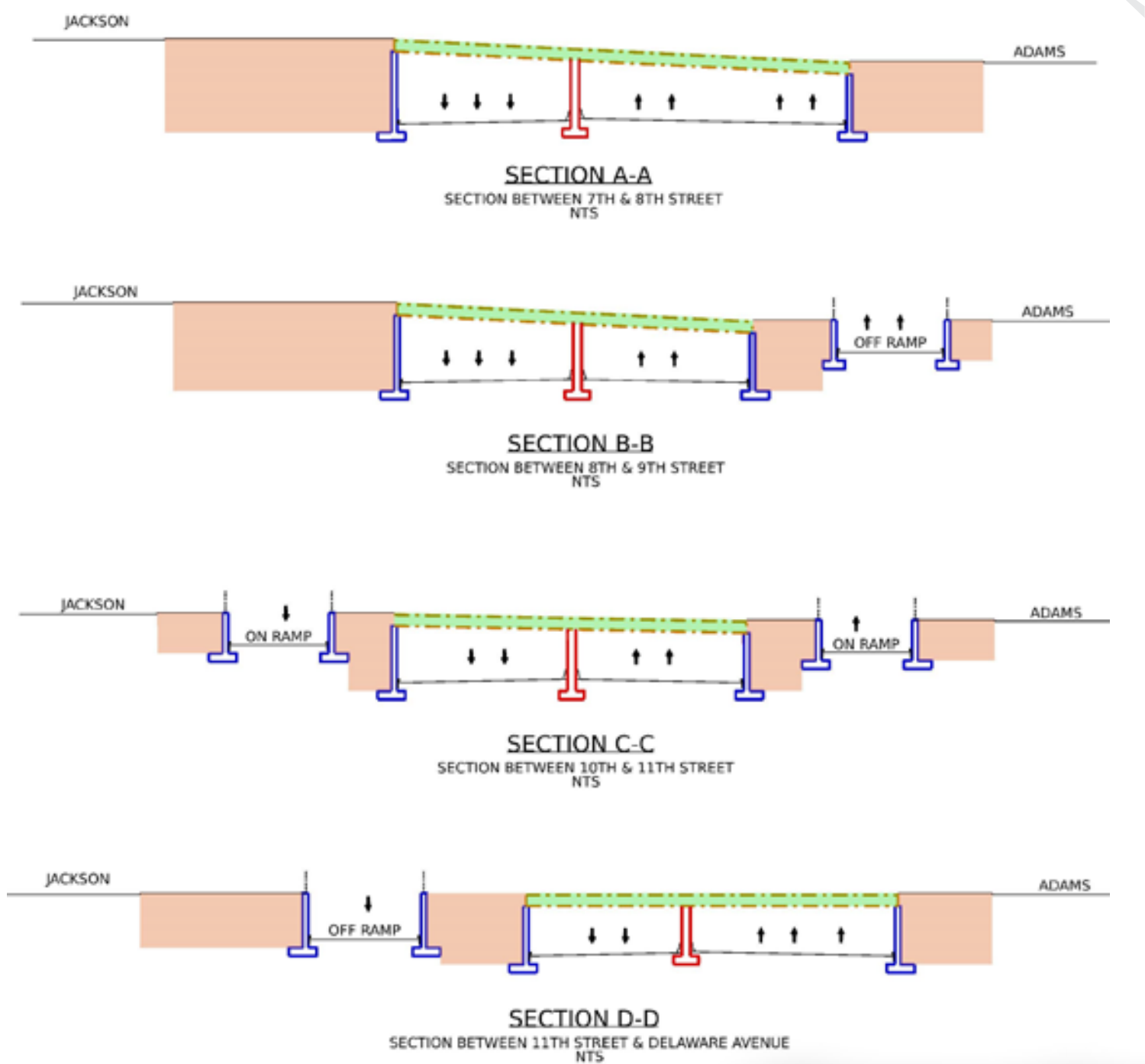


OPEN

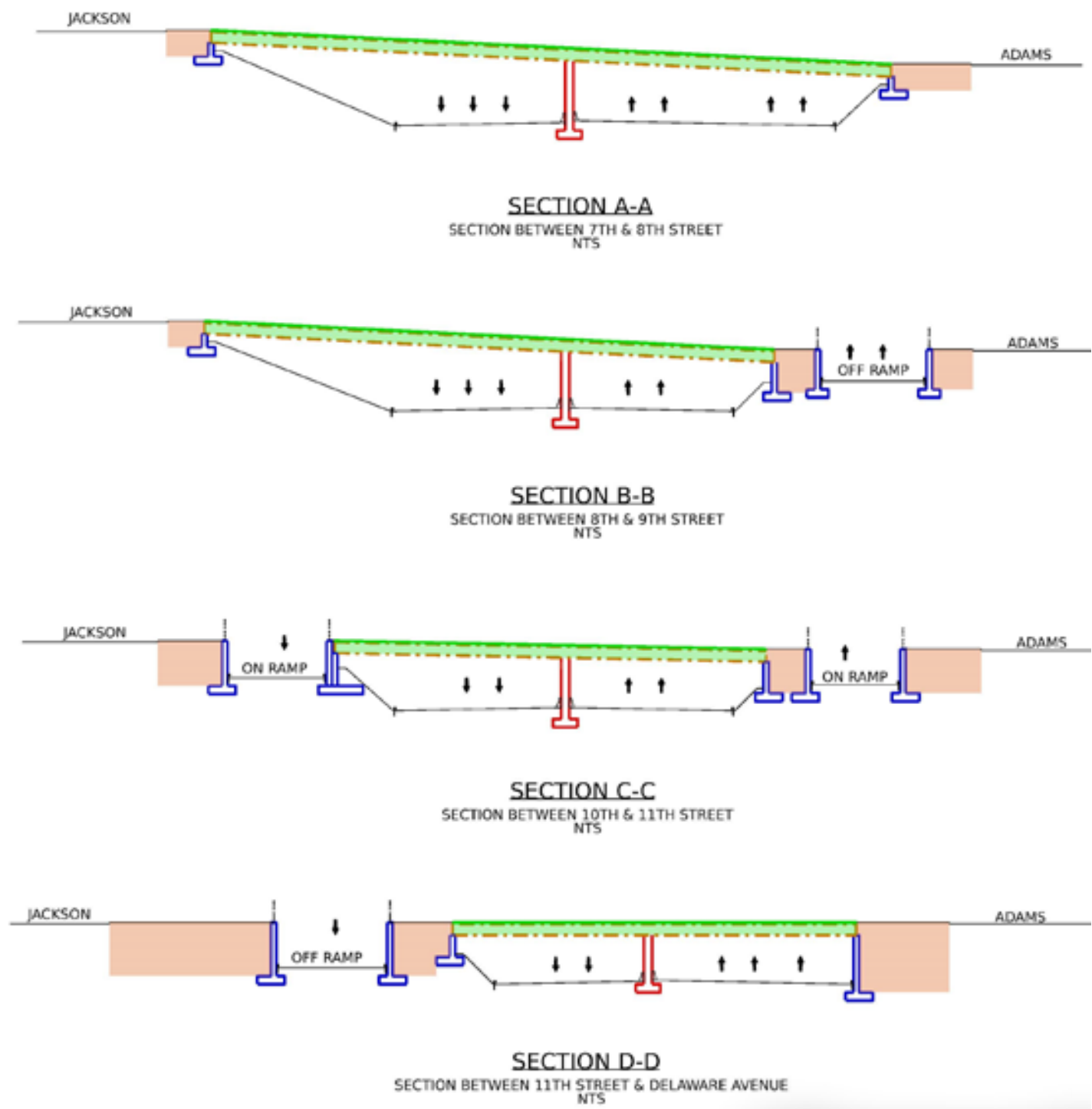


Cap Structural Considerations

CLOSED

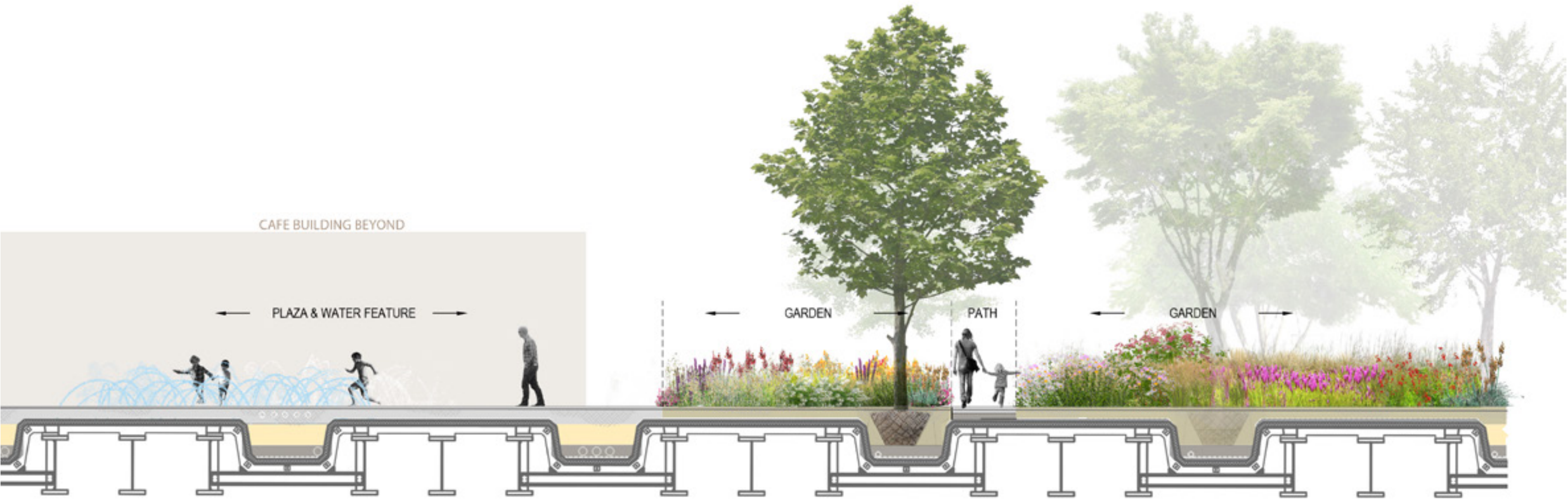


OPEN



Concept sections illustrate two methods for creating a cap: “closed” where the space between Adams/Jackson and I95 is filled, and “open”, where it is not.

Cap Structural Considerations



Conceptual cap structure design. Deeper trenches allow for larger plantings, such as trees, over the structure.

An aerial photograph of a city, likely Chicago, showing a dense urban landscape with numerous buildings, trees, and a prominent multi-lane highway (I-95) running diagonally across the frame. A baseball field is visible in the upper left quadrant. The image is overlaid with a semi-transparent dark blue filter.

I-95 FEASIBILITY STUDY *Conclusion*

Conclusion

Guided by the community's vision, the proposed cap park unites the neighborhoods divided by the construction of I-95. The future park is a place to celebrate history, while looking to Wilmington's future

The new cap over I-95 in Wilmington will become a world class, civic park while establishing a community-oriented space for life in the surrounding neighborhoods to unfold. The cap park, spanning approximately 15 acres over the interstate, provides a wide range of programs from festival and small performance space, to small group gathering, cafe amenities, play, gardens, and pop up market space.

Guided by the public's vision for the future space, the park will stitch together the communities divided by the construction of I-95 and provide new life to an area that is today dominated by cars. The sloping topography of the cap park utilizes the existing elevation change between North Jackson and North Adams streets to showcase views of Downtown Wilmington while simultaneously forming distinct destinations within the park.

The result of the 16-month feasibility study process is a vision for the future that creates an amenity for the neighborhoods in Wilmington. It is a place to gather, to celebrate, and to connect. It will be an active, year-round hub of Wilmington life that will serve generations of residents and visitors alike.

