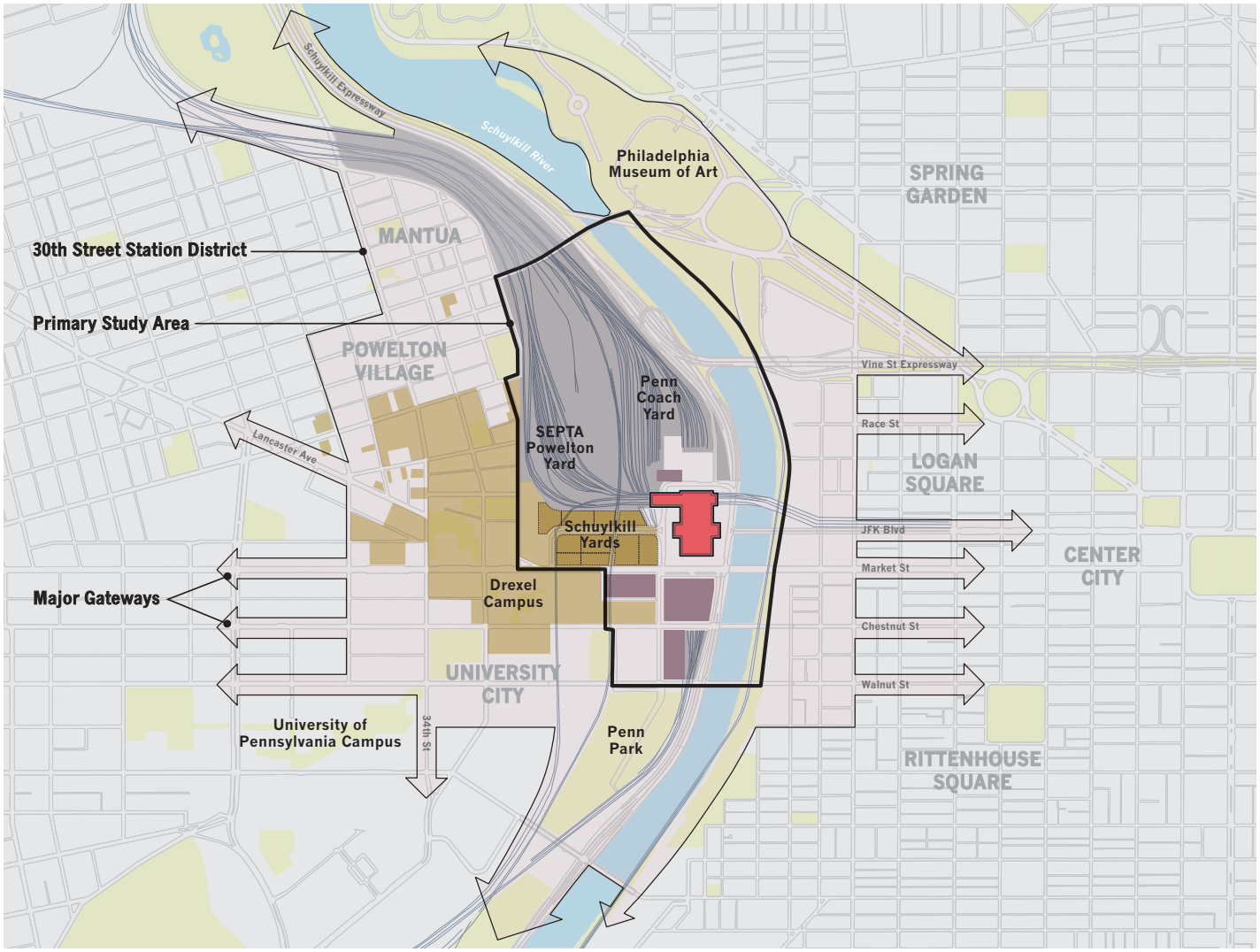
PHILADELPHIA

30TH STREET STATION DISTRICT PLAN

Growing Philadelphia's Future at 30th Street Station

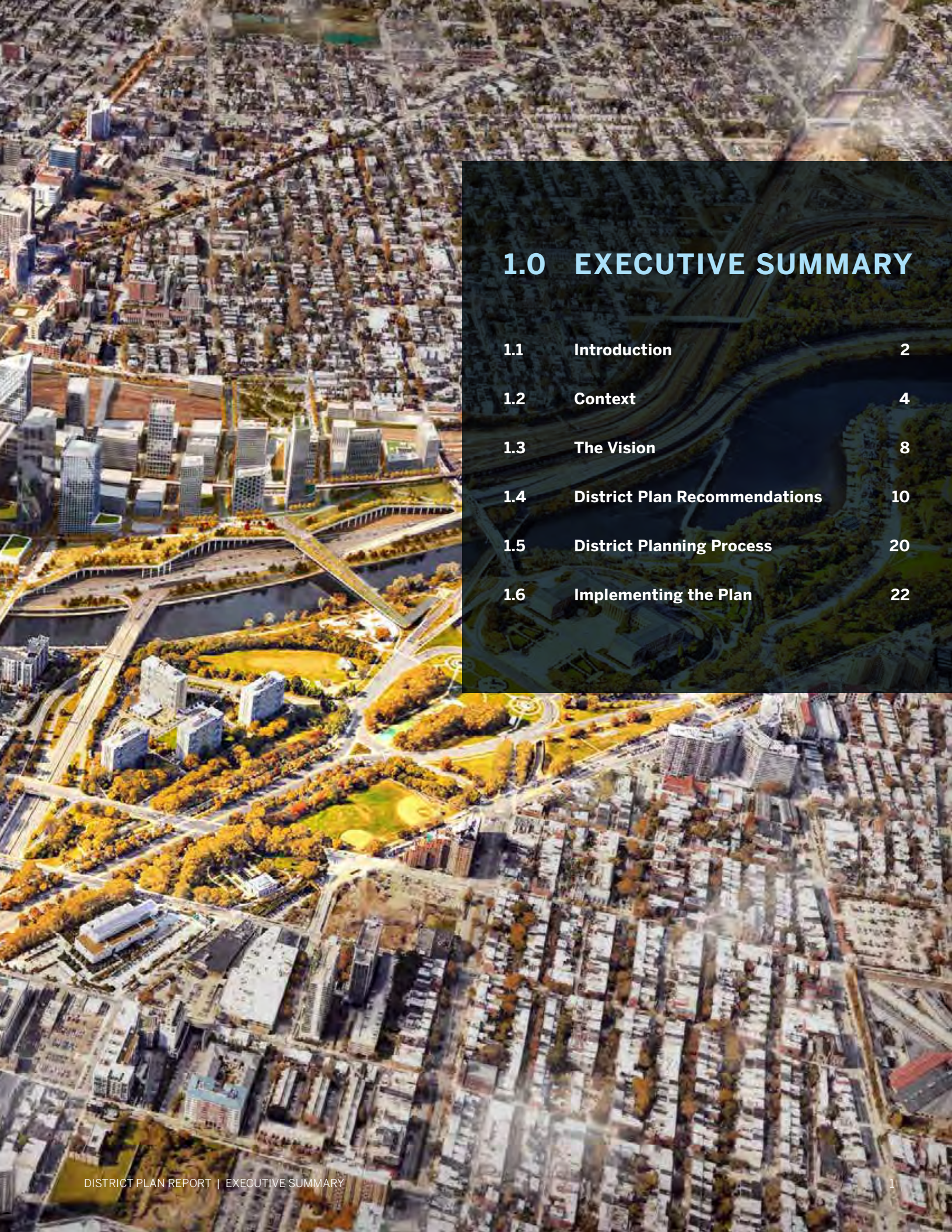
About the 30th Street Station District Plan

Completed in June 2016, the Philadelphia 30th Street Station District Plan is a long-range, joint master planning effort led by Amtrak, Brandywine Realty Trust, Drexel University, the Pennsylvania Department of Transportation, and the Southeastern Pennsylvania Transportation Authority ("Principals") to develop a comprehensive vision for the future of the 30th Street Station District in the year 2050 and beyond.



District Plan Study Area

PHILADELPHIA 30TH STREET STATION DISTRICT PLAN



1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

THE OPPORTUNITY

Philadelphia is undergoing a new era of growth and opportunity, and the district around 30th Street Station is at the forefront of this renaissance.

30th Street Station is the third-busiest Amtrak station in the country, houses direct connections to SEPTA and NJ TRANSIT, and is a nexus for dozens of local and regional bus, subway, and trolley routes, which bring tens of thousands of people to University City and Center City every day. Over the next three decades, renewed interest in rail travel will bring twice as many people and increased activity to this already bustling transportation hub. Interest and development around the station is increasing in parallel to the station's growth. Few districts around the world offer the characteristics of the 30th Street Station District – a location adjacent to premier healthcare and education institutions, close proximity to Center City, access to the Schuylkill River, large assemblages of land, and connectivity to one of the most important intermodal hubs on the Northeast Corridor.

The vibrancy found within the walls of 30th Street Station must extend to the District around it, much of which is open, active rail yards and parking lots. Accessibility, a pedestrian-friendly environment, and urban amenities – hallmarks of Philadelphia's dynamic and exciting neighborhoods – will make the District come alive. The momentum around the station presents an opportune moment in Philadelphia's history to build a fully-integrated, transportation-centered, mixed-use district that brings the city and station more seamlessly together.

The District Plan lays out a vision for the next 35 years and beyond to accommodate a projected 20 to 25 million passenger trips per year – double the current capacity – circulating through an enhanced 30th Street Station, build 18 million square feet of new development, and create 40 acres of new open space for the city, including a phenomenal new civic space – Station Plaza – at the station's front door.

Unlocking the value of this new neighborhood will require expansive infrastructure and amenities – roads, utilities, parks, bridges, and extension of transit services – as well as significant private development. Overall, the District Plan represents $10 billion of public and private investment, including $2 billion for station and District public infrastructure, $4.5 billion in private real estate development in the rail yards, and an estimated $3.5 billion for Drexel's Schuylkill Yards project. These investments in the District will have robust and widespread economic development benefits, with the potential to generate $3.8 billion in City and State taxes and 40,000 jobs when complete.

The 30th Street Station District Plan represents the culmination of a two-year process of discovery, consultation, and planning with an extraordinary diversity of organizations, institutions, design professionals, and citizens who comprise the District. The District Plan is equally daring in its vision and achievable in its details. It provides a road map towards a world-class, well-integrated 30th Street Station anchoring a dynamic, connected, and inviting neighborhood, an incredible gateway for Philadelphia, and a center for new economic growth and opportunity.

A set of central planning goals and design objectives underlie the District Plan and represent a shared commitment to city building and true design excellence.

Planning Goals

- **Community:** Build a vibrant community full of opportunities to live, learn, work, and play.
- **Connectivity:** Celebrate 30th Street Station as a premier multi-modal transportation hub where people seamlessly connect to resources and attractions in the community, city, and region.
- **Identity:** Create a high-quality network of active, attractive, and safe places with memorable identity and character.

Design Objectives

- **Placemaking:** Lead with the public realm. Attractive, iconic, and authentic infrastructure and public space shape District identity, enhance real estate value, and attract development.
- **The Station as a 21st Century Hub:** Improve the station to be future-ready for a growing number of passengers and create a neighborhood destination while preserving the special characteristics of this grand historic station.
- **Multi-Modalism:** Enhance the multi-modal connections that serve as the transportation backbone of the District.
- **New, Connected Neighborhoods:** Support development that builds on District strengths, shapes and reinforces neighborhood character, carefully considers neighborhood transitions within the District and at its edges, and connects existing neighborhoods.
- **Connections to the Schuylkill River:** Bring District residents, workers, and visitors to riverside trails and public spaces.
- **A Bridge between Center City and University City:** Knit together the neighborhoods of Center City and University City through enhanced and new connections.

Aerial View of the Station and District

A CRITICAL LINK ON THE NORTHEAST CORRIDOR

Access to the Country's Largest and Most Dynamic Regional Economy

The station sits at the nexus of the country's most important intercity rail corridor and one of its most expansive regional commuter rail systems. It is among the busiest stations on the Northeast Corridor (NEC), a spine of rail connecting Washington, D.C. and Boston that services more than 750,000 riders each day – a workforce that contributes a combined $50 billion annually to the American economy.

The NEC anchors a region of over 50 million people across eight states and the District of Columbia. Taken together, this region accounts for 20% of the country's GDP; on its own, it would be the world's fifth largest economy. The NEC is the critical piece of infrastructure tying the region together, and Philadelphia occupies a central location on the corridor. At just over an hour from New York and under two hours from Washington, D.C., Philadelphia is positioned perfectly to share in both regional economies and take advantage of residents and businesses seeking access to them.

The station also connects to SEPTA's Regional Rail system, which serves 13 branch lines across the city and suburbs, transporting over 36 million annual riders. SEPTA's Market-Frankford Line Subway and trolley service at 30th Street is proximate to the station and provides extensive connectivity to Center City and beyond.

Future of Rail Service on the NEC

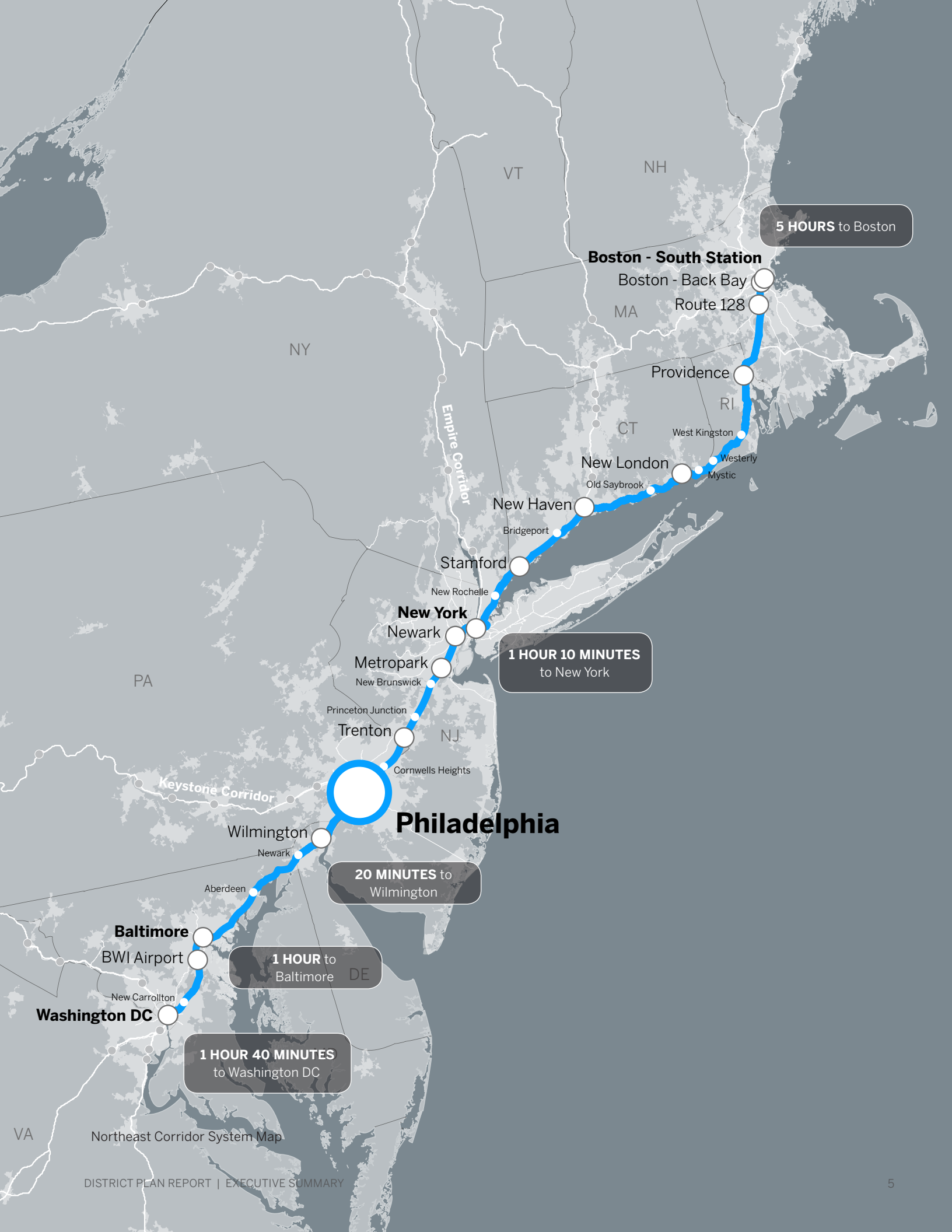
The Federal Railroad Administration (FRA) is working with NEC stakeholders to develop a long-range, integrated investment plan. This planning effort, called NEC FUTURE, was initiated in early 2012 and is expected to conclude in late 2016. The purpose of NEC FUTURE is to define a program to upgrade aging infrastructure and to improve the reliability, capacity, connectivity, performance, and resiliency of passenger rail service on the NEC for both intercity and regional trips, within a multi-modal network, while promoting environmental sustainability and economic growth.

For the NEC FUTURE program, FRA is currently considering three Action Alternatives that represent a range of possible visions for passenger rail in the Northeast. All three Action Alternatives include significant increases in intercity and regional rail service and investment at 30th Street Station. In addition, one alternative explores supplemental service to a new Philadelphia Airport station, while another includes a Center City station serving trains operating on a proposed second NEC spine. The FRA will select a Preferred Alternative upon completion of the Tier 1 Final EIS in 2016. For more information, visit www.NECFUTURE.com.

The 30th Street Station District Plan is able to accommodate any of the alignment alternatives being considered by NEC FUTURE.

30th Street Station Today

Acela Train Leaving Philadelphia


VT
NH
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Empire Corridor
Keystone Corridor
5 HOURS to Boston
Boston - South Station
Boston - Back Bay
Route 128
Providence
West Kingston
Westerly
Mystic
New London
Old Saybrook
New Haven
Bridgeport
Stamford
New Rochelle
New York
Newark
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1 HOUR 10 MINUTES
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Princeton Junction
Trenton
Cornwells Heights
Philadelphia
Wilmington
Newark
20 MINUTES to
Wilmington
Aberdeen
Baltimore
BWI Airport
1 HOUR to
Baltimore
New Carrollton
Washington DC
1 HOUR 40 MINUTES
to Washington DC
Northeast Corridor System Map

A DISTRICT PRIMED FOR TRANSFORMATION

New Momentum in and around University City

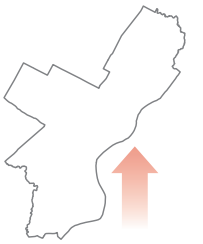
Upward population, transportation, and real estate trends converging around 30th Street Station set a compelling stage and opportunity for a grand transformation of the District.

Busy and growing intermodal transit hub

30th Street Station welcomed 11 million passengers in 2015 and is expected to double its ridership by 2040 due to transportation improvements planned by Amtrak and SEPTA.

Diverse and growing job and residential markets

The District's prime location between Center City and University City, two of the metropolitan region's largest employment centers, gives direct access to 375,000 workers.

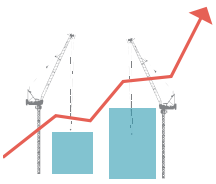


Growing Philadelphia and strong Center City

Philadelphia reversed its decades-long trend of population decline in 2010. Since then, the City has grown each year and has one of the highest growth rates of millennials among US cities.

Investment in significant urban park networks

New recreational amenities centered on the Schuylkill River watershed build on a vast network of parks and trails that have made the area highly desirable.



Robust development pipeline driven by a growing 'eds and meds' sector

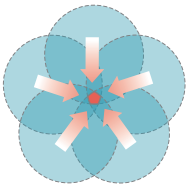
In the past two years, 29 new development projects were advanced or completed in University City alone, representing 5 million square feet of new office, research, residential, academic, and medical facilities as well as over 4 acres of new public space.

Diverse neighborhoods with uniquely 'Philadelphia' scale and character

From the great urban universities of Drexel and Penn to the rowhouse blocks of Powelton Village and Mantua, the District adjoins dynamic neighborhoods that are attracting both residents and workers.

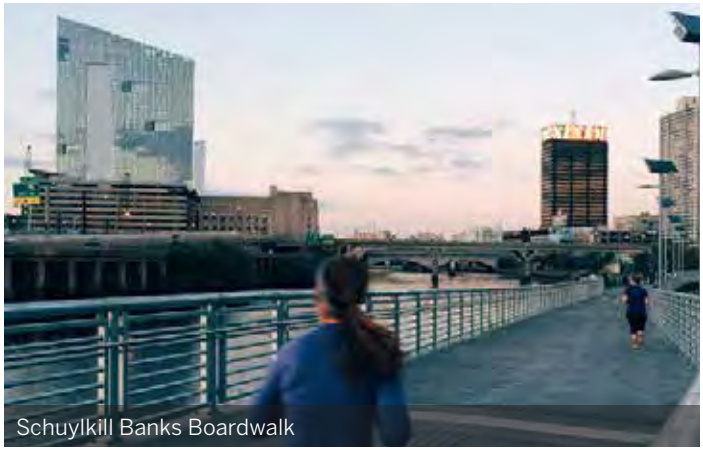
One of the largest land assemblages on the Northeast Corridor

There are roughly 12 acres of underbuilt lots that could easily accommodate new development just outside the station. To the north, the roughly 88 acres of rail yards offer an unprecedented opportunity for redevelopment.



Alignment of key stakeholders to deliver District change

For the first time ever, all land owners and major stakeholders in the District are planning for a shared, cooperative future.


Schuylkill Banks Boardwalk

Food Trucks at The Porch


Melon Street, Mantua


The Station and Market Street Bridge


Drexel University Campus


New, Protected Bicycle Lanes


Schuylkill River Trail


Temporary Events in Front of the Station

1.3 THE VISION

A STATION-ANCHORED URBAN NEIGHBORHOOD

The vision reflects a shared conviction that the fortunes of Philadelphia and the opportunities of the Northeast Corridor have aligned to warrant transformational growth in this urban area. The opportunity presented by the District allows for a Plan that is simultaneously visionary and authentically Philadelphia, building on the city's rich tradition of neighborhoods characterized by pedestrian-scaled streets, parks, and memorable cultural and natural amenities.

This Plan calls for a new urban neighborhood at the front door of a renewed 30th Street Station, with a healthy balance of residential buildings, station-anchored commercial office towers, and outstanding retail, recreational, and cultural amenities to sustain a vibrant urban environment. At the heart of the District, enhancements to the station's waiting and boarding areas, customer amenities, and customer services will provide passengers with a comfortable, seamless experience both within the station and extending out to the District.

The District neighborhood begins with the redevelopment of the blocks west and south of the station along JFK Boulevard, Market Street, and 30th Street, including the 14-acre site of Drexel University's future Schuylkill Yards, a hub where its education and research institutions can facilitate innovation by the business community to spur economic growth.

As the neighborhood matures, it grows northward over the rail yards with commercial office development focused closest to 30th Street Station and gracefully transitioning to a vibrant, urban residential community towards Spring Garden Street. The District and its neighboring communities are woven together by an integrated and inviting network of streets and public spaces, providing the connectivity and quality of place needed to make the District thrive.

The Plan brings tremendous value to its numerous diverse user groups. For **daily transit commuters**, the Plan improves circulation and flow through 30th Street Station and its immediate urban edges, improving the everyday experience of the space as a multimodal hub. For **long-distance travelers**, it offers a compelling gateway to Philadelphia with world-class amenities, connections to the city, and new retail offerings. For **workers in the District**, it creates an accessible, attractive, and active workplace with diverse opportunities for business collaborations. For **residents of the District and neighboring communities**, the Plan offers opportunities for housing and employment in close proximity to work and transit, as well as incredible new natural and recreational amenities and shopping conveniences. For **students and faculty** at nearby universities, the Plan calls for investment in a world-class public realm and a seamlessly integrated place – connecting back to the station via improved transit offerings, local trails, and greenways. For **visitors**, the Plan helps advance a more legible experience of the city and its myriad cultural and historic assets. And for **all citizens of Philadelphia** interested in an enduring civic legacy, the Plan offers a compelling vision of a new urban place anchored by the historic station – a point of pride for people all over the city.

The Station District will become Philadelphia's next great neighborhood, a place to live, work, learn, and play near one of the nation's busiest and most important transportation hubs and accessible to one-of-a-kind urban and natural amenities.

District Illustrative Plan

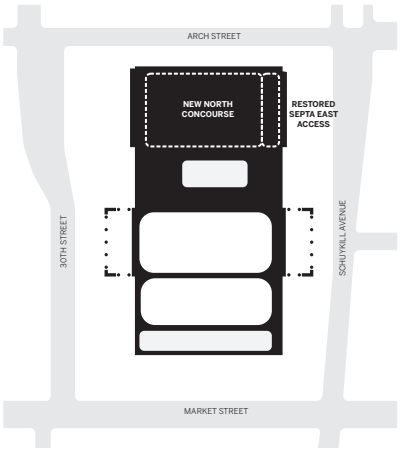
READY THE STATION FOR THE 21ST CENTURY

New Intercity and Regional Rail Concourses

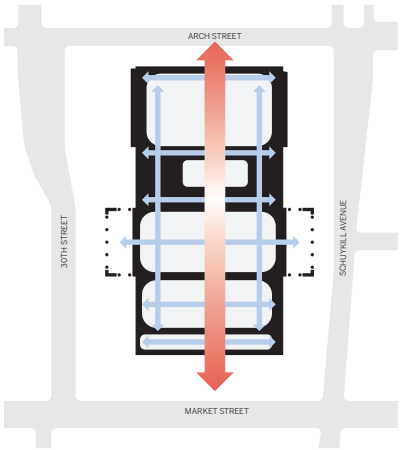
Driven by projected growth in all modes serving the station, passenger volume at 30th Street Station could more than double over the next 25 years and beyond, posing new challenges for circulation, waiting, and boarding at the station. Serendipitously, the original station was designed to handle this type of passenger volume, but changes in station function and circulation over time have constrained capacity. The Plan seeks to rediscover the original intent of the station – with changes to accommodate the realities of travel in the 21st century – in order to meet projected demand and improve the quality of passenger experience.

In particular, the Plan calls for updating the existing retail offerings in the station, reopening the North Concourse as a passenger facility to increase Amtrak and NJ TRANSIT platform access by 50%, and tying into the vacant East SEPTA Mezzanine to double access to Regional Rail platforms. This concourse would also realize a new public entrance on Arch Street, eventually connected to new development extending north from the station. These improvements will complement and celebrate the grand and dramatic Main Hall of the station.

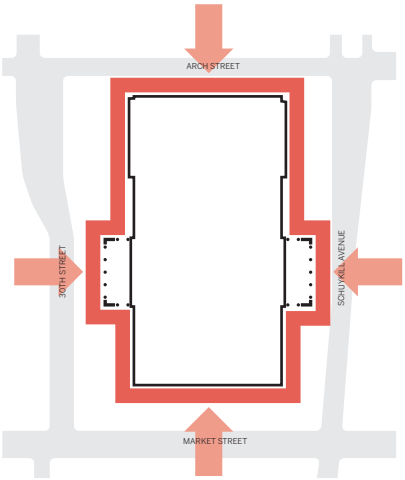
Station improvements that prioritize the passenger experience will be the early-win projects in the Plan. They are achievable in the near term and can have district-wide benefits.



Expand Passenger Space



Restore the Primary Axis



Access All Four Sides

Arch Street Entrance to New North Concourse, Looking North towards Arch Street


Expanded Retail Offerings Leading North towards the New Concourse

RECONNECT THE STATION

New Intermodal Connections within an Expanded Station

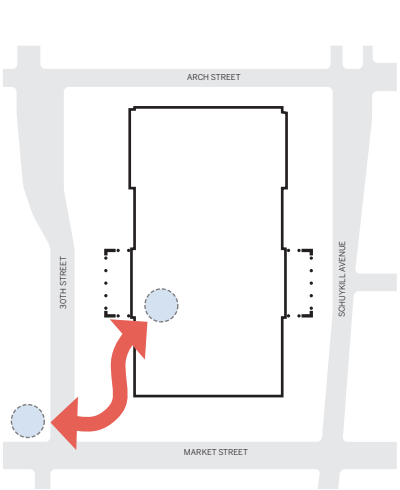
Travel to the District is easily achieved by a number of modes, with nearly 100,000 trips made daily by train, subway, bus, trolley, car, bicycle, or on foot. However, the modes do not clearly connect, creating a confusing and sometimes precarious experience for visitors. The Plan envisions a fully-integrated multi-modal system where passengers can travel by the modes of their choice with ease and comfort.

For almost 30 years, passengers transferring between 30th Street Station and the trolley and subway lines below Market Street have lacked a covered, climate-controlled route, forced instead to leave the station and cross a busy 30th Street. The Plan proposes to re-establish a convenient and safe connection between these stations – via a new stairway within 30th Street Station's Main Hall and through an active and day-lit below-grade retail concourse leading to the subway and trolley station.

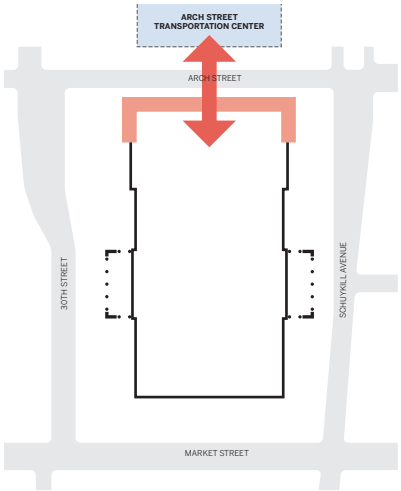
Elsewhere, passengers traveling on intercity buses (BoltBus and Megabus) board on the sidewalk along JFK Boulevard, an ad hoc location that lacks even a covered waiting area. The Plan envisions a permanent home for these buses on the north side of Arch Street as part of an integrated multimodal transportation facility. The new intercity bus terminal connects directly via pedestrian bridge to 30th Street Station and provides an indoor waiting area along with bus queuing. In the long-term, an additional Amtrak concourse could anchor this Arch Street Transportation Center.

The Plan also calls for street enhancements to improve traffic circulation and provide safe and pleasant travel routes for pedestrians and bicycles. By re-establishing two-way circulation on the loop of roads around the station, the Plan seeks to improve traffic flow while also enhancing pedestrian and bicycle safety and experience. This two way system feeds into adjusted highway ramps at Arch Street, simplifying access to and travel from I-76.

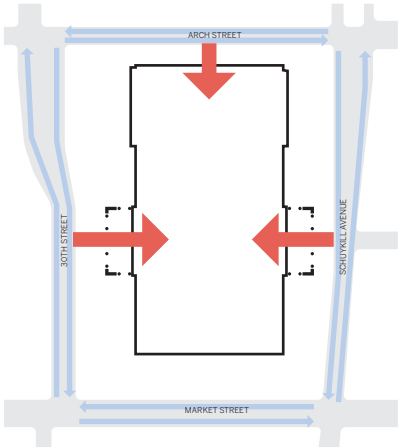
The cumulative effect of these and other station interventions is to make intermodal connections simple, efficient, and even pleasant, prioritizing the passenger experience.



Reconnect the Subway



Expand Multimodal Offerings



Simplify Vehicle Access

Skylight Above New Underground Connection between the Station and Subway

Restored North Facade and New Arch Street Entry, Looking East from Cira Centre

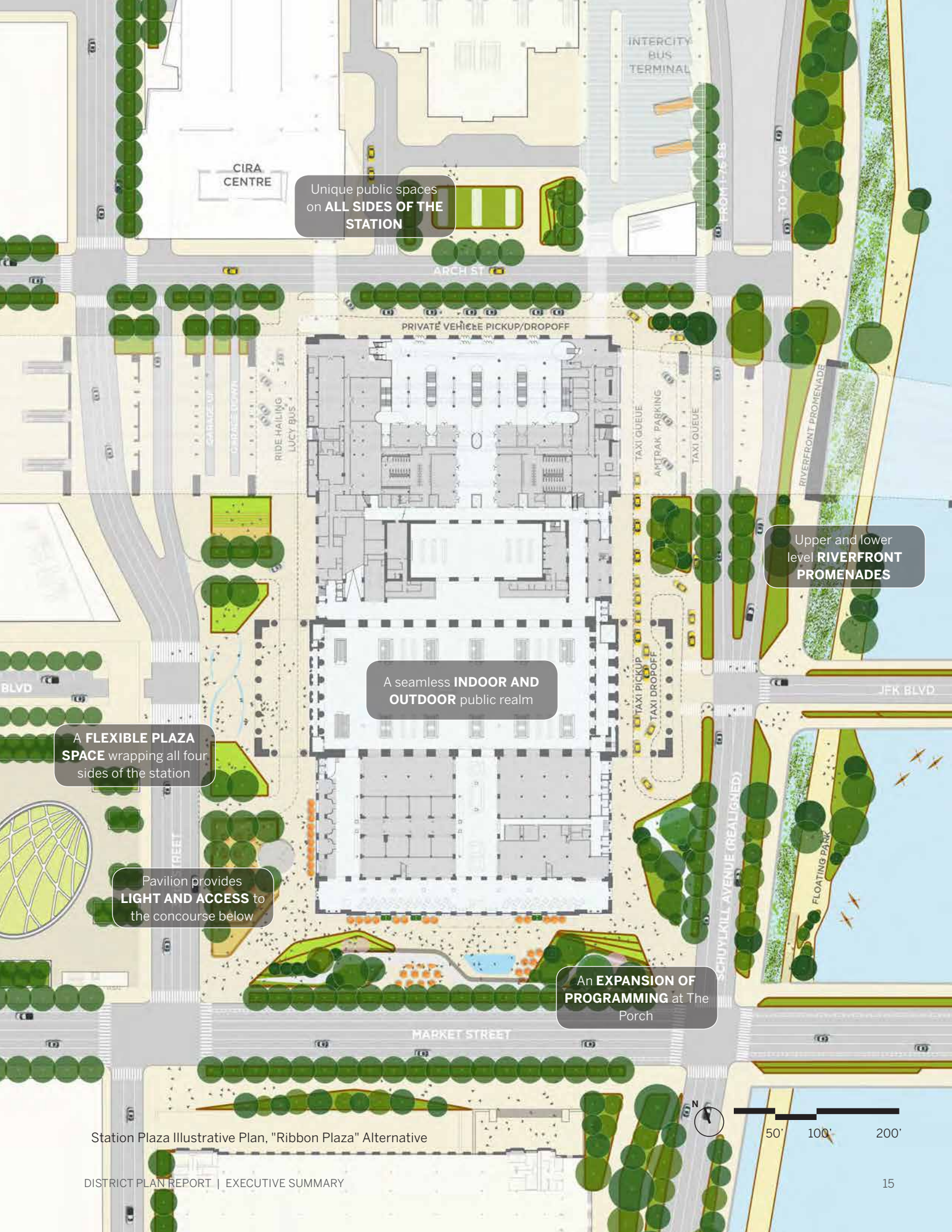
RENEW STATION PLAZA

The City's Next Great Civic Space

Station Plaza is a vitally important civic space framing all four sides of the station to create the first and lasting impression of 30th Street Station and the District. The plaza must create a welcoming experience for all station visitors, whether they arrive by car, transit, bicycle, or on foot. Like Dilworth Plaza at City Hall, Station Plaza can be a central civic space that seamlessly integrates everyday passenger access needs with opportunities for social interaction and recreation.

Great urban district transformations across the nation and world lead with the public realm to catalyze private development. This was the case with Philadelphia's original squares, and continues to be the case today with projects like the Delaware River Waterfront. Activating Station Plaza as a dynamic public space will provide an anchor for the District and true gateway for University City. It will help catalyze development of Drexel University's Schuylkill Yards, parcels tied directly to the station, and future rail yard development within easy walking distance. And it will leave the customer with positive, memorable impressions of the station and District.

Station Plaza: a Seamless Civic Space Wrapping around the Station, Looking East at 30th Street



Station Plaza Illustrative Plan, "Ribbon Plaza" Alternative

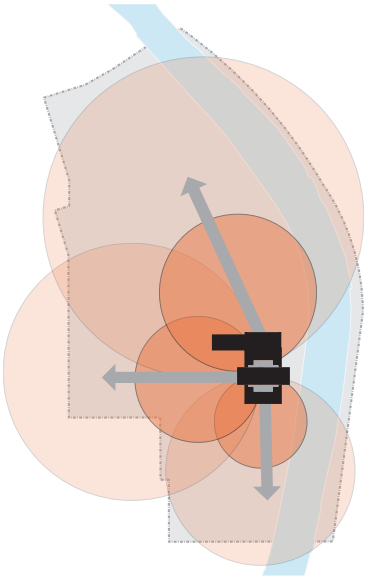
BRING THE CITY TO THE STATION

A New Transit-Oriented Urban Neighborhood

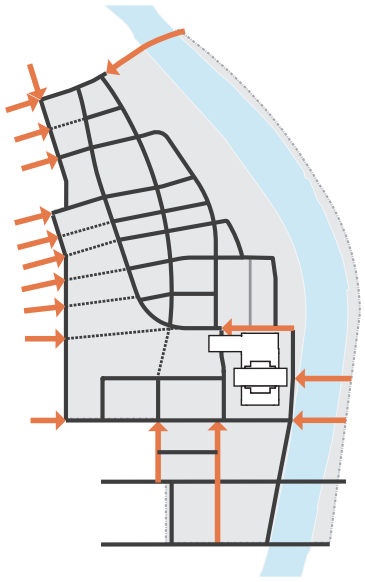
The 88-acre rail yards north of 30th Street Station represent an unprecedented opportunity to create a new urban neighborhood from the ground up by leveraging connections to the station and investing in world class amenities. This Plan envisions an opportunity for up to 10 million square feet of new development above the rail yards and 8 million square feet of development adjacent to 30th Street Station, with program and massing strategies tailored to a site's proximity to the station and sensitive to existing context.

This new neighborhood will become a living, breathing part of West Philadelphia. Its heart is the station. Its lungs, the great park spaces overlooking the river and the intimate pedestrian greenways woven throughout. Its backbone, the historic city grid extended out from Powelton Village towards the river. And its soul is the people – residents, students, workers, and visitors – who will one day call it home.

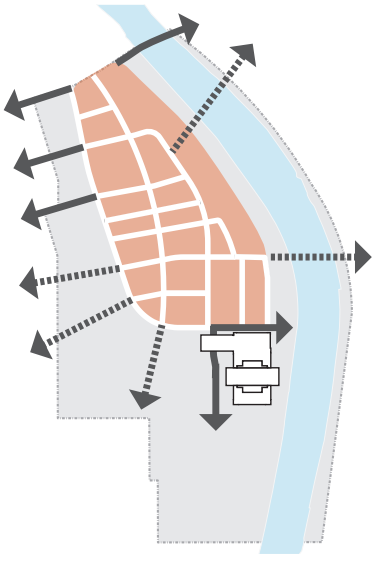
The Plan envisions a type of urban development that is only possible through major new connections from the District to the rest of the city. To the east, the Plan proposes two new pedestrian and bicycle bridges across the river to destinations in Center City, prioritizing direct connections to Fairmount Park, the Philadelphia Museum of Art, and Logan Square. To the west, the Plan proposes both vehicular and pedestrian bridges across Powelton Yard, connecting new and existing neighborhoods. All roads and greenways in the District ultimately lead back to the station as an anchor of development and access point to the city and region.



Celebrate the Station as District Anchor



Extend the City Grid



Connect Separated Neighborhoods

"Schuylkill Bluffs" Park Over the Northeast Corridor, Looking South from Spring Garden Street

New Pedestrian Bridge at Race Street Connecting Logan Square to the District, Looking West from Center City

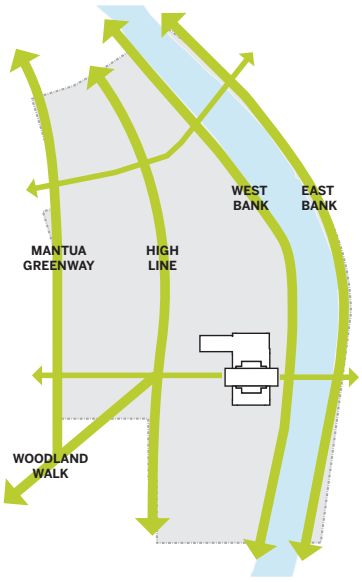
PRIORITIZE THE PUBLIC REALM

Great Places to Live, Work, Learn, and Play

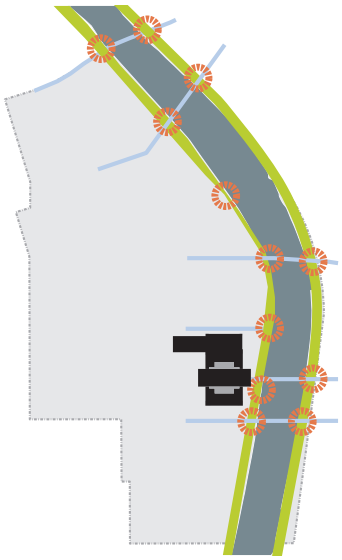
The Plan proposes to strengthen existing neighborhoods and anchor new neighborhood development with public spaces that provide amenities for residents, workers, and visitors; create physical and visual connections to the rest of the city by overcoming difficult infrastructure barriers; and serve important ecological and high-performance design functions.

At the edges of the existing community, the Plan proposes a physical and programmatic expansion of Drexel Park as neighborhood anchor as well as improvements to the Mantua Greenway / West Bank Trail as part of a larger strategy to connect greenways to and through the District, including a prominent trail under the High Line that connects south to Penn Park. At the eastern edge of the rail yards, the Plan proposes an expansive park – the Schuylkill Bluffs – above the Northeast Corridor tracks. This park is intended to provide recreational and cultural amenities for new and existing neighborhoods, create a dramatic Center City overlook, and facilitate new physical and visual connections to the Schuylkill River.

From these larger interventions to small, pocket parks that create a real sense of place or connections down to the riverfront, the Plan aims for world-class amenities that can define the essential character of this neighborhood and help propel development.



Link and Lengthen Greenways



Bring People to the Riverfront

Expansion of Drexel Park as a Neighborhood Amenity, Looking West Towards Powelton Village

A Central Greenway along the High Line and New 31st Street above the Rail Yards, Looking South

A PLAN FOR PHILADELPHIA, BY PHILADELPHIANS

Unlocking potential development in the District will require building broad stakeholder consensus and a shared commitment to one vision, which will be jointly implemented and whose benefits will be widely shared.

Institutional Partners

Five Principal partners, each with significant investments in the District, have led the vision for the 30th Street Station District: Amtrak, Brandywine Realty Trust, Drexel University, the Pennsylvania Department of Transportation (PennDOT), and the Southeastern Pennsylvania Transportation Authority (SEPTA). A Coordinating Committee of institutional partners has also guided the planning effort. In addition to the Principals, its members include the City of Philadelphia, CSX Corporation, the Delaware Valley Regional Planning Commission, New Jersey Transit, Philadelphia Industrial Development Corporation, Schuylkill River Development Corporation, University City District, and the University of Pennsylvania.

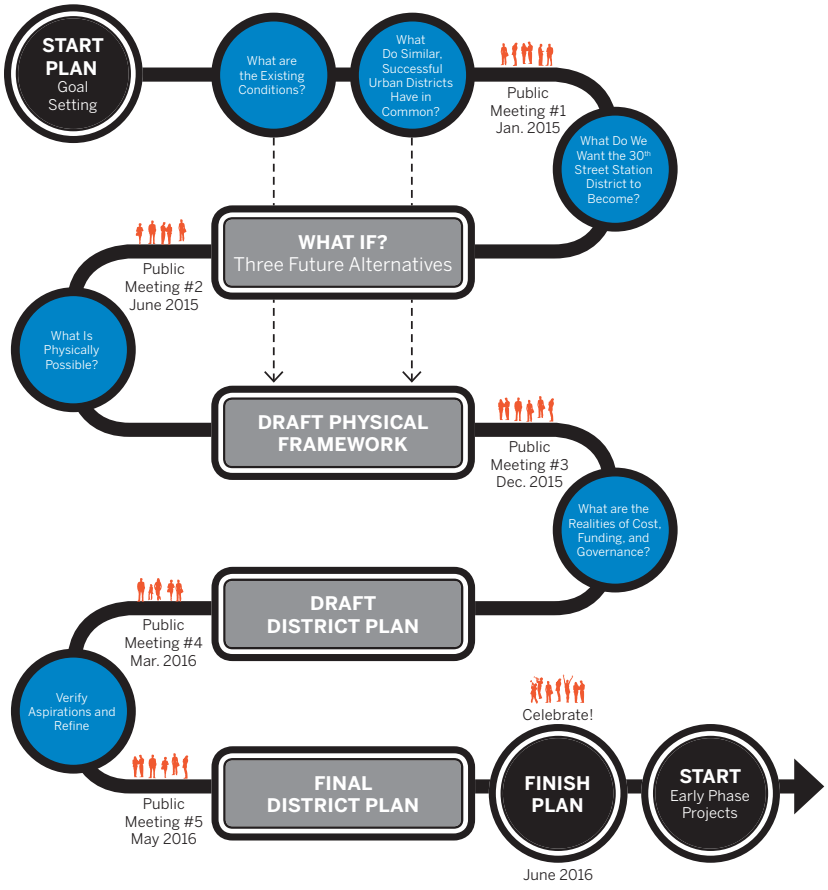
Stakeholder Engagement

The vision harmonizes the ideas from a diverse and highly-engaged set of stakeholders, including elected officials, community organizations, business, trade and advocacy organizations, anchor institutions and major employers, transportation passengers, citizens who comprise the District, and the general public. The stakeholder discourse has yielded a clear understanding of the goals and objectives that are shared in common. In addition, a Civic Advisory Group comprising local civic leaders met four times to review the development of the Plan.

Public Engagement

Active and informed public participation is also a key element of the District Plan. The planning process continually engaged the general public including commuters, residents, businesses, tourists, students, and intercity rail passengers. A total of five open house public meetings were hosted at 30th Street Station over the course of the two-year effort to garner vital input from the public and all District Plan stakeholders. At each meeting, the public was able to provide comments on the status of the Plan and valuable feedback on key issues, from goals and objectives to conceptual alternatives to project phasing. In total, this engagement effort included the following:

- **5** public open houses
- **4,130** total public comments
- **1,375** project e-mail subscribers
- **19,515** e-mails sent
- **15,685** website visits
- **45** stakeholder meetings



Visioning Process

In June of 2015, three different conceptual alternatives were developed to establish different stories about what the future 30th Street Station District could be. These three "What If" alternatives were meant to inspire dialog and elicit feedback from the many unique points of view regarding need, desire, benefit, and ambition.

The three conceptual alternatives were evaluated by the District Plan institutional partners and stakeholder groups, who provided valuable guidance on the elements to be carried into a preferred direction for the District Plan. Two of the conceptual alternatives, CBD2 and Schuylkill Crossing, emerged as the most promising for further study, while the Innovation City concept was found to be the least promising.

In the subsequent months, additional stakeholder engagement guided the blending of the conceptual alternatives into a single, cohesive concept and affirmed stakeholder physical planning goals and objectives. This engagement helped refine the vision for the District and emphasized the following overarching themes:

- The historic station is sacrosanct: look to history when planning for expansion.
- An intermodal connection between 30th Street Station and SEPTA's Market-Frankford and trolley lines at 30th Street must be a priority project.
- Station Plaza should strike a balance between functionality and civic space, focusing on flexibility.
- The Philadelphia street grid is foundational to any new neighborhood in the rail yards.
- The amount of open space within the new neighborhood should be calibrated to the needs of the District, sensitive to the realities of cost.
- Pedestrian connections to Center City should be focused in areas of greatest utility.
- Strategies for accommodating increased parking and traffic should be clearly articulated.
- Life safety considerations must underlie all plans for rail yard development.
- Designs should engender a high-quality user experience at the station and within the larger neighborhood.

Central Business District (CBD) 2

Schuylkill Crossing

Innovation City

District Plan

STRATEGY TO STIMULATE AND ACCELERATE DISTRICT GROWTH

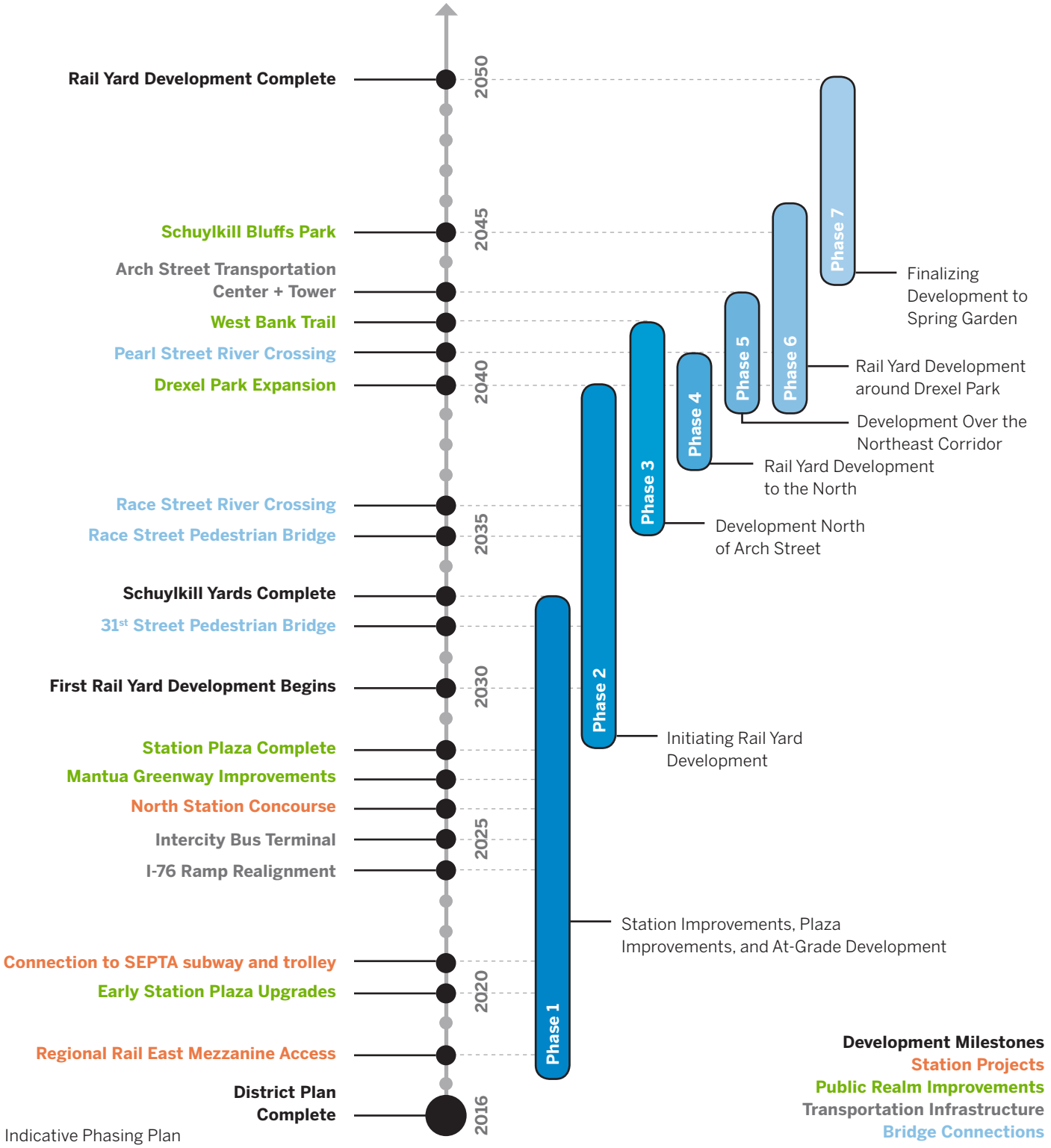
The 30th Street Station District Plan is a collection of projects that will be constructed over a 35-year timeline. The implementation road map for the District Plan strategically advances investments in the transportation services, public spaces, and retail amenities at and near the station in the early phases to create value and positive conditions for successful development of a new District neighborhood in the later phases.

Near-term projects set the stage for growth by enhancing 30th Street Station's physical condition and accessibility and helping advance Drexel's Schuylkill Yards, the 14 acres of land west of 30th Street and south of Market Street that could accommodate up to 8 million square feet of new development around the station.

As near-term projects are advanced, planning, design, and funding for rail yards development will occur on a parallel track. Key early projects in the rail yards include the Intercity Bus Terminal just north of the station as well as new connections to both Center City and Powelton Village. Building on the success of these and other early projects, which create District momentum and raise land values, the rail yard development can then begin in earnest. Development over the yards is envisioned as a progression of projects that emanate out from the station, building farther from south to north with each phase.

Collaboration and partnerships among a multitude of public and private entities will be required to ensure commitment to the long-term vision, present a unified team in making the case for outside investment and support, and fund projects through reinvestment in the District. Through these cooperative efforts, the Station District can become Philadelphia's next great neighborhood.

Overall Aerial View above Center City



Indicative Phasing Plan

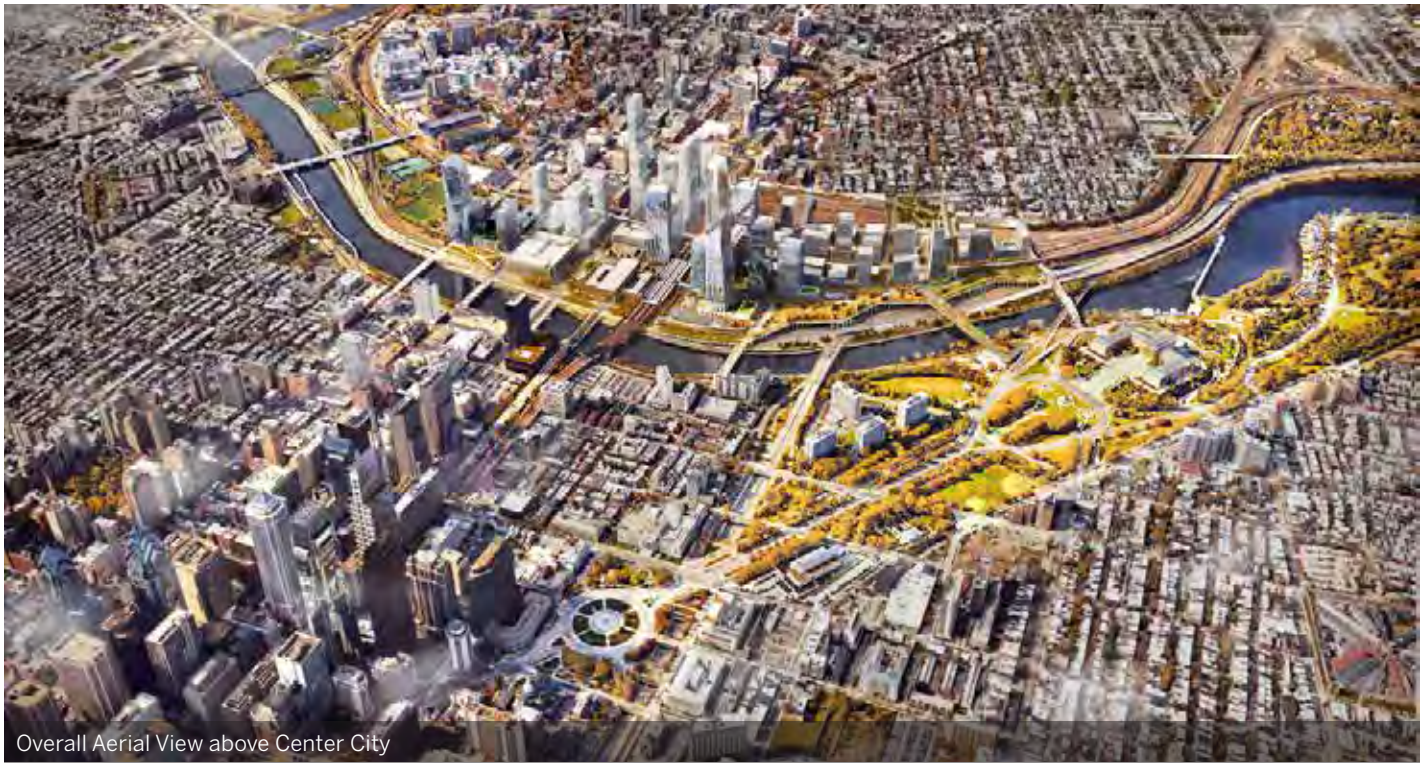
HISTORY OF LONG-TERM VISIONS

Thinking Big Is Part of Philadelphia's DNA

The Plan for development around 30th Street Station is a vision that will take decades to complete. Outside of early wins at and around the station, this Plan will require patient, multi-generational commitment to a new future, one built around a shared vision and updated periodically as circumstances change.

Planning this far into the future is nothing new to Philadelphia. Big ideas are part of the city's nature, and often these ideas take decades to be fully realized. William Penn's iconic four-square grid, laid out in 1682, took hundreds of years to take shape. The city's invaluable watershed park system, with Fairmount Park as its crown jewel, has been realized in phases since its conception; big plans for the Delaware River Waterfront and smaller projects like the Schuylkill River Trail are, in a way, a continuation of this original vision, bringing to life an idea that has endured for almost 150 years. Time and again, from ideas like the Market-Frankford elevated line and its reimagining as an underground subway to the Commuter Rail Tunnel uniting the Reading and Pennsylvania Railroads below Center City, Philadelphia has shown that long-term city-building ideas are achievable and have the power to shape the future – even in their formative stages.

No fewer than five plans and dozens of smaller studies dating back to 1933 have laid out visions for rail yard development at 30th Street Station. Each of these efforts was a serious undertaking, by planners and developers of good will and considerable talent. But each, for reasons of time, place, and circumstance, fell short of their target. Something today is different, however: the economic, institutional, and civic realities in University City suggest a realistic and compelling path forward. This Plan is as an implementation-focused, incentives-driven collection of component projects that builds toward common goals and success for Principals and stakeholders. It is a ground-up plan that will deliver real, transformational physical and economic benefits to the station and District. It will become one in a long line of bold ideas that make Philadelphia a more competitive, livable, and sustainable city and place to call home.



Overall Aerial View above Center City

GROWING PHILADELPHIA'S FUTURE TOGETHER

An Inclusive Project

The Plan's vision has been borne out of unprecedented collaboration among the Principals, institutional stakeholders, and the communities neighboring the District. As the Principals conclude the Plan and turn their attention to making the Plan concepts a reality, the stakeholders and surrounding neighborhoods should and will continue to have an active role.

Over the next 35 years, existing communities will converge with new neighborhoods, creating a District which blends present-day strengths with future opportunities. The future District will be much more than the physical streets, parks, and buildings represented in this Plan. Their character will reflect the people who live, work, and play in them and diverse, inclusive communities make for dynamic, exciting communities.

Each project that advances the Plan – whether a station improvement, retail, residential or office development, park, streets, or transportation project – is an opportunity to involve the civic and business communities so that the Plan's future successes can be shared by all. The Project Principals will continue to collaborate with neighborhood and business leaders to expand opportunities for local communities as planning and implementation move forward.

Overall Aerial View from Powelton Village

2.0 30TH STREET STATION


TRAIN INFORMATION

2.0 30TH STREET STATION

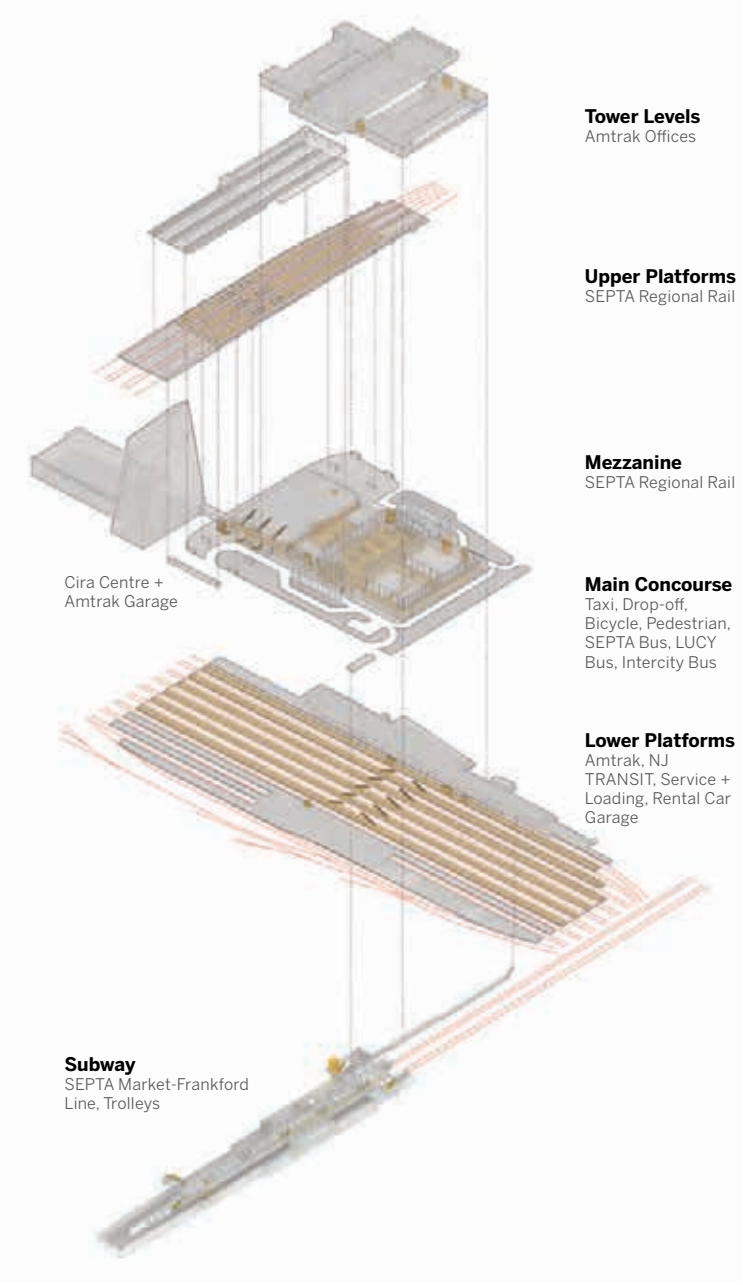
Beloved Gateway and Unrealized Asset

Philadelphia's 30th Street Station is Pennsylvania's busiest intermodal station, serving Amtrak, SEPTA and New Jersey Transit. The station has experienced a true renaissance since its restoration in the late 1980s, and now serves as a catalyst for significant commercial and residential development. The Main Hall is a grand civic space offering an impressive portal to the city and a place to dine, shop, and experience the energy and excitement of one of the world's great train stations.

Driven by projected growth in all modes serving the station, passenger volume at 30th Street Station could more than double over the next 25 years and beyond, posing new challenges for circulation, waiting, and boarding at the station. Serendipitously, the original station was designed to handle this type of passenger volume, but changes in station function and circulation over time have constrained capacity. The Plan seeks to rediscover the original intent of the station – with changes to accommodate the realities of travel in the 21st century – in order to meet projected demand and improve the quality of passenger experience.

In particular, the Plan calls for updating the existing retail offerings in the station, reopening the North Concourse as a passenger facility to increase Amtrak and NJ TRANSIT platform access, tying into the vacant East SEPTA Mezzanine to double access to Regional Rail platforms, and re-establishing a convenient and safe connection between the station and SEPTA subways and trolleys via an active and day-lit below-grade retail concourse. The Plan also proposes a new public entrance on Arch Street, eventually connected to new development extending north from the station, where a permanent home for intercity buses would be accommodated as part of a larger Arch Street Transportation Center. This is, in part, enabled by street enhancements to improve traffic circulation and provide safe and pleasant travel routes for pedestrians and bicycles to access the station.

The cumulative effect of all station interventions will be to make intermodal connections simple, efficient, and pleasant and create a better overall passenger experience.



30th Street Station: Intermodal Components

2.1 CONTEXT

2.1.1 Station History

30th Street Station was opened in 1933 by the Pennsylvania Railroad and included passenger facilities, office towers, rail yards, a power plant, a post office, and related infrastructure. Construction of the station allowed operation of through-trains between Washington, D.C. and New York City, claimed the Schuylkill River waterfront for civic use, and spurred the redevelopment of West Market Street as a high-rise office district.

The station was originally designed by the Pennsylvania Railroad to handle twice as many passengers as it does today, though with more long-distance travelers who had very different functional needs than the commuters and intercity travelers at the station today. The station building's plan was more symmetrical in terms of use, with both a South and a North Concourse. The latter, which is no longer in use as a passenger facility, included access to the rail platforms below and brought buses directly into the station to facilitate easy transfers; the Main Waiting Room (today referred to as the North Waiting Room) served this concourse and was not just a pass-through space. Regional Rail was accessed via both an East and a West Mezzanine. Although not part of the original plan, early changes to the station anticipated the two additional stairs in the Main Hall which would eventually connect down to parking and to the SEPTA Market-Frankford Line. This connection is also no longer in use.

1933 Station Plan

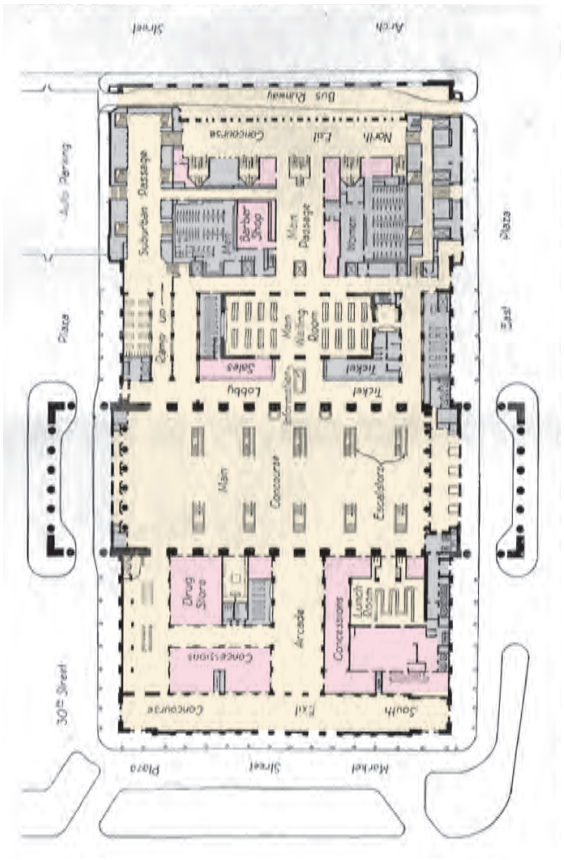


Photo of Station and Station Operations, 1933


Source: Hagley Museum

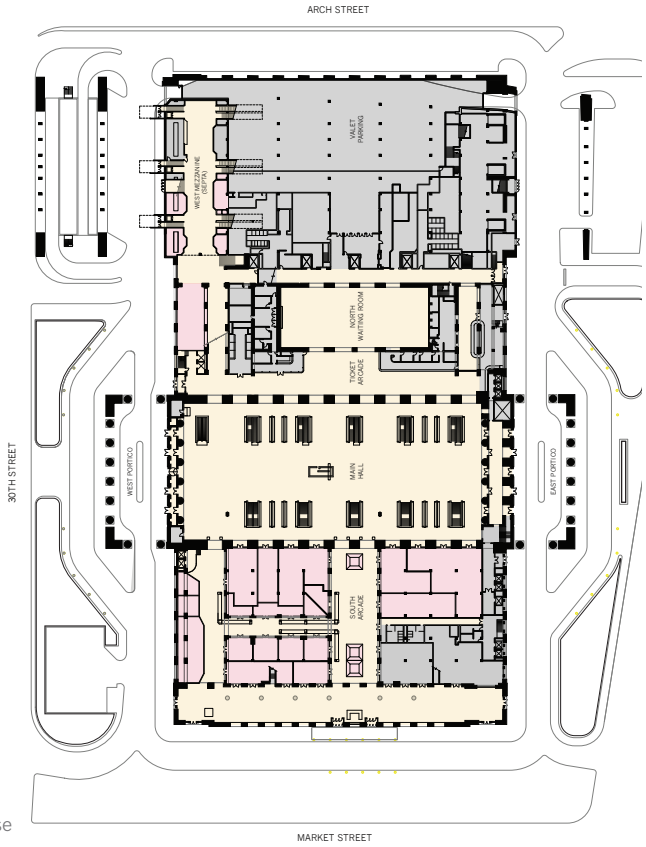
West Facade from Market-Frankford Elevated Line, 1934


Source: Railway Age

2.1.2 The Station Today

The station is highly functional but does not represent the full intent of the original plan. Circulation is focused on the Main Hall and the corridors leading to the southwest corner of the building, where the majority of pedestrians enter and exit the station en route to SEPTA subway or trolleys or to destinations in University City. The connecting ramp to SEPTA's mezzanine level is congested and will become even more congested when new fare control gates are installed. The entire north end of the station is closed off at Arch Street and used today as a valet parking garage. Vehicular traffic for passenger drop-off and pick-up circulates around all four sides of the station on an inner road loop. Most vehicle activity takes place under the East Portico, where formal taxi operations are focused. Overall, the station serves the needs of many different users, but that service and the larger experience could be vastly improved.

2015 Station Plan



The Station's West Portico Today

Passengers in the Main Hall

2.1.3 Multi-Modal Transportation Operations

In 2014, more than 11 million passenger trips were served at 30th Street Station and within its immediate vicinity:

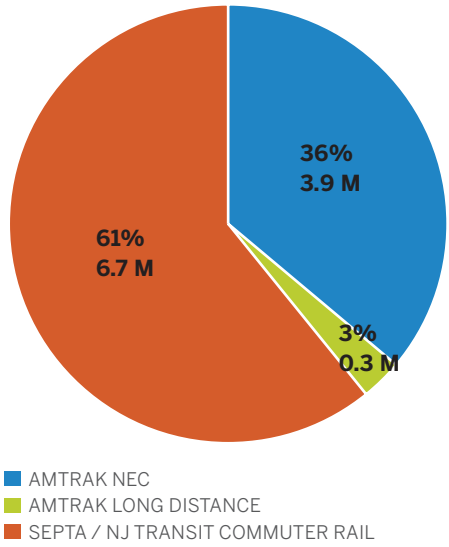
- 4.12 million **Amtrak** trips (12,500 daily boardings)
- 7.15 million **SEPTA Regional Rail** trips (24,600 daily boardings)
- 395,000 **NJ TRANSIT** rail trips (1,200 daily boardings)
- 15,700 **SEPTA Subway and Trolley** daily boardings at the 30th Street Market-Frankford station
- 3,900 daily **SEPTA bus** boardings
- 4,900 daily **intercity bus** boardings on JFK Boulevard

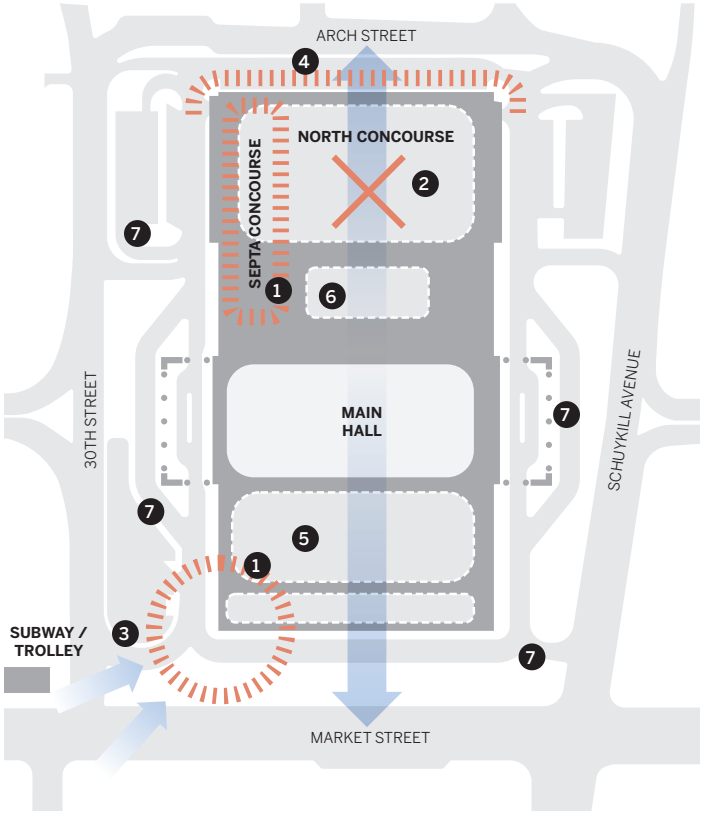
While the station has the space to accommodate passengers, the Main Hall is filled with a variety of wayfinding and commercial signage and retail kiosks that hinder passenger circulation. Additionally, Amtrak passengers wait in long queues, prior to station agents opening escalators and stairs down to the platform level. Only one of two available access points to each platform in the Main Hall is used for boarding. Elevators are out of sight. Once passengers have proceeded onto the platform, they wait further in unconditioned space – hot in the summer, cold in the winter. The transfer point between the SEPTA Concourse and west corridor of the station is also significantly congested, in part due to the single ramp that accesses this area.

Pedestrian crowding within the station congests main circulation areas and strains infrastructure. Connections between modes are difficult. And the station sits within a vehicular roadway loop that constrains movement for passengers and visitors arriving on foot or by bicycle. Moreover, significant improvements to the station are needed simply to resolve state-of-good-repair issues.

As a result of planned service increases by Amtrak and SEPTA, the passenger volume at 30th Street Station could double by 2040, creating new challenges for circulation, waiting, and boarding at the station. Current issues will become even more exacerbated as the station expands beyond its design capacity.

± 11 Million Annual Boardings (2014)





Key Station Challenges

2.1.4 Last-Mile Station Access

At the time of the opening of 30th Street Station in 1933, the blocks surrounding the station were only partially developed with warehouses and other industrial spaces. Passengers arrived and departed by cars and taxis beneath the dramatic station porticoes. Today, the porticoes continue their function as covered drop-off and pick-up areas, accessed by an interior circulation road around the station, which also provides access to a variety of short-term and longer-term parking spaces. Arch Street is used for access to underground parking and three lanes of taxi queuing space.

Today, the development around the station is more robust and diverse. The nearby residential, office, commercial, and education buildings now mean that people are arriving at or traveling by the station on foot, on bicycle, by local or regional transit, or by car. The time has come to reimagine the civic space surrounding 30th Street Station for all the users of today and tomorrow, celebrating the grandeur and significance of this important gateway. With thousands of travelers, office workers, students, and residents moving through the space every day, it could become one of the city's truly exceptional public spaces while still serving the diverse circulation and multi-modal needs of station users.

Taxi Queuing at Arch Street

The Porch

Market-Frankford Headhouse and the Station

2.2 STATION IMPROVEMENTS

2.2.1 The Vision

An Expanded, Revitalized Station

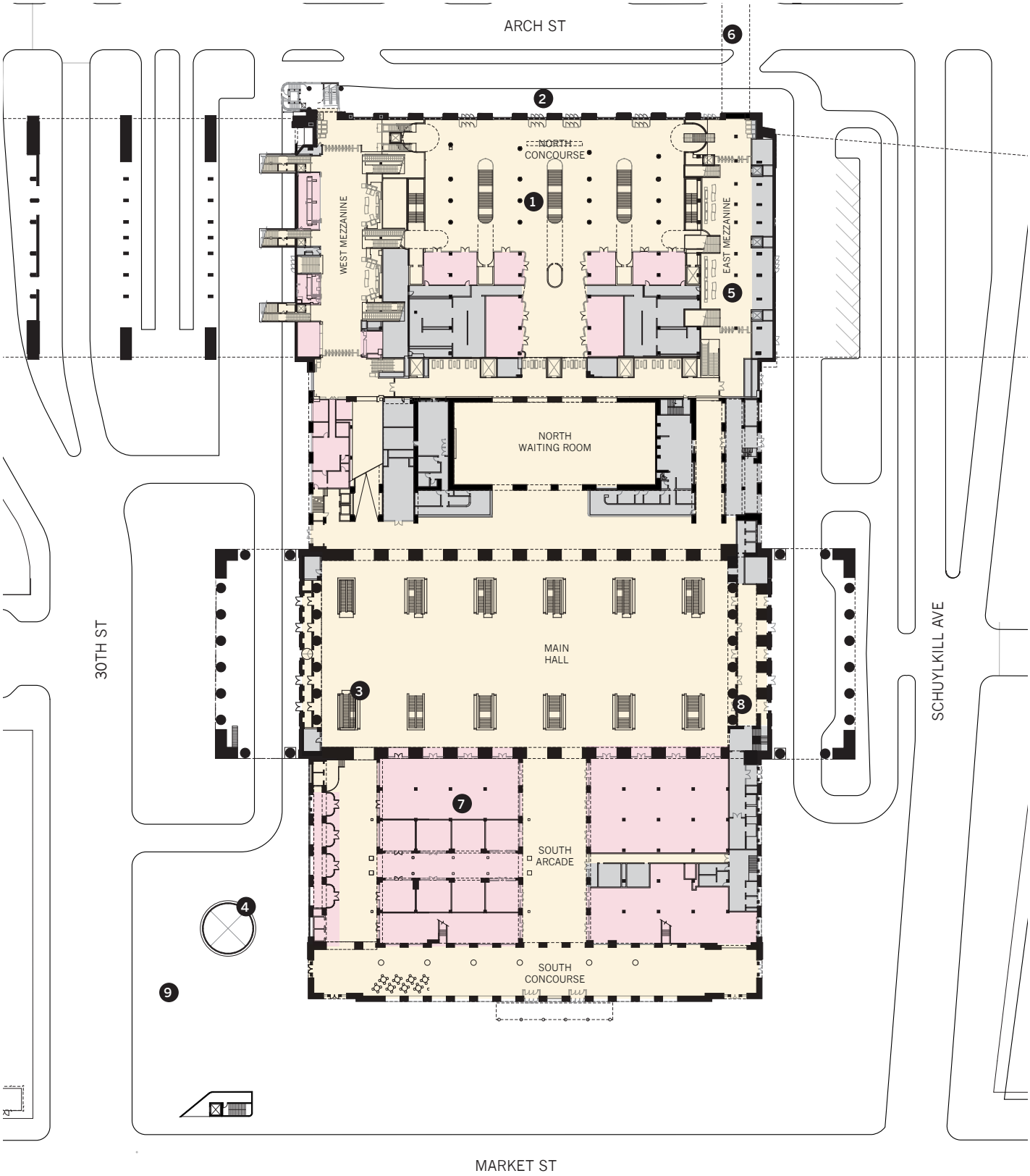
This Plan calls for reusing existing infrastructure to expand passenger service and retail areas. The North Concourse will be reopened as a passenger facility, increasing lower level platform access by 50%. The eastern half of the SEPTA Mezzanine will be reopened to double access to the upper level Regional Rail platforms. A stairway will be reopened at the western end of the Main Hall to provide direct access to the Market-Frankford Line, via a rebuilt tunnel and a retail concourse within the existing rental car garage. Reopened access stairs west of 30th Street will connect Schuylkill Yards directly to Regional Rail platforms. The station could also expand to a new "Far North" Concourse north of Arch Street. This concourse would connect with an intercity bus facility and provide direct access between lower-level railway platforms and a cluster of new commercial development. Together, these improvements will help meet the planning aspirations of stakeholders and demands of transit passengers, while respecting and enhancing the station.

New North Concourse


South Concourse Retail Improvements


New Bar/Lounge Area


Restored Arch Street Facade



1. New North Concourse in Existing Valet Garage
2. Restored Arch Street Entrance and Drop-off
3. Connection down to Market-Frankford Line
4. Skylight Over New Underground Concourse to the Market-Frankford Line
5. Reopened East SEPTA Mezzanine
6. Bridge to New Intercity Bus Station
7. South Concourse Retail Reconfiguration
8. New Bar/Lounge Overlooking the Main Hall
9. Station Plaza Improvements

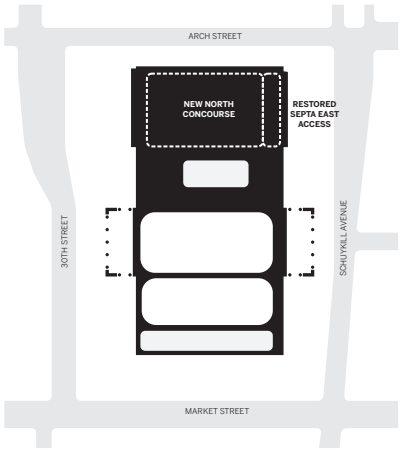
Public Circulation
Retail
Service / Back of House

N

25' 50' 100'

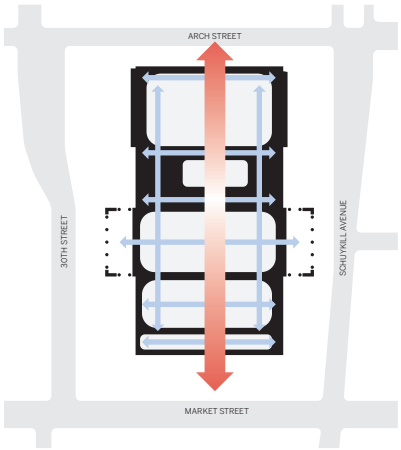
2.2.2 Station Planning Principles

Station improvements focus on two overarching goals – meeting functional needs and enhancing the customer experience.



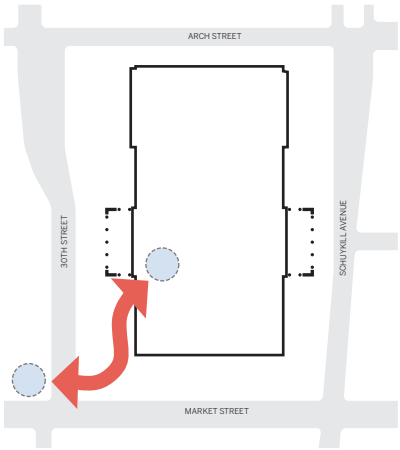
Expand Passenger Space

Today, the station's two most congested spaces are the western corridor to SEPTA Regional Rail and the Main Hall around stairs serving Northeast Corridor trains. With projected ridership growth, these spaces will struggle to function as intended. The Plan proposes expanding circulation and access points to Amtrak platforms via a re-activated North Concourse. This will connect to a second access corridor on the east side of the station – closed today – to Regional Rail platforms, helping address major pedestrian choke points.



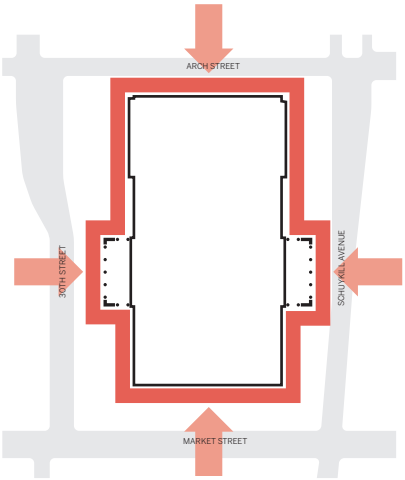
Restore the Primary Axis

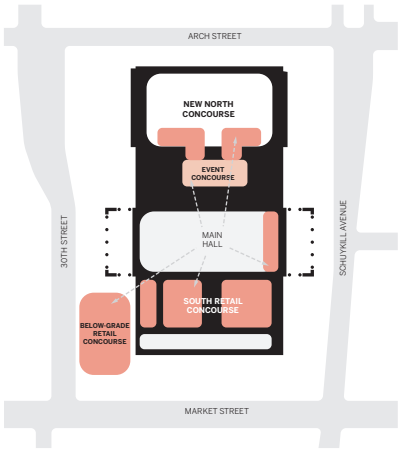
The station is a series of east-west-oriented waiting, boarding, and retail areas, tied together with north-south passageways. The Plan proposes to strengthen the original design intent by realizing the north-south passageway from Market Street to Arch Street that ties together the South Retail Concourse, Main Hall, North Waiting Room, and a new North Concourse. Allowing a clear view through the station from end to end, this promenade will become a key passenger wayfinding element.

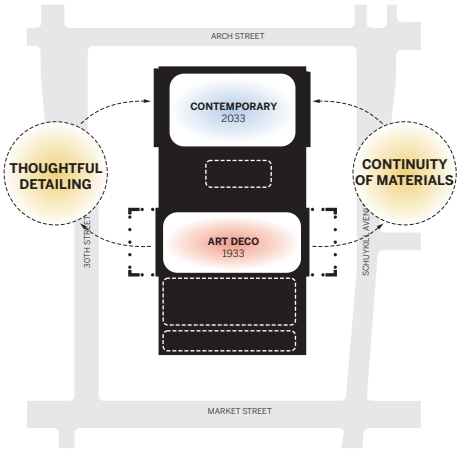


Reconnect the Subway

For almost 30 years, passengers transferring between 30th Street Station and trolleys and subways below Market Street have lacked a covered, climate-controlled route, forced instead to leave the station and cross 30th Street. The Plan proposes re-opening the underground connection between these stations via a new stair within the Main Hall, through an active, below-grade retail concourse, and under 30th Street.







Access All Four Sides

Today, the station building is active on three of its four sides, relegating the Arch Street frontage to a blank wall with short-term taxi parking. The Plan envisions bringing this side of the station to life and realizing a civic building with all sides active towards the city.

Upgrade Retail Offerings

Train stations across the country are discovering value by bringing new types of retail tenants to old spaces, increasing both the quality and character of retail offerings to better serve passengers and those living and working in the neighborhood. The Plan proposes more variety in retail offerings, with a better balance between convenience retail and fast food, destination shopping and higher-end dining. This will help make the station both a place to pass through and a District destination, while expanding retail options to increase revenues.

Preserve and Respect History

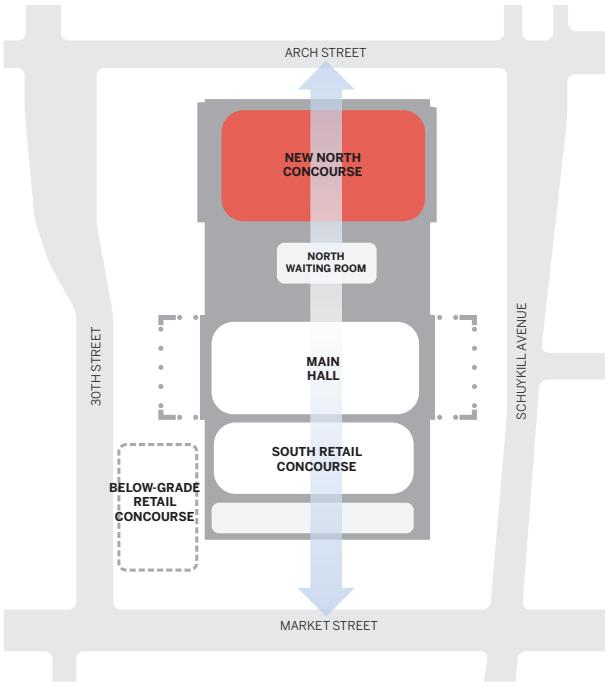
All proposed interventions look to the station's historic Art Deco design as the basis and inspiration for future work. While new spaces will reflect contemporary design, they will capture the feel of the historic station through materiality and attention to detail – harmonious and respectful without imitating an historic style.

2.2.3 New North Concourse

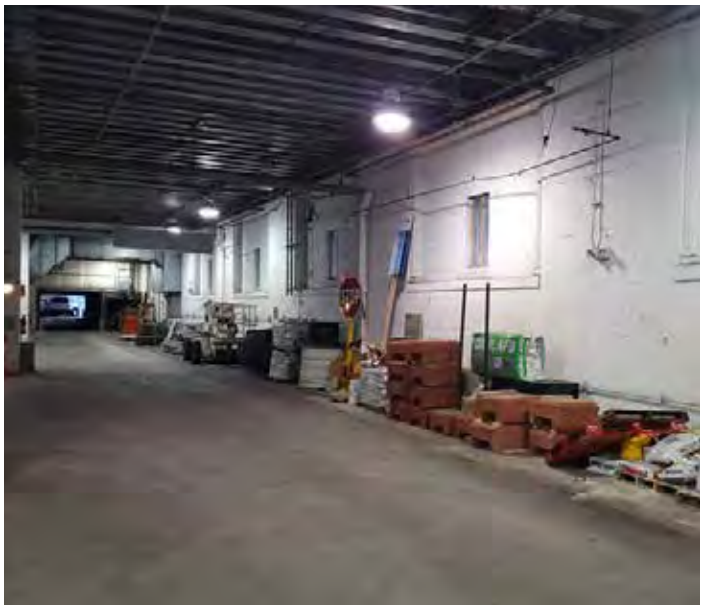
The Plan envisions reactivating the former North Exit Concourse – currently the valet parking garage – as a mixing bowl of passenger movement that expands access down to Amtrak and NJ TRANSIT and up to SEPTA Regional Rail. It will be reverent to the historic design of the station while creating an inspiring passenger terminal for the next century.

Proposed Improvements

- Provide a second area for ticketed access down to **Amtrak and NJ TRANSIT** trains below
- Create new connections from the ground level up to the **SEPTA Mezzanine**
- Repair and re-open the **Arch Street facade** as an entry and exit, including a new passenger drop-off area
- Create new opportunities for **station retail**
- Improve overall station **circulation and wayfinding**

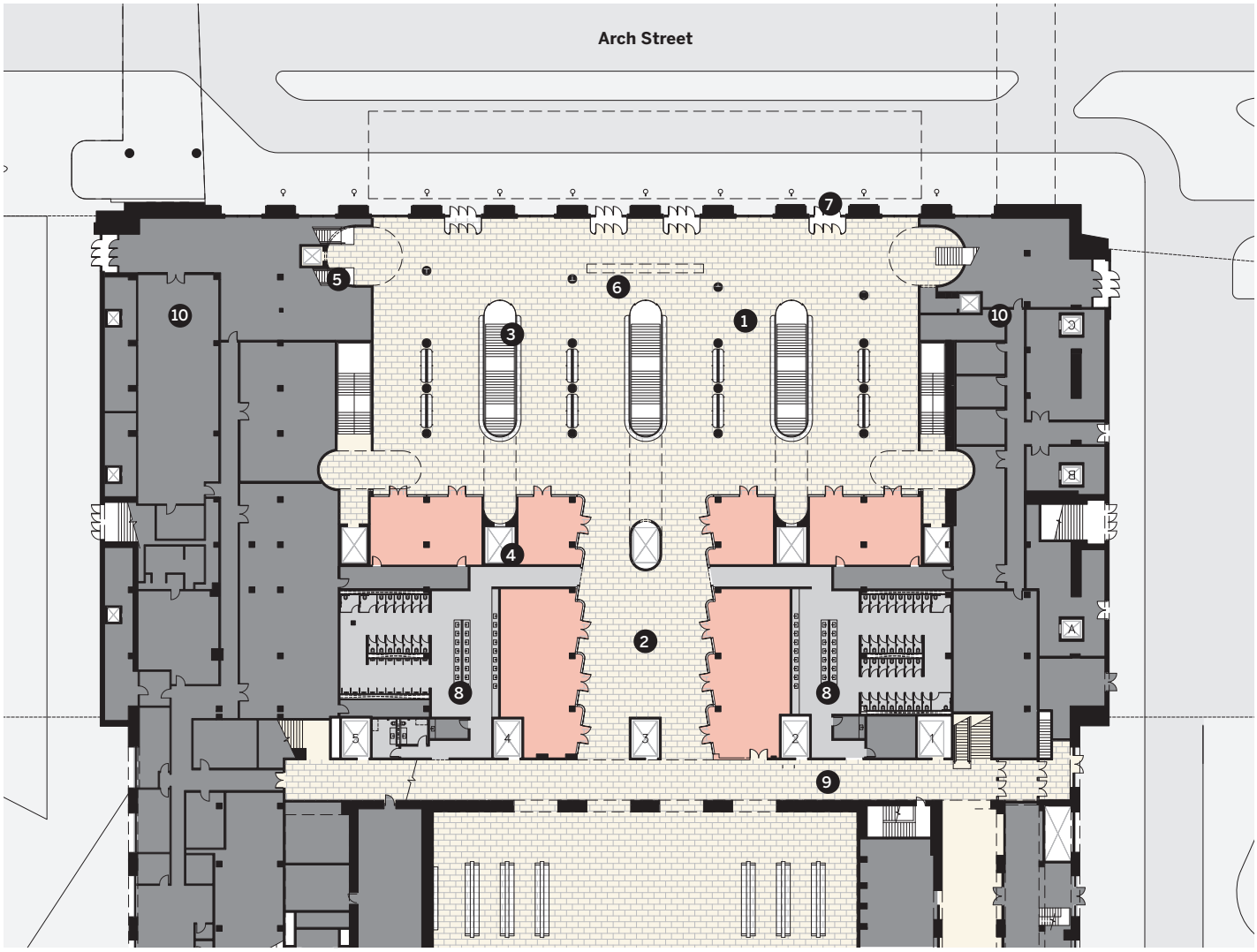


Existing Arch Street Facade (Interior)



New Entry at the Arch Street Facade

Concourse Level Plan

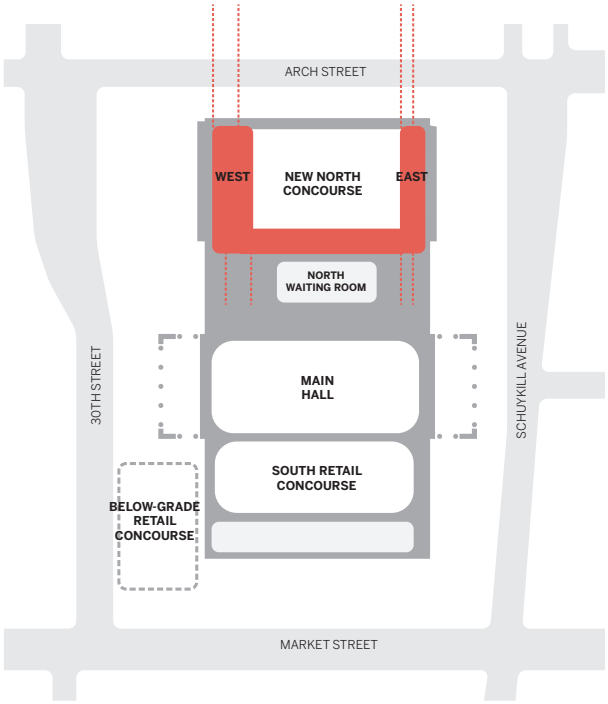


1. New North Concourse
2. North retail concourse
3. New stairs/escalators down to Amtrak and NJ TRANSIT platforms below
4. New elevators down to Amtrak and NJ TRANSIT platforms
5. New connections up to SEPTA mezzanine level
6. Central train information board
7. Renovation of Arch Street facade and new door access
8. Men's, women's, and family restroom renovation
9. Improved east-west access corridor
10. Reconfigured and optimized back-of-house areas

2.2.4 New East Concourse

The transfer point between the SEPTA Regional Rail Concourse – located in the West Mezzanine – and the west corridor ramp leading down to the Main Hall is the most congested point in the station. With Regional Rail ridership expected to double over the next 25 years, expanded capacity for these passengers is of critical importance.

The Plan envisions a second means of access to SEPTA Regional Rail at the station's east side. This East Mezzanine space already exists within the building and was historically used as an exit concourse from platforms above. The Plan proposes reopening and expanding the width of the corridor to provide new access to SEPTA Regional Rail. The SEPTA West and East Mezzanines will be fully integrated with the rest of the station: connections will lead down to the new North Concourse, and a future bridge connection from the East Mezzanine over Arch Street could connect to the intercity bus facility. This interconnectivity provides an opportunity to reconfigure the SEPTA Key fare control gates to complement new passenger flows, with control gates for paid access into the West and East Mezzanines at their north and south ends. Public access, including access to Cira Centre, would be provided through the new North Concourse.



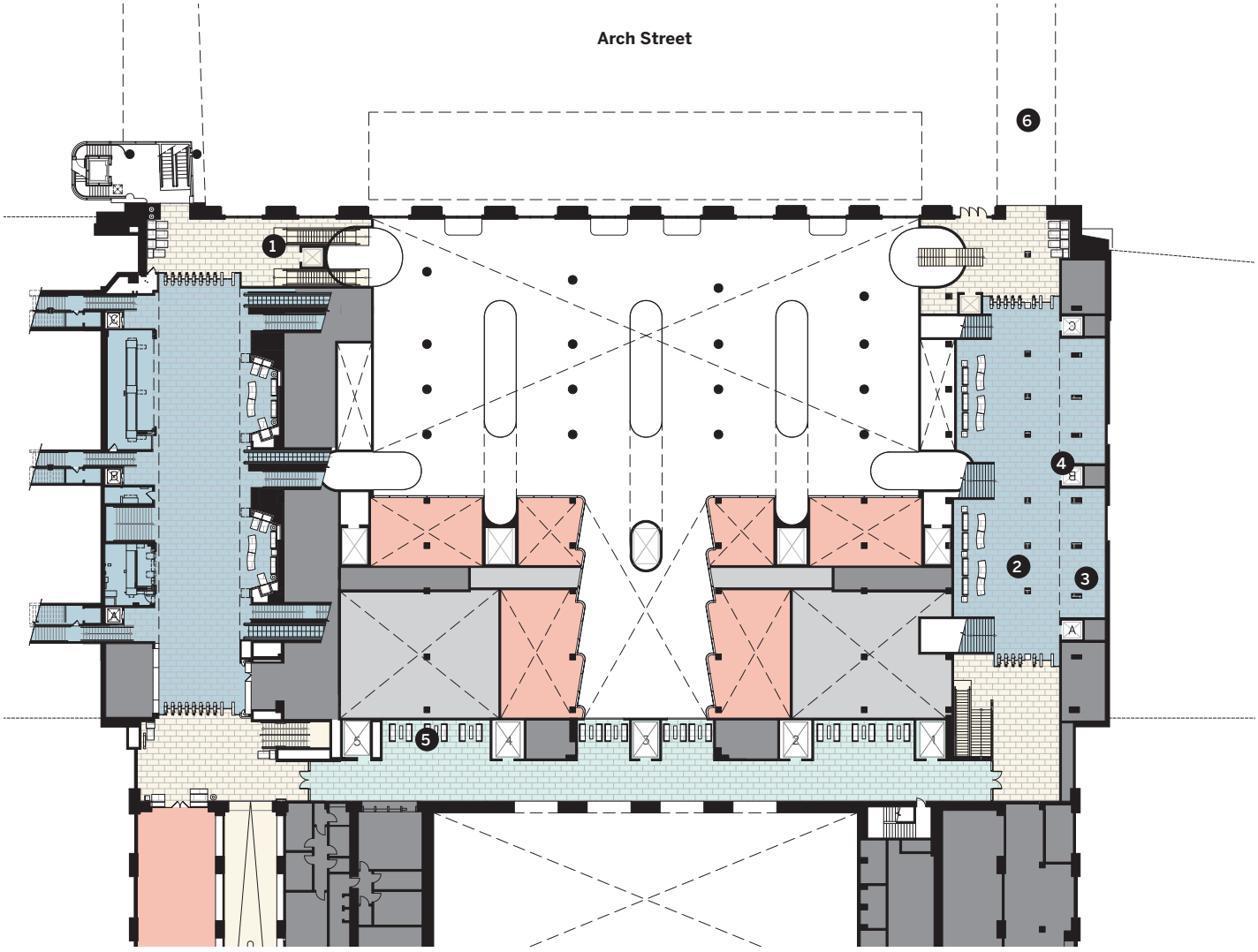
Proposed Improvements

- **Relieve congestion** in the station's highly trafficked corridors
- Reactivate **existing station infrastructure**
- Connect to the **new North Concourse**
- Create an **accessible route** to mezzanine and platform levels
- Accommodate implementation of the **SEPTA Key** system
- Anticipate a **future bridge** at the East Mezzanine to connect to a bus facility or vertical development across Arch Street

Existing East Mezzanine Corridor

New Route to Regional Rail from the New North Concourse

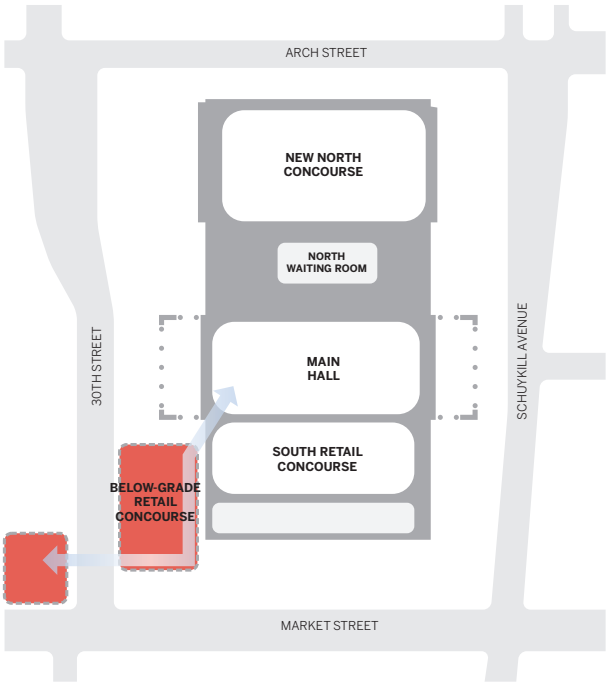
Mezzanine Level Plan



1. New connections down to North Concourse
2. Reactivated East Mezzanine corridor
3. Back-of-house space recaptured for circulation / waiting
4. Baggage handling elevators replaced for public use
5. Expanded and renovated ClubAcela Lounge
6. Future bridge connection to development and bus station

2.2.5 New Underground Concourse

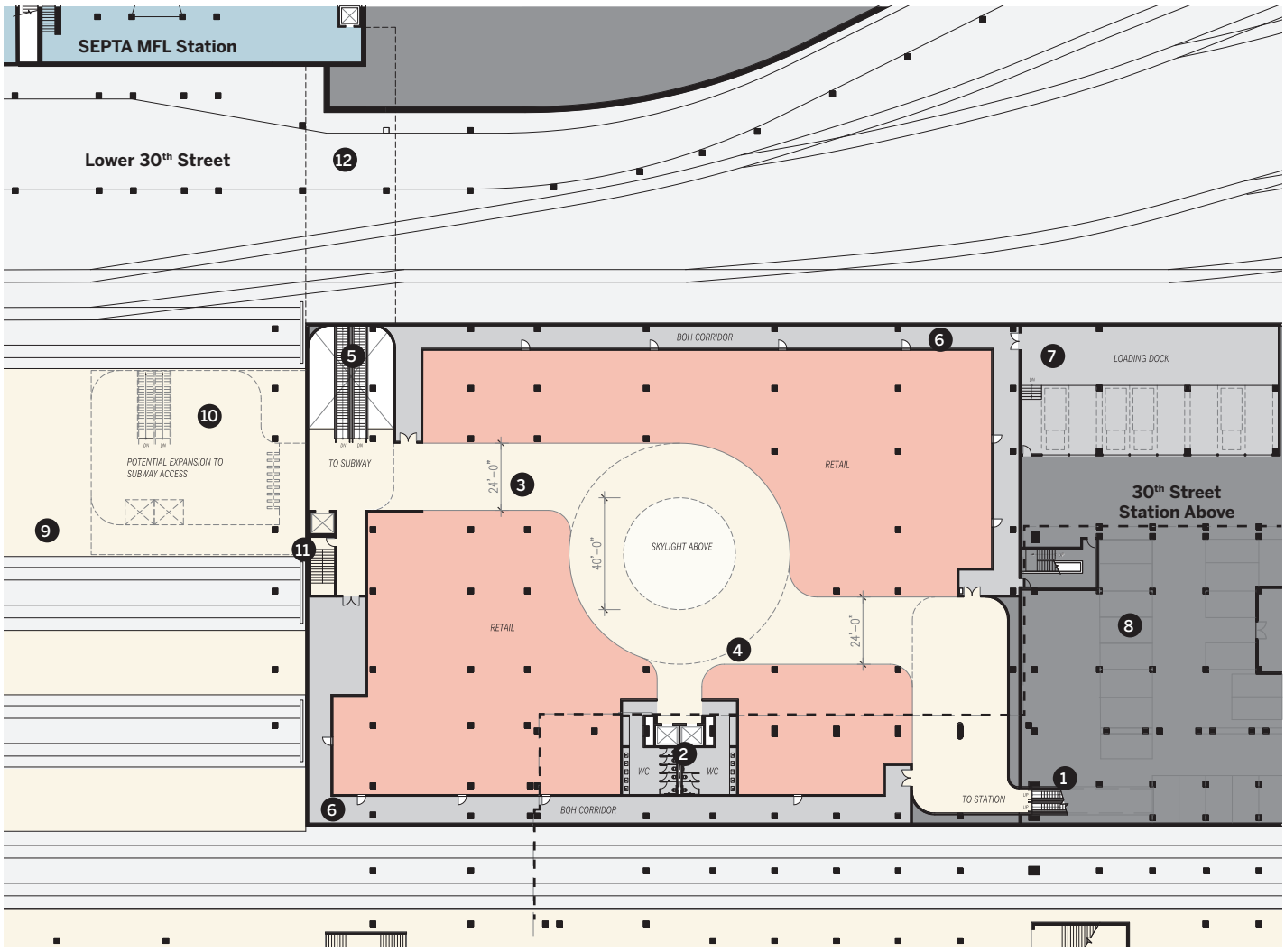
Passengers transferring between SEPTA's Market-Frankford Line (MFL) Subway or trolley services and 30th Street Station must travel outside and across a busy stretch of 30th Street. Although they were once connected by an underground passageway, the connection was closed due to security concerns. The Plan envisions re-establishing the underground connection via a new concourse with active retail and restaurant space rather than a narrow tunnel. This creates a series of new opportunities for both stations and for the District, while facilitating a better overall passenger experience. Connection between the stations will also be enhanced by improvements to the existing at-grade crossing to ensure safety, enhance pedestrian experience, and improve wayfinding for those crossing at street level. Proposals for Station Plaza and for changes to the road network around the station will work together to further this ambition.



Proposed Improvements

- Provide an **indoor, protected pathway** between SEPTA's MFL and 30th Street Station.
- Upgrade the existing headhouse within Drexel's Schuylkill Yards project.
- Connect directly to the **Main Hall** of 30th Street Station.
- Convert the southern end of the garage into a **new underground retail concourse**, allowing circulation to weave through retail rather than making perpendicular movements in a tunnel
- Provide access to the the concourse from **Station Plaza**.
- Make all passageways and stairs **highly visible** to improve passenger wayfinding and safety.
- Reserve space for an indoor, protected **bicycle hub** that includes area for storage, rental, and locker facilities.
- Explore potential for a connection to **an extended MFL platform** from the east side of 30th Street, via a paid zone on the old mail platform, given physical viability.

Concourse (Platform) Level Plan



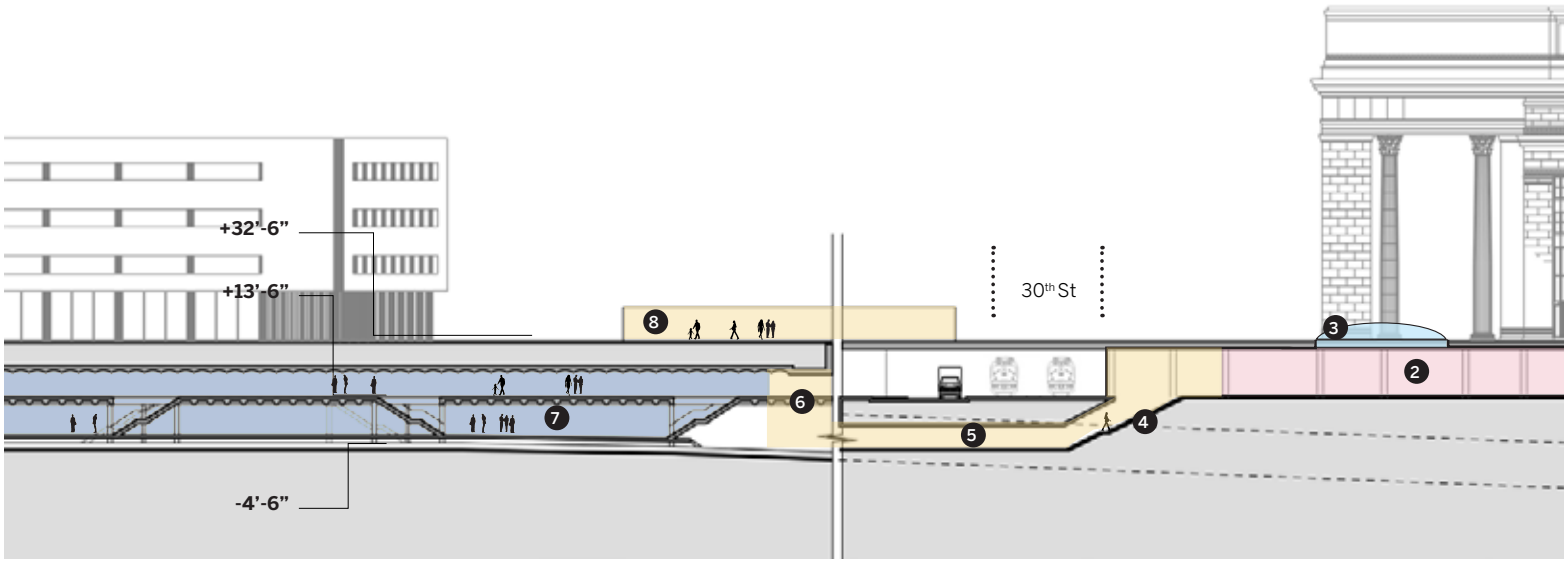
Public Circulation
Retail
Bathroom
Back-of-House

N
25' 50' 100'

1. Stair and escalator up to Main Hall
2. Elevator up to South Arcade area
3. Pedestrian corridor
4. Rotunda with skylight
5. Stair and escalator down to tunnel
6. Service and back of house
7. Loading dock and back-of-house service for retail
8. Existing underground parking area to remain
9. Potential for future connection along former mail platform to IRS Building and farther south below Lower 30th Street.
10. Potential "east headhouse" with paid zone access to the Market-Frankford Line on the east side of 30th Street. This requires additional study to determine physical viability.
11. Connection up to Station Plaza
12. Tunnel below

2.2.5 New Underground Concourse

Section at Market Street, Looking North



1. Down from Station Concourse
2. New Retail Space
3. Skylight Above
4. Down to Pedestrian Tunnel
5. Pedestrian Tunnel
6. Up to Mezzanine Level
7. MFL + Trolley Platforms
8. SEPTA Headhouse

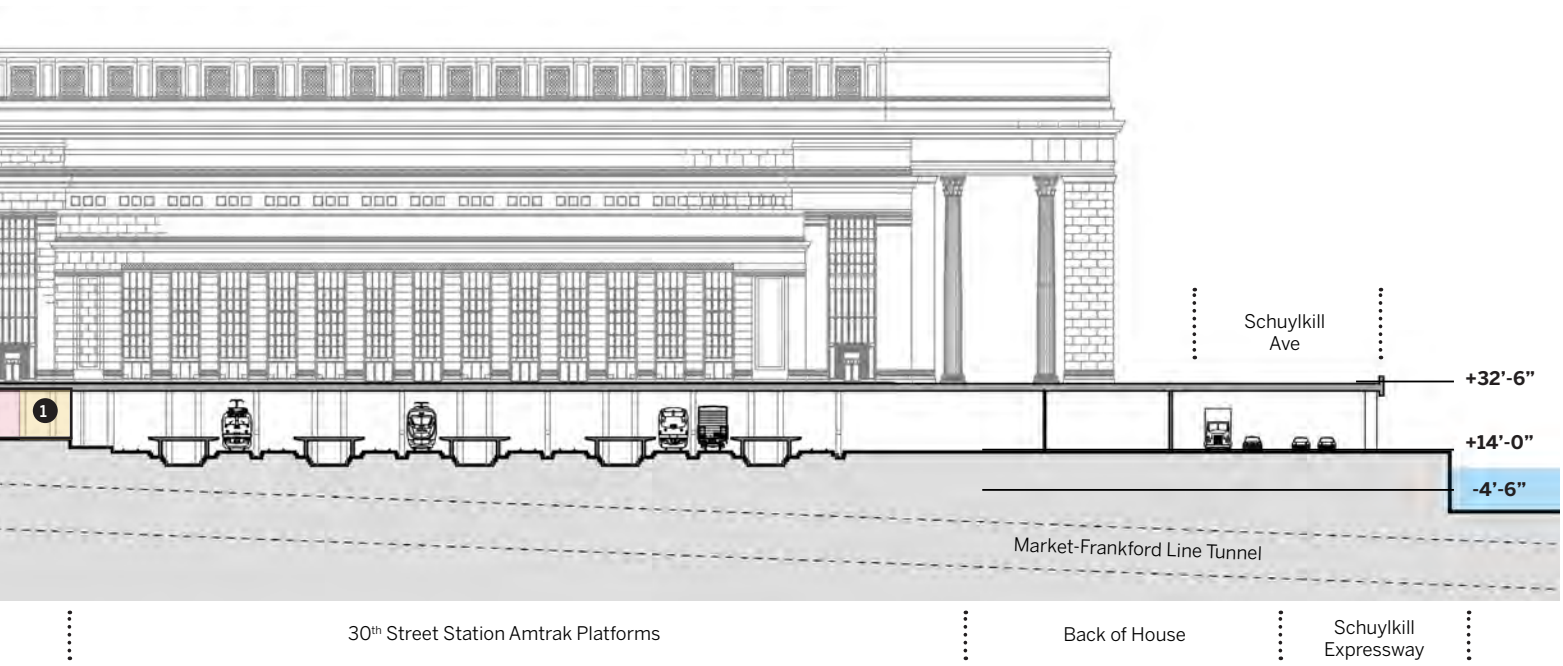
Public

Paid Zone

Retail

Existing Connection Requires Crossing 30th Street

New Below-Grade Connection from the MFL to the Station



Vision for a Dramatic Skylight Opening to Station Plaza

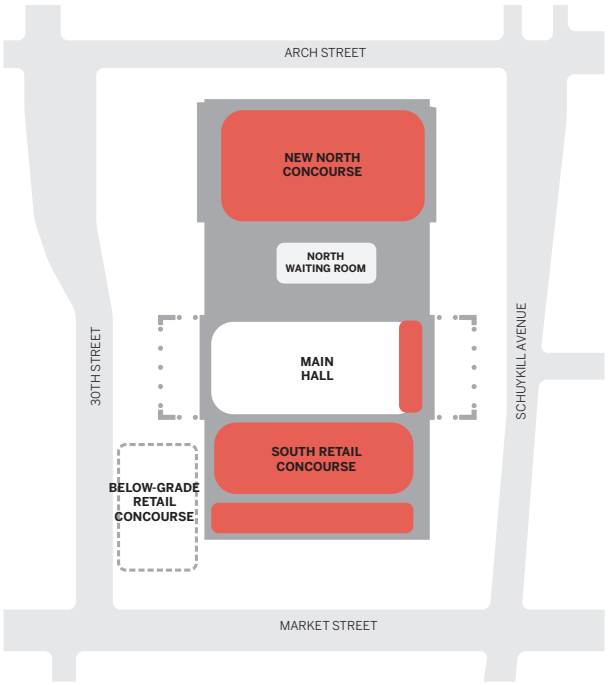
2.2.6 Station Retail

Retail at 30th Street Station currently does not meet its fullest potential. Stores could achieve higher sales productivity by capturing a portion of the estimated $260 million in unmet spending potential of those living and working in the District.

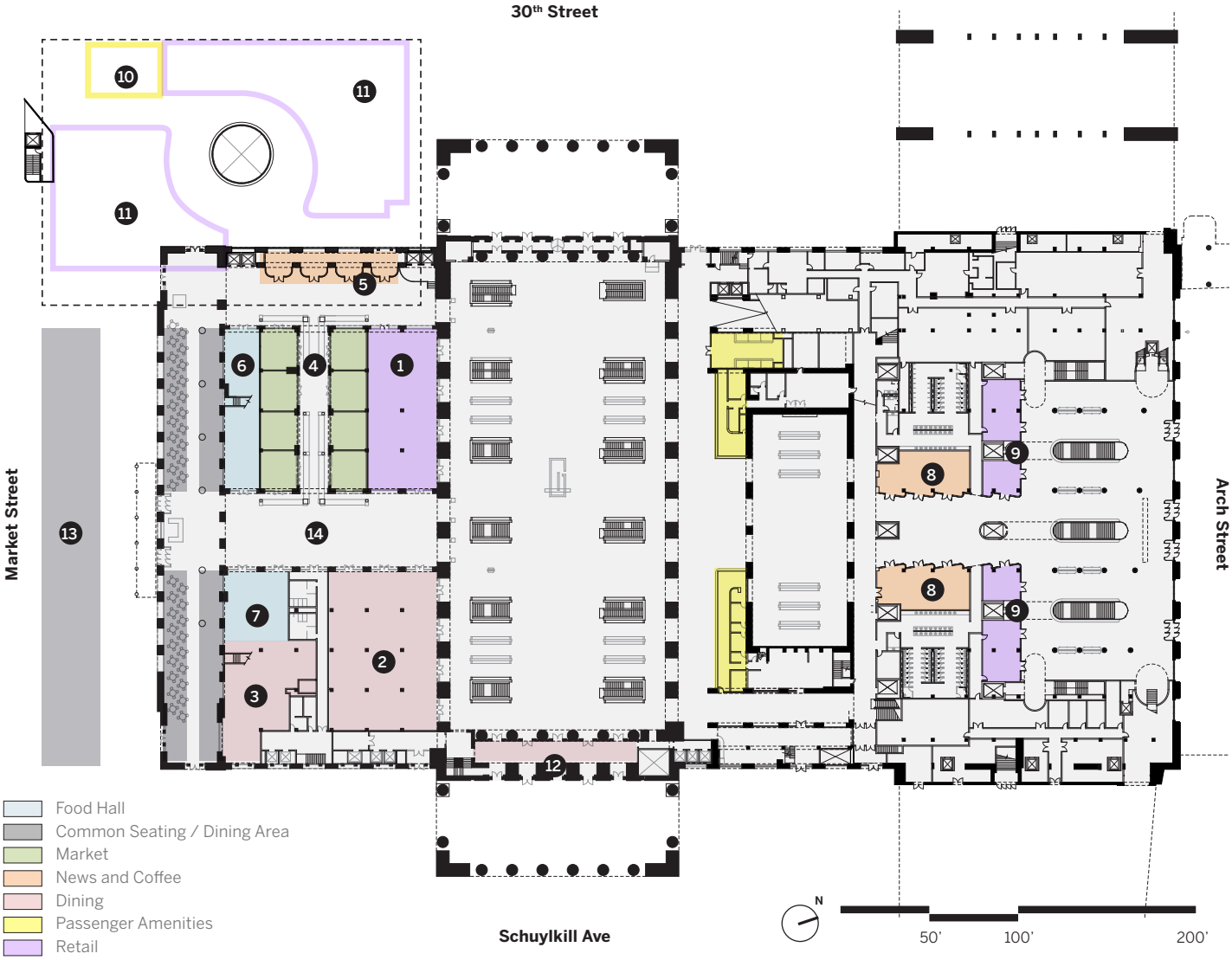
Improving retail value requires revisiting store mix and visual identity, both of which can be updated to reflect the latest market trends and preferences. The Plan proposes renovation and remerchandising of the existing retail space into a modern and attractive amenity that serves passengers and the deep and growing market of those who work, live, and study in the District.

The Plan envisions a reconfiguration of the existing retail in the South Concourse and other spaces facing the Main Hall. Kiosk retail will be removed to provide ample space for comfortable passenger circulation. For the remaining 27,400 square feet of leasable retail area, the Plan proposes a food hall, a market, sit-down dining, and convenience stores and amenities all located to take advantage of foot traffic and the station's architecture. The Plan increases the value of the space, and will make a positive contribution to the brand of the District and the city.

The Plan also sees potential to add up to 23,800 square feet of additional, new leasable area in the new North Concourse and new underground retail area. These opportunities for future retail expansion will enable the station to provide an exciting and diverse mix of retail offerings to its passengers and to the District's growing number of nearby residents, students, and workers.



Proposed Station Retail Plan



1. Passenger-oriented retail: 4,370 SF
2. Sit Down Dining: 5,160 SF
3. Sit Down Dining: 3,230 SF
4. Market: 4,590 SF
5. News/Coffee: 1,150 SF
6. Food Hall: 2,100 SF
7. Food Hall: 1,700 SF

Total Improved Retail: 22,300 SF

8. News/Coffee: 2,940 SF
9. Passenger-oriented retail: 2,870 SF
10. Bicycle center: 1,700 SF
11. Passenger-oriented retail: 19,690 SF
12. Mezzanine Bar and Lounge: 2,400 SF

Total New Retail: 29,600 SF

13. Outdoor Seating and Food Amenity at The Porch
14. Kiosks removed

2.2.6 Station Retail

Proposed Improvements to Existing Retail

- A **food hall** at the south end of the station featuring local, unique, high-quality food tenants from the Philadelphia area.
- A **market** that offers both fresh grocery items and grab-and-go prepared foods.
- **Newsstands and coffee shops** conveniently located in the areas of the station with the most foot traffic.
- **Sit-down dining** and café along the Main Concourse featuring casual dining and popular restaurants and a café to increase foot traffic and draw in the area's population. The café will provide a convenient coffee option for passengers in the Main Concourse.
- **Consolidated passenger amenities** (ticketing, car rental, Traveler's Aid, and others) to de-clutter the station and provide the best possible customer experience.

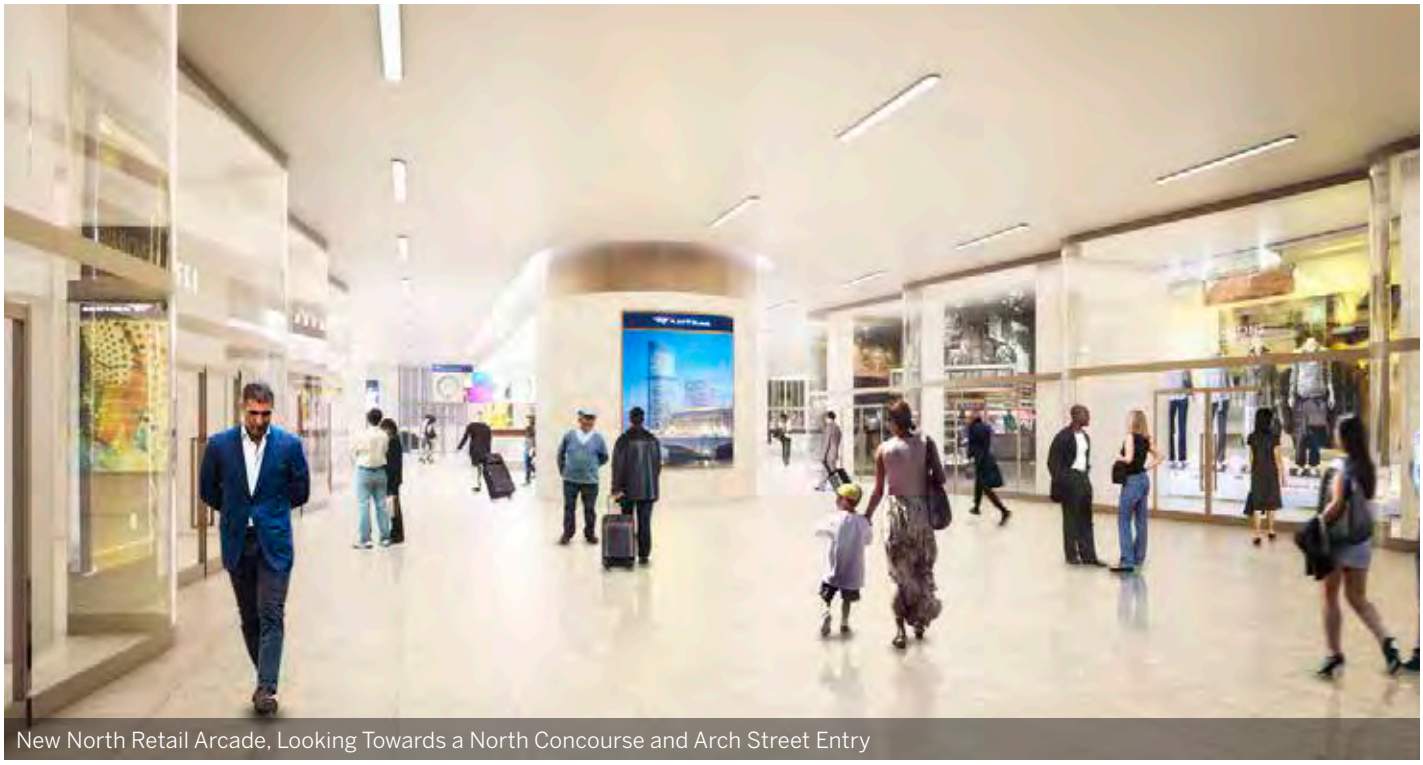
Proposed New Retail

- A new **mezzanine bar and lounge** overlooking the Main Hall, along the station's east facade, with connections to a sit-down restaurant at ground level.
- **Passenger-oriented retail** at the new North Concourse and the MFL Subway connection.
- A **bicycle center** with rental, storage, and locker facilities conveniently located at or below Station Plaza.
- A high-end **café or restaurant** within Station Plaza which could feature seasonal changes and be integrated with space inside the southwest corner of the station.

Existing South Concourse Area

Vision for New Restaurants with Seating Facing The Porch

Vision for a New Bar and Lounge Space on the Mezzanine Overlooking the Main Hall



New North Retail Arcade, Looking Towards a North Concourse and Arch Street Entry

2.2.7 Historic Preservation

Built between 1929 and 1934, 30th Street Station is one of the last-to-be-constructed "gateways" to a major American city. It stands as one of the greatest construction accomplishments of the Pennsylvania Railroad Company (PRR) and the central city improvement program undertaken by the City of Philadelphia and PRR, known as the Philadelphia Improvements Project. Designed by Graham, Anderson, Probst and White, the monumental building is defined by its characteristic Neoclassical architecture, with influences of Art Deco and streamlined modern design incorporated throughout its interior. The station building is remarkably well preserved and continues to fulfill its original transportation function more than eighty years after its construction.

The period of significance for 30th Street Station – that is, the period which the National Register defines as historically significant when designating a landmark – is defined as 1929 to 1934. A majority of existing physical fabric in the building dates to this period and reflects the original design and the building's importance to architecture and urban planning.

Future projects will vary in scale and intensity and therefore require varying levels of review and consultation with federal, state, and local agencies. Given the station's high level of integrity, as well as the frequent need to update the facility so that it can continue to effectively serve its function as a transit hub, the Plan recommends an over-arching preservation philosophy for 30th Street Station of "Rehabilitation." This is the most flexible preservation treatment in terms of both protecting historic architectural character and accommodating contemporary uses. The interpretation of this philosophy varies throughout the station based on three overarching preservation zones.

Preservation Zone 1

These spaces, which may be public or non-public, define the essential character of the building and exhibit the greatest degree of extant original architectural fabric from 30th Street Station's period of significance. In general, these spaces have a high level of integrity, in that they are in good condition and have few alterations. Treatments for Preservation Zone 1 spaces aim to maintain and return, if feasible, spaces and materials to their appearance during the period of significance.

Preservation Zone 2

These spaces may define the essential character of the building, but exhibit low integrity due to the loss of most or all character-defining features or materials and/or the extensive incorporation of new materials or features. Zone 2 spaces generally aim to preserve character-defining features as part of any major repair or alteration while allowing for compatible change.

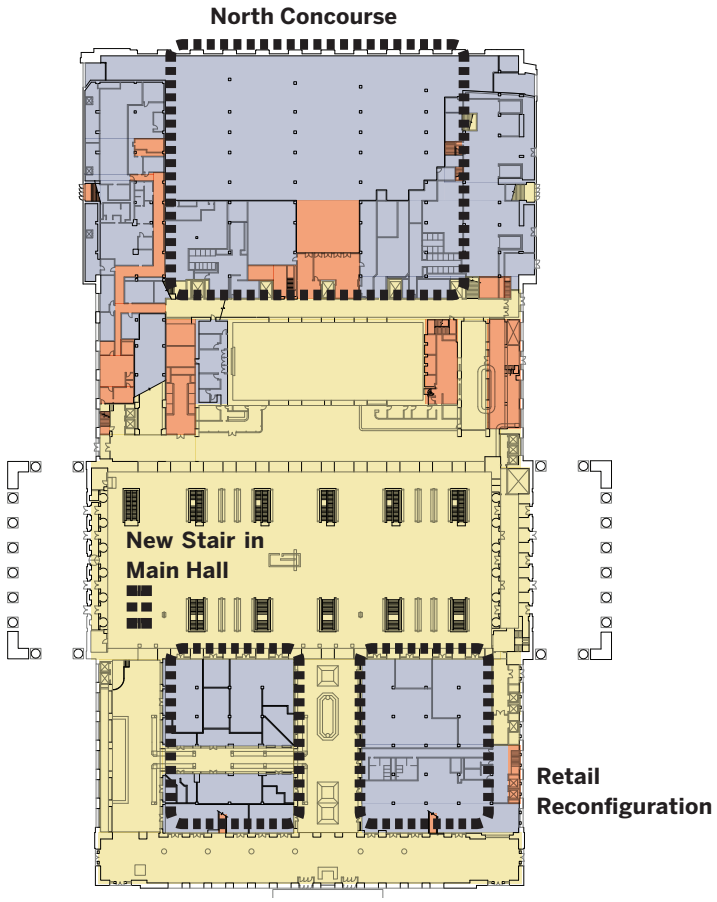
Preservation Zone 3

These areas contain few, if any, character-defining features and therefore do not contribute to the historic or architectural significance of 30th Street Station. Due to their low significance, these areas can be altered to meet contemporary needs.

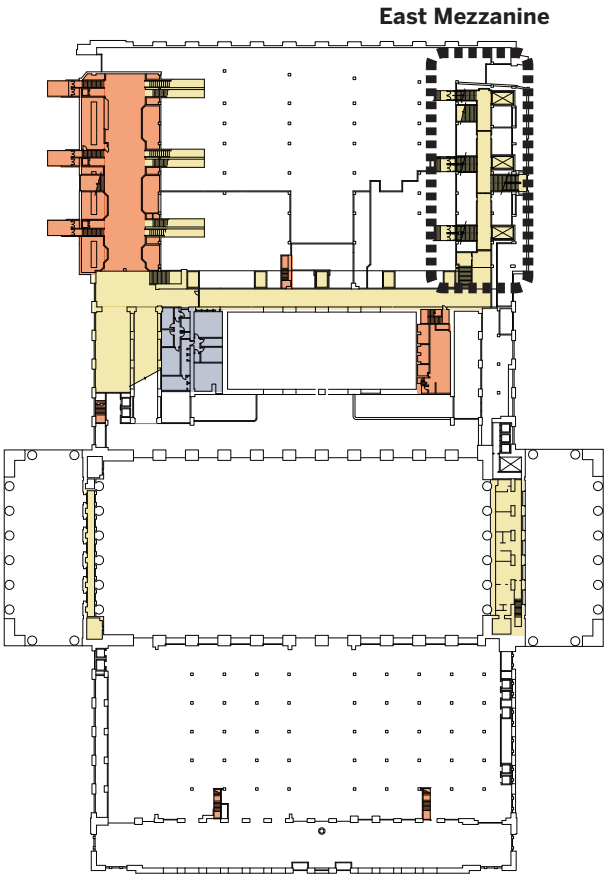
Nearly all changes proposed to the station fall within Preservation Zones 2 or 3 and would not impact areas with historical significance. These changes have been designed to invoke the character of the historic station through materiality and attention to detail while still reflecting contemporary design and function.

Proposed North Elevation

Existing Ground Level Plan



Existing Mezzanine Level Plan

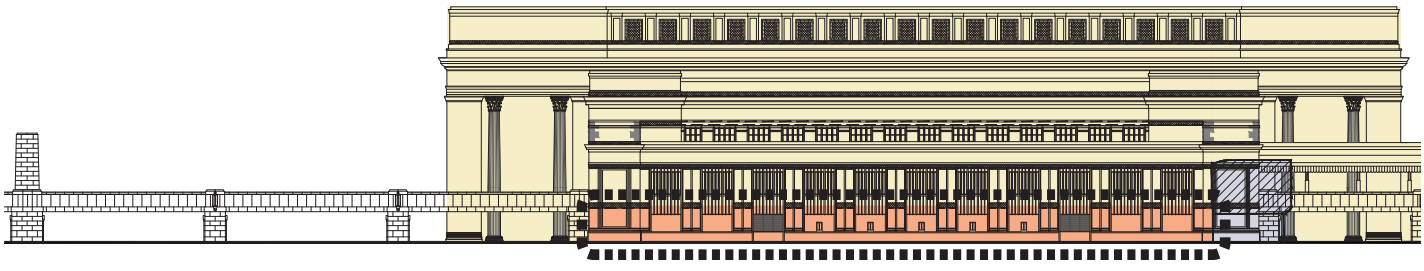


Preservation Zone 1

Preservation Zone 2

Preservation Zone 3

Existing North Elevation
(Remaining elevations are entirely in Preservation Zone 1)



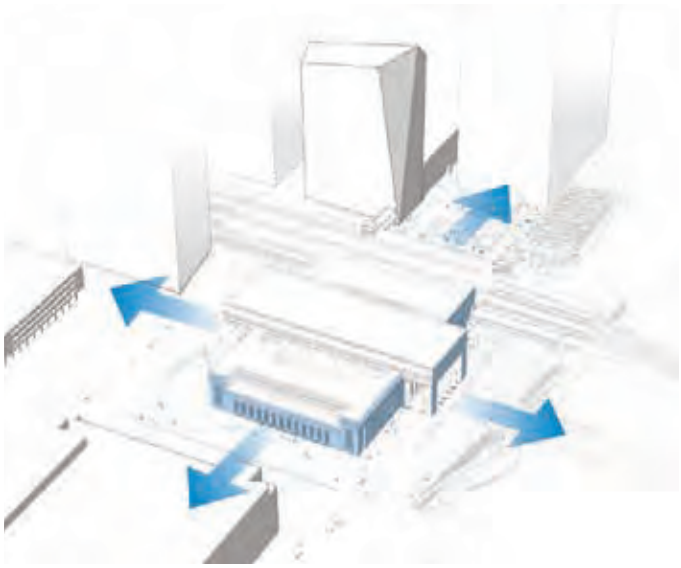
2.3 STATION PLAZA

2.3.1 Introduction

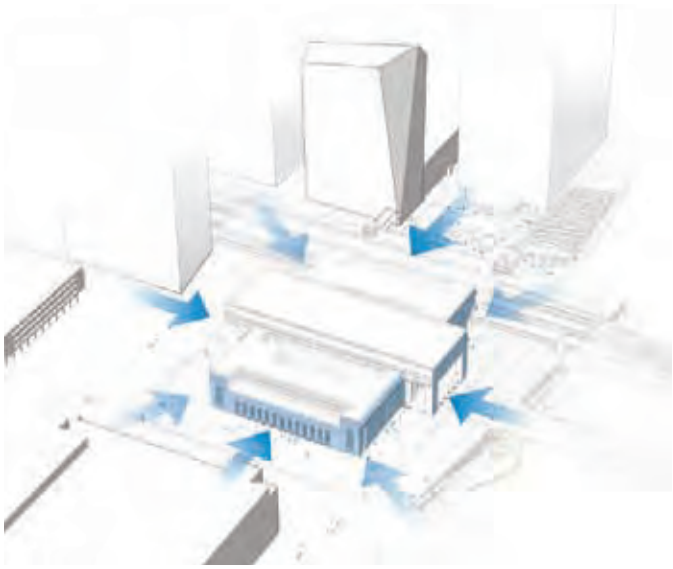
The long-term success of the District will depend, to a large degree, on the success of 30th Street Station and its immediate urban edges – the blocks in all directions adjacent to the station. These edges must balance transit functions with some of the highest-density development in the District. The Plan proposes **physical extensions of the station** out into the city: to the north, with a new concourse and transit-oriented development, in addition to the existing connection to Cira Centre; to the west, connecting to the Market-Frankford Line and to development across 30th Street, integrated with both underground and regional SEPTA services; to the south, with a future retail concourse connecting underground to the former Post Office; and to the east, extending the Station Plaza public space out to the riverfront. More importantly, these physical moves help to extend the **life and urban vibrancy of the station** to animate and add value to the District. The station will become the center of gravity of a thriving, mixed-use precinct.

Likewise, the Plan is about bringing the myriad interests around the station more seamlessly to its front door, through physical connectivity, programming, and public realm design. As the hinge point between institutional, commercial, civic, and ecological identities, the station will serve as both a beginning and end point of each experience. It will become a destination unto itself where all of these layers come together.

The starting point for all new public space is a great new plaza and active urban perimeter around the historic train station. Like Dilworth Plaza on the west side of City Hall, Station Plaza will become a central civic space for the District, serving station customers, neighbors, nearby institutions, and visitors. Activating Station Plaza as a dynamic public space will provide an anchor for the District and a true gateway to University City. It will help catalyze development of Schuylkill Yards, parcels tied directly to the station, and future rail yard development.

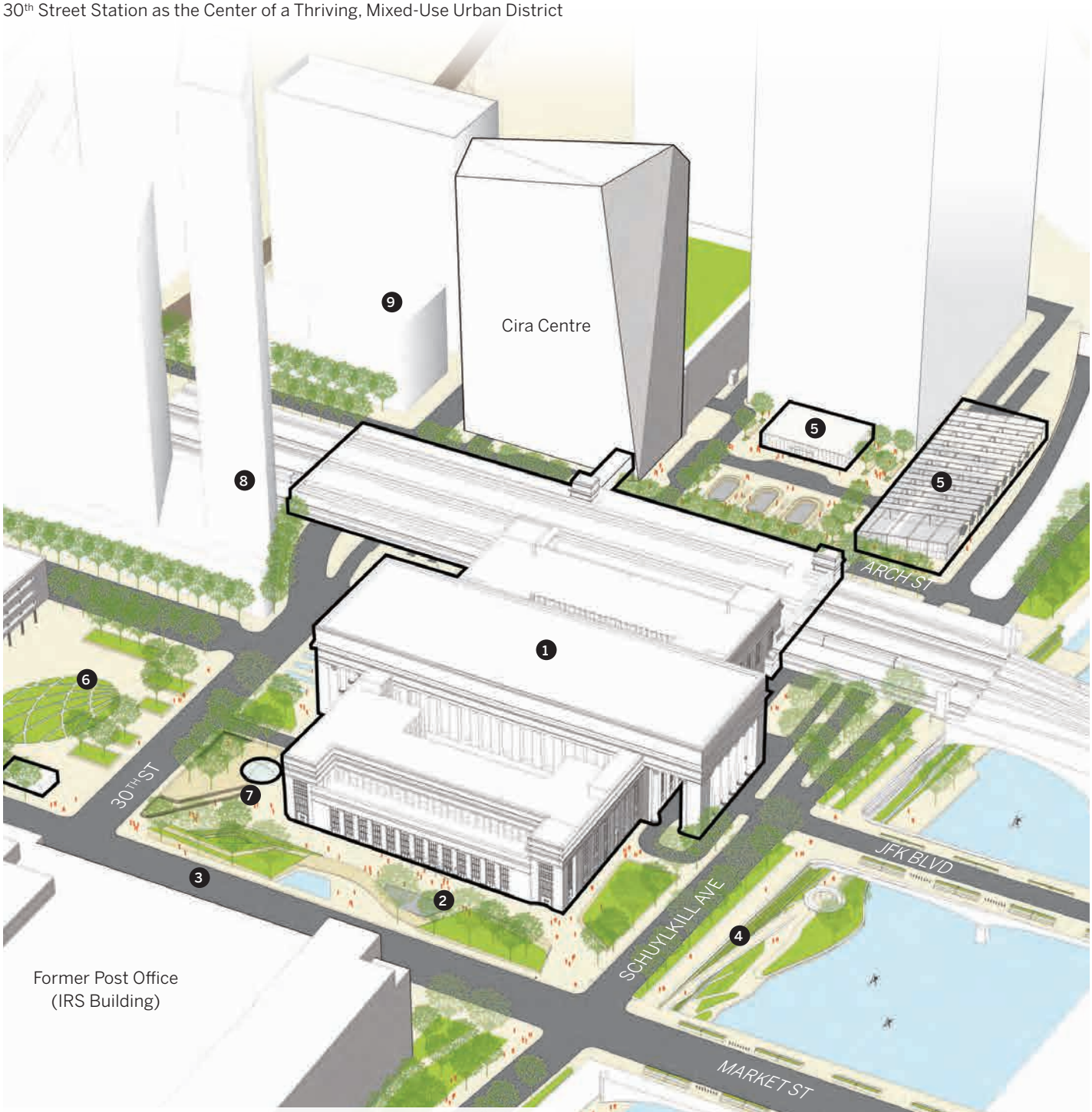


Extending the Station Out into the City...



...and Bringing the City to the Station

30th Street Station as the Center of a Thriving, Mixed-Use Urban District

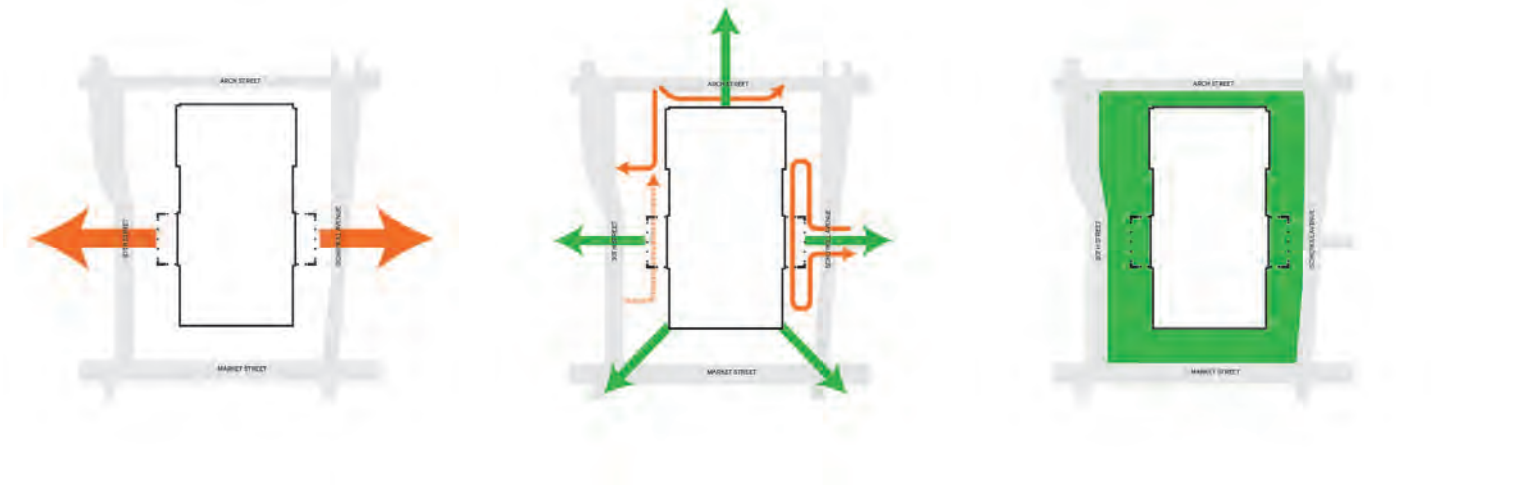


1. Upgraded 30th Street Station: a District anchor
2. Station Plaza: a great new public space
3. The grid: better streets and circulation for all modes
4. New access to the riverfront
5. Multimodal transportation center and commercial development at Arch Street
6. Drexel's Schuylkill Yards
7. SEPTA subway connection and underground retail concourse
8. Amtrak development site
9. Future development in the rail yards

2.3.2 Station Plaza Planning Principles

Station Plaza binds the station to the city. It offers safe, convenient, and intuitive access for all travelers. It will provide a generous civic landscape that welcomes residents, passengers, and visitors alike and create a dignified frame for its historic central building. Station Plaza will be a place to gather as well as a place to pass through. The redesign of Station Plaza creates an early win for the District. Prioritizing the plaza will leave the customer with positive memorable impressions, infuse civic pride, and help to stimulate development of areas to the west, south, and north of the station.

All Station Plaza improvements focus on one fundamental goal: to facilitate better connections between the station and its surroundings for all modes and all users. The six planning principles are intended to guide future design of the plaza. The following pages describe three potential interpretations of these principles.



Honor the East-West Axes and the Historic Facade

30th Street Station's twin porticoes are iconic: they dominate views down JFK Boulevard from both Center City and University City and signal the station's status as transportation hub and civic building. The design of Station Plaza must maintain clear sightlines and circulation paths to the building's main entrances. Similarly, the building's composition relies on symmetry and repetition. The layout of vertical elements within the plaza and adjacent streetscape – trees, but also light poles, furnishings, and freestanding architectural features – should draw on the structure of the building's facade, complementing rather than detracting from its architecture.

Create Seamless Access for All Modes and Design for Flexibility

The station is, above all, a transportation hub, and the last mile starts at Station Plaza. The plaza must create a seamless experience for all station customers, whether they arrive by car, transit, bicycle, or on foot. To accommodate shifting demands and preferences over the course of its lifetime, Station Plaza should allow for flexibility in both station operations and public realm programming.

Visually Unify the Field

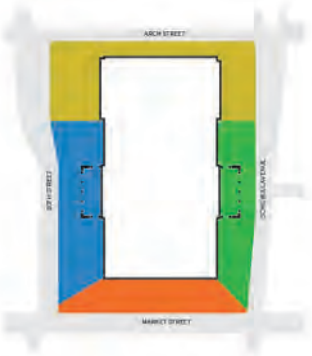
Safe, convenient, and intuitive access relies on a physically connected and visually coherent plaza surface. Stone unit pavers, or a similar material, can privilege pedestrian continuity while accommodating vehicle loads.

Link to the River

As a public landscape, Station Plaza benefits from adjacency to not only 30th Street Station but the Schuylkill River and the park system along it. Station Plaza should extend across Schuylkill Avenue to create a riverfront promenade on two levels, with connections to other District parks, Schuylkill Banks, and Fairmount Park.

Program the Plaza to Serve Customers, District, and City

The District serves many communities: travelers, residents, students, workers, and visitors. Plaza programming should serve all communities, prioritizing the rail customers that bring the place its life and purpose. Plaza programming will not exist in isolation; District users will experience it as part of a larger open space network and one of many options for park use.



Program and Design Each Side of the Plaza Uniquely

Differing uses and adjacencies suggest different programmatic identities for Station Plaza's four sides. The west plaza should be the largest-scale and most civic space, with maximum flexibility for safe movement and seasonal programming. The sunny south side offers opportunities for everyday use and retail integration. The east side is a dignified entry to the station that accommodates vehicular movement, filters safe pedestrian passage, and connects to the river. The north side is an important access point and gateway to future rail yard development.

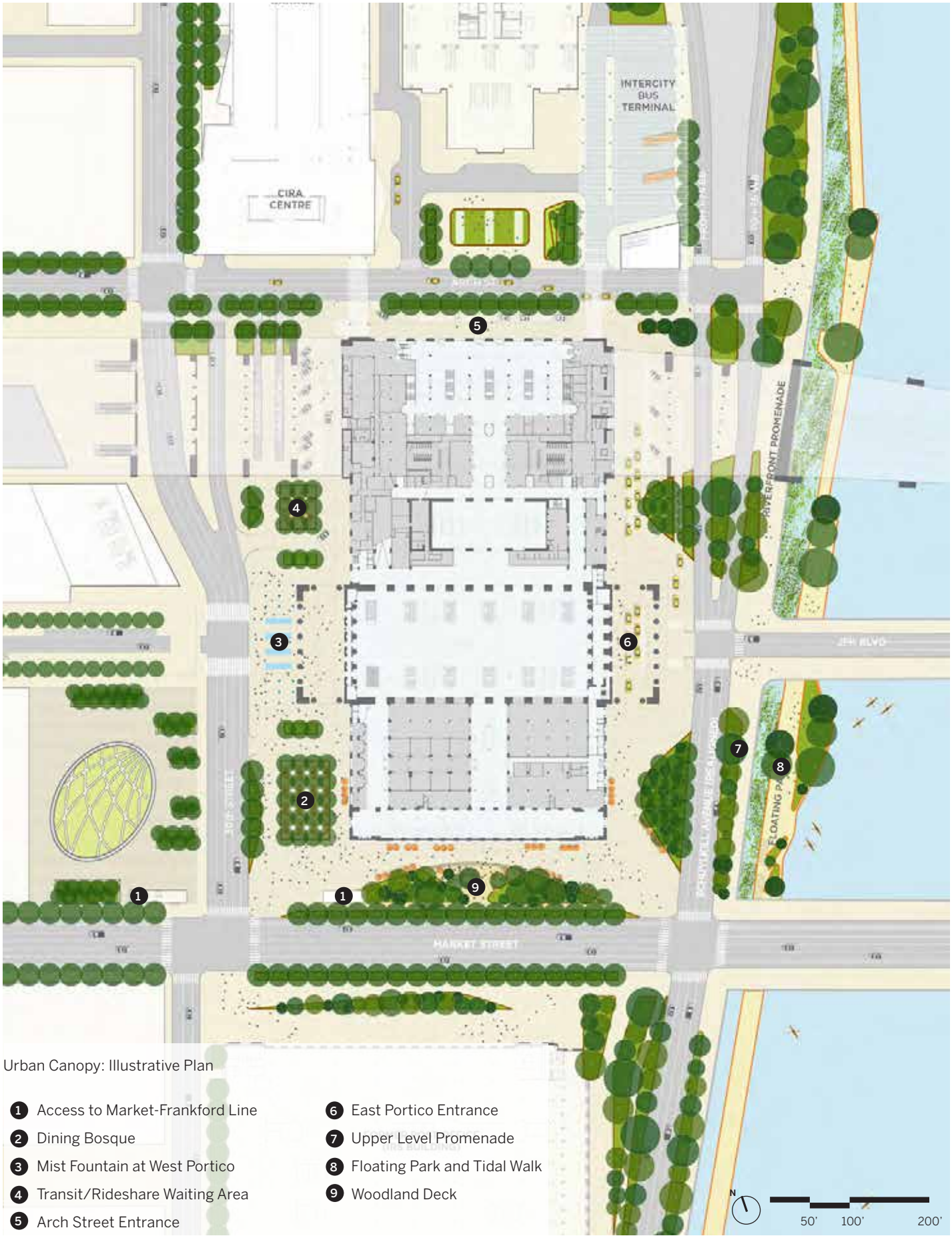
2.3.3 The Vision: "Urban Canopy" Alternative

The Urban Canopy concept draws on the green corridor of Fairmount Park for inspiration and addresses the profound lack of tree cover in the District today. This alternative provides the most shade and the lushest planting, with clearings for circulation and events.

The character and form of the canopy changes to reflect the sides of the station. On the east, plantings are dense and multi-layered, protecting the plaza from the street and echoing the river landscape. On the south side, a meandering, elevated woodland deck allows walking and sitting beneath the trees. Between Schuylkill Avenue and 30th Street, the Market Street sidewalk would rise to a high point, allowing ADA access to the deck. The west side features the largest open areas and the most formal composition, with gridded bosques of trees framing the portico. A mist fountain brings interest to the West Portico, and light tubes interspersed with the trees bring natural light to the retail concourse below.

View of the West Portico from the 30th Street Sidewalk

Urban Canopy: View towards the South Side of the Station from the Elevated Grove



Urban Canopy: Illustrative Plan

1. Access to Market-Frankford Line
2. Dining Bosque
3. Mist Fountain at West Portico
4. Transit/Rideshare Waiting Area
5. Arch Street Entrance
6. East Portico Entrance
7. Upper Level Promenade
8. Floating Park and Tidal Walk
9. Woodland Deck

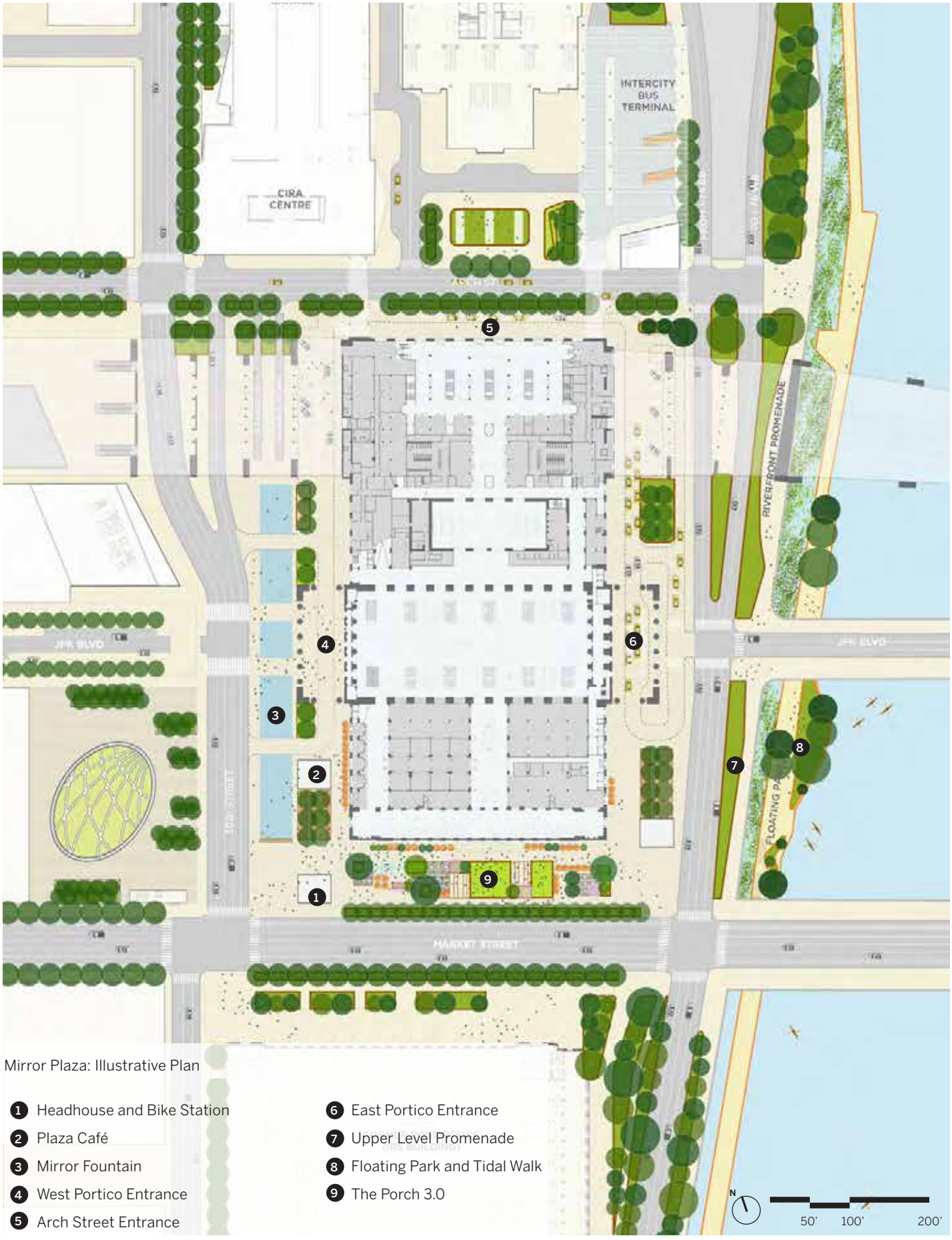
2.3.4 The Vision: "Mirror Plaza" Alternative

The Mirror Plaza alternative is named for a long, shallow surface of water that refers to the river and reflects the west facade of the station. This alternative is civic, open, minimal, and bold.

Formed by a shallow scrim of water above dark paving, the mirror fountain allows for play and helps cool the space in summer and allow for play. Breaks in the fountain bring pedestrian and vehicular circulation across to the station. A café and elevated seating area face the fountain. At the southwest corner, a headhouse allows for access to the retail concourse and Market-Frankford Line below. The east side offers additional retail space and shaded seating, raised to provide views of the river. On the south side, a fine-grained landscape of micro-lawns, wood decks, flowering trees, and movable seating provides space for impromptu, small-scale events and an atmosphere of fun, comfort, and relaxation to passersby and visitors who linger.

View towards the West Portico from the 30th Street Sidewalk

Mirror Plaza: The Porch Viewed from the South Side of the Station



Mirror Plaza: Illustrative Plan

1. Headhouse and Bike Station
2. Plaza Café
3. Mirror Fountain
4. West Portico Entrance
5. Arch Street Entrance
6. East Portico Entrance
7. Upper Level Promenade
8. Floating Park and Tidal Walk
9. The Porch 3.0

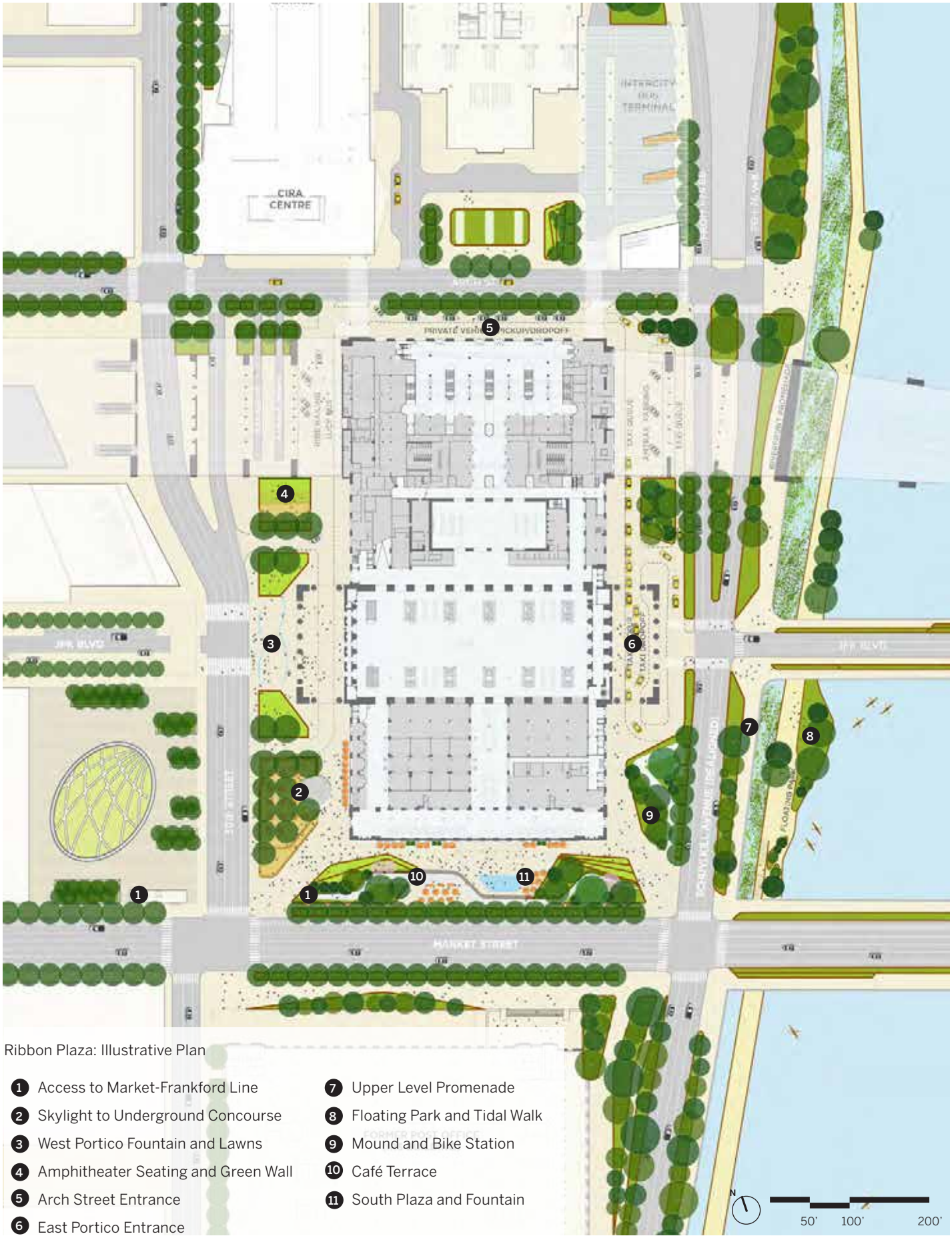
2.3.5 The Vision: "Ribbon Plaza" Alternative

The Ribbon Plaza Alternative, named for the varied string of raised elements ringing the outer edge, takes a playful, vertical, yet architecturally respectful approach to the many demands on Station Plaza.

On the east and south sides of the station, mounds cover a café, bike shelter, and the entrance to the Market-Frankford Line while providing shade, vegetation, and elevated views of the river and city. On the west side, a large skylight illuminates the retail concourse below and offers iconic views of the station building from the lower level. At the West Portico, a pair of sloped lawns frame the station's grand pedestrian entrance and a dynamic fountain while providing casual seating.

View towards the West Portico from the 30th Street Sidewalk

Ribbon Plaza: Elevated Landforms and Shade Structure Viewed from the South Side of the Station



Ribbon Plaza: Illustrative Plan

1. Access to Market-Frankford Line
2. Skylight to Underground Concourse
3. West Portico Fountain and Lawns
4. Amphitheater Seating and Green Wall
5. Arch Street Entrance
6. East Portico Entrance
7. Upper Level Promenade
8. Floating Park and Tidal Walk
9. Mound and Bike Station
10. Café Terrace
11. South Plaza and Fountain

2.3.6 Comparing the Three Alternatives

The three alternative visions for Station Plaza satisfy the six primary planning principles while suggesting different experiences and identities for this new civic space. The three alternatives also offer different approaches to common programmatic needs. The diagrams opposite highlight the location and expression of these common elements.

Pedestrian Access

In keeping with the planning principles, all three alternatives provide open pathways to the station's busiest pedestrian entries: the southeast corner, the southwest corner, and the West Portico.

Access to the Market-Frankford Line

In addition to the renovation of the existing headhouse at the northwest corner of 30th and Market Streets, each alternative includes a headhouse in Station Plaza, leading to the re-opened pedestrian tunnel and the proposed underground retail concourse. In the Urban Canopy alternative, the headhouse is minimal but prominently located, in line with the existing headhouse. In the Mirror Plaza alternative, it is a larger and bolder feature, anchoring the corner of the plaza. In the Ribbon Plaza alternative, the headhouse is integrated into an elevated landform, with an accessible green roof above.

Bike Station

All three alternatives provide at-grade bicycle racks in Station Plaza. The Mirror Plaza and Ribbon Plaza alternatives also include sheltered bike stations in the Plaza, integrated with the Market-Frankford headhouse in Mirror Plaza and with an elevated landform at the southeast corner in Ribbon Plaza. The Urban Canopy alternative assumes a bike station underground, as part of the larger retail concourse and Market-Frankford Line connection.

Skylight to Underground Retail

The three alternatives suggest different strategies for bringing light to the retail concourse below. In the most ambitious of these, the Ribbon Plaza alternative proposes a round, freestanding skylight that offers both light to the concourse below and iconic views up to the West Portico. In the Urban Canopy alternative, a grid of light tubes interspersed with the trees bring light and shadow to the concourse below, and at night would help illuminate the plaza. In the Mirror Plaza alternative, a larger skylight would be integrated with the fountain and headhouse.

Café

In addition to interior station retail and the ability for continued accommodation of food trucks in Station Plaza, two of the three alternatives suggest a freestanding café in the Plaza. In the Mirror Plaza alternative, the café could be located in either of the retail pavilions on the east and west sides of the station, overlooking either the river or the mirror fountain. In the Ribbon Plaza alternative, the café, like the bike station and headhouse, is integrated into the elevated landscape, opening onto a seating area on the south side of the station.

Seating

All alternatives provide a wide variety of seating options, including benches, walls, tables and chairs, terraces, and lawn. The Urban Canopy alternative is distinguished by extensive areas of shaded, flexible seating beneath the trees. The Mirror Plaza alternative includes, on the south side of the station, a varied palette of lawns, decks, benches, and tables and chairs. The Ribbon Plaza's elevated landscape includes sloped lawns and amphitheater seating.

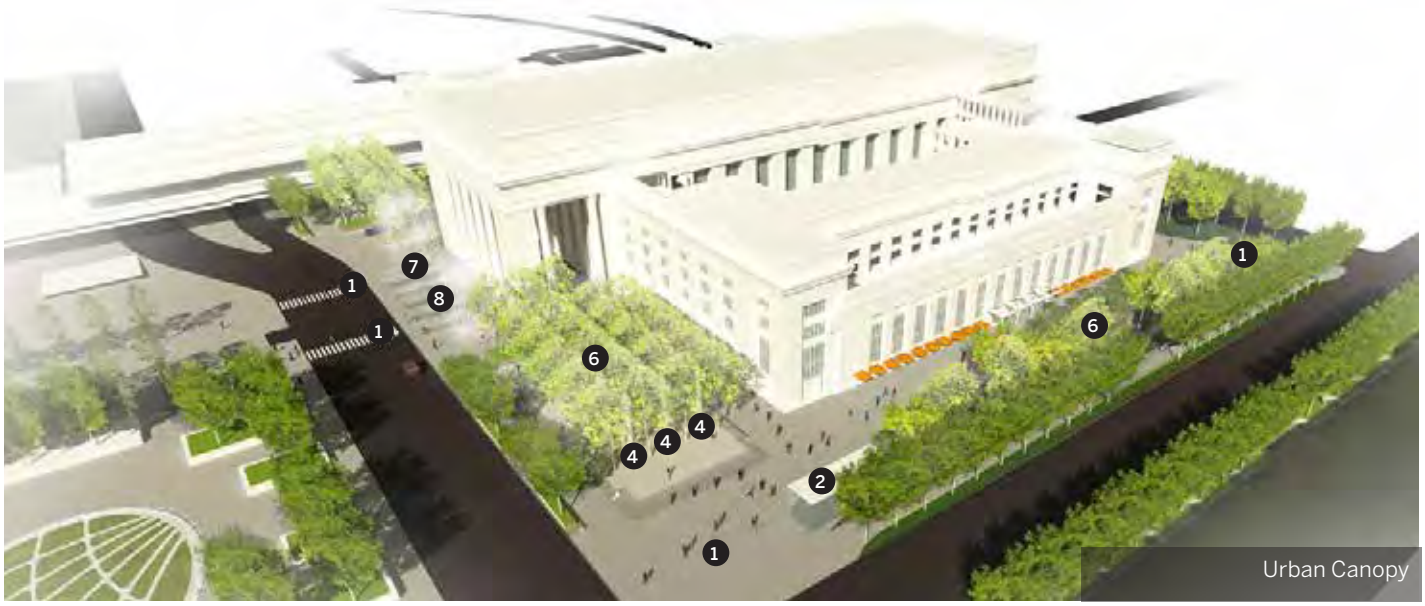
Event Space

Although the Station Plaza alternatives are designed primarily for everyday use in support of station functions, they provide the flexibility to accommodate public events. In all three alternatives, the fountains at the West Portico are flush with the pavement to allow for use as event space when dry. In addition, the larger areas of paving to the south in the Ribbon Plaza and at the corners of the Urban Canopy could accommodate smaller events and vendors.

Fountains

The three alternatives offer different options for interactive water features. The Urban Canopy alternative suggests a mist fountain at the West Portico, cooling the largest area of paving and creating atmospheric effects. The Mirror Plaza alternative features a long, reflective sheet of shallow water along the entire western facade of the station. The Ribbon Plaza alternative features two fountains: a waterfall at the south plaza café and a programmable set of curving, vertical water curtains at the West Portico.

1. Pedestrian Access to Station
2. Market-Frankford Line Access
3. Bike Station
4. Skylight to Concourse Below
5. Café
6. Seating
7. Event Space
8. Fountain



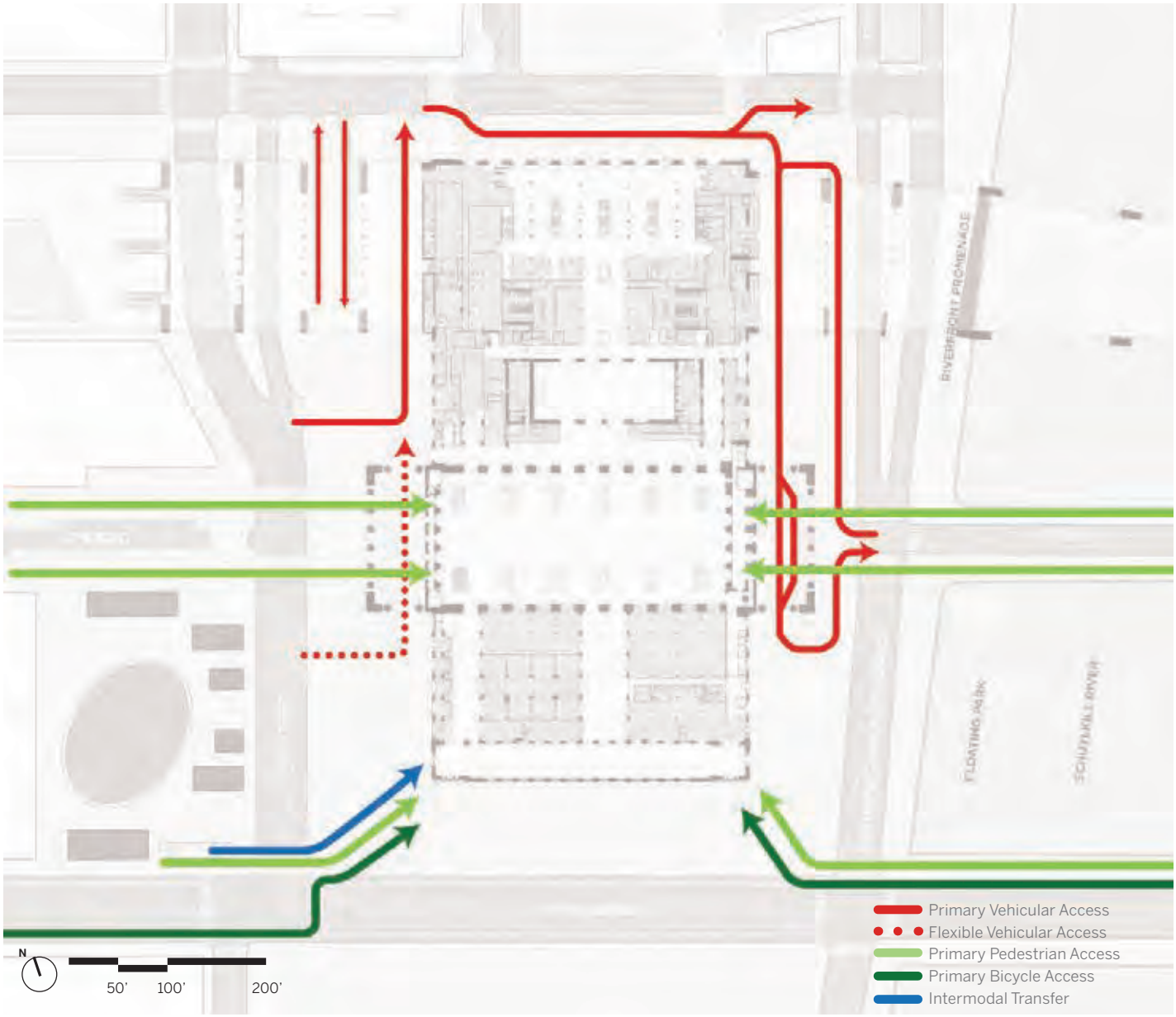
Urban Canopy

Mirror Plaza

Descriptions of numbered items are provided on the preceding page.

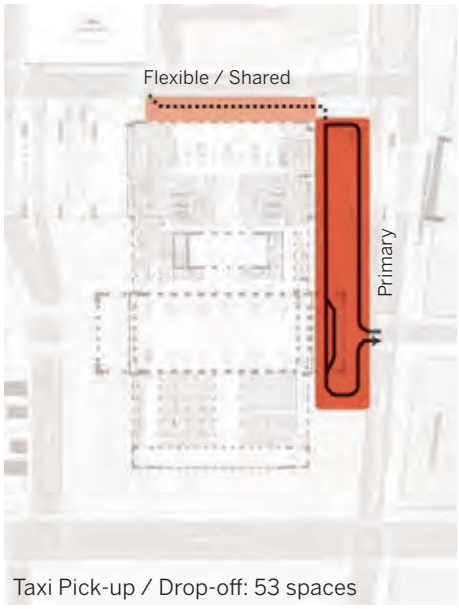
Ribbon Plaza

2.3.7 Circulation and Drop-off

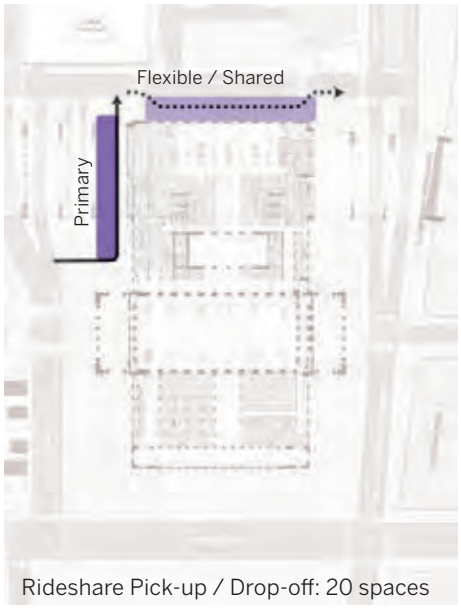


Multimodal Circulation

The plan for Station Plaza accommodates functional curbside uses serving station passengers, including drop-off and pick-up, short-term parking, taxi queuing, and local and regional bus services. To balance these needs, the Plan recognizes that, while the station building is symmetrical, it has asymmetrical usage. Taxi drop-offs and pick-ups are concentrated on the east side, where passengers connect to and from Center City. On the other hand, most people leaving the station on foot or bicycles do so to the west and south, connecting to the subway, trolley, LUCY, or walking destinations in University City. The Plan, therefore, removes Little Market Street and focuses curbside functions to the north and east, prioritizing the public realm to the south and west. In keeping with the design principles, the Plan strives for maximum flexibility: modes could move between sides as demand shifts, and the West Portico includes flexible zones for vehicular circulation if needed.

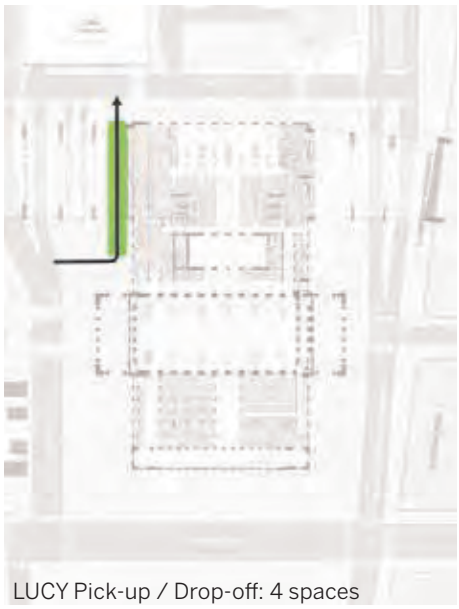


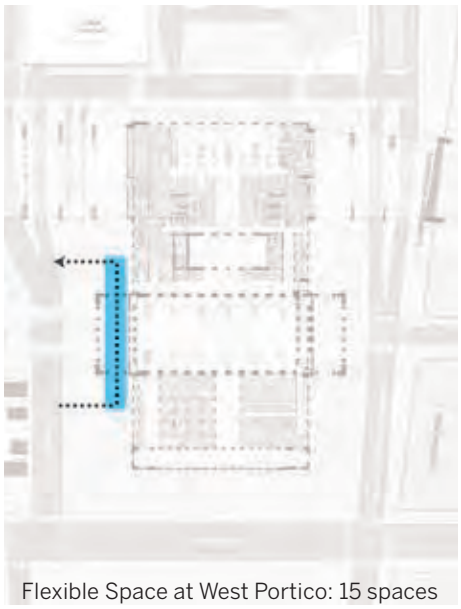
Taxi Pick-up / Drop-off: 53 spaces

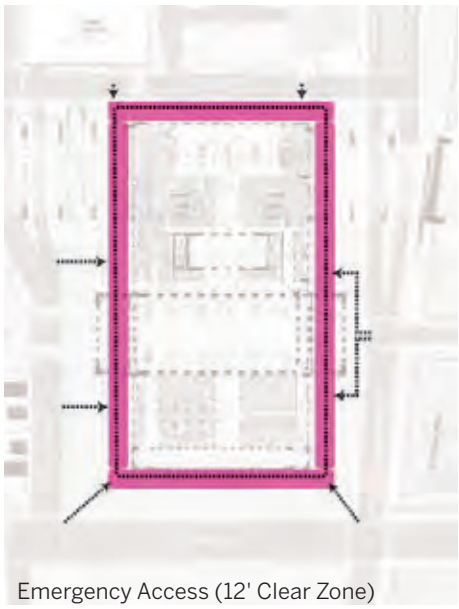


Rideshare Pick-up / Drop-off: 20 spaces


Private Car Pick-up / Drop-off: 14 spaces


LUCY Pick-up / Drop-off: 4 spaces


Flexible Space at West Portico: 15 spaces

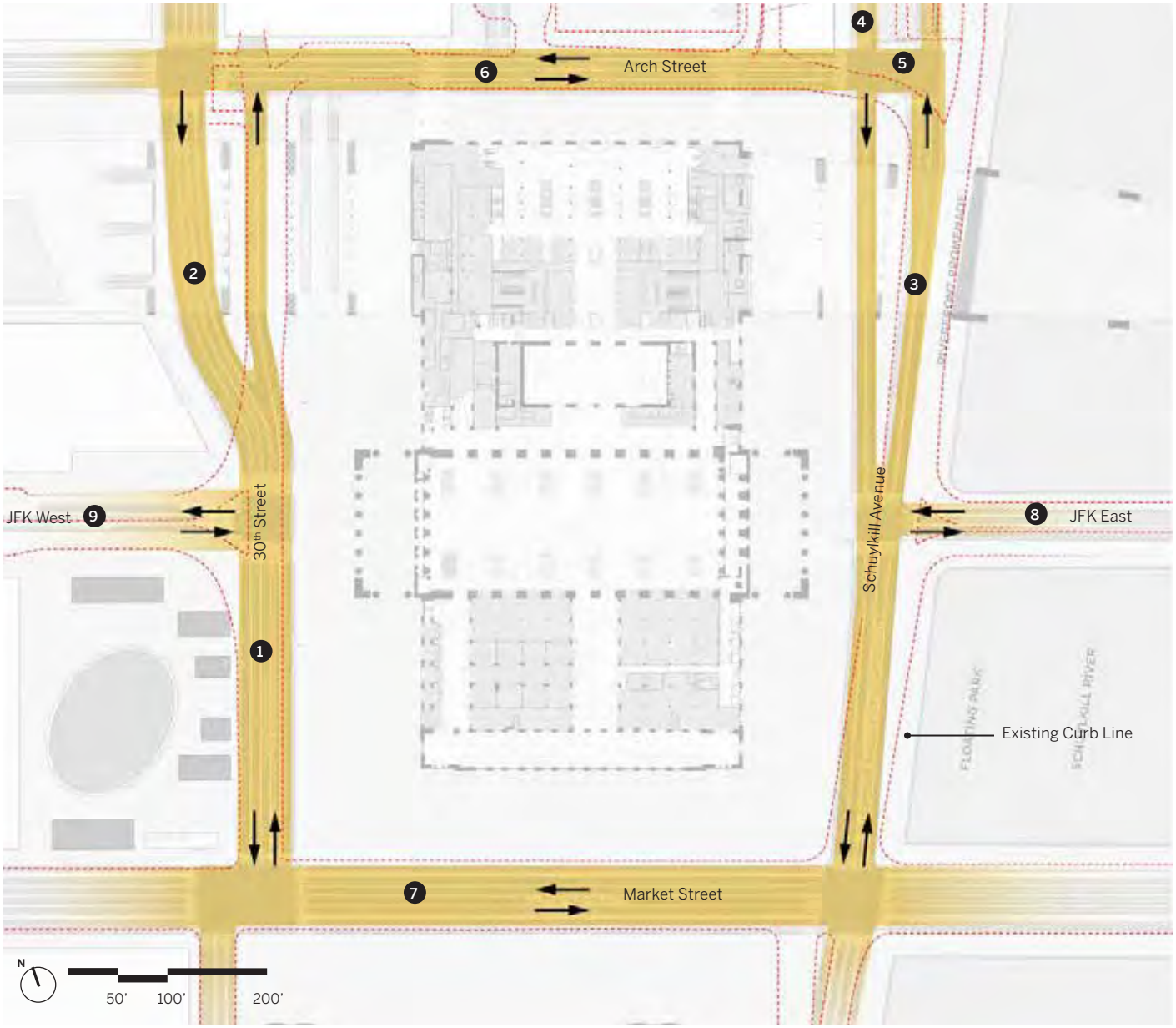

Emergency Access (12' Clear Zone)

Surface Transportation Access

The Plan recommends the following changes, which will lead to the improvements noted on the previous page.

- Taxi-only drop-off managed and consolidated on the east side, so that taxis can rejoin the queue after drop-off.
- A signalized intersection at JFK on the east for taxis entering and leaving the station, bypassing today's circuitous routes and allowing them to proceed directly to their destination.
- Private cars served on the north side of the station and rideshare services on the west side, at the SEPTA viaduct.
- Pedestrian environments protected and non-vehicular uses of the West Portico prioritized. However, the West Portico could be used for additional pickup, dropoff, and queuing capacity if necessary.
- LUCY buses queue under the SEPTA viaduct, with direct exterior access up to the Regional Rail mezzanine.
- Amtrak Thruway buses use the SEPTA viaduct space in the near term, eventually moving to the Intercity Bus Terminal.

2.3.8 Street Upgrades and Improvements



Adjustments and upgrades to adjacent city streets will help improve circulation around the station while providing additional land for an enhanced public realm at and near Station Plaza. These improvements are intended to address the following issues:

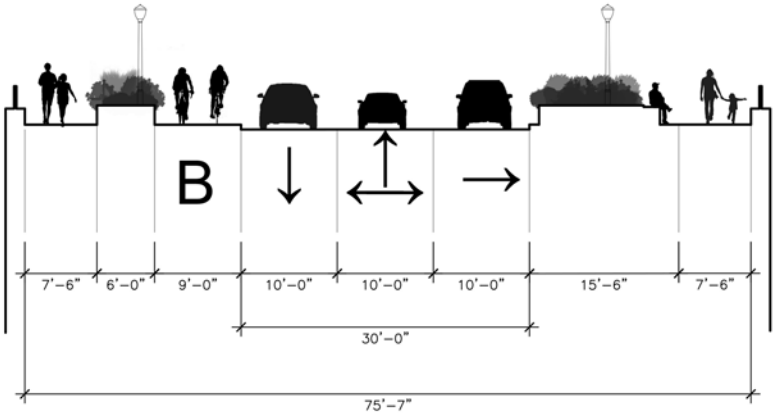
- Accommodate all modes serving the station
- Increase roadway capacity while slowing vehicles
- Simplify access to Center City
- Eliminate unnecessary circling of vehicles coming from I-76
- Improve quality of the pedestrian environment
- Allow for addition of safe bicycle lanes
- Set up future connections into the rail yards

The pages that follow provide details of the proposed changes, street by street.

1. Two-way circulation around the station on Market Street, Schuylkill Avenue, Arch Street, and 30th Street
2. Re-alignment of 30th Street north of JFK Blvd
3. Re-alignment of Schuylkill Avenue
4. I-76 on- and off-ramp reconfiguration
5. Signalized intersection at Arch Street and Schuylkill Avenue
6. Arch Street: improved sidewalks and pedestrian environment
7. Market Street: new dedicated bicycle lanes
8. JFK (east): narrowed roadway to incorporate two-way protected bicycle lane
9. JFK (west): pedestrian-friendly and green urban street

JFK Boulevard East
at Schuylkill Avenue, Looking West

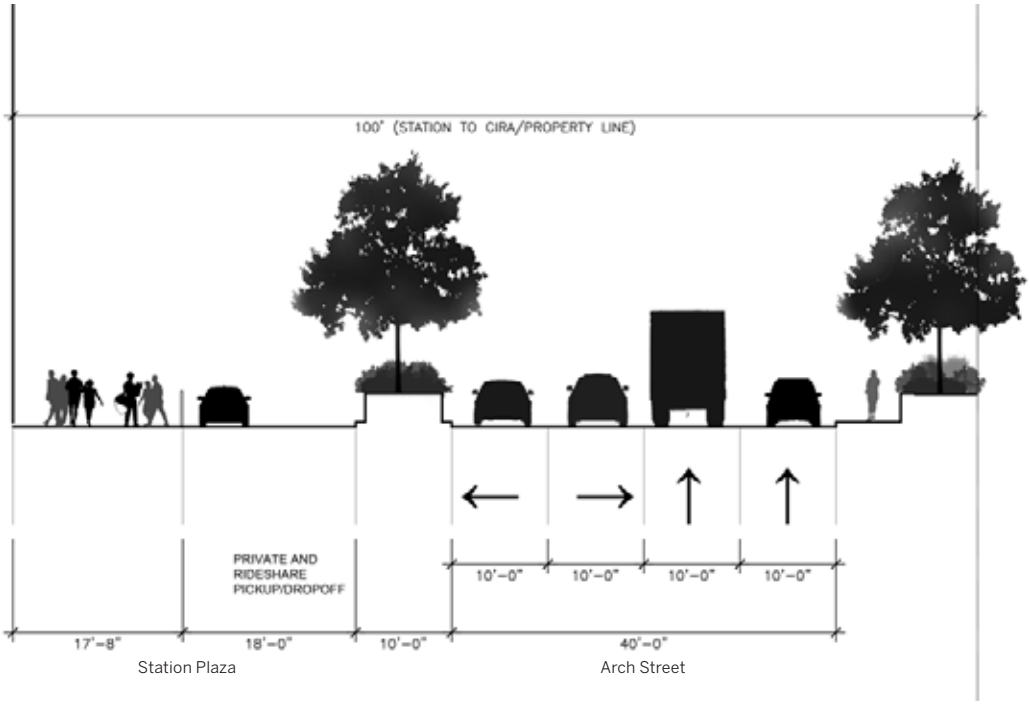
To the east of Schuylkill Avenue, proposed changes to JFK Boulevard follow current plans to convert this thoroughfare into a complete street through Center City. Traffic lanes remain in the existing configuration, serving I-76 and a realigned entrance to the East Portico. A raised, two-way bicycle lane on the south side of the street provides convenient access to the station for cyclists arriving from Center City. If structural conditions permit, modular planters and furnishings retrofitted to the bridge could bring shade and life to the street while protecting the sidewalk from traffic and inviting pedestrians to linger and enjoy views of the river.



JFK BOULEVARD

Arch Street
at I-76, Looking West

Proposed changes transform Arch Street from a back-of-house, service-focused area to a true urban street serving the station's North Concourse, the multi-modal hub, and rail yard development. Four lanes accommodate two-way vehicular traffic. Raised planters bring shade and green, separating the street from the North Concourse pickup/dropoff zone and the multi-modal hub.

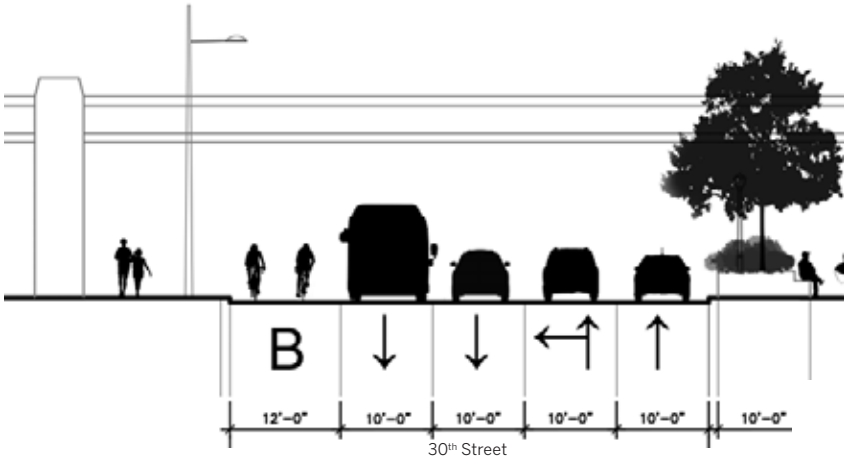


Station Plaza
Arch Street

2.3.8 Street Upgrades and Improvements

30th Street
at JFK Boulevard, Looking North

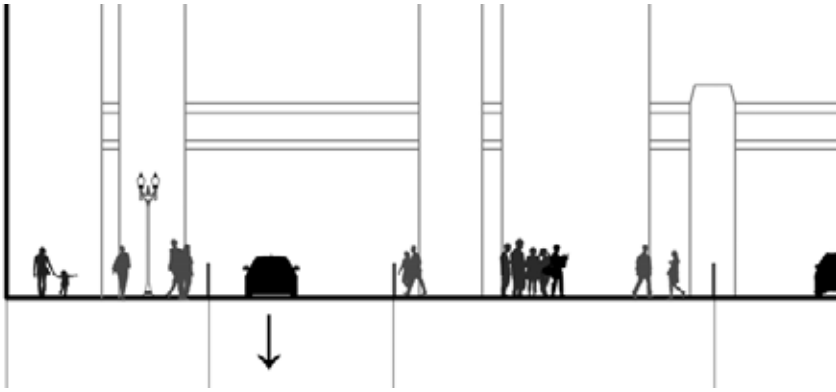
Maintaining the existing curbline and right of way on the west side of the street, 30th Street widens east to allow for two-way vehicle traffic and a two-way cycle track on the west side of the street. With these enhancements, realignment north of JFK Boulevard brings connectivity to future rail yard development.



30th Street

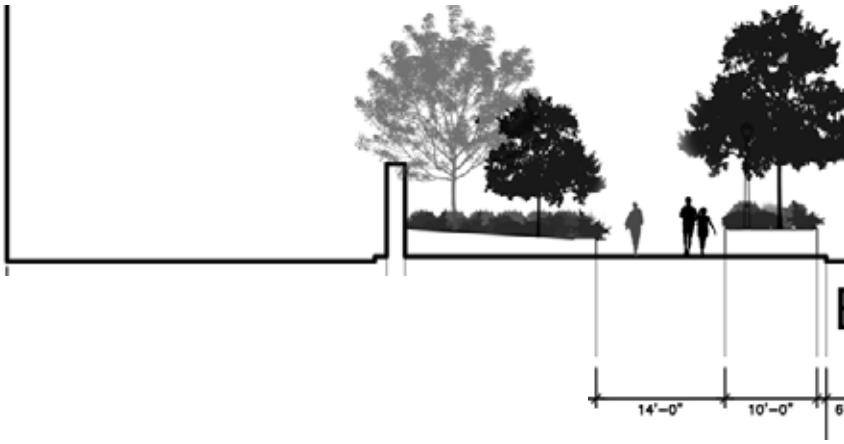
Schuylkill Avenue
at JFK Boulevard, Looking North

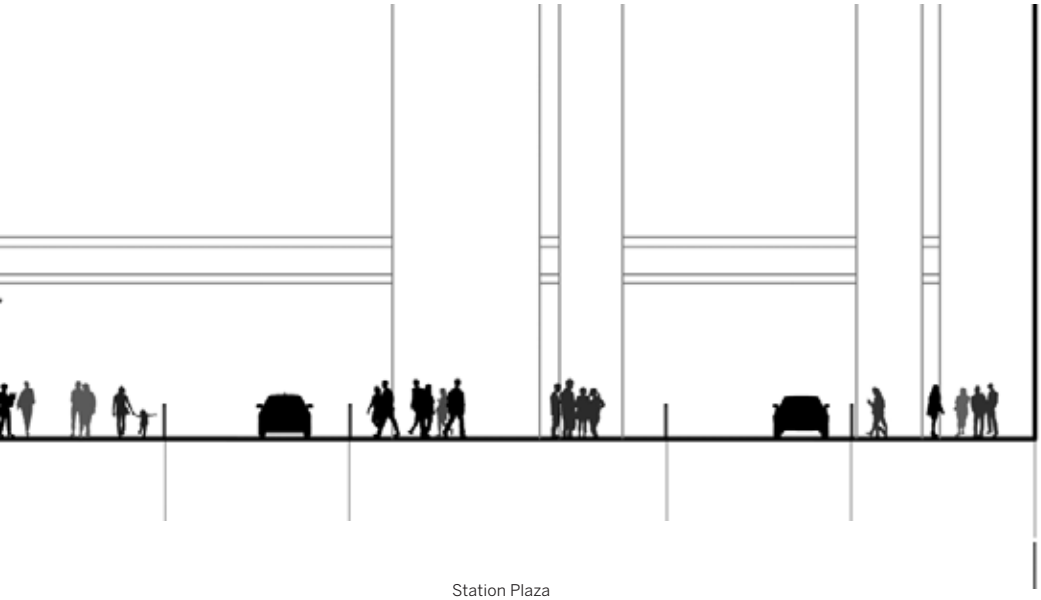
Schuylkill Avenue widens slightly to accommodate two-way movement, with narrower lanes and denser planting to calm traffic and protect the public realm from heavy, expressway-bound traffic. Shifting the centerline to the west allows for more efficient, reconfigured ramp access to I-76 and opens space for a more generous riverfront promenade.


Station Plaza

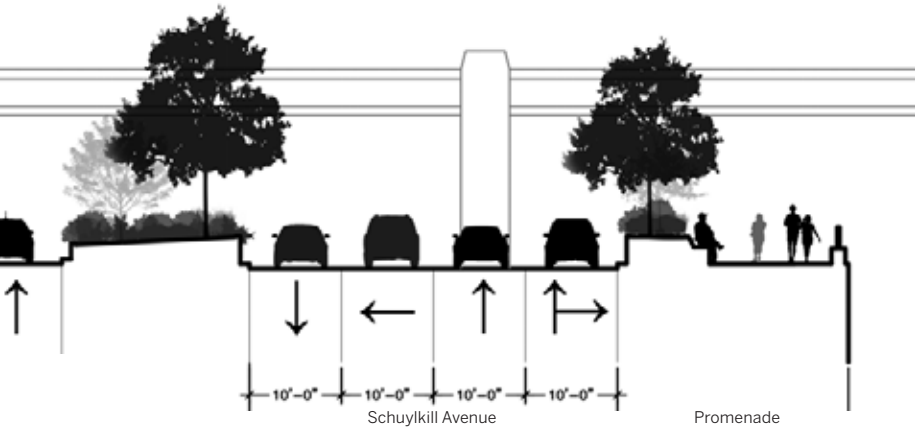
Market Street
at Schuylkill Avenue, Looking West

Market Street maintains its current vehicular traffic configuration while adding protected lanes for cyclists. Generous sidewalks and contiguous street tree planters with integrated seating create a comfortable, inviting public realm that brings the landscape of Station Plaza to this critical street.



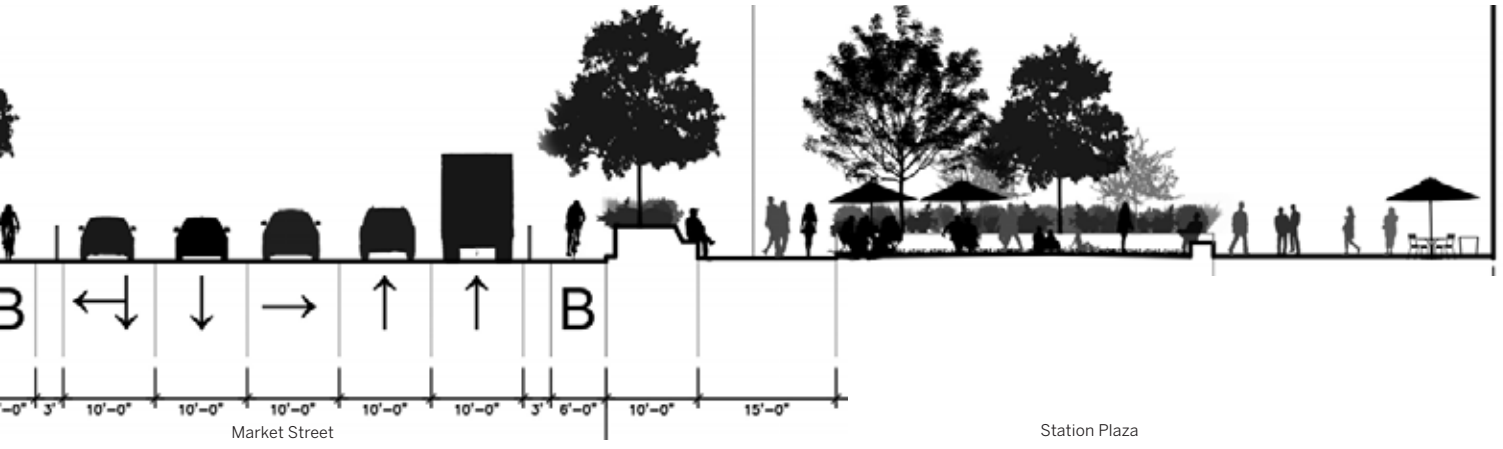


Station Plaza



Schuylkill Avenue

Promenade



Market Street

Station Plaza

2.3.9 Station Plaza Programming

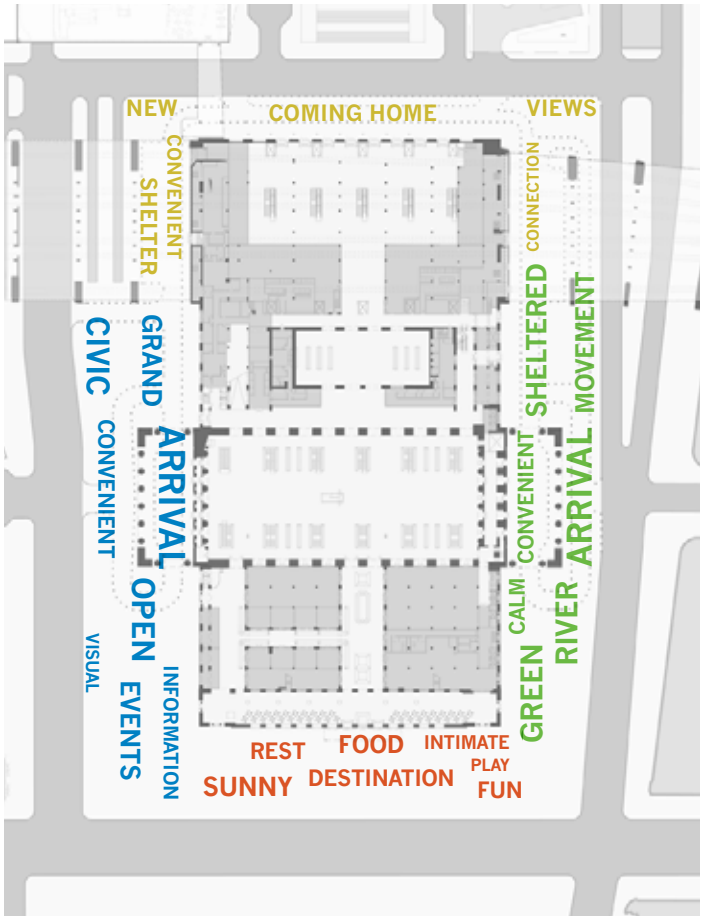
30th Street Station is the heart of University City. Its proximity to present and future retail, residential, recreational, and cultural assets creates a unique opportunity inside and outside the station. The current success of The Porch can be leveraged and heightened with an improved public space. With the reconfiguration of operations, the total plaza space within the block nearly quadruples in this Plan, allowing for expanded programming and social interactions.

While the vertical frame and horizontal plane of the plaza will unite and dignify the space, plaza programming will respond to site adjacencies, requiring each side of the plaza to be designed in response. All three concepts for Station Plaza expand paved and planted areas surrounding the station, creating spaces that provide a sanctuary from the traffic and sounds. Paving and planting designs take advantage of the station block perimeter, creating clear view corridors to main station entrances. The voids between planters clearly define pedestrian walkways and paved spaces, while preventing the possibility of unsafe mid-block crossings.

The **west side** of Station Plaza is imagined as the primary civic-scale space, designed with maximum flexibility for safe movement and large-scale seasonal programming. A significant fountain would mark the axis of the portico and JFK Boulevard. The space is large enough to accommodate concerts, movies, and interactive art installations, among other programs. Furnishings, including seats and umbrellas, are intended to be moveable, enhancing flexibility.

Protected from Market Street, the sunny **south side** offers opportunities for seating and dining under large canopy trees. These diverse, smaller-scale spaces link most directly to the retail within the station. Programmed structures, either permanent or temporary, could include cafés, outdoor retail, and bicycle kiosks. Yoga, farmers markets, small-scale performances, and food trucks are also program opportunities on the south side. Furnishings would be a mix of fixed and moveable.

The **east side** of Station Plaza abuts the busy Schuylkill Avenue; it is imagined as a dignified space that primarily accommodates vehicular movement and filters safe pedestrian passage. As such, additional programming is not envisioned, with the exception of a possible bike station on the southeast corner in the Ribbon Plaza alternative and a retail pavilion in the Mirror Plaza alternative. Likewise, the **north and northwest sides** of the station are intended to enhance vehicular movement while maximizing pedestrian safety.



(Above): The station building and adjacent context suggest different identities and programs for each of Station Plaza's four sides.

(Right): Different uses suggest different design responses.

East Facade

South Facade, Mirror Plaza Alternative

West Facade, Urban Canopy Alternative

2.3.10 New Access to the River

Riverfront Promenade

The idea of Station Plaza crosses the physical boundaries of its adjacent streets, extending south to related public space in front of the former Post Office along Market Street, north to anchor development at Arch Street, and east to a riverfront promenade that would, in the future, tie to the larger District's proposed riverfront parks and paths, with connections beyond to Fairmount Park. By realigning Schuylkill Avenue in front of the station, the Plan realizes 25'-30' of new riverfront area at deck level. This will be an opportunity to enhance today's waterfront experience, get to the river on the west side, and enjoy the magnificent views to Center City. The design envisions a generous, tree-lined promenade that will accommodate bicycles as well as pedestrians. Raised planters will protect pedestrians from Schuylkill Ave and provide an opportunity for seating facing out towards the river. Similarly, benches with integrated perennial planters on the existing Schuylkill River bridges would offer places to pause and enjoy views of Center City, the river, and the landscape below.

Multi-Level East Riverfront Promenade

1. Station Plaza
2. Upper Level Promenade
3. Waterfront Stair Access
4. Vegetated Screen
5. Existing Retaining Wall
6. Boardwalk
7. Floating Park and Wetland Plantings

Schuylkill River Trail West and Floating Park

The Riverfront Promenade also suggests connections down to a lower-level system of boardwalks and floating elements that would advance the West Bank Trail connection through the District. The Riverfront Promenade and Floating Park complement Station Plaza, answer current demands for riverfront access in University City, and connect to the District's future open space network. However, the Riverfront Promenade and Floating Park can be phased independently of Station Plaza — as early wins or as the ultimate extension of the Plaza landscape.

Noise abatement measures would be undertaken to minimize the impact of highway sound on the promenade. The existing stone retaining wall adjacent to I-76 would provide a sound barrier for people at river level. In addition, a proposed vegetated sound barrier would further reduce traffic noise, filter pollutants from the highway, and provide a backdrop to enjoy the river and wetland gardens. Although solid at lower levels to block sound, this wall would become permeable above to permit passive ventilation of the highway.

Vision for a Riverfront Public Space at the Station

2.4 ARCH STREET TRANSPORTATION CENTER

2.4.1 The Vision

The area north of Arch Street has already been the focus of transit-oriented development, starting with the construction of Cira Centre in 2005. This first building proved that the area is a natural place for significant transit-oriented commercial development due to its proximity to both 30th Street Station and the Schuylkill Expressway. It is also a major opportunity for Amtrak to develop its air rights in a premier location directly over the Northeast Corridor.

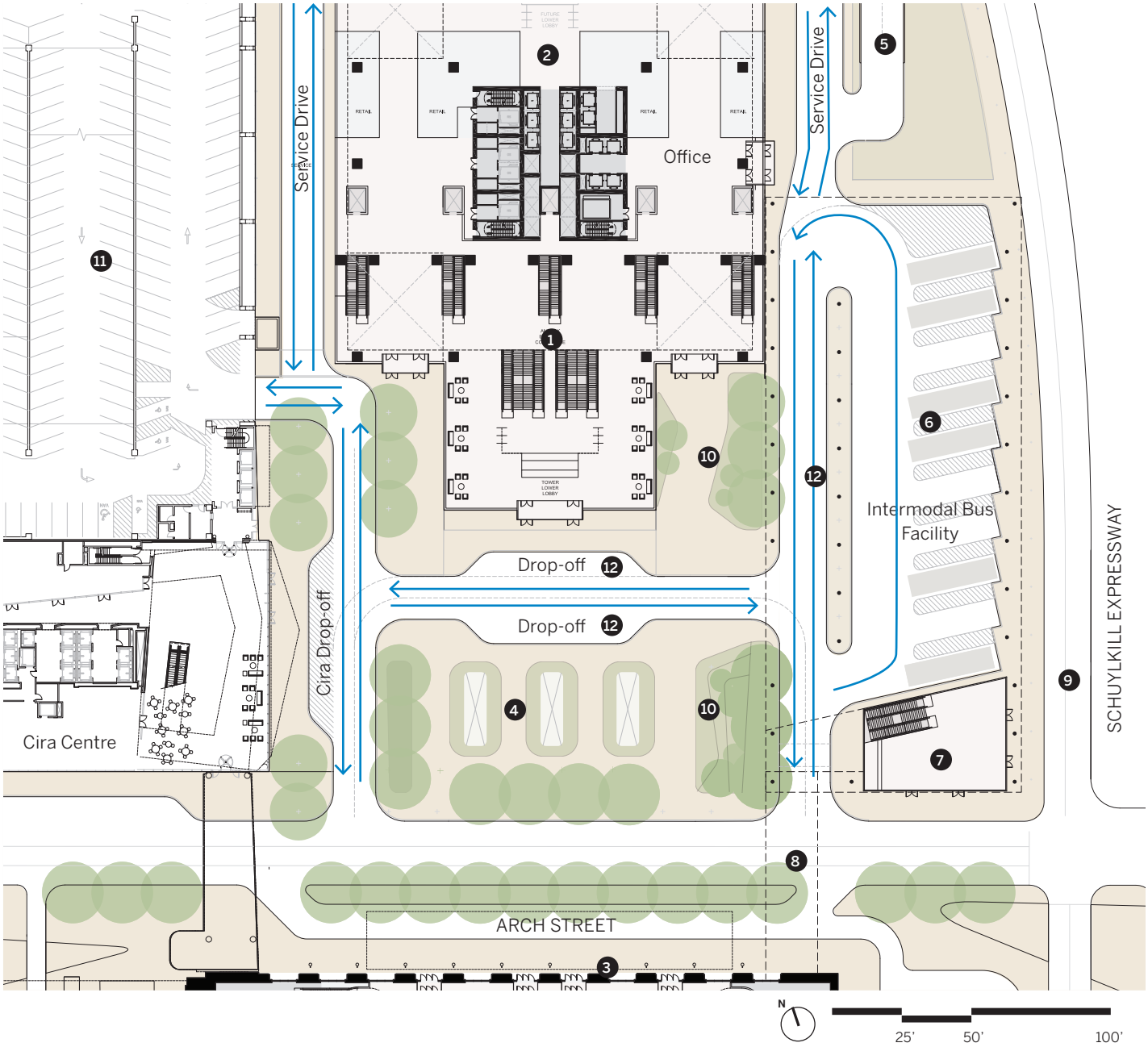
The Plan calls for replacement of the surface parking deck north of Arch Street with a multimodal transportation complex that brings together "far north" access to the lower-level Amtrak platforms with a new intercity bus terminal, all designed around a major new public space and significant commercial development.

Three major planning principles drive this concept:

1. **Activate Arch Street**: new transportation functions and commercial activity will bring life to what today functions as the back of the station. Coupled with a new North Concourse, the Arch Street facade will become a fourth public frontage for the station, with an improved street-level experience and dedicated passenger drop-off and pick-up spaces.
2. **Create New Intermodal Connections:** the Plan accommodates an intercity bus facility tied directly to 30th Street Station, with bus queuing and passenger loading under a weather-protected canopy connected via pedestrian bridge back to the station's East Mezzanine. Future development could include additional Amtrak access to complement new access to both Amtrak and SEPTA achieved at the North Concourse on Arch Street.
3. **Anchor New Development in the Rail Yards:** this area has the potential for significant, station-anchored commercial development built over and adjacent to the Northeast Corridor. This early phase of rail yard development could help spur future development to the north and west, while respecting key view corridors from Cira Centre and the station.

Vision for a New Station Entry at Arch Street, connected to the Transportation Center

Ground Level Plan



1. Far North Concourse and platform access
2. Tower above
3. Renovated North Concourse south of Arch Street
4. Central plaza
5. Ramp to Amtrak Service Area
6. Intercity Bus covered queuing area
7. Bus ticketing / waiting
8. Potential bridge connection to East Mezzanine (above)
9. Realigned I-76 Off-Ramp
10. Outdoor waiting area
11. Existing Amtrak garage with additional levels
12. Drop-off and pick-up for taxi, private car, or ride share

2.4.2 A Permanent Home for Intercity Bus Service

The provision of a high-quality facility for intercity buses is integral to the creation of a multi-modal transportation hub at Arch Street. Intercity bus service is relatively new to Philadelphia, beginning in 2008 as a curbside boarding operation. It has seen high demand, serving on average nearly 5,000 daily passengers in 2014.

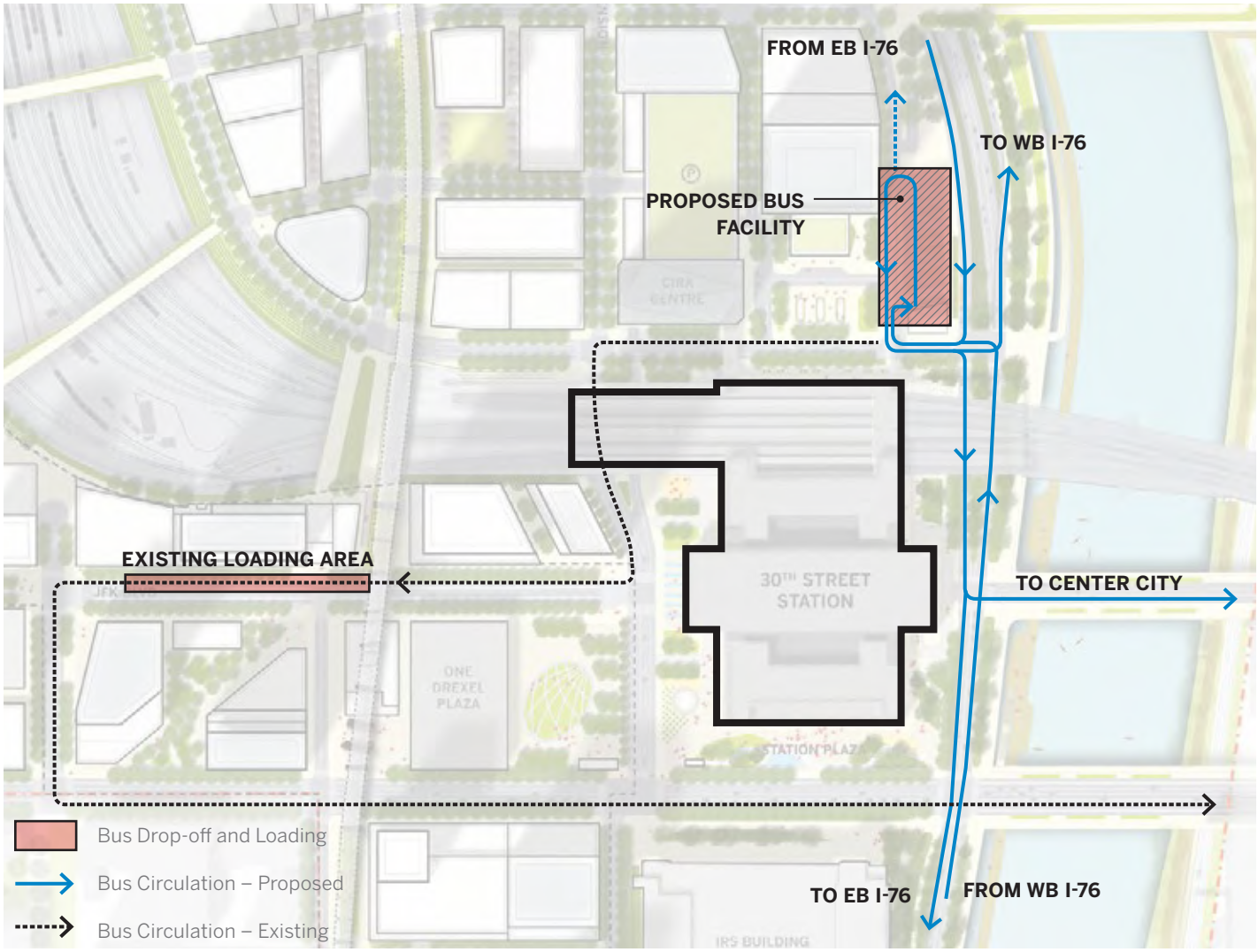
Given the limited number of years that intercity bus services like Megabus and BoltBus have served Philadelphia, it is hard to predict what the service will look like and how many passengers it will serve in the future. However, recent years have shown high growth. Estimates for daily intercity bus ridership in 2040 range from 8,300 to 10,900 passengers, with up to 20 buses operating in the peak hour. An estimated seven bays are needed to accommodate this peak demand. Additional bus operators may want to use the intercity bus facility as well; Amtrak is growing its Thruway service, and smaller operators such as Bieber Tourways serve the District. The Plan allocates up to two bays for Amtrak service and up to two bays for other operators, for a total of 11 bays at the proposed intercity bus facility.

The intercity bus facility is envisioned at the corner of Schuylkill Avenue and Arch Street. While realizing the facility requires rebuilding the I-76 eastbound off-ramp at Arch Street, the site has many benefits, including:

- Capacity of up to 11 bays
- Co-location with other modes
- Close proximity to interstate ramps, limiting bus circulation through the District
- Ability to provide climate-controlled waiting area for passengers
- Simple multimodal transfers for bus passengers, with easy access to 30th Street Station at grade or via a potential pedestrian bridge over Arch Street

Vision for the Arch Street Transportation Center, looking north from Arch Street

Proposed Location and Routing of Intercity Buses through the District




BoltBus on 30th Street (Former Loading Area)

Current Loading Area on JFK Boulevard

3.0 DEVELOPING THE STATION DISTRICT

3.0 DEVELOPING THE STATION DISTRICT

A Transportation-Oriented Future

This Plan calls for a new urban neighborhood at the front door of a renewed 30th Street Station with a healthy balance of residential buildings, station-anchored commercial office towers, and retail, recreational, and cultural amenities to sustain a vibrant urban environment. At the heart of the District, enhancements to the station's waiting and boarding areas, customer amenities, and customer services will provide passengers with a comfortable, seamless experience both within the station and extending out to the District.

The District neighborhood begins with the redevelopment of the blocks west and south of the station along JFK Boulevard, Market Street, and 30th Street, including the 14-acre site of Drexel University's future Schuylkill Yards, a hub where its education and research institutions can facilitate innovation by the business community to spur economic growth. As the neighborhood matures, it grows northward over the rail yards with commercial office development focused closest to 30th Street Station and gracefully transitioning to a vibrant, urban residential community towards Spring Garden Street. The District and its neighboring communities are woven together by an integrated and inviting network of streets and public spaces, providing the connectivity and quality of place needed to make the District thrive.

For passengers, the Plan delivers the world-class experience of a premier transportation hub. For visitors, the Plan helps advance a more memorable experience of the city and its myriad cultural and historic assets. And for all citizens of Philadelphia interested in an enduring civic legacy, the Plan offers a compelling vision of a new urban place anchored by the historic station. The Station District will become Philadelphia's next great neighborhood, a place to live, work, learn, and play proximate to one of the nation's busiest and most important transportation hubs and accessible to one-of-a-kind urban and natural amenities.

Overall Aerial View from the North

3.1 CONTEXT

3.1.1 District Characteristics

Roadway Infrastructure

The complex web of rail, highway, and bridge infrastructure at 30th Street Station has played a significant role in shaping the urban fabric of this part of Philadelphia. This infrastructure and resultant grade separations create a challenging environment for pedestrians and cyclists traveling through the District. This is evident in places like the elevated sections of Walnut Street and 31st Street and the streets that they cross above grade. The net effect of the District's legacy as an infrastructure hub is an incomplete and often discontinuous street network.

The District is connected directly to the interstate system via the Schuylkill Expressway (I-76) and the Vine Street Expressway (I-676) along the western bank of the Schuylkill River. The east side of the station is flanked by this bi-level freeway system. Access is provided from an upper level roadway (Schuylkill Avenue), which runs along the east side of the station. JFK Boulevard, Market Street, Chestnut Street, and Walnut Street create east-west connections over the Schuylkill River to Center City, while Spring Garden Street, farther north, connects to Eakins Oval and the Benjamin Franklin Parkway.

Scale and Character

Philadelphia is a highly walkable, pedestrian-friendly city with continuous sidewalks, human-scaled buildings, and good street tree coverage. It has also, in recent years, become more welcoming to cyclists, with a growing number of bicycle lanes and off-street trails.

Compared to much of the city, though, the 30th Street Station District has a coarse-grained street network, creating large blocks, which lend themselves to monolithic buildings. While efficient for some uses, unbroken facades at street level create a discouraging environment for pedestrians. Similarly, a lack of street trees – the result of a utilitarian history and the constraints of planting over structure – creates a street environment that is hotter in the summer, colder in the winter, and windier throughout.

An Incomplete City Grid

Big Buildings, Big Gaps

3.1.2 Transportation Connectivity

The 30th Street Station District is the region's most important multi-modal hub and is the nexus for 96,000 travelers on a daily basis. Roughly 40% of these travelers use rail transit within the station, including Amtrak, SEPTA Regional Rail, and NJ TRANSIT. Another 25% use adjacent transit modes in the District, including SEPTA subway, trolley, and bus service and curbside intercity buses. Cars account for roughly 30% of District travel, although the majority of cars around the station are traveling through the District en route to other destinations.

Multi-modal Connections

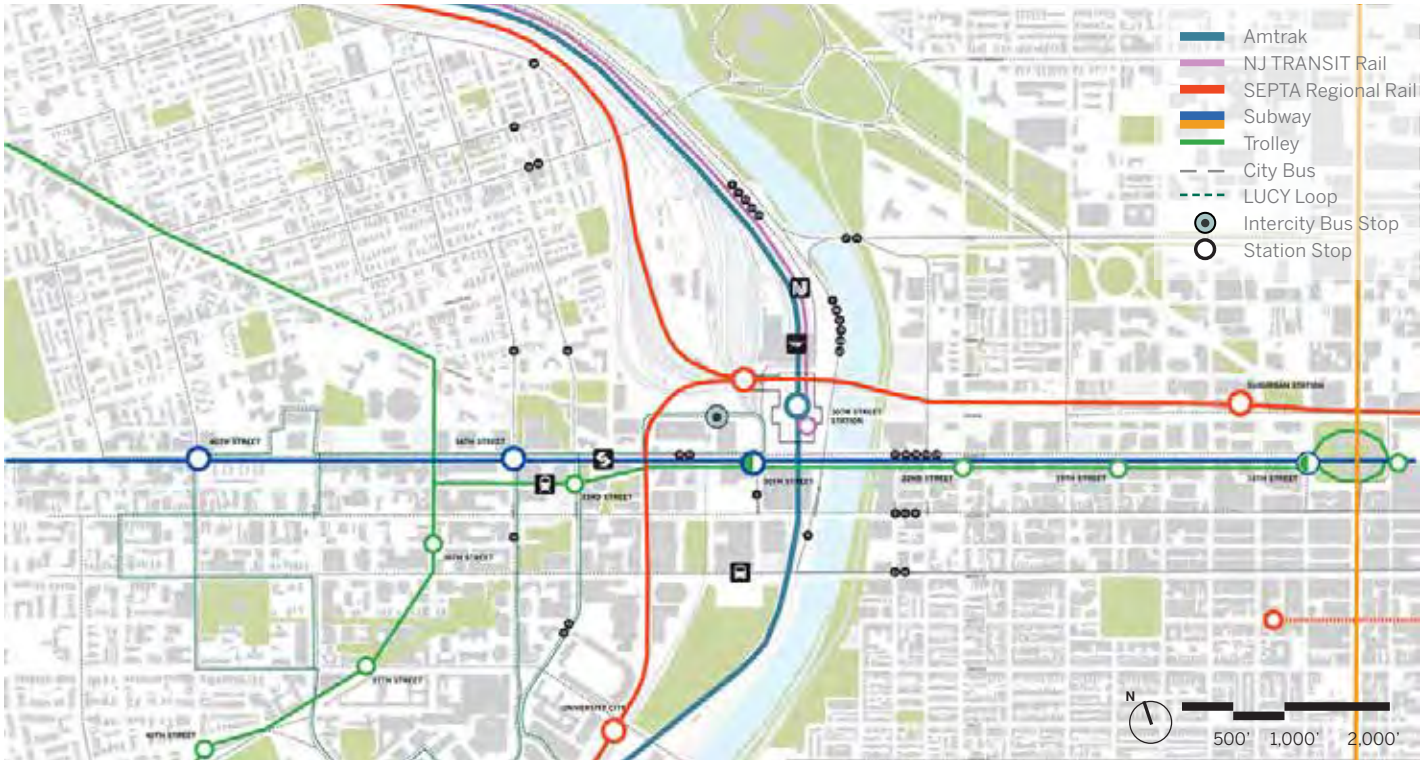
30th Street Station is endowed with an exceptional number of robust travel modes. It has the multi-modal elements that connect the station to the city and the region – and they are proximate. This level of connectedness is on par with some of the best stations in the world. At 30th Street Station, however, the modes approach each other, but do not clearly integrate. This diminishes the potential of the station to achieve its full multi-modal potential. The station's multi-modal elements may not present themselves well to first time riders or visitors; this is most evident in difficult connections and a generally poor pedestrian and cyclist environment.

Surface Transportation Conflicts and Congestion

There are also significant modal conflicts between pedestrians and automobiles. Along with poor signage and inadequately sized facilities, there is generally an insecure pedestrian and cyclist environment that results from adjacent roads serving as the major access route from I-76 into Center City.

A traffic study of morning and afternoon weekday peak periods clearly indicates that Schuylkill Avenue and the entrance to I-76/I-676, where four lanes of traffic merge to one, causes the observed congestion around the station. Along this section of Schuylkill Avenue, there are more than 20 buses stopping in a 60-minute time period with passengers alighting and exiting. Taxis also exit from 30th Street Station onto this stretch of Schuylkill Avenue. The competition for a short merge space and ultimate queuing affects the entire connected street network of JFK Boulevard, Market Street, Chestnut Street, Walnut Street, and numbered streets from 30th through 34th. The congestion creates a frustrating experience for drivers, bus riders, bicyclists, and pedestrians alike.

City-Wide and Regional Transit Connections



3.1.3 Neighborhoods and Parks

District Neighborhoods

The District adjoins several distinct communities, including the residential neighborhoods of Mantua and Powelton Village and the campuses of Drexel University and the University of Pennsylvania. Across the river, the District connects to the western portion of Center City. These communities draw their character not only from their residents and businesses, but from their physical fabric: the scale and materiality of buildings, the width of the streets, the trees and parks and gardens.

Neighborhoods strengthen the District's overall identity while creating variety and character within it. Mantua and Powelton Village provide a model for smaller scale residential buildings; development at the edges adjoining these neighborhoods should respect their scale. Within the District, loft conversions like the Left Bank and new tower construction like Evo suggest the potential for higher-density living. The District is also likely to include significant office and retail development. Even large office buildings can contribute strongly to the public realm, as the Comcast Center does with its generous plaza. Concentrations of retail can activate key streets and contribute to the District's character.

District Open Space

The 30th Street Station District is surrounded by campuses and parks, but, until the creation of The Porch at 30th Street, contained none within its boundaries. The Porch has brought a much-needed civic amenity to the immediate station area, and its success suggests the potential for more extensive, longer-term investments. Similarly, the relatively recent Drexel Park, located at the edge of the District, offers a good example of a new neighborhood-scale park that serves the communities of Drexel, Powelton Village, and Mantua. The Drexel and University of Pennsylvania campuses themselves offer substantial, publicly accessible open spaces that support their campus communities, but the close identification between the universities and their campuses limits their usage by other members of the public.

The District also benefits from its proximity to a network of regional parks. The immensely popular Schuylkill River Trail connects the District to the Benjamin Franklin Parkway, East and West Fairmount Park, the Wissahickon, and destinations outside the city like Valley Forge. These great parks are essential to Philadelphia's image and identity, and suggest the role that civic open spaces can play in shaping the future of the District.

District Neighborhoods and Parks

3.1.4 Looking Ahead: Future Projections

Upward population, transportation, and real estate trends converging around 30th Street Station set a compelling stage and opportunity for a grand transformation of the District.

Population

The year 2010 marked a pivotal reversal of a 50-year decline in population for Philadelphia. Population growth has continued year after year, and, in 2015, Philadelphia boasted a thriving population of 1.55 million people. Much of this growth is attributable to a burgeoning millennial population, which grew 6.1% between 2006 and 2012 – more than any other US city. Center City Philadelphia also boasts the third most populous downtown in the US after New York City and Chicago. In Philadelphia's downtown, there has been a long and steady history of population growth. Between 2000 and 2010, the population in Philadelphia's core grew by 7.6% and added 21,000 residents.

Transportation

Population growth in the city and the Northeast region has spurred new demand for transportation services. By 2040, the number of rail passengers at 30th Street Station is expected to double. The use of District transit services outside the walls of 30th Street Station – subway, trolley, city bus, and intercity curbside bus – is also expected to rise by a factor of two above the current 24,700 daily travelers.

One District transit service of note is the Loop through University City (LUCY), an employer shuttle route that services major employment centers at Drexel University, Presbyterian Medical Center, University of Pennsylvania, the Penn Health System, and the Children's Hospital of Philadelphia. LUCY ridership has sky-rocketed in recent years. Between 2008 and 2013, LUCY annual ridership increased by 67% as compared to 6% for all other SEPTA bus services, suggesting great demand for 'last mile' connection transportation services from 30th Street Station to the District's major employers.

In contrast to the upward rail and transit trends, automobile trends in the region show declining overall daily traffic volumes and flat peak-hour congestion. A major factor for this flat growth trend is that the roadway network in the District already operates at or near capacity during peak periods.

Cycling is an increasingly popular alternative mode of transportation in Center City and University City. Between 2005 and 2013, cyclists crossing the Schuylkill River during the peak between Spring Garden Street and South Street grew 260%. Of all large cities in the United States, Philadelphia has the highest percentage of commuters using a bicycle to get to work, with 2.3% of all commuters; in greater Center City, 5.3% of commuters travel by bicycle.

Real Estate Market

The City of Philadelphia reports approximately 200 development projects recently completed, under construction, or planned, representing more than $8.5 billion of investment. The concentration of planned and recently completed projects in University City – 29 in total – suggests the area is primed for a dramatic transformation. Half of the pipeline developments are residential, while the remaining projects represent new office or institutional development. New residents, employees, and transit users in the District translate into opportunities and considerations for future retail, residential, office, and hotel development.

Retail: Based on an analysis of spending potential of residents, workers, transit riders, and students in the District through 2020, there is an estimated $262 million of unmet potential creating an opportunity to deliver up to 175,000 square feet of new retail near 30th Street Station. Currently, most retail offerings in the District are located at the station itself.

Residential: A demand analysis of rental and owner-occupied units indicates a demand of approximately 3,500 new residential units within Center City and University City annually. Pipeline development in the District captures some of the near-term potential with 1,400 new units. A high degree of transportation access and proximity to major employment hubs in Center City and University City make the District well-positioned to capture additional demand.

Office: Between 2010 and 2014, the annual pace of office absorption and development in Philadelphia averaged 244,000 square feet of net absorption, 2.6 million square feet of gross absorption, and 82,000 square feet of new office development. Center City and University City pipeline office development through 2020 totals 3.4 million square feet, an average of 566,000 square feet annually – seven times the historical average. This extraordinary pace of office development is driven by specific institutions or companies expanding in Philadelphia. The Comcast Innovation and Technology Center (1.3 million square feet) and FMC Tower at Cira Centre South (830,000 square feet) are prime examples. New office development in the District, therefore, will rely both on competing for tenants looking in Central Philadelphia and creating a District attractive enough to support net new growth for Center City and University City.

Hotel: Planned growth of University City's institutions is more likely to fuel demand for hotel rooms in the District than tourism. Developments such as The Study at University City, Penn Tower, and Homewood Suites (an extended stay hotel), represent hotels that allow institutions to attract patients and other visitors that may need overnight accommodation.

3.1.5 Development Opportunities

At-Grade Development

The 14 acres immediately west and south of 30th Street Station will become an integral part of the Drexel University campus known as Schuylkill Yards. With the potential for 8 million square feet of new development in this area, it is expected to absorb much of the near-term demand for office, residential, retail, and other institutional space in the District – and ultimately define the aspirational urban character of the area around 30th Street Station.

Drexel and its Master Developer, Brandywine Realty, plan for Schuylkill Yards to become an attractive and exciting front door to University City and to one of the country's most important train stations. To do so, the neighborhood must be more city than campus, planning for an active and inviting ground-floor presence along improved sidewalks and public spaces. This mixed-use neighborhood will bring robust education and research institutions together with the commercial sector. It endeavors to work with citizens, businesses, entrepreneurs, and government leaders to become a centerpiece of innovation, technology, and economic development in the Philadelphia region.

Rail Yards

The biggest development potential and challenge in the District lies in the 88 acres of rail yards north of 30th Street Station. This development area is bounded by 32nd Street to the West, Spring Garden Street to the north, the Schuylkill River to the east, and 30th Street Station and Schuylkill Yards to the south. The yards consist of several functional segments, hosting a multitude of active railroad operations, highway infrastructure, personnel activities, and parking which support the rail operations of this major transportation hub and the larger Northeast Corridor (NEC).

Amtrak Yards (63 acres): The station is positioned directly over ten north-south NEC through-tracks providing service to Amtrak and NJ TRANSIT trains. West of the NEC, maintenance and rail support functions occur within the Race Street Engine Terminal, Penn Coach Yard, and Maintenance of Way Yard.

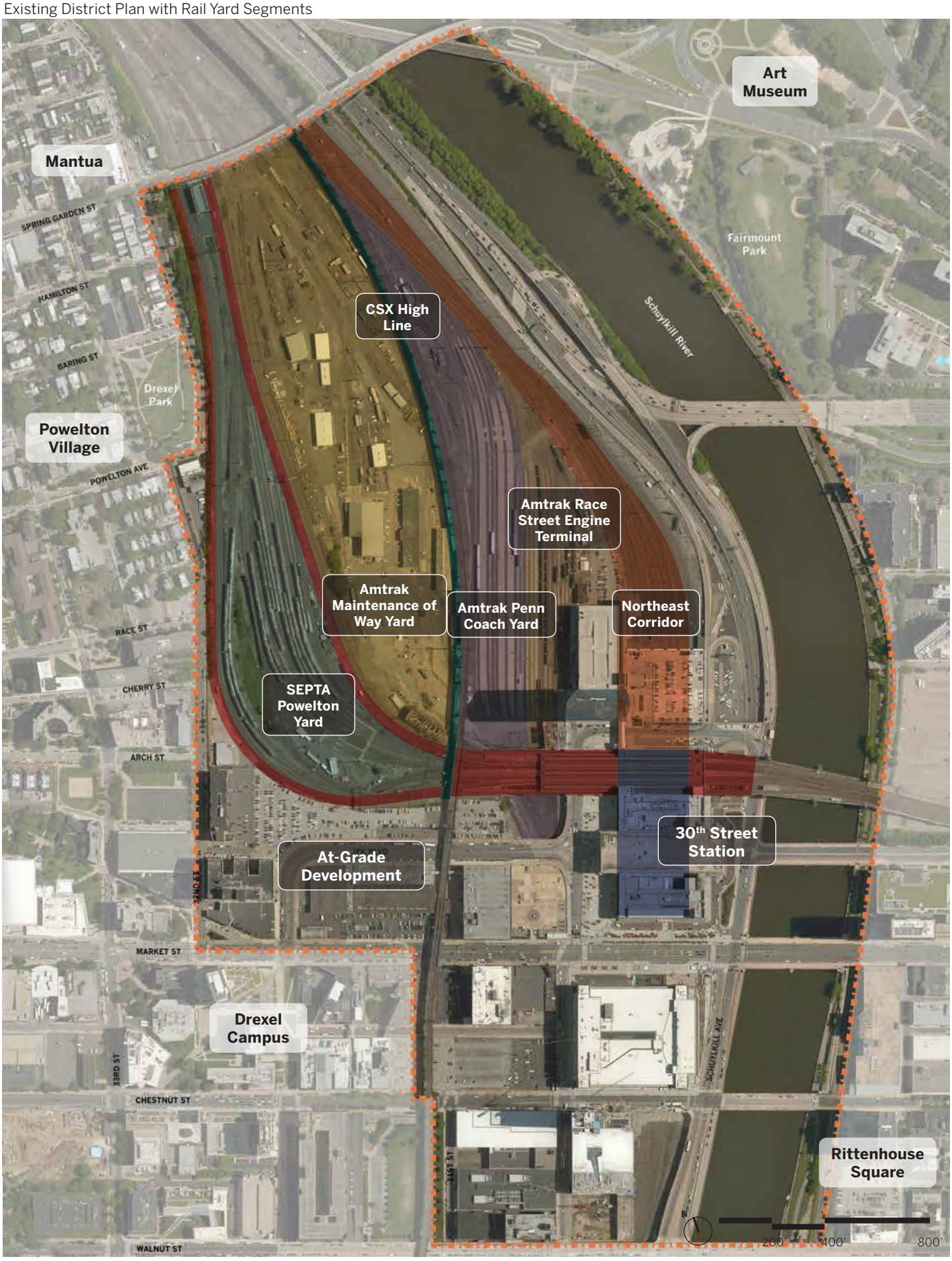
SEPTA Powelton Yards (25 acres): Six upper-level, east-west through-tracks service SEPTA Regional Rail. Heading east from 30th Street Station towards Center City, the six upper level tracks neck down to four tracks and cross the Schuylkill River on a viaduct transitioning to a Center City tunnel and Suburban Station. Moving west out of the station, the two northerly tracks and the two southerly tracks carry trains to and from points west and north of the station, while the two center tracks bear south. The remaining tracks located within Powelton Yard serve as mid-day train storage.

CSX High Line: CSX's West Philadelphia Elevated Branch, known commonly as the High Line, is an active freight line carrying two tracks on an elevated trestle traversing north-south through the rail yards. The High Line rises north from Arsenal Interlocking onto its elevated structure through the District, crosses to the west side of the NEC and heads north above 31st Street, and finally touches down at Zoo Interlocking.


At-Grade Development Overview


View of Powelton Yards

Existing District Plan with Rail Yard Segments



3.2 THE VISION

3.2.1 Illustrative Plan

The Plan represents an illustrative version of what development in the District can become in the next 35 years and beyond. It is a framework for growth based on infrastructure and development controls aimed at creating this new neighborhood. The form, program, and scale of particular buildings and green spaces – although shown here indicatively – will be refined over time based on market feasibility and economic realities of individual projects.

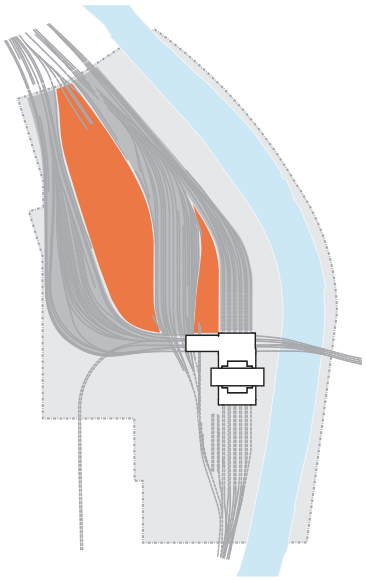
Existing Site Plan

1. An upgraded 30th Street Station as District anchor
2. Station Plaza as a great new public space
3. Drexel's Schuylkill Yards
4. The Arch Street Transportation Center and related commercial development
5. New access to the riverfront to anchor a Schuylkill River West Bank Trail
6. Expansion of the city grid into the rail yards as a framework for development
7. An expanded Drexel Park as community amenity
8. Schuylkill River pedestrian bridge at Art Museum
9. Schuylkill River pedestrian bridge at Race Street
10. Pedestrian bridges over Powelton Yard
11. Greenway under CSX High Line
12. New surface rapid transit alignment
13. A great overlook park extending the development towards the river
14. Drexel Square and renovated One Drexel Plaza

District Illustrative Plan

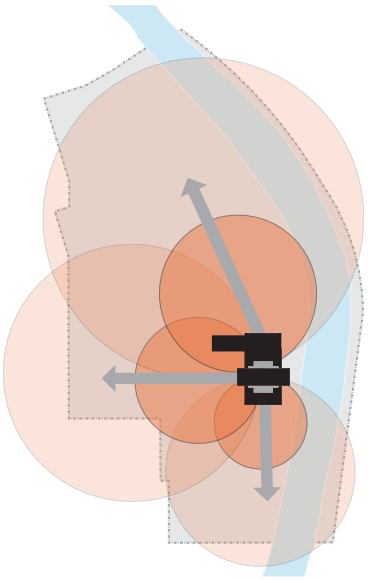
3.2.2 District Planning Principles

The Plan for development extending out from the station is focused on creating a community with unparalleled access to transportation and amenities and a uniquely 'Philadelphia' identity.



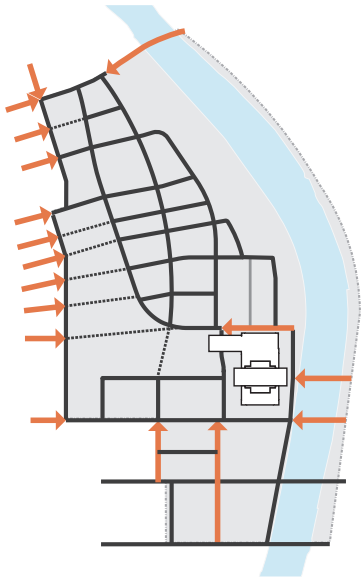
Preserve and Protect Railroad Operations

First and foremost, the station and yards facilitate passenger rail operations. The existing tracks and maintenance functions in the rail yards are critical to station operations and will be preserved under the proposed development. The result is two worlds at different levels – a vibrant, urban community above deck with a highly functioning rail yard below.



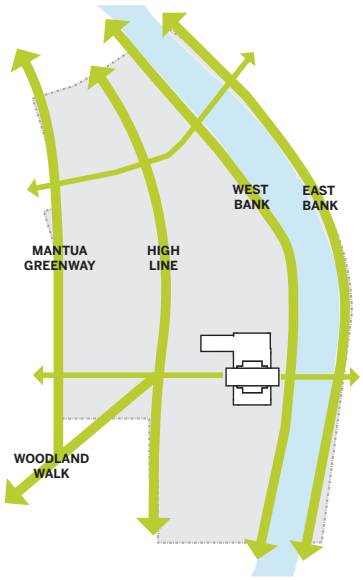
Celebrate the Station as District Anchor

30th Street Station serves as the centerpiece of a highly transit-oriented development, with urban districts extending outward from its perimeter into the surrounding city. The Plan envisions neighborhoods of dense development on land to the west and south of the station and above the yards to the north. Everything ultimately connects back to the station.



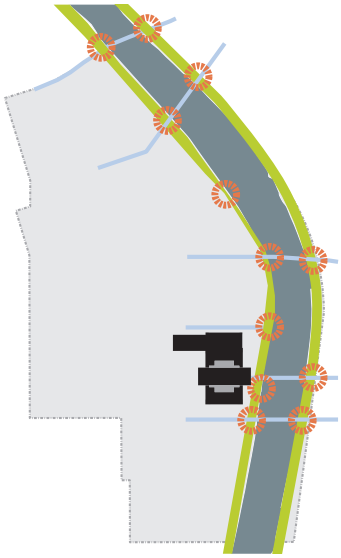
Extend the City Grid

The historic city grid is foundational to a new street network within the District, establishing center lines for new rights-of-way and serving as a guide for the scale of streets and blocks. The grid creates the framework for Philadelphia's unique flavor of walkable urbanism.



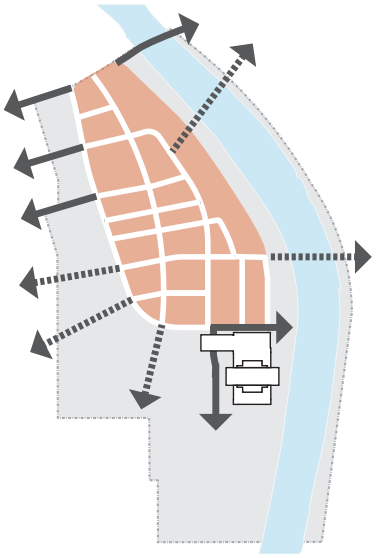
Link and Lengthen Greenways

The District Plan taps into West Philadelphia's legacy greenway system, suggesting a web of connections to the city and along the water. These greenways serve as wayfinding devices but also provide community amenities and opportunities for recreation.



Bring People to the Riverfront

A series of programmed landscape spaces along the Schuylkill River will finally provide West Philadelphia with direct access to the waterfront, mirroring the amenity that runs along a majority of the East Bank. Key moments provide up and down movement and connection between a new West Bank Trail and the adjacent urban fabric.



Connect Separated Neighborhoods

The rail yard development is tied back into the city fabric through a series of road extensions and pedestrian bridges. These links are vital to connecting an otherwise-isolated development more fully into the life of the city.

3.2.3 Framework for At-Grade Development: Schuylkill Yards

At-grade development within the District will be focused on Schuylkill Yards, a next-generation innovation community, intentionally designed and holistically created from the ground up through a partnership between Drexel University and Brandywine Realty Trust. As part of the larger Philadelphia innovation ecosystem expanding on both sides of the Schuylkill River, the location is unmatched because of its connection between the city's economic and education centers, while sitting at the region's major transportation hub. This nexus will drive economic activity and growth for the city, and is buoyed by access to talent and capital. As curators of the neighborhood, Drexel and Brandywine are committed to embracing a culture of ideas and to ensuring that this community of start-ups, established companies, researchers, artists, residents, and visitors is inclusive and diverse so that innovation, creativity, and opportunity are available to all.

More information on the Schuylkill Yards project is available at www.schuylkillyards.com.

Schuylkill Yards Project Overview, from Center City

Source: SHoP Architects and West 8

Vision for Drexel Square and JFK Boulevard, Looking West

Source: SHoP Architects and West 8

Schuylkill Yards Master Plan (courtesy of SHoP Architects and West 8)

1. **Transform JFK** into a green, pedestrian-focused shared street
2. Improve the **pedestrian connection** from JFK to 32nd Street
3. Integrate the neighborhood with the city grid by connecting 31st Street from Chestnut north to JFK
4. Improve **at-grade pedestrian connection** between SEPTA Regional Rail and Market-Frankford Line along 30th Street
5. Transform the space in front of One Drexel Plaza into a great **public square** for the campus and community
6. Reinforce **Station Plaza** as a high-quality public space that contributes to a civic-scale room around 30th Street
7. Reimagine One Drexel Plaza (Bulletin Building) as an innovation catalyst
8. Establish a strong urban presence along **Market Street** as a civic boulevard
9. Engage the **CSX High Line** in creative ways to activate spaces below and adjacent to the viaduct
10. Respond to the **diagonal movement of Woodland Walk**, which terminates at Market Street, with an extended public space
11. Improve 30th Street as a **southern gateway to the station** and connection from Cira Green to Station Plaza
12. Create a **more robust grid framework** south of Market Street by extending 31st Street to Chestnut and connecting Ludlow Street for pedestrian access to 30th Street
13. Connect into the **rail yards** at strategic locations, to be coordinated with future rail yard development

3.2.4 Framework for Rail Yard Development

The overarching planning objective for the rail yard is to offer a coordinated, cohesive vision for high-density, highly connected development spanning the various uses of the yards and connecting to existing neighborhoods and the river. Through careful study and analysis, the Plan proposes different development strategies over each unique functional area while safeguarding continuous operations on the Northeast Corridor and within SEPTA's Powelton Yard.

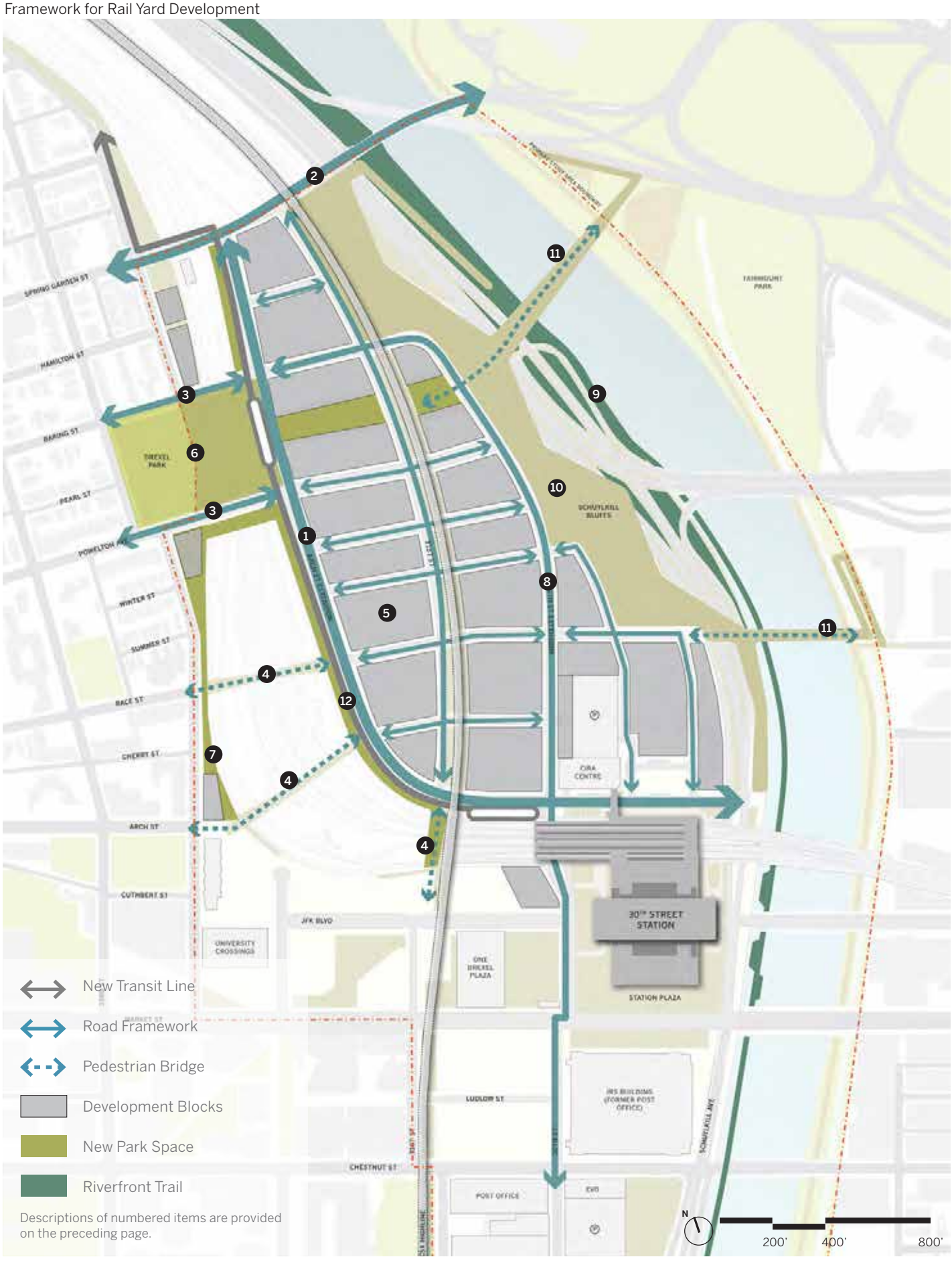
Full integration with and connectivity to the city is critical to the success of this development. The regular urban grid extending from Powelton Village and Mantua is replicated in the rail yards, with several roads and pedestrian bridges spanning the gap at Powelton Yard to connect the development to the west. A much-desired connection to Center City is made through two proposed pedestrian bridges that will benefit both the rail yards and the existing neighborhoods.

The rail yards today also create an interruption to the many strands of greenways running through the city. The Plan proposes a series of bold and interconnected open space networks – such as the Mantua Greenway, West Bank Schuylkill River Trail, High Line Greenway, and Schuylkill Bluffs – to relink these important paths. Strategically designed parks create access down to the waterfront and soften the impacts of infrastructure barriers such as I-76, NEC, and the CSX High Line.

The framework for the rail yards relies on key infrastructure that will help catalyze investment.

1. An extension of **Arch Street** west from 30th Street and bending northward up to Spring Garden Street. This alignment would be entirely within the Amtrak MOW property, hugging the eastern boundary of Powelton Yard.
2. A transformed Spring Garden Street as a **northern gateway** to the development connecting to the Art Museum and Center City.
3. An extension of the **city grid,** where possible, with bridges over the yards.
4. **Pedestrian bridges** where vehicular bridges are not possible, to reduce to impact of the void and ensure full connectivity back to the neighborhoods. All new bridges must be universally accessible and prioritize safety.
5. A simple grid system as framework for **flexible urban blocks** that could host a wide range of different uses. This assumes demolition of a decommissioned traction power supply switching station (Substation 1A) located at the southernmost edge of the Powelton Yard / Maintenance of Way Yard border.
6. Doubling the size of **Drexel Park** by extending it on deck over the rail yards and connecting to the new Arch Street.
7. A **green crescent** of linear park along the eastern edge of Powelton Village, fully connecting the West Bank Schuylkill River Trail with Schuylkill Yards and eventually back to the riverfront.
8. Extension of 30th Street north as a **spine for development** within the yards.
9. A linear park and series of boardwalks along the **Schuylkill River** to complete the West Bank Trail.
10. A deck level **"river overlook"** as an edge to development and buffer from the highway. This should connect down to the riverfront at key moments.
11. New **pedestrian bridges** at Race Street to increase connectivity to Center City and at Pearl Street to connect to the Art Museum.
12. A right-of-way allocation for **surface rapid transit** connecting the neighborhood back to the station and to destinations north and west.

Framework for Rail Yard Development



3.3 CIRCULATION NETWORK

3.3.1 Roads, Bridges, and Transportation Connections

A standard street grid within and around the rail yards – related in scale and orientation to the existing Philadelphia grid – is critical to the overall Plan. The grid fosters strong connections to nearby neighborhoods such as Mantua and Powelton Village while creating a flexible framework for future development.

Around the station, a set of careful adjustments to streets increases connectivity and balances modes, providing improvements for all users of the roadway network. These adjustments include:

- Changing the one-way circulation loop around the station to a two-way urban street network
- Aligning the I-76 ramps and Schuylkill Ave
- Extending 31st Street north to JFK and south to Chestnut Street
- Reducing the size of JFK to improve the pedestrian experience
- Adding dedicated bicycle lanes to select streets

Connections into the Rail Yards

Extensions of existing streets directly from the neighborhoods and over Powelton Yard face severe physical constraints, due to a unique combination of factors relating to topography, track configuration, and rail operations. While extending all adjacent streets over Powelton Yard is not feasible, a few strategic roadway connections will provide access to and from the new community above the rail yards:

- An extension of Arch Street west and then north to Spring Garden, to serve as a main street in the West Yards
- An extension of 30th Street north to serve as a main street in the East Yards
- Extension of Powelton Avenue and Baring Street – the north and south borders of Drexel Park – over Powelton Yard to connect into rail yard development
- A future "31½ Street" connection may be possible if development is ever realized within Powelton Yard

Within the rail yards, interconnecting streets will follow the grid to the west, creating new segments of Cherry, Race, Summer, Winter, and Hamilton Streets. The alignment and configuration of these streets will negotiate around the columns and other structural elements supporting the CSX High Line.

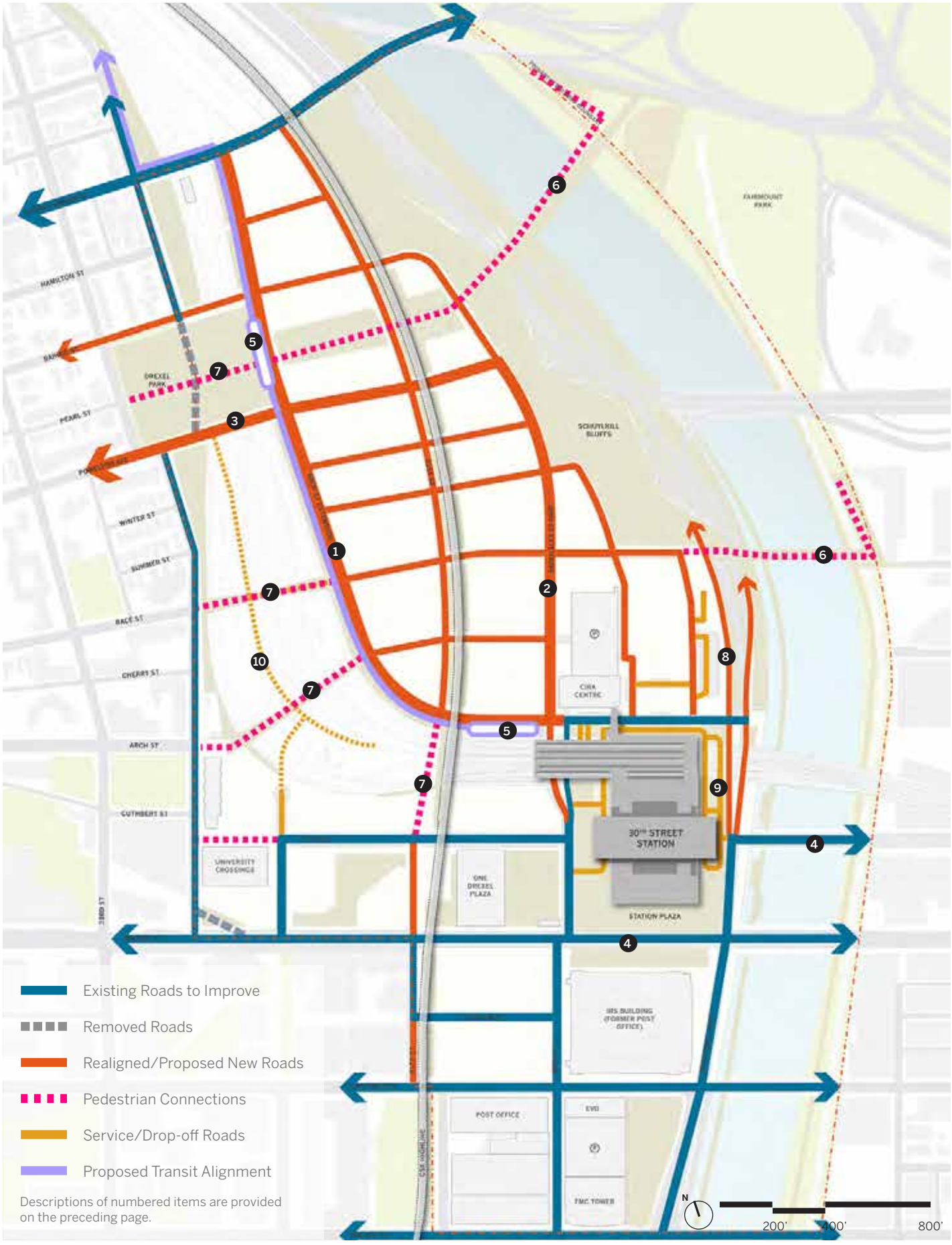
Connections to Center City

Connections to Center City are a crucial part of making new development within the yards viable. Expressway ramps at Arch Street should be improved through realignment to make vehicular movements more logical and pedestrian friendly. Pushing these ramps as far to the east as possible will also open up a significant parcel for new station-anchored development and create an area along the river that can be captured as public space.

No new roadway bridges across the Schuylkill River are proposed as part of the Plan; no clear route exists that connects both to West Philadelphia and to Center City, successfully navigates the many different physical constraints, and creates a desirable path of travel. However, the Plan does suggest significantly improved connectivity for pedestrians and bicycles, with new Schuylkill River bridges proposed at Race Street and Pearl Street, connecting to the Philadelphia Museum of Art.

1. Arch Street extended as western spine
2. 30th Street extended as eastern spine
3. Powelton Avenue connection to neighborhood
4. Dedicated bicycle lanes added at existing streets
5. Proposed transit stops
6. Pedestrian bridges to Center City
7. Pedestrian bridges over Powelton Yard
8. Reconfigured expressway ramps
9. Drop-off/pick-up adjustments at the station
10. Possible future roads over Powelton Yard

District Circulation Network Plan



3.3.2 Transit Connections

Transportation in the District should leverage access to the robust multi-modal hub that is 30th Street Station to minimize reliance on automobile travel as much as possible. The Plan enhances these offerings by proposing a new multi-modal transportation center north of Arch Street, including an intercity bus facility. The Plan also suggests a potential route along an extended Arch Street – with dedicated ROW – for rapid transit that has the potential to serve existing neighborhoods, new development at the rail yards, and wider regional destinations such as the Philadelphia Zoo. The particular transit mode to be employed will require further investigation as rail yard development plans advance. Several transit modes should be considered, including light rail, bus rapid transit, monorail, and aerial gondola. Each of these modes offers both advantages and disadvantages for use within the District.

- **Light Rail (LRT):** Rapid transit system operating on a fixed guideway in exclusive right-of-way; electrically propelled through overhead wires. A light rail system would operate at deck level through the yards and street level (at grade) beyond.
- **Bus Rapid Transit (BRT):** High-capacity, bus-based transit system that operates on exclusive right-of-way; level boarding and priority at intersections make it feel more like rail than traditional bus service. BRT would operate at deck level through the yards and street level beyond.
- **Monorail:** People mover running on a single rail, typically elevated and potentially automated. A monorail would run on an elevated line at locations within and beyond the rail yards.
- **Aerial Gondola:** High-capacity aerial cable car system strung between stations, supported and propelled by cables from above. The elevated cars would run above street/deck level both in the rail yards and beyond, with stations accessed from the ground. Gondola systems work well in urban settings with constrained environments.

Within the rest of the District, additional surface transit should be planned to be flexible and expand incrementally as development expands northward. A shuttle bus service like LUCY could be employed to connect via looped service back to 30th Street Station.

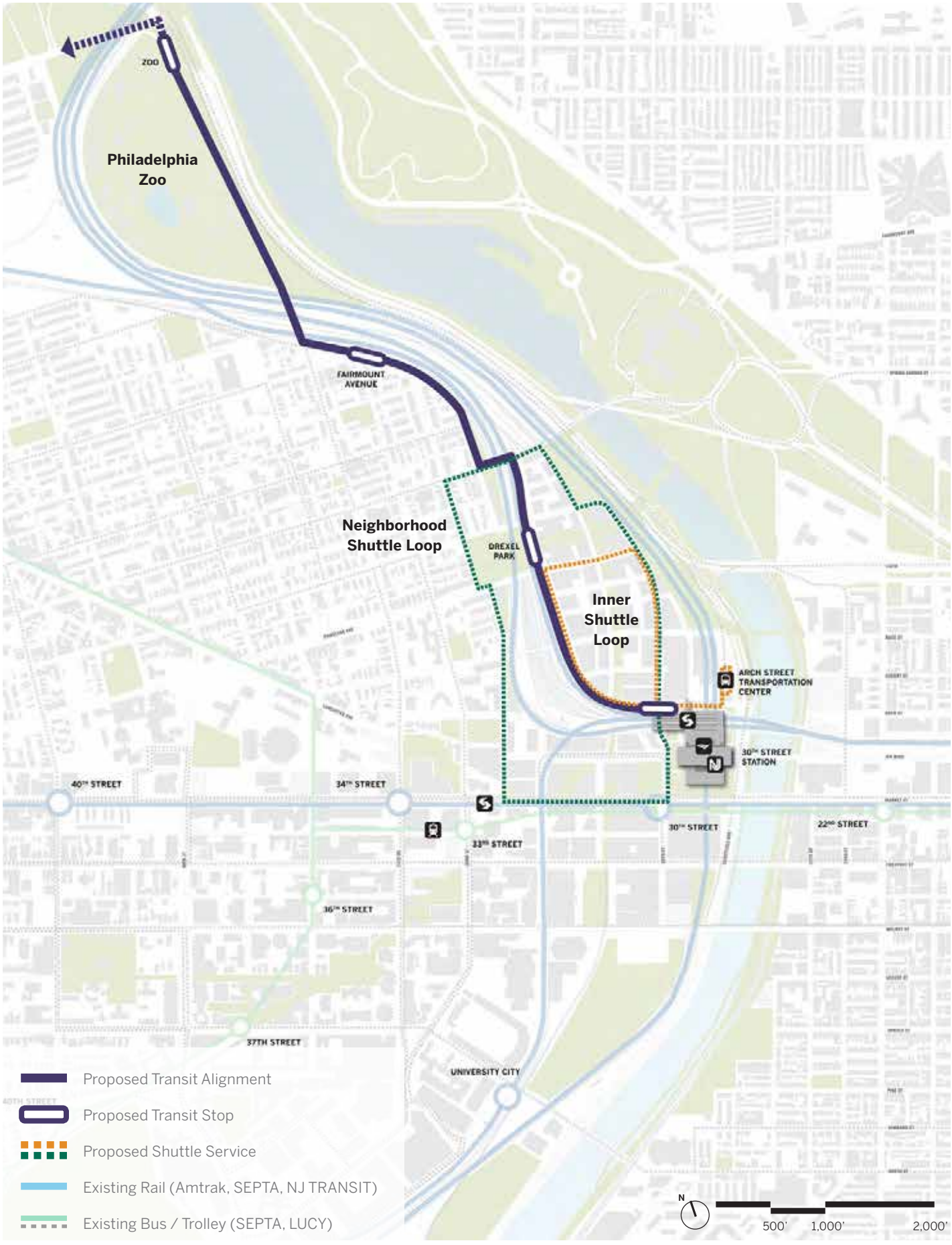
Seattle Link Light Rail

Mexico City Metrobus (BRT)


Las Vegas Monorail


Portland Aerial Tram (Gondola)

Plan for New Transit Service



3.3.3 Bicycle Connectivity

A robust multi-modal system includes comprehensive and best-in-practice bicycle facilities. This includes creating an extensive network of bicycle lanes that are protected or separated on streets, installing adequate bicycle parking infrastructure, and deploying bike share throughout new development. To complement existing bicycle lanes and lanes proposed by the City, existing key streets should be retrofitted to include dedicated bicycle facilities and nearly all new streets should be designed with separated bicycle infrastructure. The rail yards development can be a leader in planning, designing, and building a premier cycling network.

Several east-west streets can provide additional bicycle and pedestrian connections from neighborhoods across Powelton Yard, including Baring Street and Powelton Avenue. Where road bridges are not feasible over Powelton Yard, joint bicycle-pedestrian bridges provide an alternative solution for connectivity at Race Street and Arch Street. The two new bicycle-pedestrian bridges identified at Race and Pearl Streets provide improved east-west connectivity across the river. Important north-south bicycle connections through the rail yards are achieved on extended Arch, 31st, and 30th Streets, along with a joint pedestrian and bicycle path along the west side of the Schuylkill River.

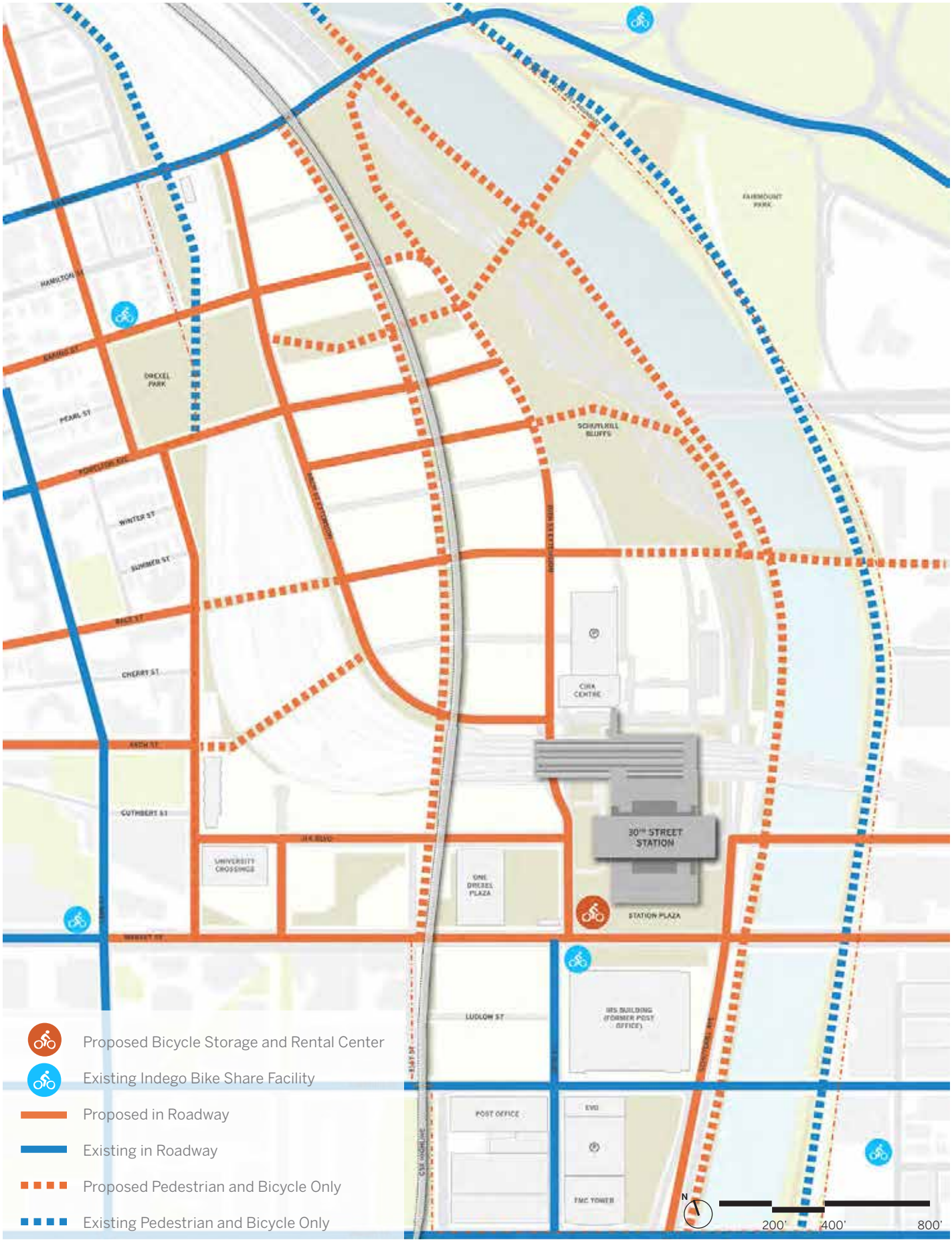
Both in-roadway and dedicated pedestrian and bicycle lanes are recommended. The following pages show the recommended bicycle infrastructure to be used throughout the rail yard development in more detail.

At 30th Street Station, the Plan proposes a bicycle facility that could include storage, locker rooms, and rental, either at-grade within Station Plaza or below the plaza in the new underground concourse. Facilities of this kind have been successful at other intermodal hubs, such as Washington's Union Station, and as district anchors, such the bicycle pavilion at Millennium Park in Chicago. Accommodating this at and beneath Station Plaza will further establish the station as an intermodal hub and transfer point to access destinations throughout the city.

Protected Bicycle Lane, Polk St., San Francisco

Bikestation DC at Union Station, Washington DC

Bicycle Network Plan



3.3.4 New Street Typologies

Creating a human-scaled, transit-oriented, pedestrian- and bicycle-friendly neighborhood is critical to the programming, identity, and function of the rail yard development. The width and landscaping of sidewalks, the width of streets, and presence of on-street parking all respond to the program and urban conditions of adjacent development. A robust transit-oriented community also includes comprehensive and best-in-practice bicycle facilities.

Sections of new street typologies are shown on the following pages. These typologies use nomenclature defined by the City of Philadelphia to classify existing streets.

1. Arch Street Extension is the main commercial corridor and primary access route in the rail yard development. The eastern edge of the road is anchored by retail, commercial, and other active frontages. The western edge of the road borders Powelton Yard and includes a dedicated surface rapid transit line. The street right-of-way of 108' is the widest in the new development. The ROW encompasses the proposed transit corridor, protected bicycle lanes in each direction, one drive lane in each direction, one on-street parking lane, and a landscaped sidewalk serving the commercial frontage.

2. Powelton Avenue is a key link between the rail yard development and the Powelton Village and Mantua neighborhoods. As a major street, Powelton Avenue has a 74' right-of-way. The ROW includes protected bicycle lanes in each direction, one drive lane in each direction, one on-street parking lane, and sidewalks serving mixed-use developments on two sides.

3. Typical east-west directional streets in the rail yard development have a right-of-way of 64' and are designed as High-Volume Pedestrian Streets. These human-scaled streets have a typical 12' wide sidewalk, one drive lane in each direction, shared bicycle lanes, and one on-street parking lane.

4. The lower portion of 30th Street Extension is a variation of the typical High-Volume Pedestrian Street type. Given the proximity and connection to 30th Street Station, this stretch of the road is expected to have heavier pedestrian traffic. Instead of the 12' wide sidewalks of the typical street, 15' wide sidewalks are proposed on both sides of the street here.

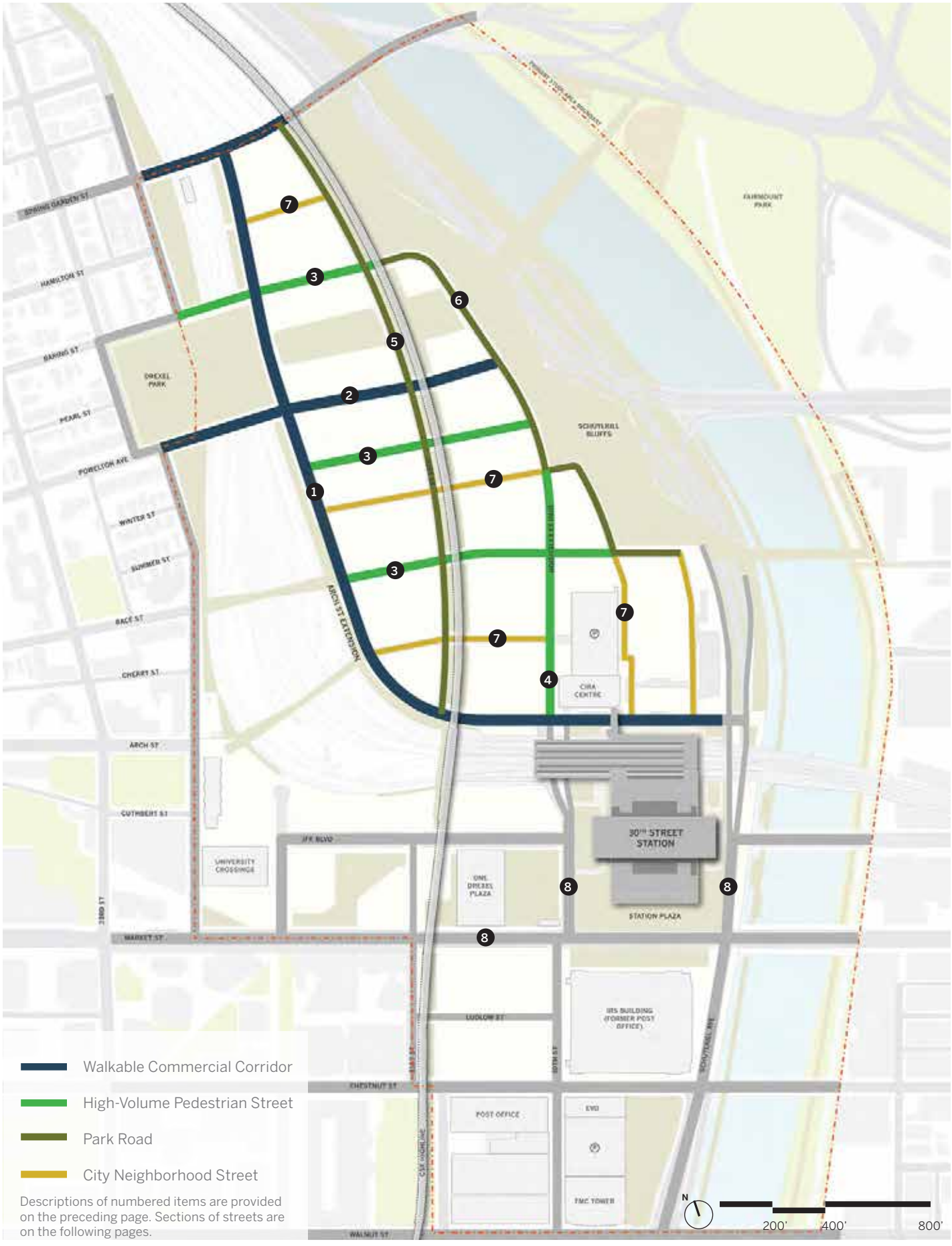
5. 31st Street runs parallel to the CSX High Line, bordering the proposed greenway beneath the viaduct. The greenway is a recreational spine that connects south to Schuylkill Yards, and the adjacent street is a local road that services development parcels on either side. The street ROW is 40', and includes one sidewalk on the west side, one drive lane in each direction, and one parking lane. Two-way bicycle lanes and pedestrian paths are provided within the greenway right-of-way, separate from the road.

6. The northern section of 30th Street shares a similar condition to 31st Street and is designed as a Park Road. The 40' street right-of-way contains one sidewalk on the development side, one drive lane in each direction, and one parking lane. The adjacent Schuylkill Bluffs accommodates additional bicycle lanes and pedestrian paths.

7. Typical City Neighborhood Streets function primarily as service streets or could potentially be limited access private roads within the development. These streets will have low pedestrian volume and no bicycle lanes. Street ROW width is 52', and contains one drive lane in each direction, one parking lane, and 12' wide sidewalks.

8. Adjustments and upgrades to adjacent city streets will help improve circulation around the station and safely accommodate pedestrians and cyclists. Existing at-grade street design is detailed in the Station Plaza section of this Plan.

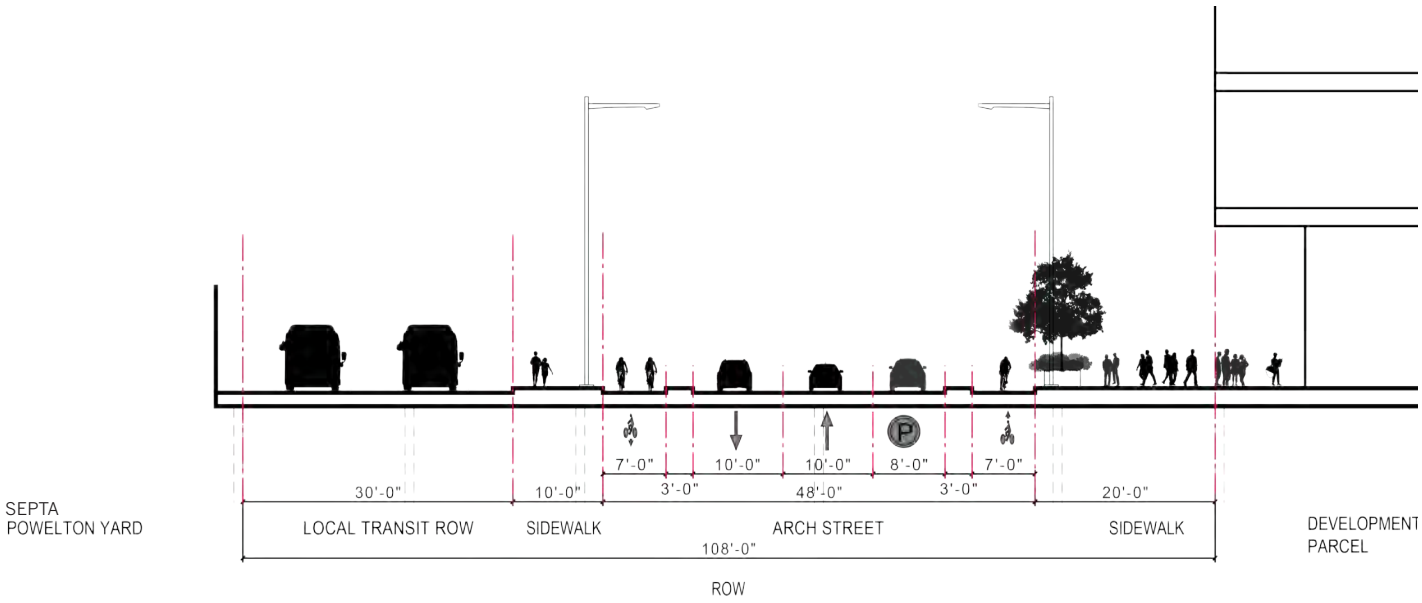
Street Typology Plan



3.3.5 Street Right-of-Way Sections

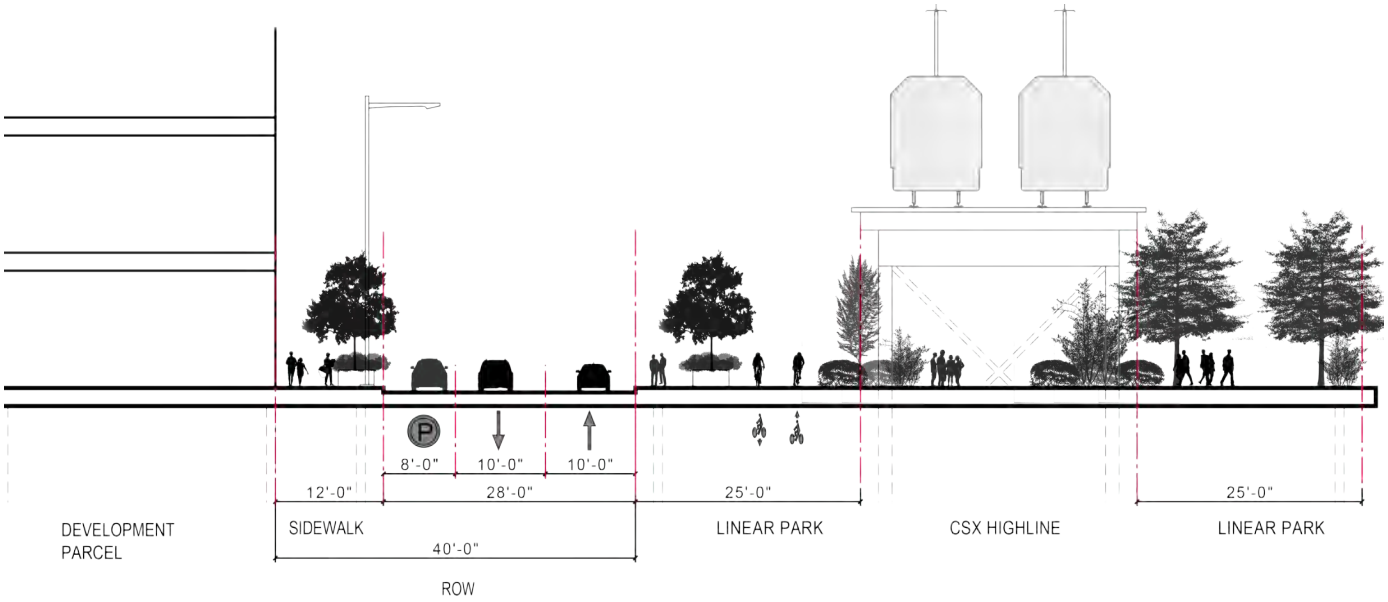
Arch Street Extension (Walkable Commercial Corridor)

Right of Way: 108’



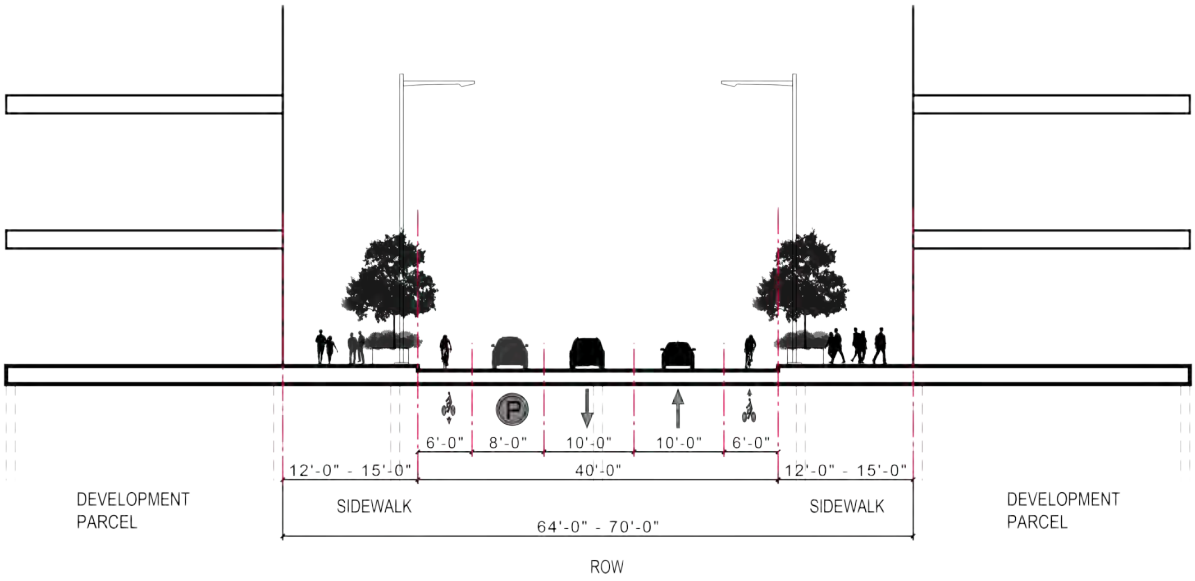
31st Street (Park Road)

Right of Way: 40’



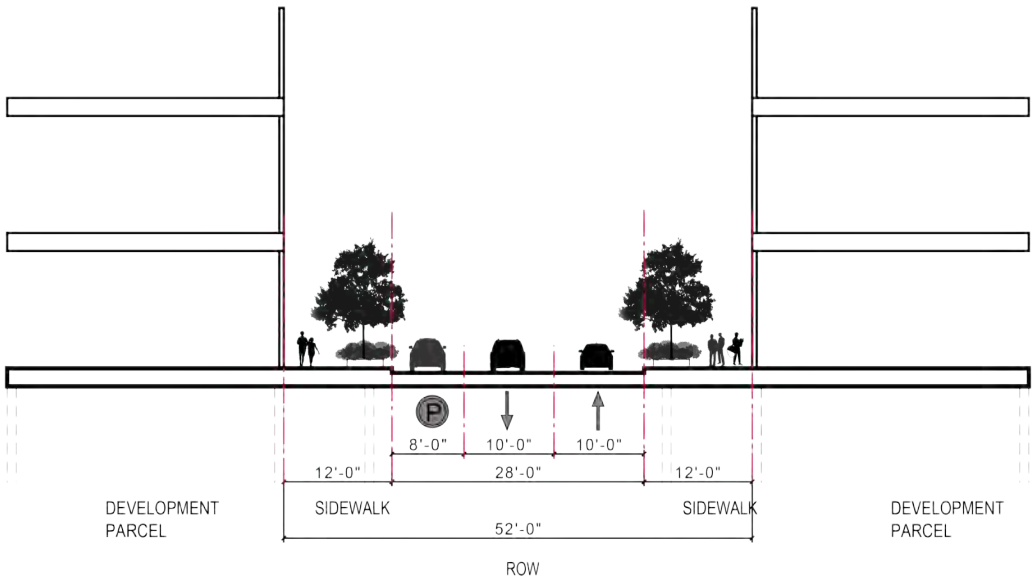
Typical High-Volume Pedestrian Street

Right of Way: 64' - 70'



Typical City Neighborhood Street

Right of Way: 52'



3.4 PUBLIC SPACE NETWORK

3.4.1 A Critical Link in Philadelphia's Watershed Park System

The history of Philadelphia's parks follows two main threads: the civic and neighborhood squares built on the original William Penn Plan and the watershed preserves of the Fairmount Park System. Fairmount Park, combined with the adjacent Wissahickon, was the first of the watershed preserves and today remains the largest and most visited of these cherished public landscapes. The 30th Street Station District forms the southwestern border of Fairmount Park; it is not, today, an easy border to cross. The Schuylkill Expressway and rail yards lie between West Fairmount Park and University City, and are impassable to park users on foot or bicycle. To reach 30th Street Station from the end of Martin Luther King, Jr. Drive, the park's western thoroughfare, one must cross the river twice. Although the Philadelphia Zoo is less than two miles away, the walk there is long and lonely.

Redevelopment of the District, including rail yard development, creates the opportunity to connect University City directly to the tremendous resource and attraction of Fairmount Park while creating a unique urban landscape in its own right — much as Schuylkill Banks has done on the east side of the river. Once inaccessible, Schuylkill Banks is wildly successful and at times even overcrowded: with rapid development in University City, the time is right for a landscape that, like Fairmount Park above it, encompasses both sides of the river.

The open space network detailed in this chapter would link the District and University City to West Fairmount Park (including attractions like the Philadelphia Zoo, the Mann Center, and Dr. Martin Luther King, Jr. Drive), East Fairmount Park (including Kelly Drive and Boathouse Row), the Wissahickon, and the regional path networks of the Schuylkill River Trail and the Circuit. Closer at hand, new pedestrian bridges would tie the District to the Philadelphia Art Museum and the Benjamin Franklin Parkway, Logan Circle, Center City, and Schuylkill Banks. To the south, District open space would connect to Penn Park and the emerging corridor of the Lower Schuylkill River, manifested in recent projects like the Schuylkill Banks boardwalk, Gray's Ferry Crescent, and Bartram's Mile. To the west, the Mantua Greenway and extensions of Lancaster and Woodland Walk would tie the District to Mantua, Powelton Village, and the Drexel and Penn campuses.

The Schuylkill River is an essential resource for the citizens of Philadelphia – an amenity and an attraction – as well as an ecological corridor that does serious work. Along with University City's anchor institutions and 30th Street Station, the river will drive the District's structure, value, and identity. It should be honored, embraced, and enjoyed.

3.4.2 District Parks and Civic Spaces

The District's public space network serves three core functions. First, it provides a District amenity – places to relax, to exercise, to socialize, and to play. Second, it provides physical, visual, and perceptual connections between the District and the rest of the city. Third, the public space network serves as ecological infrastructure: trees shade buildings and streets, soil absorbs stormwater runoff, and topography and plants filter noise and air pollution from adjacent infrastructure. Parks are essential to the physical and mental health of those who will travel to, live, and work in the District, and they have a major role in attracting economic investment.

Network Overview

The Plan features nearly **40 acres** of parks and civic space and **five miles** of new and improved greenways. Overall, public space accounts for approximately 25 percent of the District's land area – comparable to benchmark developments like Battery Park City in New York (30 percent) and Kings Cross in London (39 percent). Passengers, residents, and workers would enjoy convenient access to open space, with a less than five minute walk to the nearest park. Open space within the rail yards takes advantage of the unique amenity of the Schuylkill River, softens the impacts of infrastructure on the urban environment, and balances the relative paucity of park land in the constrained, at-grade portion of the District.

Station Plaza: Center and Catalyst

The starting point for all new public space is a great new plaza and active urban perimeter around the historic train station. Station Plaza will become a central civic space for the District, serving station customers, neighbors, nearby institutions, and visitors.

Access to the River

The District also provides new waterfront access, complementing the nearly complete stretch of parks and trails on the east side of the river. A riverfront promenade at the river's edge – at some points a wooded riverbank and at others a series of boardwalks and floating barges in the river – will complete the vision for a West Bank Trail and offer a unique District amenity. Its counterpart will be an upper level river overlook park built on a deck partially over the Schuylkill Expressway.

Greenway Connections

Greenways form a series of north-south connections and loops that stitch the District together. The Plan continues broader linkages such as the Mantua Greenway, the West Bank Schuylkill River Trail – which currently runs down 32nd Street – and University City's Walks, the former diagonal streets that have been become pedestrianized over time. An emerging greenway below the CSX High Line can also create a connection between 30th Street Station, Drexel, Penn Park, and new development within the rail yards.

Neighborhood Amenities

Within this extensive park network, the varying scale, character, and context of individual landscapes will offer the people of the District a broad range of amenities, experiences, and ecologies. The section that follows describes the components of the open space network in detail and discusses the programmatic opportunities afforded by each.

3.4.3 Public Space Typology and Program

The District's public space network is as diverse as it is extensive. This diversity is both by design and by circumstance. The constraints and opportunities of the District – the river, the High Line, the topography, and the rail yards themselves – structure much of the system. At the same time, the system can be used strategically to support key linkages, a wide variety of program, and a range of functions and experiences.

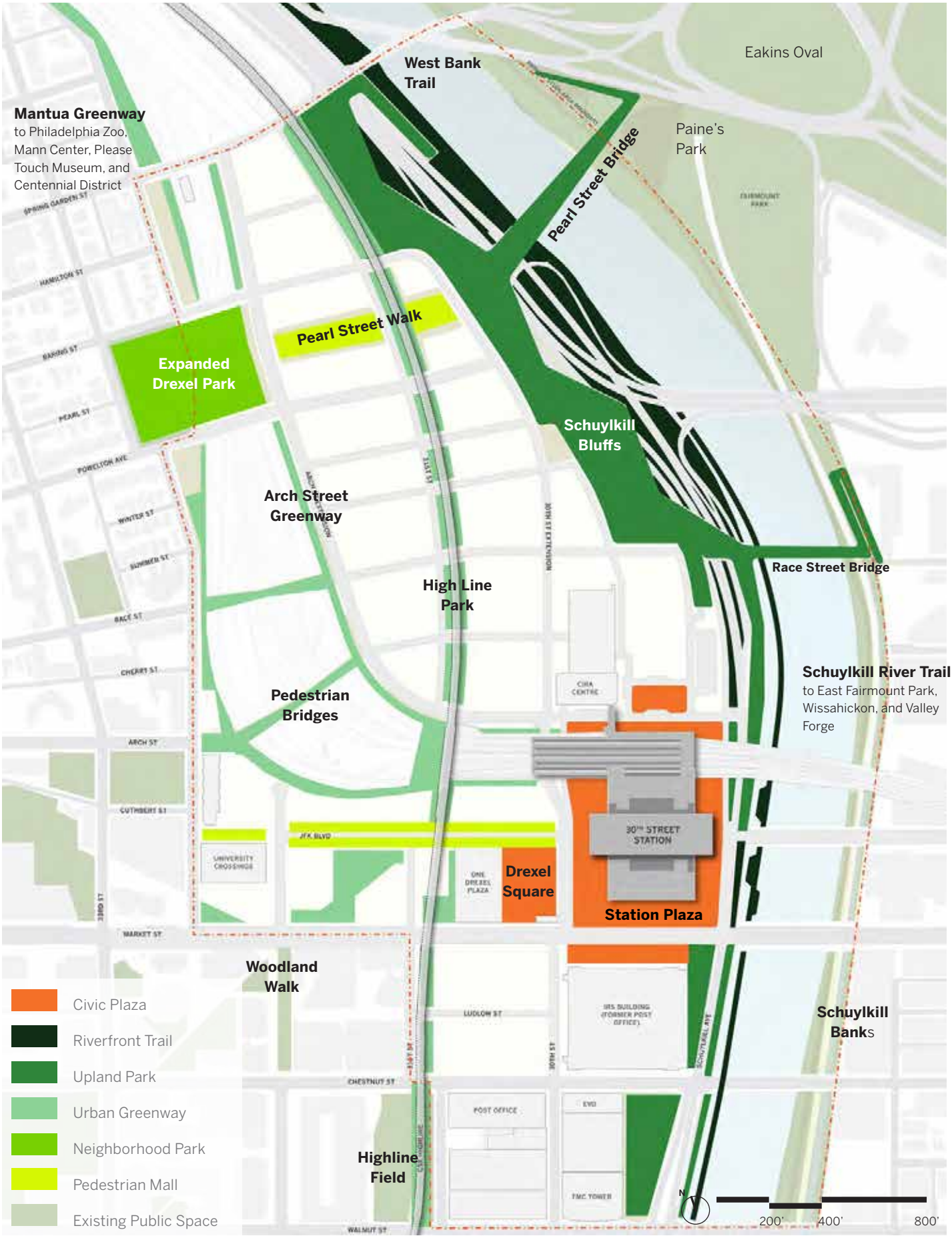
This section describes the major components of the open space network, with an emphasis on those linking the entire District and serving rail yard development.


Upland Park: Belmont Plateau in West Fairmount Park


Neighborhood Park: Drexel Park Today


Urban Greenway: Mantua Greenway Today


Civic Plaza: Dilworth Park


Eakins Oval
West Bank Trail
Mantua Greenway
to Philadelphia Zoo, Mann Center, Please Touch Museum, and Centennial District
Paine's Park
Pearl Street Bridge
Pearl Street Walk
Expanded Drexel Park
Schuylkill Bluffs
Arch Street Greenway
High Line Park
Race Street Bridge
Schuylkill River Trail
to East Fairmount Park, Wissahickon, and Valley Forge
Pedestrian Bridges
Drexel Square
Station Plaza
Woodland Walk
Schuylkill Banks
Highline Field
Civic Plaza
Riverfront Trail
Upland Park
Urban Greenway
Neighborhood Park
Pedestrian Mall
Existing Public Space
200'
400'
800'

3.4.3 Public Space Typology and Program

West Bank Trail

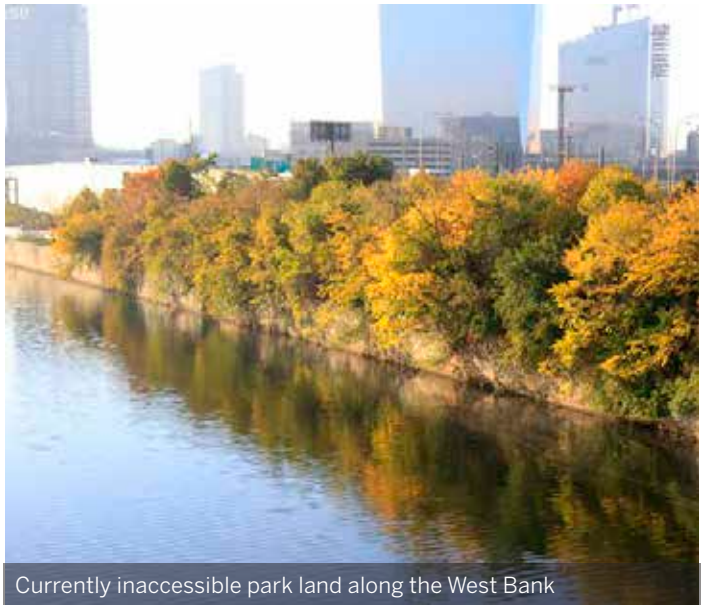
The park network begins with the District's most prominent natural feature, the Schuylkill River, and builds on the success of Schuylkill Banks as well as the East (Kelly) and West (Dr. Martin Luther King, Jr) River Drives that lie immediately upstream. Currently, the Schuylkill River Trail (SRT) flows seamlessly from Kelly Drive to Schuylkill Banks, which now extends to South Street. This was not always the case: until recently, public river access terminated at the Philadelphia Art Museum. A similar situation exists today on the west side of the river. Unlike Kelly Drive, MLK Drive is closed to vehicular traffic for much of the weekend, and draws crowds of walkers, runners, and cyclists for events and everyday recreation. During the week, visitors use the popular trail that runs parallel to MLK Drive from Falls Bridge to Center City. At the District's edge, this path abruptly ends in a narrow, inadequate sidewalk that follows MLK Drive across to the east bank.

Between MLK Drive and I-676, a strip of vegetated but inaccessible park land exists along the west side of the river, providing to a few adventurous fisherman stunning views of Center City and the feeling of a surprisingly wild river bank. The West Bank Trail begins with this riverbank, which could be transformed quite inexpensively through management of the existing vegetation and construction of an at-grade trail. At the I-676 interchange, the West Bank Trail would leave terra firma to follow an elevated boardwalk, similar to the newly completed structure that extends the SRT from Locust Street to South Street. This boardwalk would extend south through the District, where ramps and stairs could connect it to the existing bridges at JFK Boulevard, Market Street, Chestnut Street, and Walnut Street. At 30th Street Station, the boardwalk could tie into a more expansive floating landscape that invites visitors to pause and enjoy the river, rather than simply passing through.

Program for the West Bank Trail draws on its potential for linear movement and the strong connection to the Schuylkill River and its ecology. Walkers, runners, and cyclists would use this trail to connect to West and East Fairmount Park, the Wissahickon, and the Circuit, and could use the trail in combination with the SRT and Schuylkill Bluffs to create shorter loops. More intimately connected with the river than even the current SRT, the West Bank Trail would also provide opportunities for fishing, bird watching, and kayaking. At the floating park, the river would be close enough to touch.

Ⓐ Typical condition of West Bank Trail **on existing park land**

Ⓑ Typical condition of West Bank Trail **on boardwalk**



Currently inaccessible park land along the West Bank

The Schuylkill Banks Boardwalk

3.4.3 Public Space Typology and Program

Schuylkill Bluffs

The District's signature park will be Schuylkill Bluffs, an elevated riverfront landscape stretching from 30th Street Station to Spring Garden Street. Schuylkill Bluffs brings the landscape of Fairmount Park into the heart of the District and University City. Fairmount Park currently exists at two topographic levels: a lower, bank level and an upper level of bluffs and plateaus. The banks, which include the river drives, are the better known of the two landscapes, but the upper level is home to some of the park's most popular destinations – including the Mann Center, the Please Touch Museum, and the Philadelphia Zoo – and to iconic views of the city.

Schuylkill Bluffs can be conceived of as an extension of upper Fairmount Park – a constructed bluff that simultaneously offers unparalleled views of Center City and a way to bridge the dividing infrastructure of the Northeast Corridor and I-76. It creates a continuous, connected riverfront landscape while negotiating the vertical and structural constraints of the rail yards and highway below. From the proposed riverfront promenade at 30th Street Station, the Bluffs extend along the river's edge past the relocated I-76 ramps at Arch Street. Once past these ramps, they swing west over the Northeast Corridor and widen into a larger landscape. At Race Street, a pedestrian bridge connects the park, the rail yards, and the neighborhoods of Mantua and Powelton Village to Center City and Schuylkill Banks. Just south of I-676, the bluffs extend east to an elevated overlook with views of the river, the Art Museum, and the skyline. At Pearl Street, the park intersects the rail yard development's biggest east-west connection, the Pearl Street Walk.

The structure and spaces of Schuylkill Bluffs are sufficiently flexible to accommodate multiple and changing programmatic needs over time. As a thick but linear park, Schuylkill Bluffs can serve as a landscape for both gathering and movement. It provides a variety of paths and trails for walkers, strollers, joggers, runners, and cyclists of varying abilities and preferences. In the center of the park, Schuylkill Bluffs features a chain of open lawns that provide room for picnicking, barbecuing, sunbathing, pickup sports, and large events. At the development edge, more intensively paved areas could host markets and events, seating for restaurants, playgrounds, and sports that require hard surfaces and equipment. At the edge of the deck, raised topography and denser, more layered plantings serve functionally to screen the highway but also echo the natural landscape of the river and provide spaces for shade and solitude. Significantly, the scale and connectivity of Schuylkill Bluffs suggest that it could serve as a corridor for wildlife as well as people.

View of Schuylkill Bluffs, Looking North Towards the Art Museum from Race Street

View of Schuylkill Bluffs, Looking South from Spring Garden Street

3.4.3 Public Space Typology and Program

Drexel Park

Drexel Park is a quintessential Philadelphia neighborhood park, one of many that build on the legacy of Center City's great squares. Its flexible, friendly lawn offers space for events, casual sports, leisure, and enjoyment of the views to Center City. Like many such parks, it acts a neighborhood commons. The District Plan proposes a physical extension of Drexel Park across Powelton Yard, and an expansion of this role in connecting neighborhoods. Given the physical constraints of Powelton Yard, Drexel Park is one of the few places where both streets and landscape can create a feasible bridge across. It is a critical link in the Plan, and the place where old neighborhoods and new can mingle in a shared space. Materially and programmatically, the new Drexel Park would continue to be a flexible, neighborhood-focused space. Roughly doubling its size allows for additional features, such as a dedicated playground and paved areas for markets, food trucks, and events.

View of an Expanded Drexel Park, Looking West from Arch Street Towards Powelton Village

High Line Park

Like the riverfront parks and the landscapes along Powelton Yards, the High Line Park is a linear landscape that stitches together the rail yards, at-grade development, and existing neighborhoods. Unlike these other parks, however, it runs like a seam through the center of the rail yard development. This location, combined with the gritty charisma of the High Line itself, suggests a unique and urban character for the High Line Park. At its most basic, the greenway features continuous paths and sidewalks that extend, via a pedestrian bridge, over Powelton Yard to Schuylkill Yards, the Drexel Campus, and Penn Park. Varied surface materials along the length of the High Line could support a variety of functions: paved areas for retail, markets, events, and sports like basketball, tennis, street hockey, and skateboarding; lawns and soft surfaces for convenience uses like playgrounds, dog parks, and neighborhood pocket parks; and porous, richly planted rain gardens to manage stormwater. This final function is crucial, given the topography of the rail yard development: the requirement that streets clear below the High Line creates an artificial valley within the rail yard deck that water will drain towards. The structure of the High Line should also be respected and celebrated with lighting and related art installations.

View of the High Line Park and Greenway, Looking South

3.4.3 Public Space Typology and Program

Mantua Greenway and Powelton Yard Bridges

Mantua Greenway currently exists as a paved multi-use trail along the western edge of Powelton Yards, extending from Drexel Park along 31st Street and Mantua Avenue to 34th Street, which provides connections to the Philadelphia Zoo and West Fairmount Park beyond. A further extension along Mantua Avenue is currently planned. The District Plan builds on the Mantua Greenway's success, suggesting that it can become a connective spine along the entire western edge of Powelton Yards. Extending from a central axis through the expanded Drexel Park, it runs south on 32nd Street past new development. At Race Street and Arch Street, pedestrian bridges connect over Powelton Yard to rail yard development. From Arch Street, the greenway continues south along 32nd Street, but could also continue east along the southern edge of Powelton Yard, linking to the northern edge of Schuylkill Yards, the High Line Park, and 30th Street Station beyond. As a narrow, linear path landscape, the Mantua Greenway's primary program will be walking, running, and cycling. However, small pocket parks will be created along its route, and careful attention to the planting along its edge will create varied experiences, screen and frame views across the rail yard, perform green infrastructure functions, and serve as a narrow but extensive wildlife corridor.

View of an Improved Mantua Greenway at 32nd Street and Winter Street, Looking South

View of a Pedestrian and Bicycle Bridge Crossing at Arch Street, Looking East Towards the Station

3.4.4 Humanizing Challenging Infrastructure

Rail yard development must layer working infrastructure, building development, and civic space to create a dynamic urban hub. Although a seamless deck can be achieved in many locations – particularly over the MOW and Penn Coach Yards – vertical clearance and horizontal spans preclude this solution elsewhere, at least in the near term. For this reason, the District Plan includes significant undecked portions of rail yard. These openings present several challenges, including physical connection, safety, visual amenity, noise, and air quality. Careful attention and thoughtful design will be required to address these challenges and ensure the health of future residents, as well as the social and financial viability of rail yard development.

Physical Connections

The most technically challenging portions of the site – Powelton Yard, the Northeast Corridor (NEC), and I-76 – form the edges of the development. Without a plan for radical new connectivity, areas between them are and will remain islands. The High Line poses additional challenges. Its vertical clearance requirements push required decks down rather than up: a valley between the ridges of Powelton Yard and the NEC. The District Plan employs different solutions for each of these infrastructure barriers, tailored to unique constraints and context.

Powelton Yard is constrained in some locations by long spans over tracks, but more critically by vertical clearance. This clearance is driven by SEPTA's overhead catenary replacement project, which is advancing well before development of the Plan. Anything built over Powelton Yard must therefore negotiate freestanding catenary, with typical clearance requirements of 40'-0" and limited potential for clearance of 23'-6" at bridges only — but not for extensive overbuild decks. Rail yard topography compounds these clearance issues: to the north of the site, from Drexel Park to Spring Garden Street, an existing drop from neighborhood to yards eases crossing. To the south, however, Powelton Yard is roughly level with the blocks along JFK Boulevard. This landscape of constraints drives the Plan response. At Drexel Park, the existing grade differential allows for the most robust connection over Powelton Yard, with vehicular bridges and landscape over structure. Further south, where grade changes using currently assumed vertical clearance requirements do not allow vehicular streets and landscape decks are more challenging, the Plan relies on pedestrian bridges that must step and ramp down to grade at both sides. These bridges preserve pedestrian connectivity, an essential ingredient in any transit-oriented development.

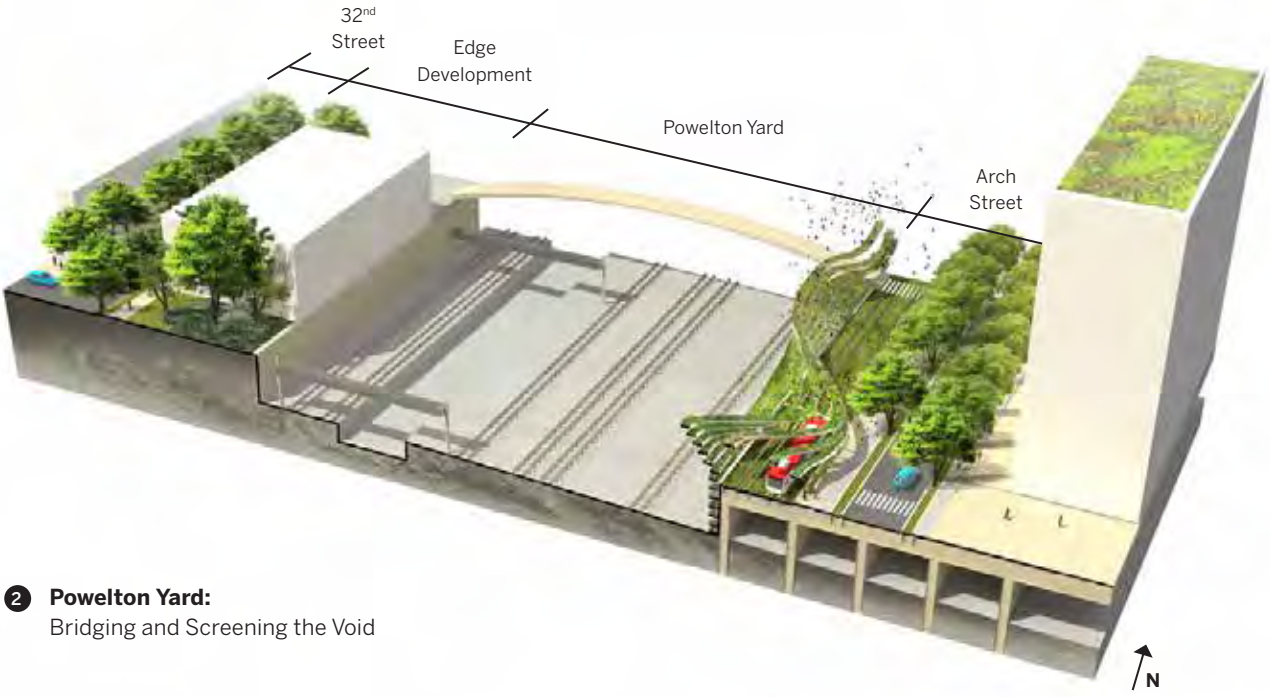
The eastern portion of the site is dominated by two critical and intensively used infrastructure corridors: the Schuylkill Expressway and NEC. Although they differ in vertical and horizontal clearance requirements, both preclude building construction, except in very limited locations. This reality, combined with the compelling attraction of the Schuylkill River, suggest a landscape response. Schuylkill Bluffs is a proposal to deck extensively over the NEC and in limited locations over I-76 to provide an amenity as well as north-south connections from 30th Street Station to Fairmount Park. This connection is anchored at the south end by an extension of the Schuylkill Avenue promenade and at the north end by a ramped connection to Dr. Martin Luther King, Jr. Drive, West Fairmount Park, and the West Bank Trail. At Race Street and Pearl Street, the park also extends over the Schuylkill River on new pedestrian and bicycle bridges to complete key east-west connections between Powelton Village, Mantua, new rail yard development, Center City, Logan Square, the Art Museum area, Schuylkill Banks, and Fairmount Park.

Connecting Over Powelton Yard

Connecting Under the High Line

Connecting Over the NEC, I-76, and the River

1 Schuylkill Bluffs:
Negotiating Infrastructure with Landscape



2 Powelton Yard:
Bridging and Screening the Void

3.4.4 Humanizing Challenging Infrastructure

Visual Quality

Experience and visual perception, although difficult to quantify, have profound impacts on the viability of urban areas. Location and amenity drive real estate value, while the quality of the civic realm can determine the success or failure of a plan that relies on walking, cycling, and transit for circulation. From this perspective, the open rail yards present a challenge which must not be taken lightly: they cannot be perceived as uncomfortable, unsafe, or unsightly, but rather should be embraced and celebrated.

From the upper floors of tall buildings, open yards present less of an issue and even an opportunity: like a natural barrier, they open the horizon to longer views and allow for ample light. The issue lies critically at street level, where urban life succeeds or fails. From lower down, the yards and highways occupy a greater proportion of the visual field — one notices them more. Moreover, the lack of human scale and subtle variation will increase perceived walking distances, threatening desired transportation mode splits and retail viability.

In areas where constraints preclude building development but permit landscapes over structure, parks can effectively mediate the edges of infrastructure. This is the approach taken at Schuylkill Bluffs. Topography and vegetation will control views, emphasizing the distant skyline and screening the nearer infrastructure. At the street edge, park programming and planting will provide life, interest, human scale, and environmental comfort.

This same approach is possible at Drexel Park, but the remainder of Powelton Yard would be open under the current structural and clearance assumptions. The edges of Powelton Yard are by necessity often narrow, without room for a mediating horizontal landscape. The suggested solution, here and at similar interfaces in the District, is to create dynamic vertical screening elements that bring life, comfort, and interest to the rail yard edge. The intent would be to not entirely block or obscure the yards, but to create a humanizing transition between city and infrastructure.

Finally, some infrastructure – particularly the High Line – cannot and should not be obscured visually. The High Line is an iconic structure, and because of its height will continue to be a strong presence within the rail yard development. Lighting and simple, clean ground surfaces can highlight the structure and give it the breathing room it demands. In addition, public art could call attention to the structure and weave it into the fabric of development.

Noise and Air Quality

In addition to visual impacts, open rail and highway infrastructure will generate noise and emissions at deck level. This is particularly true of the Schuylkill Expressway, and to a lesser extent the rail yards. Many of the same devices employed to visually screen infrastructure can mitigate sound and air pollution. Topography and vertical barriers are the most effective methods of blocking sound, and can mechanically intercept some pollutants, especially particulates. Vegetation is ineffective at blocking sound, but adds an air quality benefit, both through physical deposition and biological processes. Effectively addressing noise and air impacts will be necessary for the physical and mental health of people living and working within the rail yards, and will, like visual issues, strongly influence real estate value.

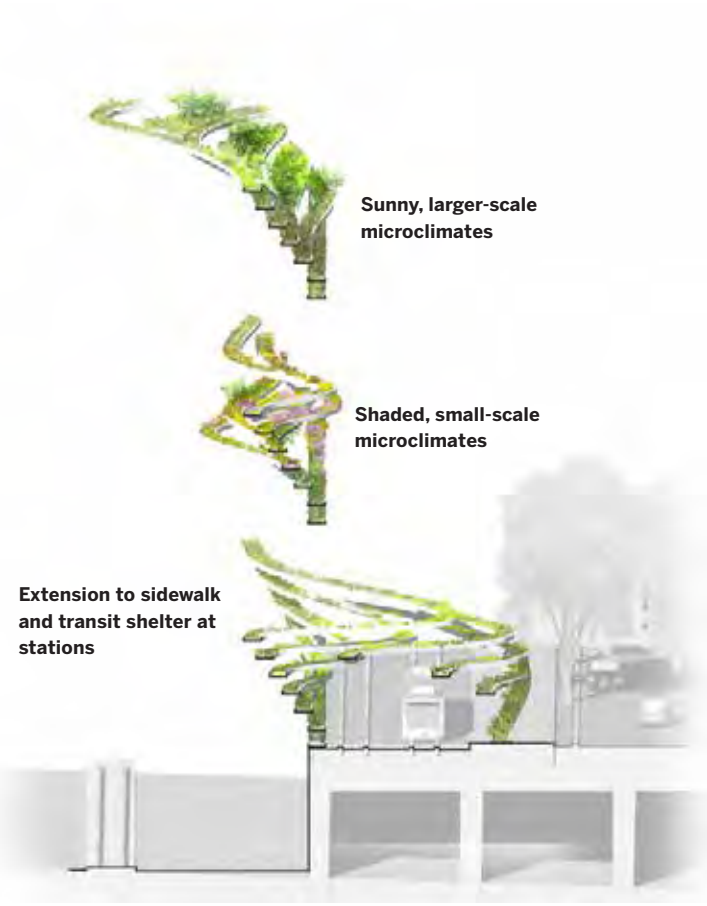
The High Line

The High Line structure bisects the rail yards and limits physical and visual connectivity. Columns and other structural elements dictate where streets and pedestrian connections can occur. The Plan recommends roadway connections between these structural elements at Arch Street, Winter Street, Race Street, and Baring/30th Streets, as well as Powelton Avenue. On either side of the High Line, a 25' greenway will provide north-south connectivity within the yards and connect to an emerging greenway below the rail viaduct in University City.

This greenway is also an important safety consideration: it buffers adjacent future uses from the active freight rail line. The Plan assumes standard offset guidelines from the railroad for all occupied buildings. Below the viaduct, crossings approach the structure but do not touch it, remaining offset at a safe distance.

Powelton Yard Edge

The Arch Street Extension through the yards is a unique street. It is the most continuous thoroughfare in the network and thus the development's transportation spine, providing space for cars, transit, bicycles, and pedestrians. It is an urban street with mixed-use development on one side. But it is also an edge landscape, mediating the relationship between urban development and the open infrastructure of the rail yards. Given the demands on the Arch Street ROW and the need to maximize developable land within the MOW Yard, room for an extensive landscape like Schuylkill Bluffs is not available. In the absence of horizontal space, the Plan proposes a porous and varied vertical structure that at times would extend over the transit ROW to engage the streetscape. This structure could be imagined as a linear habitat corridor and an extension of the zoological landscape along a new transit line that serves the Philadelphia Zoo. Layered habitat trays with varying microclimates could host plants, birds, insects, and other small species. From an experiential perspective, this structure would visually screen the rail yards at street level, temper the micro-climate, humanize the scale of the street, provide access to views of vegetation, and perhaps become a destination in itself. It would be equally compelling viewed as a pedestrian, from the interior of a building, or from a car, bicycle, or train.



View of the Arch Street Edge Landscape

3.4.5 Landscape Over Structure

Proven Technology

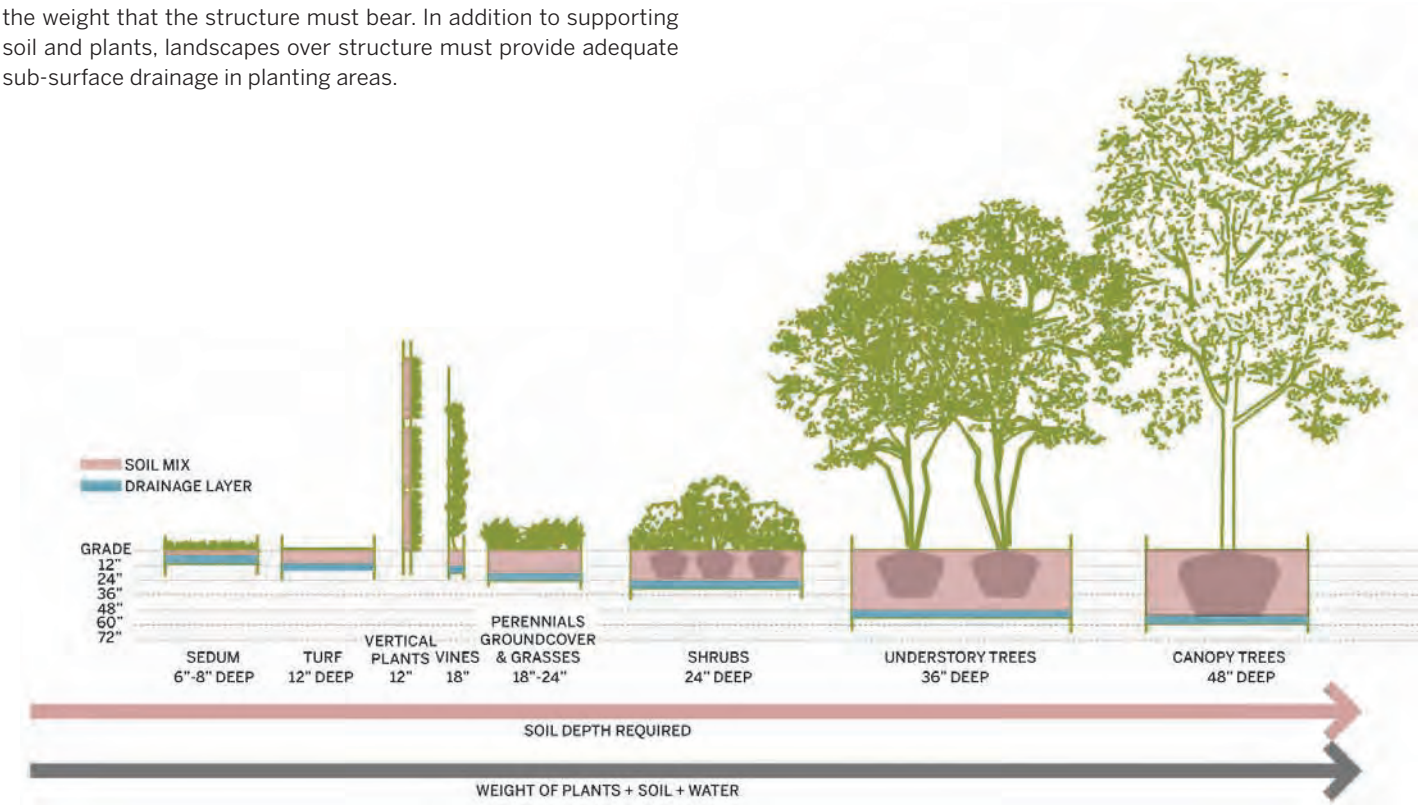
The majority of the District public space network would be built not on terra firma, but on structure – both the existing deck at and around 30th Street Station and the proposed deck above the rail yards. Although landscapes over structure are more expensive and technically complex than conventional landscapes, the structural and horticultural requirements are well known. Many of Philadelphia's signature public spaces, including Dilworth Park, Love Park, Comcast Plaza, and Independence Mall, are built partially or entirely on structure.

Soil, Drainage, and Structure

Plants need adequate volumes of well-drained soil to thrive. The required depth and volume of soil increases with plant size. The drought-tolerant sedums on a green roof – the most minimal landscape over structure – need only 6-8 inches of soil depth, while a canopy tree needs up to 4 feet. Larger trees not only thicken the profile of the deck structure, but dramatically increase the weight that the structure must bear. In addition to supporting soil and plants, landscapes over structure must provide adequate sub-surface drainage in planting areas.

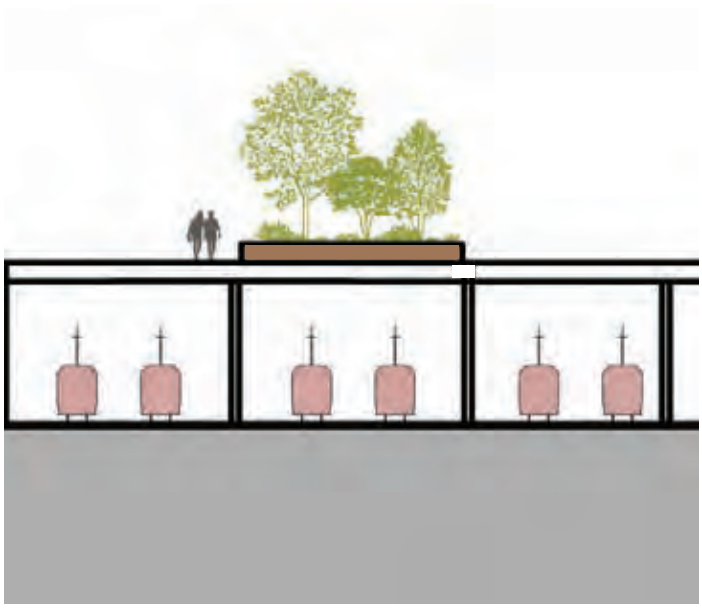
Existing Structures

At Station Plaza, where landscape construction takes place above an existing deck, plantings must be accommodated in raised planters. All three alternatives considered in the Plan would provide the soil depth necessary for tree, shrub, and groundcover plantings. The structural capacity of the deck is another important consideration. The District Plan assumes that the deck over the underground retail concourse will be rebuilt. The resulting deck can be engineered to support trees and other plantings. Elsewhere, for example at the south side of the station, an analysis of the existing structure would need to be performed during detailed design of the Plaza. However, given the plantings currently in place at The Porch and former Post Office Building, it is reasonable to assume that the existing deck can support, at the minimum, small trees.

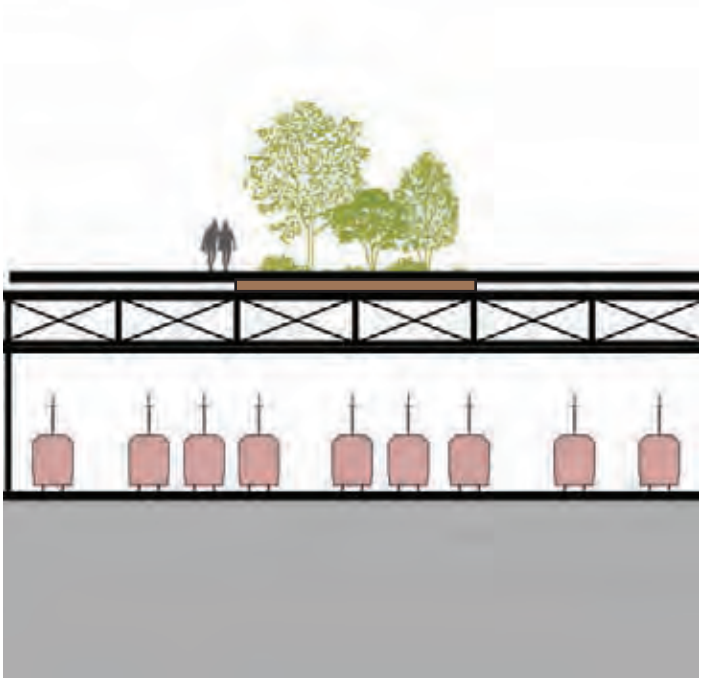


Proposed Rail Yard Deck

In the proposed development over the rail yards, the District Plan assumes that the deck structure will be engineered to support landscapes that include mature canopy trees, and that the required soil depth will in most cases be accommodated within the thickness of the structural deck to eliminate the need for raised planters. The conceptual grading of this deck takes into account not only vertical clearance over the rail yards, but also required soil depths and the structural thickness required to support them. Where vertical clearances are challenging, or the proposed deck meets the existing deck at 30th Street Station, vegetation would need to be accommodated in raised planters.



Vegetation over existing structures must be placed in raised planters



New deck construction could integrate required soil depths for planting

3.5 DISTRICT DEVELOPMENT

3.5.1 Development Strategy

At-Grade Development

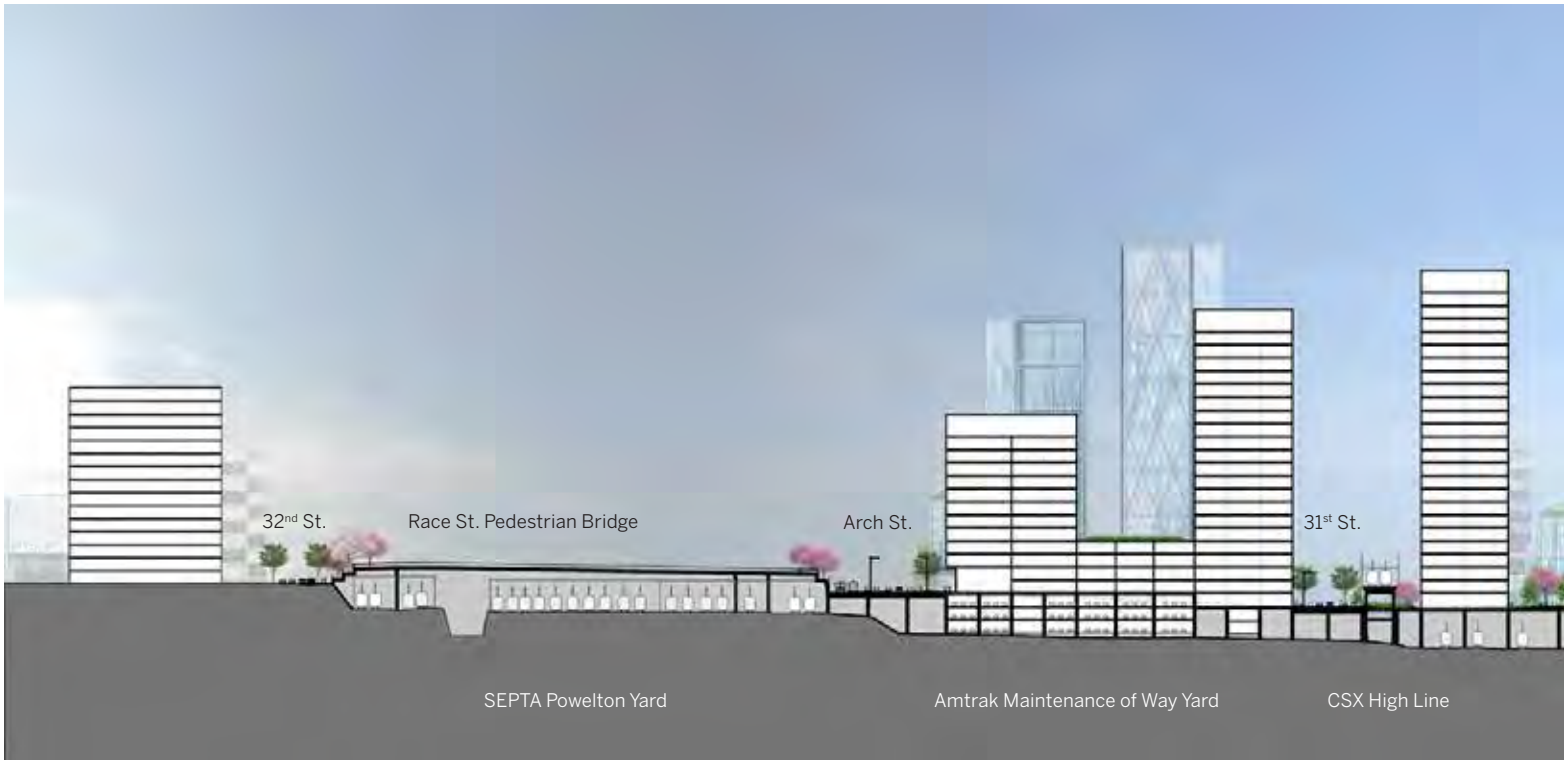
Near-term development will likely be focused on sites west of 30th Street, redevelopment sites south of Market Street, and edge parcels between 32nd Street and Powelton Yard. Drexel is currently planning development at its Schuylkill Yards project, the 14 acres of land immediately west and south of the station. These parcels have the potential to achieve approximately 8 million square feet of new development over many years and subject to rezoning entitlements.

Rail Yards Development

Major infrastructure investments within the rail yards will create new city fabric – streets and open spaces – and help unlock their value as development sites. All rail yard development is not the same, however, so the Plan calls for a development strategy related directly to continuity of railroad operations and site complexity, decking requirements, and connection to existing neighborhoods.

- The most development, potentially including high-rise buildings, should take place on the parcels where staging and construction would be the simplest: over the **Amtrak Maintenance of Way Yard**. Here, although an accessible lower-level maintenance area must be maintained for Amtrak, buildings can be built more or less conventionally.
- The **Penn Coach Yard** is more complex due to maintenance tracks, equipment, and servicing functions, but still includes ample opportunity to coordinate building columns and cores with track locations below. While the majority of development opportunities are located north of Arch Street, there is another development site immediately adjacent to the station at the northwest corner of 30th Street and JFK Boulevard.
- The remaining areas within the yards – **SEPTA's Powelton Yard** and the **Northeast Corridor** – are highly complex, extremely costly, and operationally challenging development areas. Construction must be carefully staged to minimize disruptions to regional and intercity mainline service, yet each yard has constrained areas for staging and access. These areas also require long-span structural approaches to bridge over tracks, increasing the cost of construction. Except for limited areas where these constraints are not present, development within these areas should be limited to lightweight decking for landscape or bridges rather than buildings.

Rail Yard Section, Looking North



Overall Aerial View of Rail Yard Development

3.5.2 Building Construction Typologies

Development in the District can be generally grouped into four structural typologies with two sub-types based on operational considerations. The first, shown below as **Type 1**, is conventional building on land, which describes the majority of Schuylkill Yards and other parcels south of the station. **Type 2A** and **Type 2B** apply to Amtrak's Maintenance of Way Yard, where the existing maintenance functions and storage could be consolidated, leaving a portion of the yard open for below-deck parking garages. These types differ in their structural complexity and the quality of urban space they potentially create at street level. In both cases, building cores can be brought all the way down to grade.

The majority of the eastern rail yard falls under a more difficult **Type 3A** construction, where vertical development is built over existing maintenance tracks. Due to the geometry of the tracks, structural column locations need to be coordinated, resulting in possible transfer decks and raised elevator pits in certain areas.

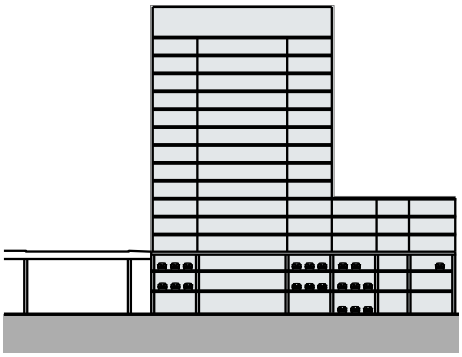
Type 3B construction is essentially the same structural system, although with active tracks rather than maintenance tracks below. This difference creates construction challenges that could result in significant cost premiums. There are a limited number of development parcels that fall under this category, since a majority of the active track area is categorized as Type 4.

Type 4 construction is the most difficult and expensive, built over active train tracks with tight spacing and curves. Here, stringent clearance requirements limit areas for structural touchdown, creating longer spans and deeper transfer decks. The Plan recommends setting aside Type 4 areas for elevated parks or leaving them open to rail operations below.

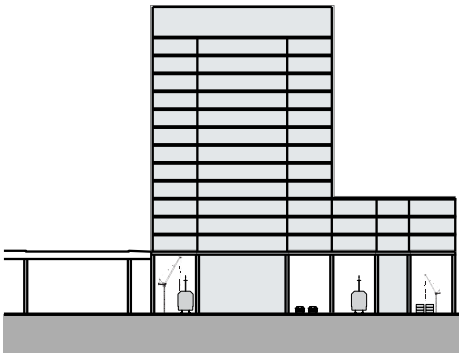
Each of these construction types has a direct bearing on cost and schedule.

Type 1: Conventional Building

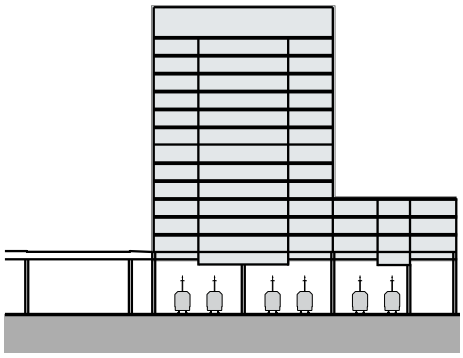
Type 2A: Parking Podium Below



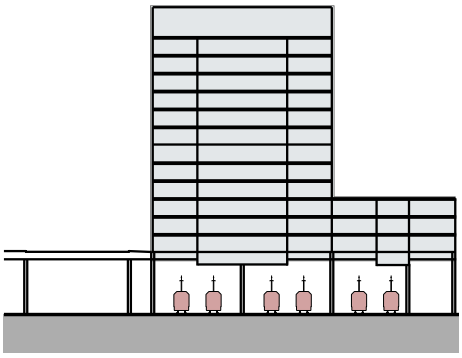
Type 2B: Maintenance Yard Below



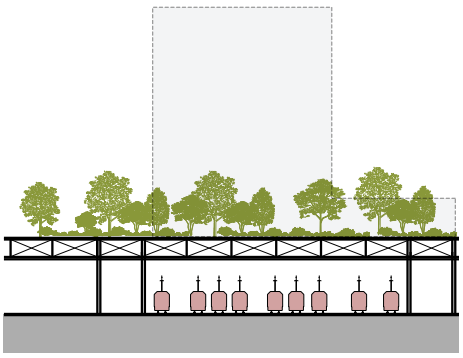
Type 3A: Over Maintenance Track



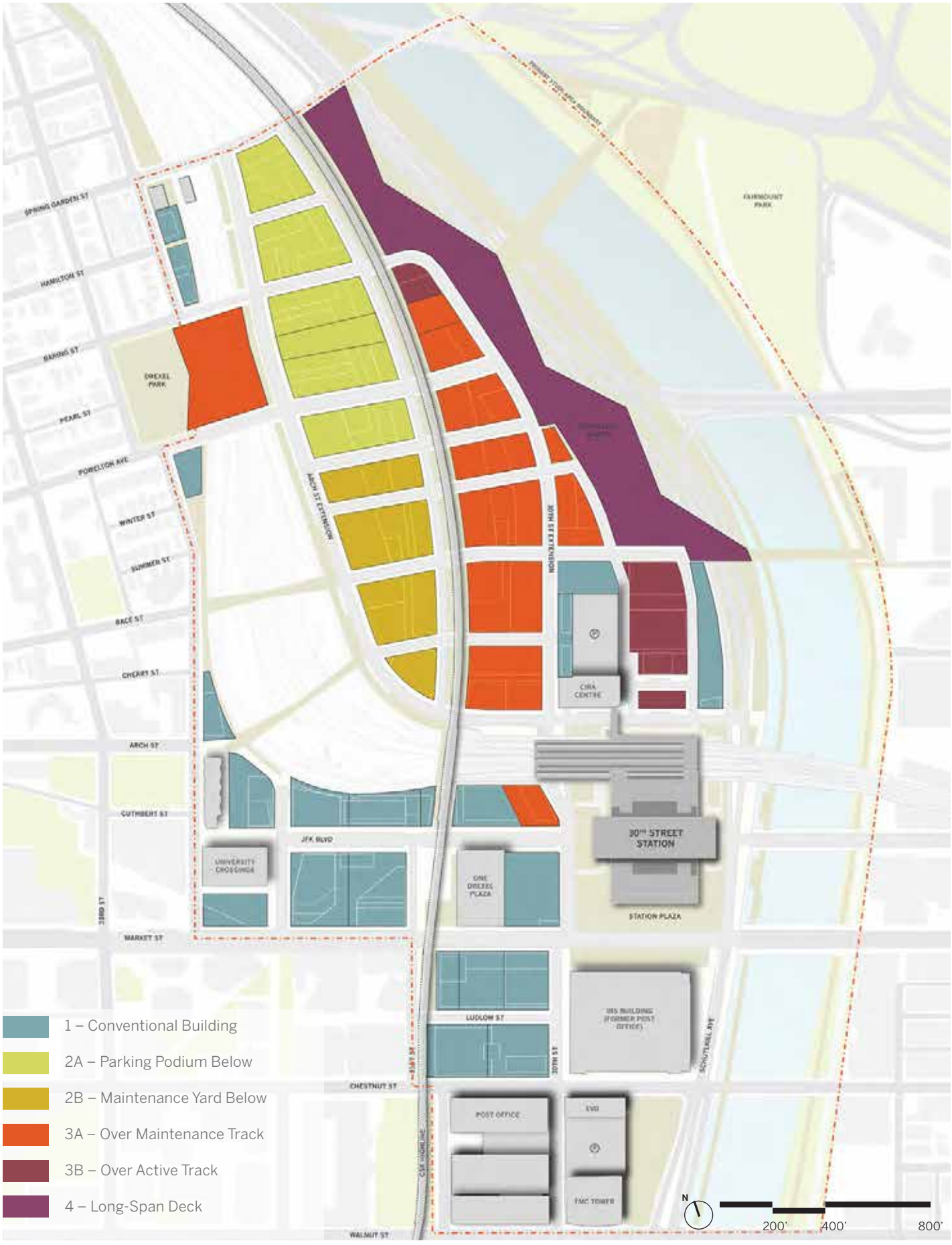
Type 3B: Over Active Track



Type 4: Long-Span Deck



Building Construction Typologies



3.5.3 Land Use and Building Program

There are myriad ways to prescribe land use and density, lay out buildings, and program the District. As an illustration, this section represents one approach that achieves the overall goals set forth in the Plan.

In this scenario, high density offices and hotels are situated at the southeastern edge of the rail yard, within close proximity of the station and adjacent to the successful Cira Centre. For the central parcels, the Plan envisions an anchor tenant made up of one or two major companies or institutions to spur the development of a mixed-use community. Northern parcels are predominately residential, within close proximity of Drexel Park and the Schuylkill River Trail. Schuylkill Yards – which is both station-accessible and situated on land – would achieve the highest density and most robust mix of commercial, institutional, and residential uses. An assumption of this mix was made for the purposes of this report, but the actual break down of use and square footage will ultimately be determined by Drexel and Brandywine.

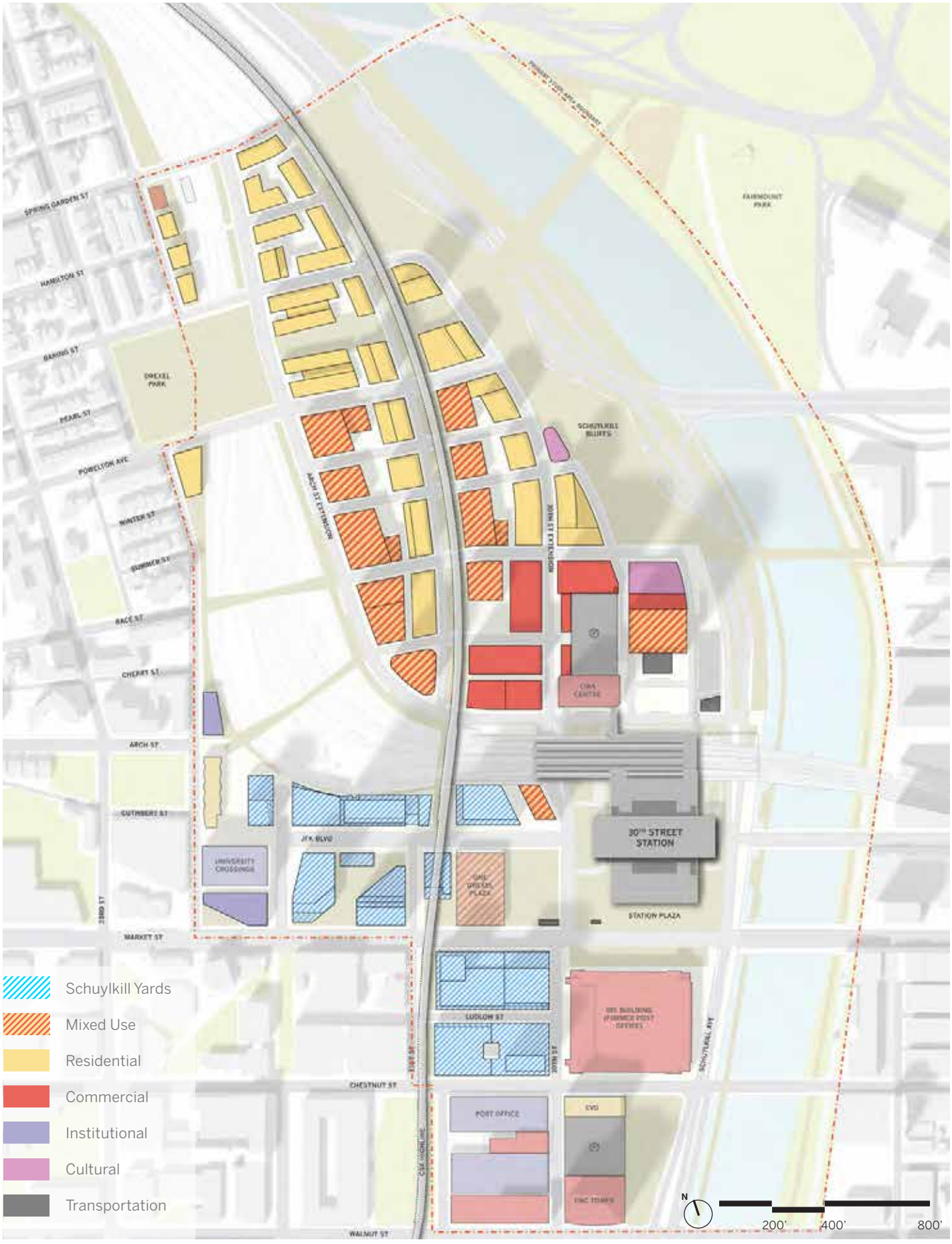
The actual configuration of building pads must remain flexible but be based on careful coordination with the constraints of the yards below. Tracks will dictate, to some degree, where building cores and primary structural elements can be located.

Summary of Proposed New Development

Location	Cultural	Hotel	Anchor	Office	Residential	Retail	Transportation	Total (sf)
At-Grade		230,000	890,000	4,050,000	2,360,000	330,000		7,860,000
Rail Yard	20,000	830,000	1,180,000	2,140,000	5,800,000	220,000	110,000	10,300,000
Total (sf)	20,000	1,060,000	2,070,000	6,190,000	8,160,000	550,000	110,000	18,160,000

Indicative Building Program

Indicative Building Program



3.5.4 District Neighborhoods

Station-Anchored Commercial Neighborhood

The area north of Arch Street as well as the Amtrak-owned site at 30th Street and JFK Boulevard represent the greatest potential for high-density, commercial mixed-use development above the rail yards. This neighborhood represents a major opportunity for Amtrak to develop its air rights in a premier location with direct intermodal connectivity. Amenities, open space, and retail offerings can be shared between station and neighborhood, with early investments catalyzing longer-term rail yard development.

As development energy flows from Center City westward, this neighborhood is positioned to become a true transit-oriented development hub with a prominent location over the Northeast Corridor, high visibility from Center City, and direct connections across the Schuylkill River via a planned Race Street Bridge. Landmark buildings here would define the evolving character of the entire District – a symbol of University City's transformation – just as Cira Centre has done since 2005.

New Development, Transportation Functions, and Public Space North of Arch Street

South Yard Mixed-Use Neighborhood

The southern half of the rail yard, south of Powelton Avenue, is within a comfortable walking distance of the station and in close proximity to Schuylkill Yards and University City. Here, the District Plan proposes a vibrant mixed-use community that is transit-oriented and pedestrian friendly.

The Plan envisions an anchor tenant for this community that would bring activity, drive up land value, and establish a brand for the District. Because of the individual needs of the tenant, the framework for this area is flexible and future ready: certain parcels could be combined and service roads could be eliminated or become private drives, as needed. The area will, however, be functionally mixed, with potential for office, residential, hotel, retail, and amenities supplementing the anchor user.

New open spaces will enhance the livability of the community. A pedestrian bridge at Race Street will be an important link between this community and Center City. Other pedestrian bridges over Powelton Yard will bring foot traffic from Schuylkill Yards, envisioned as a similar development model as this community.

Extension of Arch Street into the Yards: an Active Urban Boulevard with Retail, Landscape, and Transit

3.5.4 District Neighborhoods

North Yard Residential Neighborhood

The development area north of Powelton Yard is envisioned to be largely dominated by residential uses, with supporting retail and amenities. This area will be much more intertwined with the urban neighborhoods west of the rail yards, creating shared space that benefits both new and existing communities. Generous open spaces including an expansion of Drexel Park, a connection to the Art Museum via a new pedestrian bridge, and a great view of the Philadelphia skyline all add up to a unique and desirable place to live. Connections to the new West Bank Trail and boardwalk will provide residents and visitors access to the river. This could also become a convenient place to live for those working in the District or commuting frequently to and from 30th Street Station.

A robust bicycle network and pedestrian friendly streetscape define the road network of the area. An at-grade transit line along Arch Street, the main commercial corridor, will have a stop in the community to connect to 30th Street Station to the south and the potential to connect to the Philadelphia Zoo to the north. The community has convenient vehicular access via Spring Garden Street and the Schuylkill Expressway.

View of the District from the West, Falling in Density at Neighborhood Edges

East Yard Cultural Amenities

The neighborhood east of 30th Street within the rail yards is largely occupied by the Schuylkill Bluffs overlook park, which caps over the Northeast Corridor tracks below and provides a major recreational amenity for the District. There is, however, an opportunity for significant cultural programming within and adjacent to the park, serving both new development within the yards and existing neighborhoods.

The Plan suggests a cultural pavilion on 30th Street between Summer and Winter Streets, which could serve as a destination for art, music, education, or events. Outside this pavilion, a series of rotating art installations and sculpture could add interest to the park space. With new pedestrian bridges proposed at its north and south edges at Pearl and Race Streets, this area will become the western leg of a circuit that connects Logan Square, the Parkway, and the Philadelphia Museum of Art – and then extends south to 30th Street Station.

View of the District from the East, with New Bridges Completing a Cultural Circuit

3.5.5 Massing and Height

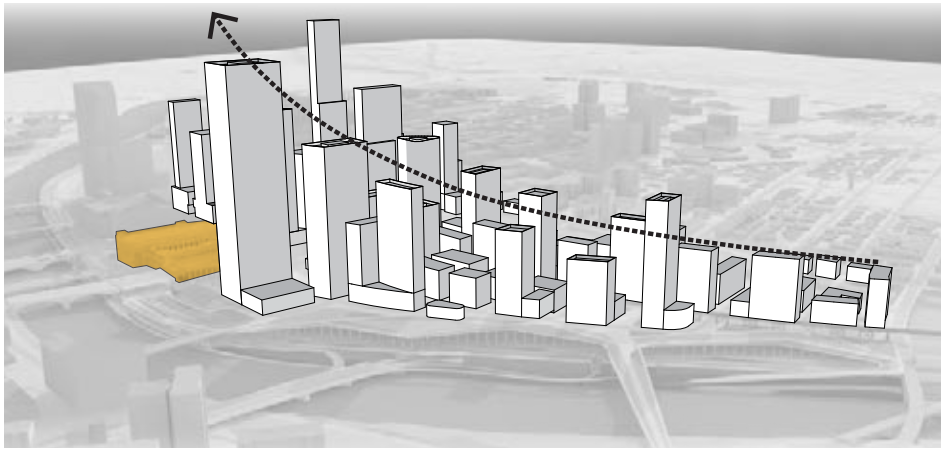
The 30th Street Station District has transformed in recent years with prominent towers like Cira Centre, FMC Tower, Evo, and buildings at Penn's Medical Center, along with significant mid-rise development at both Penn and Drexel. Center City, on the other hand, has continued to reach westward, with both commercial buildings – like Comcast Center and its new companion tower – and residential towers following the success of the Murano and others. The Schuylkill River is fast becoming more of a center of urban activity between these nodes, rather than the historic divide between east and west.

The District massing represents one approach that achieves the overall goals set forth in the Plan and builds on these prior successes. It proposes significant new towers closest to the station and the Schuylkill River to further establish the University City skyline as a western counterpart to the peak of Center City. It sees 30th Street Station as a landmark and civic object, anchoring new development in the same way City Hall has done historically and in recent years.

Indicative Building Massing and Height

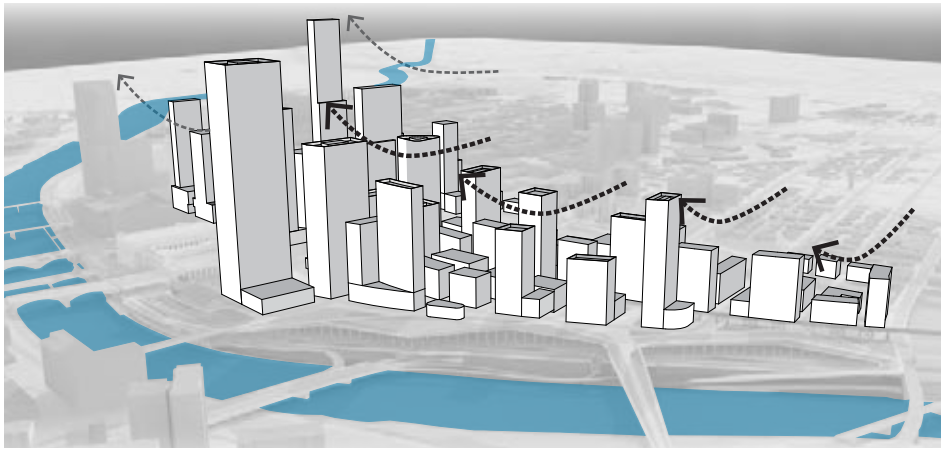
Increase in Height Towards Station

Proposed buildings rise in height from north to south, with the tallest towers clustered around the station.



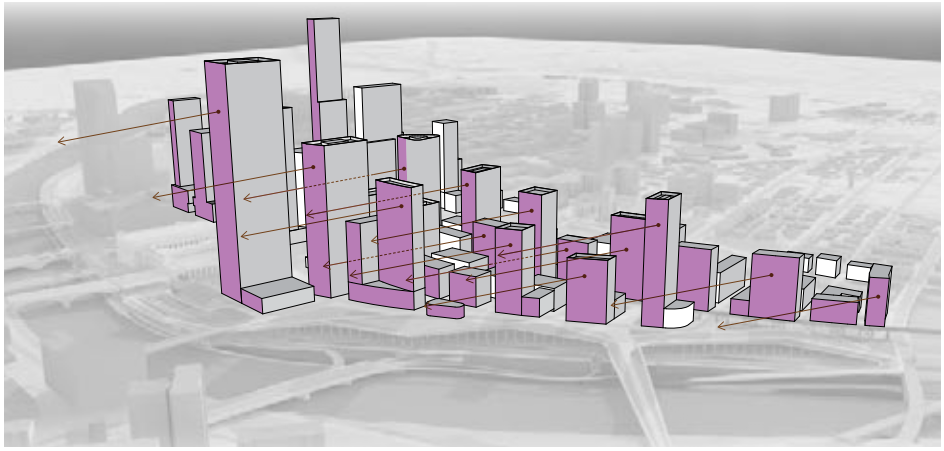
A Height Gradient from Center City to Powelton Village

Buildings increase in height from west to east, with the tallest towers overlooking the river – creating a University City counterpart to the towers on the east side of the Schuylkill. Neighborhood edges are respected with a more contextual scale.



Towers Staggered to Maximize Views to Center City, the River, and the Art Museum

Instead of a sheer wall at the river's edge, the Plan proposes staggering towers to bring view corridors farther back into the rail yards and existing neighborhoods. The off-axis grid enables tower views east towards Center City and north towards the Art Museum and Fairmount Park.



3.5.6 Alternative Development Options: Powelton Yard

Why Is Powelton Yard Open?

The Plan aspires to a fully covered yard that hides the use below – to the extent possible – and creates full connectivity between the rail yards, Powelton Village, and Drexel's Schuylkill Yards. This aspiration has proven physically and financially challenging, however. For now, the open cut revealing active tracks and maintenance facilities at Powelton Yard remains in the Plan for four fundamental reasons, which together make decking over the yard a difficult proposition.

1. The **length of clear span** required to bridge the closely spaced tracks in the yard (sometimes up to 300') presents a significant cost burden.
2. Required **vertical clearance for decking** (40') creates significant physical barriers at the yard and, more importantly, prevents clear connectivity between this area, existing neighborhoods, and future development in the Maintenance of Way Yard.
3. The above stems from SEPTA's **necessary replacement of the overhead catenary system (OCS)** serving the yard, a project that should not be delayed in order to coordinate with rail yard development taking place at an unpredictable time in the future. Given this imminent project, relaxing the clearance requirements – except at limited areas like bridges – is not possible.
4. A landscape covering the yard, on the other hand, would face significant financial challenges and, ultimately, **lacks a clear use and user** demanding this much park space (up to 17 acres).

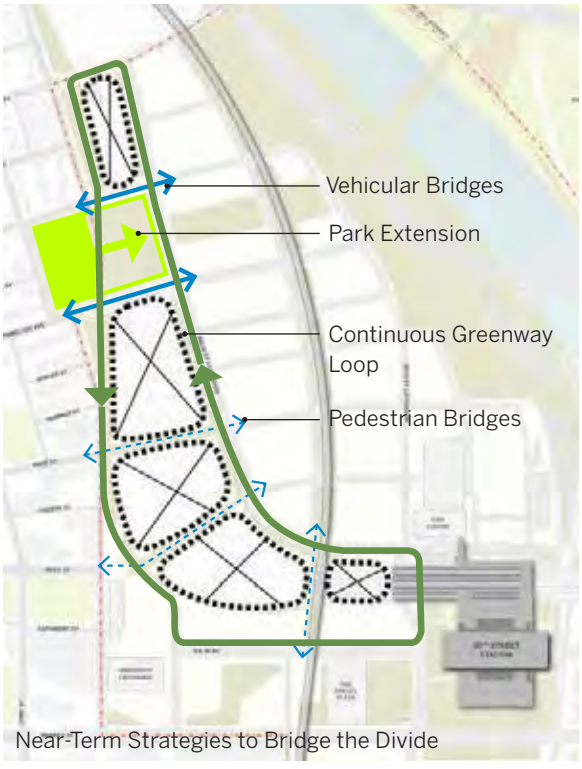
Holes in the Development

Embracing the Open Yard

The Plan recognizes that an open rail yard exerts downward pressure on land value, especially for the prospect of residential development adjacent to the yard. Every possible intervention must be explored to limit the visual and auditory impacts of this infrastructure.

The view looking down into the yards can become interesting and even dramatic features of this new neighborhood. At a minimum, the Plan strives to **overcome them as physical barriers** with new connections and **screen them from view** with other interventions. Other proposed improvements include:

- Clean up the yards
- Plant additional landscape wherever possible
- Create a continuous, connected greenway loop around the edge of the yards as a screen at ground level
- Connect as many vehicular bridges as possible, given geometric constraints
- Connect as many pedestrian bridges as possible at remaining streets, given financial constraints
- Encourage new, creative ideas for covering the gap



Near-Term Strategies to Bridge the Divide

Development Beyond the Timeframe of the Plan

At some point in the future – likely beyond the timeframe of this Plan – some of the factors challenging development within Powelton Yard may change:

- Value creation around Powelton Yard – at Schuylkill Yards and the remaining yards – creates a more compelling economic rationale for development
- Replacement or upgrade of SEPTA's OCS allows for design in tandem with overbuild, reducing clearance requirements

An illustrative version of this development, shown at right, prioritizes development on the thin strip of open land in the center of the Powelton Yard, which would allow for buildings on terra firma. These would have an address on an upper level roadway system connecting from JFK north to Powelton Avenue along an extension of what would become 31½ Street. It also envisions a row of buildings along the western edge of Arch Street, helping to create a more complete urban frontage. In total, this scenario could add an additional 2-3 million square feet of development to the District and would help facilitate direct connections between Drexel and the rail yards.

This Plan still includes some gaps in the deck where clear spans are the greatest, but these smaller gaps could become features, providing glimpses into the rail operations below while limiting the nuisance they create for buildings above.

1. Extension of "31½ Street" over the yards
2. Stair connections up at Cherry, Race, and Summer Streets
3. Landscape berm at 32nd Street edge
4. Central green
5. Western development on terra firma
6. Eastern development straddling SEPTA tracks

3.5.7 Alternative Development Options: Incorporating an Amtrak Heavy Maintenance Facility

A new, state-of-the-art Heavy Maintenance Rail Facility is a critical piece of infrastructure required to support future Amtrak Northeast Corridor service, including the maintenance of new rolling stock for *Acela* service. Philadelphia is one of several candidate sites being evaluated at this time, and the Plan has, therefore, evaluated alternative rail yard development options that incorporate the heavy maintenance rail facility.

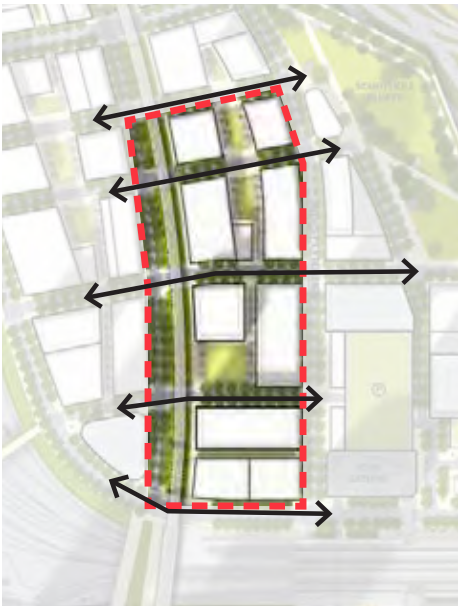
The proposed facility is 120'-150' wide and 770' long – a large footprint that is very different from the existing yard facilities. Assuming a height of 50'-60' based on similar buildings that include gantry cranes for lifting train cars, the facility would be much taller than the proposed deck over the Penn Coach Yard, which is at roughly 30' above top of rail. Due to this significant difference in height, the facility cannot be integrated under the deck and would create a disconnect in the rail yard development fabric.

Two design alternatives were explored around the Heavy Maintenance Facility to understand its impact on development potential. The first scenario, **Alternative 1**, assumes that the facility is built as a stand-alone building. Given the size and height of the building, it is difficult to co-locate mixed-use development adjacent to the facility. The parcel is essentially left open to the yard, and cuts off east-west roadway connectivity at Race Street, isolating areas to the west and east as independent developments.

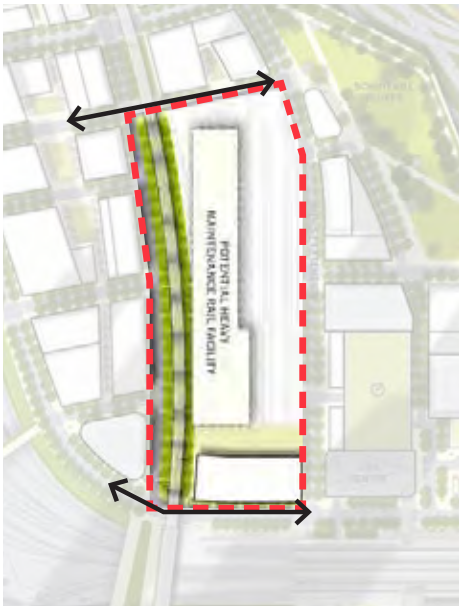
A second scenario, **Alternative 2**, tries to alleviate this challenge by exploring the option of development on top of the Heavy Maintenance Facility. The 120'-150' width of the facility is an ideal dimension for a standard office floor plate. The remaining parcel could accommodate another row of office buildings, and the complex could be interconnected by central atrium. This type of office complex within the yards could be built-to-suit to accommodate Amtrak offices as an anchor tenant. Alternative 2 establishes a continuous street frontage and brings additional development to the yards. However, it continues to cut off east-west roadway connectivity at Race Street.

Based on this evaluation, the Plan recommends Alternative 2 should the Heavy Maintenance Facility locate in Philadelphia, to meet one of the major planning principles of preserving and protecting railroad operations.

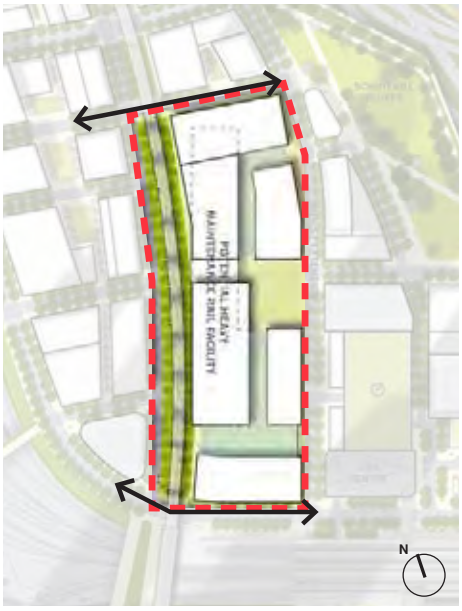
Base Scenario:
Full Grid (as shown in the District Plan)
Development GFA: 2,200,000 sf

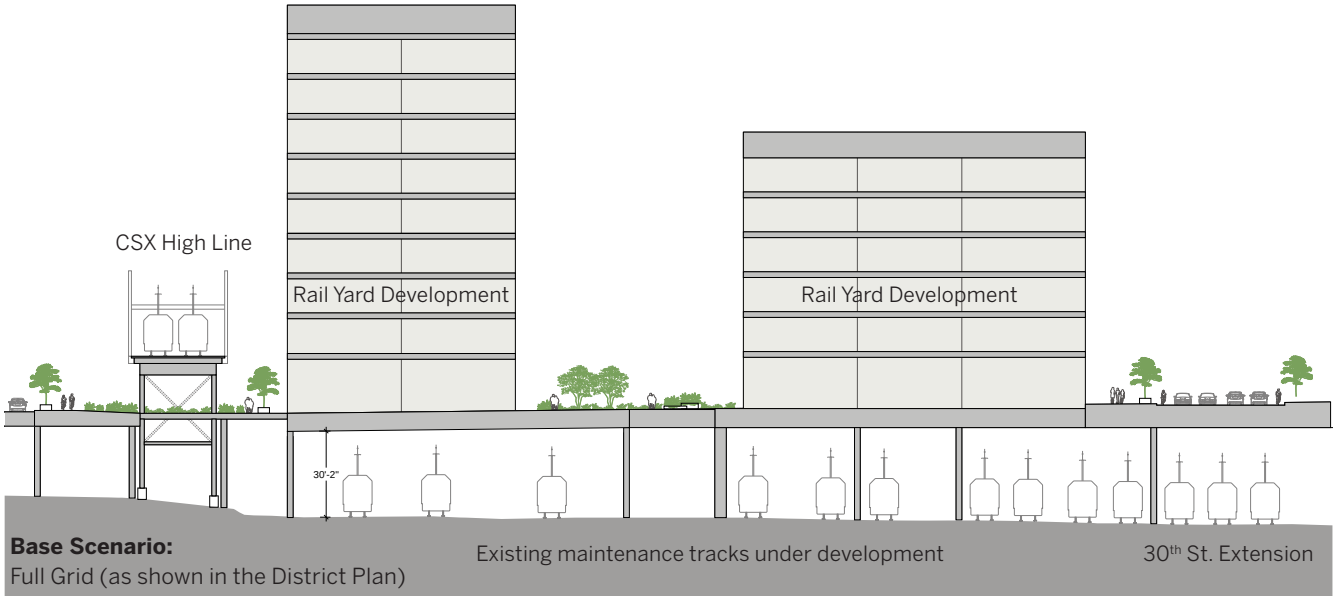


Alternative 1:
Heavy Maintenance Facility
Development GFA: 400,000 sf

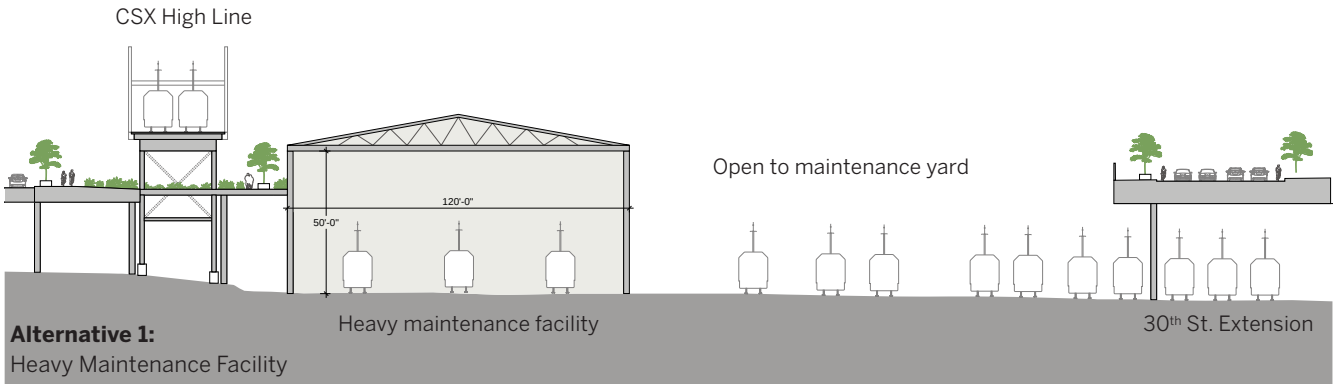


Alternative 2:
Overbuild Over Heavy Maintenance Facility
Development GFA: 1,500,000 sf

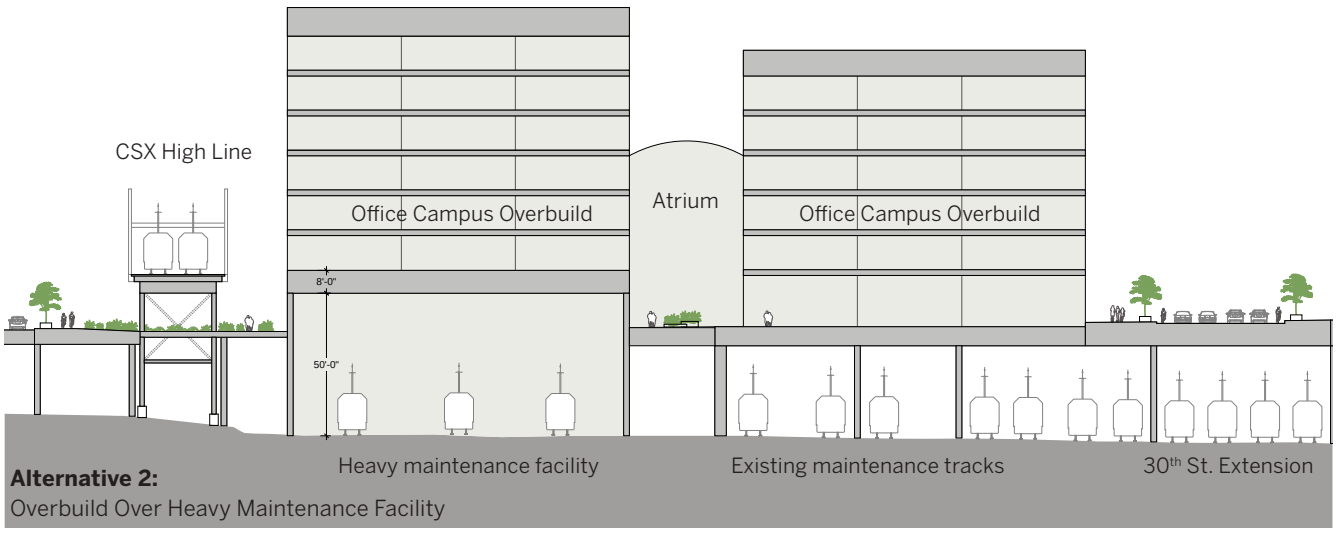




Base Scenario:
Full Grid (as shown in the District Plan)



Alternative 1:
Heavy Maintenance Facility



Alternative 2:
Overbuild Over Heavy Maintenance Facility

3.6 LIVABILITY AND SUSTAINABILITY

3.6.1 Sustainability Goals

Urban districts around the country are striving to be healthy and sustainable places. The District Plan builds on the initiatives already in place at the City and stakeholder level and incorporates forward-thinking strategies for issues related to the natural and built environment, economic conditions, social and cultural considerations, and well-being. Through the planning, design, and development moves presented, the Plan creates a built environment that offers residents, workers, and visitors a high quality of life and creates a sense of "there there" in the District.

Sustainability is a significant aspect of this Plan. Direct adjacency to 30th Street Station means that the District can be truly transit-oriented, with minimal dependence on travel by car. The rail yard development layers upland habitat and functional – air purifying, urban heat island reducing, water filtering – green infrastructure above active rail yards. At-grade redevelopment places density where it is most appropriate and adds trees and plantings within what is now a largely barren part of the city. The Schuylkill River offers connection and freedom of movement for both people and animals.

City of Philadelphia Goals

The City of Philadelphia's *Greenworks* began in 2009 and set a comprehensive plan for the city's sustainability goals. This forward-looking plan covers five main categories:

- Reduce vulnerability to rising energy prices
- Reduce the city's environmental footprint
- Deliver more equitable access to healthy neighborhoods
- Create a competitive advantage from sustainability
- Engage Philadelphians to build a sustainable future together

Following *Greenworks*, the City published its updated climate change adaptation plan, *Growing Stronger: Toward a Climate-Ready Philadelphia*. This coordinated approach to addressing the risks of climate change aims to both limit future impacts and prepare the city and its people for change.

Amtrak Goals

Amtrak's *Sustainability Policy* exists to "incorporate environmental, economic, and social sustainability considerations into Amtrak business decision-making processes and operations; assist the company in achieving the goals outlined in the Amtrak Strategic Plan; provide the foundation for the Amtrak Sustainability Program; and provide guidelines for recognizing sustainability achievements and initiatives of Amtrak departments." The organization already has a number of programs and initiatives in place under Environmental, Economic and Social sustainability, and many are valuable to consider in the District Plan, including the following:

Environmental Sustainability
- Pollution prevention
- Waste minimization
- Energy and water conservation
- Remediation
- Participation in transportation sustainability and climate initiatives

Economic Sustainability
- Designing and maintaining buildings to incorporate sustainability practices
- Utilizing procurement processes that will maximize the environmental, economic, and social value of products and services purchased
- Climate change adaptation

Social Sustainability
- Reuse of remediated land for transit-oriented development
- Accessibility and mobility improvements at stations
- Diversity initiatives and promoting interconnectivity between rail and other travel modes

District Goals

In addition to the policies already in place, the District Plan also addresses a number of factors that contribute to a place's livability and sustainability, including:

- Minimizing Energy Use and Greenhouse Gas (GHG) Emissions
- Improving Air Quality
- Mitigating Noise Pollution
- Increasing Urban Natural Habitats
- Maximizing Access to Parks and Nature
- Designing for Active Lifestyles
- Using Sustainable Materials
- Managing and Treating Stormwater
- Protecting from Flooding and Sea Level Rise

This chapter qualitatively describes key considerations for District sustainability. Development within the District should employ relevant sustainability rating systems and standards, including LEED and SITES, as well as Amtrak's existing Sustainability Policy. In addition to state and federal environmental regulations, development within the District will be subject to Philadelphia stormwater regulations.

Plan for Philadelphia Center City Bicycle Lanes

Source: http://www.centercityphila.org/about/lane_closures.php

Energy Efficient Green Technology

Source: https://greenworksphila.wordpress.com/

Free Plant Distribution to Residents

Source: http://phsblog.org/

3.6.2 Strategies to Make a Healthy Place

Minimizing Energy Use and GHG Emissions

There are two primary consumers of energy in the District: transportation functions and buildings. Inefficient design and operation of both elements can lead to higher energy consumption and larger amounts of (GHG) emissions. In the future, decisions about materials, design, and construction practices will have significant energy and GHG implications.

Residents of transit-oriented developments significantly reduce their carbon footprint due to the availability of transit alternatives. By reducing vehicle miles traveled (VMT) in favor of readily available transit alternatives, GHG emissions from TOD residents have shown as much as a 40% reduction compared to suburban residents.

Increasing Transportation Alternatives
As a transit-oriented development, the District offers great potential to minimize travel by car and instead promote walking, cycling, and the use of transit. This in turn will significantly reduce the District's energy demands relative to typical development in the Philadelphia region. Much of the District falls within a five minute walk of 30th Street Station, the city's most significant intermodal transit hub. In addition, rail yard development will be served by a transit line connecting directly to the station. For these reasons, the Plan projects that just 20% of District trips will occur by car. To successfully achieve this mode split and the energy benefit it offers, the Plan must ensure pedestrian connectivity and an inviting public realm.

Designing Green Buildings
While buildings in the District are not yet designed, a number of sustainable design goals can be established and features considered. Following the principles embedded within LEED, the Living Building Challenge, and Passivehaus, District buildings can be designed for high sustainability performance in a number of areas

Energy conservation strategies, renewable energy sources, optimized building facades, natural daylighting, rainwater capture and reuse for building cooling and greywater systems and selection of sustainable and recycled construction materials can be implemented. Roofs can be utilized for photovoltaic cells (to generate energy) and green roofs (to reduce energy demand). Where possible, district energy systems will be considered.

Creating High-Performance Landscapes
Landscape strategies for reducing GHG emissions include mitigating the urban heat island effect and designing low-maintenance landscapes that require minimal mowing and fertilizer inputs. An extensive tree canopy will shade buildings and paved surfaces, providing outdoor comfort in summer and reducing cooling loads in buildings. Paved surfaces, where possible, should also be light colored to reduce absorbed heat and reduce the urban heat island effect. Although some lawn will be desirable to support park program, it should be avoided as a default or filler landscape. Park areas that do not require a walkable surface should be planted with meadow grasses, ground cover, woodland, or other lower-maintenance plantings.

Improving Air Quality

As with GHG emissions, the relatively small proportion of trips taken by car within the District will minimize emissions of other air pollutants from trips generated by new development. However, because the District lies at the heart of a major highway interchange, it is subject to significant existing air quality impacts. In addition, although the majority of Amtrak and SEPTA trains are electric, work trains within the yards and freight trains on the CSX High Line will continue to contribute diesel emissions.

Emissions from highway and rail use present both a technical ventilation issue and a potential health impact for residents, workers, and visitors. Because rail yard development will not entirely cover the infrastructure below, some passive ventilation will occur, particularly at Powelton Yards and I-76. In addition, perforations will be included within the more extensive decks over the Maintenance of Way Yard and Penn Coach Yard. In some parts of these decks, mechanical ventilation will be required.

Landscape strategies can also mitigate air pollution. Berms, sound walls, and vegetated screens, for example along the eastern edge of Schuylkill Bluffs, can mechanically block particulates and other pollutants. Similarly, a sound wall or other barrier below the existing deck between Arch Street and Walnut Street will be essential to the success of the lower level tidal park. Vegetation within the District – particularly canopy trees, both within parks and on streets – will reduce pollutant concentrations.

Mitigating Noise Pollution

Adjacent infrastructure – particularly I-76 – will also generate noise impacts within the District. Selected building materials can help mitigate these noise impacts. While vegetation is not effective at blocking sound, other landscaping mass barriers such as berms or sound walls should be required, as they can significantly improve experience within areas close to I-76. Some form of sound barrier will be required along the lower level tidal park, especially adjacent to the existing station deck, and at the edges of Schuylkill Bluffs overlooking I-76. Although the rail yards will likely generate less noise, sound barriers may be desirable along the edge of Powelton Yards. This function could be integrated with the vegetated visual screen proposed for the Arch Street Extension.

Restoring Natural Habitats

The 30th Street Station District Plan is a major urban redevelopment, and it presents an opportunity to create and restore both riparian and upland habitat on the west side of the Schuylkill River. Although modest in size, this habitat's connection to Fairmount Park and the river corridor means that it will be of high value. Bridges designed for pedestrian and bicycle circulation may also function as wildlife bridges, helping smaller species overcome the highway and rail barriers present on the site.

The lower level tidal park begins with the narrow stretch of existing river bank between Dr. Martin Luther King, Jr. Drive and I-676. Existing vegetation here should be surveyed, preserved, and managed for habitat function. Further south, the tidal park follows a boardwalk above the river, as I-76 comes closer to the river bank. Additional planting may be inserted in interstices within the I-76/I-676 interchange. Although highly fragmented and of limited habitat value, these plantings will provide air quality and shading benefit. Vertical sound barriers along the highway at the existing station deck can incorporate planting that provides habitat for birds and insects.

The majority of the District's park space will be upland, including Schuylkill Bluffs and the extended Drexel Park. Although parts of these parks will be intensively programmed for human use, they offer opportunities to create contiguous habitat. Appropriate habitat types include upland forest and meadow. Foot paths will allow visitors to access and enjoy these habitats and provide opportunities for observation and education. The pedestrian bridges at Pearl Street and Race Street will connect these upland habitats to the east bank of the Schuylkill River; the ramp at Spring Garden Street will connect them to the riparian habitat along the west bank of the river.

Improving Access to Parks and Nature

The District's extensive open space network will provide access to parks from all developed areas within a half mile walk or less. These parks will provide a range of restorative experiences, from active recreation to immersion in rich, diverse plantings. Parks within the District also connect to the 27-mile Schuylkill River Trail and the roughly 2,700 acres of Fairmount Park and the Wissahickon valley. Closer at hand, street trees, courtyards, and green roofs will provide access to nearby nature nearby for residents and workers within the District.

Existing District Tree Canopy

Proposed District Tree Canopy

3.6.2 Strategies to Make a Healthy Place

Promoting Access to Healthy Food

Retail development within the District will likely include both grocery and restaurant options. These can serve not only new development, but the adjacent neighborhoods of Mantua, Powelton Village, and greater University City. The District's pedestrian and transit connectivity will be essential in linking existing neighborhoods to these and other new resources. In addition, large civic spaces within the District such as Station Plaza can host farmers markets. Opportunities for community-sponsored agriculture, gardening, and small-scale agriculture include the District's larger parks and green roofs.

Using Sustainable Materials

Sustainability of materials should be considered for the District's infrastructure and building construction. Non-toxic, responsibly-sourced, locally-available, and low-embedded-carbon materials should be preferred for use, whether or not the District adopts a green building certification system such as LEED or the Living Building Challenge.

Managing and Treating Stormwater

A green infrastructure approach to stormwater management involves absorbing and treating stormwater runoff in the landscape, mimicking natural hydrological cycles and minimizing the demands on conventional piped infrastructure and wastewater treatment plants. Existing development and infrastructure within the District is highly impervious, with very limited vegetation. This means that a robust green infrastructure network built in tandem with new development could significantly reduce the District's current impact on stormwater runoff, combined sewer overflows, and the Schuylkill River.

According to current City of Philadelphia stormwater regulations, developments larger than one acre must manage typical rainfall events – 1.5 inches or less, which accounts for roughly 90 percent of storms – on site. Although rail yard development, which accounts for much of the projected construction within the District, is a highly artificial condition, the soil volume required to support vegetation can store a significant amount of water, which can then be used by plants. In areas of terra firma development, runoff can infiltrate further into the soil, recharging groundwater. Using the 1.5 inch capture criteria across the 175-acre District could reduce stormwater discharge by as much as 170 million gallons of stormwater per year.

Development within the District should, wherever possible, divert stormwater runoff from roofs, streets, sidewalks, and other impervious surfaces to a distributed network of permeable landscapes. These may include rain gardens, swales, constructed wetlands, green roofs, or street planters. In some cases, runoff can be stored in sub-grade tanks and reused for irrigation, as can roof and chiller water from buildings. Major new parks such as Schuylkill Bluffs can include stormwater features that treat runoff from adjacent streets and development. The High Line greenway will play a particularly crucial role, since it forms a valley within the rail yard development.

Schuylkill River Trail

Source: SRDC

Stormwater Remediation: Portland, OR

Source:www.museumofthecity.org/

Protecting from Flooding and Sea Level Rise

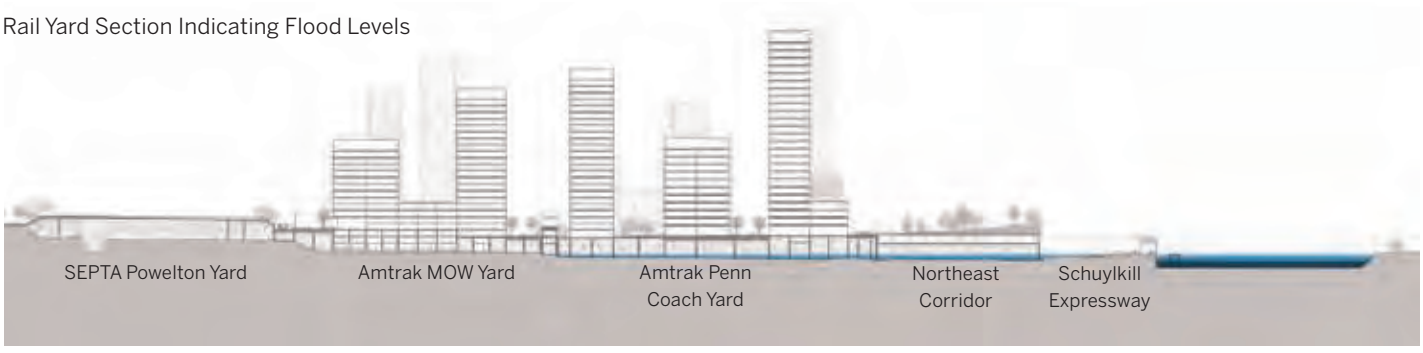
Significant portions of the rail yards lie within the FEMA "100-year" (1.0% annual chance of flooding) and "500-year" (0.2% annual chance of flooding) floodplains. Impacted areas in the District include the Penn Coach Yard and a majority of the Northeast Corridor. A small portion of the MOW Yard falls within the 500-year floodplain, while Powelton Yard lies above both floodplains. The 100-year and 500-year floodplains extend beneath the existing deck at 30th Street Station and the former Post Office, as well as the undecked parcel on Drexel's campus between Chestnut Street and Ludlow Street.

Extent and frequency of flooding are likely to increase in the future. Drivers of this increase include sea level rise, changes in precipitation patterns due to climate change, and land use changes within the watershed. The Intergovernmental Panel on Climate Change (IPCC) projects sea level rise of between 0.6 feet and 1.2 feet within the implementation timeframe of the District Plan. By 2100, projected sea level rise increases to between 1.4 feet and 3.2 feet. This magnitude of change would not permanently inundate the rail yards, but it would increase the extent of the floodplain. In addition, more frequent and intense precipitation and continued urbanization within the watershed could further increase the risk of flooding.

The combined impacts of sea level rise and heavier storm events are unlikely to threaten proposed development, where occupied buildings are raised above the rail yards a minimum of 15 feet above existing floodplain elevations. However, portions of the Northeast Corridor, Penn Coach Yards, MOW Yard, and I-76 will flood unless physical barriers are constructed. Although a resilience strategy for these areas is beyond the scope of this Plan, such a strategy could help reduce the risks associated with flooding. In addition, proposed buildings with elevator cores or parking garages extending below deck level may be subject to flooding. The design of these buildings should be coordinated with rail yard resilience planning. If no physical flood barriers are employed, these structures should be engineered to withstand flooding.

District Flood Risk

Rail Yard Section Indicating Flood Levels



4.0 IMPLEMENTATION ROAD MAP


POLICE

4.0 IMPLEMENTATION ROAD MAP

Strategy to Stimulate and Accelerate District Growth

The District Plan presents a unique opportunity for economic development in Philadelphia and the Northeast Corridor. New infrastructure and real estate will create a new, transit-oriented place to live, work, study, and visit. Few districts around the world offer the attributes available at 30th Street Station – a location adjacent to premier healthcare and education institutions, large assemblages of land, proximity to one of the country's most successful downtowns, and connectivity to Pennsylvania's busiest Northeast Corridor station. Unlocking the value of these attributes requires expansive infrastructure and amenities. Roads, utilities, parks, bridges, and extension of transit services are needed to make much of the District developable. Other districts around the world – including London's King's Cross, New York's Hudson Yards, Washington's Capitol Riverfront, and Denver's Union Station District – provide models for similar transformation from post-industrial to highly-competitive mixed-use development. Each of these have succeeded by leveraging adjacent market forces and leading with investment in catalytic infrastructure and a world-class public realm to attract private investment.

The success of the District Plan rests on building a constituency that extends well beyond the Plan's sponsors, phasing of development, and collaboration to position the District for investment. Funding and investment will need to come from a range of public and private sources, and the value proposition should be clear to these parties. In particular, District development has the potential to bolster national, state, and city competitiveness, providing a rare and significant opportunity to attract and grow innovative businesses.

Phasing will be critical. Phase 1 sets the stage for the remaining six phases by enhancing 30th Street Station's physical condition and accessibility and catalyzing growth through the District's most immediately developable land at Schuylkill Yards. Collaboration and partnerships will be required to ensure adherence to a long-term vision; present a unified team in making the case for outside investment and support; and fund projects through reinvestment in the District.

The potential fiscal benefits from the District Plan are robust and can offset the cost of infrastructure to realize the full vision for the District. The most important of these investments should happen in early phases: enhancing station and transportation services; transforming the public realm, including making Station Plaza one of the great public spaces in Philadelphia; increasing and enhancing retail in the station; successfully developing Schuylkill Yards; and stitching together that neighborhood and Center City with new development in the rail yards. Because of this infrastructure, public realm, and anchor development, rental rate growth will outpace construction cost growth, increasing land value over time.

4.1 DISTRICT PHASING STRATEGY

4.1.1 Building the District: 18 Million Square Feet in Seven Phases

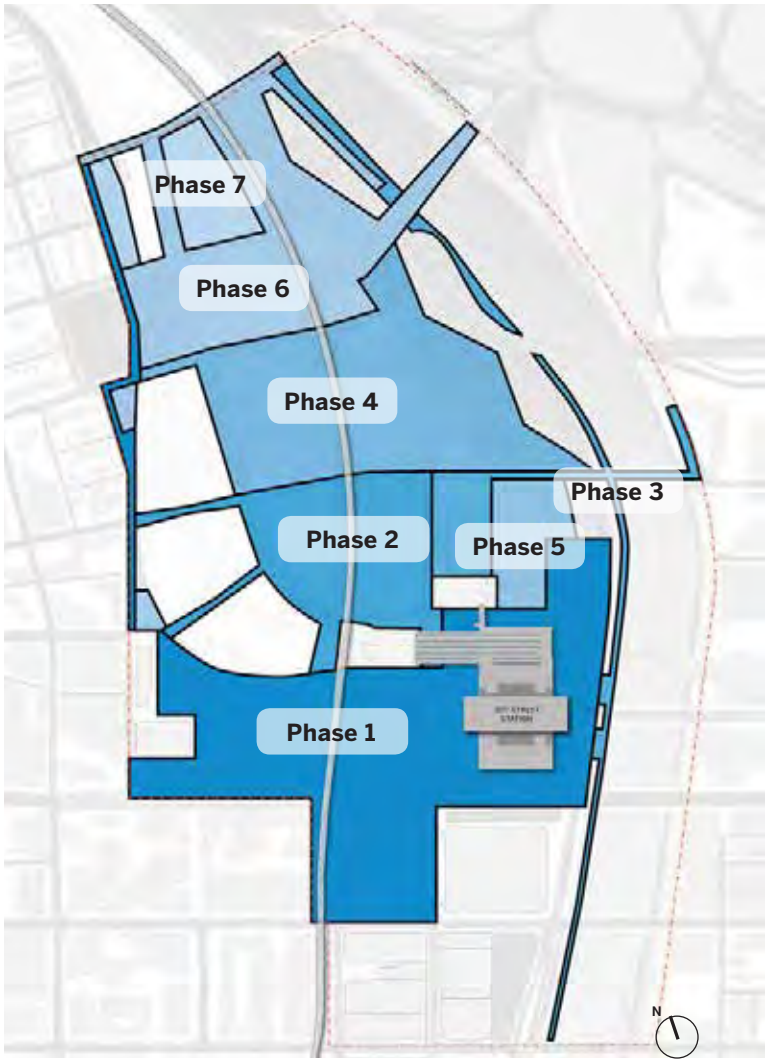
The District Plan calls for approximately 18 million square feet of development implemented in seven overarching phases. This general seven-phase development strategy is the basis for the overall project's economic analysis. Based on a reasonable development pace and market absorption rate, the phases will be spread out over 35 years, from 2016 to 2050.

The proposed phasing strategy reinforces the principle of mixed-use communities by balancing various programs within each phase. The completion of each phase marks the completion of a major project, which in turn defines the character of the communities within the District Plan. At the highest level, the Plan starts at 30th Street Station and Station Plaza, continues with at-grade development anchored by Drexel's Schuylkill Yards, and completes with the rail yard development communities.

30th Street Station and Station Plaza are the catalyst projects to be implemented first. Phasing for these station projects and their relationship to other development will be important in order to deliver "early wins" for the Plan.

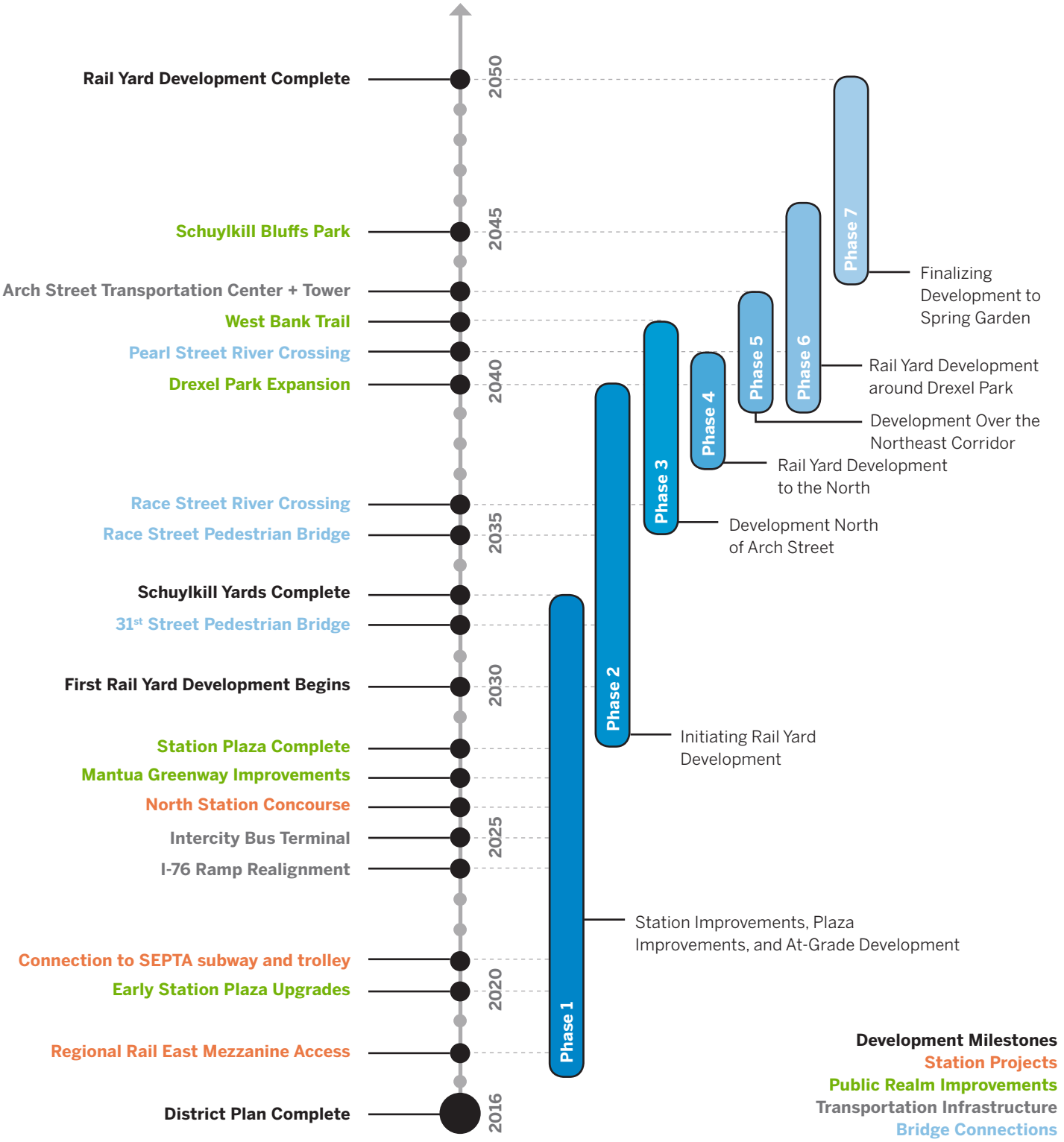
Schuylkill Yards and at-grade development are prime for early realization because of their proximity to the station and relative ease of construction. At-grade development currently has the highest real estate return potential in the District, ripe for immediate construction with minimal infrastructure. Street and public realm improvements will be the major infrastructure components during this development phase.

Development in the rail yards follows all at-grade development. The vision comprises over 10 million square feet of mixed-use development, landscaped parks, and pedestrian bridges over the yards. It includes multiple communities, built above multiple different conditions and at various elevations above grade in order to maintain full rail yard functions below. The complexity of construction and coordination makes the rail yard development the most expensive, and likely only possible if previous at-grade development and significant station and public realm improvements are made.



District Phasing

4.1.2 District Development Timeline



4.1.3 Phase 1: Station Improvements, Plaza Improvements, and At-Grade Development

Early work begins with 30th Street Station improvement projects. Projects within the station include:

- State-of-good-repair restoration
- Renovation of retail in South Concourse
- North Concourse construction
- Mezzanine reconfiguration
- Market-Frankford Line underground concourse
- Below grade retail and skylight

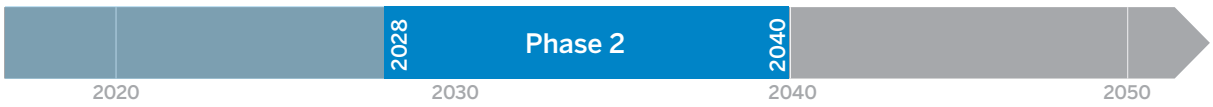
Station Plaza work encompasses the plaza upgrades themselves as well as adjacent streetscape improvements, and will be carried out in coordination with station upgrades.

The intercity bus terminal and I-76 ramp reconfiguration will occur in Phase 1 as well and will require extensive design and environmental review.

Schuylkill Yards development and other associated at-grade development – including the Amtrak parcel at 30th and JFK as a priority project – will occur in tandem with station and Station Plaza improvements. Additional public realm projects critical to supporting the new development include riverfront access, street upgrades including new bicycle lanes, and the realignment of 31st Street.

This first phase work will solidify the Market Street and JFK Boulevard corridors as thriving, mixed-use areas and set the stage for future rail yard development.

4.1.4 Phase 2: Initiating Rail Yard Development

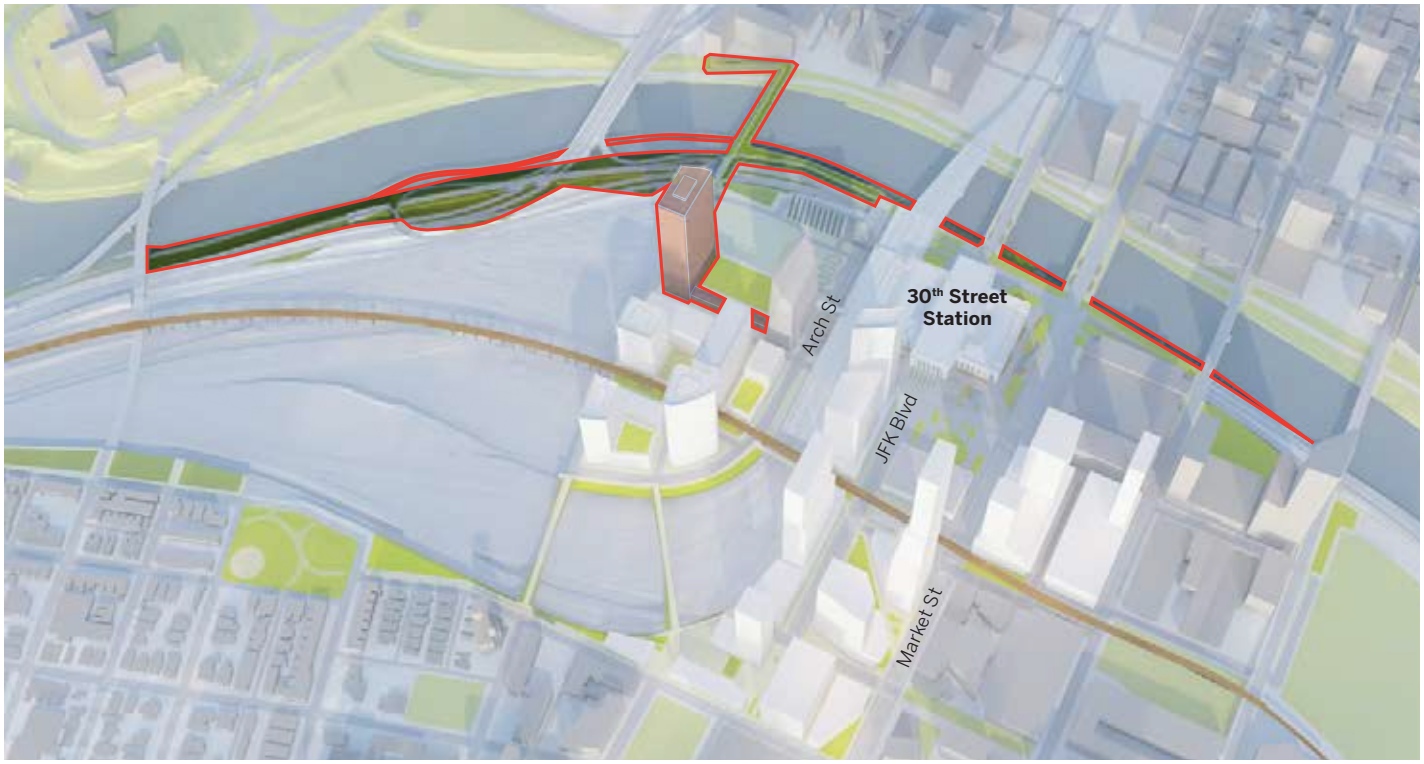


With the success of station upgrades and the at-grade neighborhood, additional development will be needed to expand and support district momentum. Because the southern portion of the Maintenance of Way Yard and the Penn Coach Yard have close proximity to the station and Schuylkill Yards, the area will have the highest land value in the rail yards in early phases. By extending existing roads and building pedestrian bridges, this area could be tethered seamlessly to existing communities.

To boost desirability of rail yard development and land value, an anchor tenant such as an institution, hospital, or major organization would be ideal for this area. The flexibility of a new grid and adjacency to major transit hub would be attractive to such an anchor tenant.

Connections over Powelton Yard and continuation of a greenway under the High Line will be key placemaking projects that improve livability both in this new development and the adjacent neighborhoods. More importantly, they set the stage for future growth of the open space framework within the rail yards.

4.1.5 Phase 3: Expanding Rail Yard Development to the East



By Phase 3, the development of the Arch Street Transportation Center brings additional transit-oriented development to the area north of Arch Street. Work in Phase 1 to reconfigure the Schuylkill Expressway ramps at Arch Street and build an intercity bus terminal – coupled with new development in the rail yards to the west – drives value on the remaining land in this area.

The Arch Street Transportation Center is envisioned to include high-density office and mixed-use program adjacent to Cira Centre, connected to the station and directly back to Center City via a pedestrian bridge at Race Street. This development begins in Phase 3 and is ultimately completed in Phase 5.

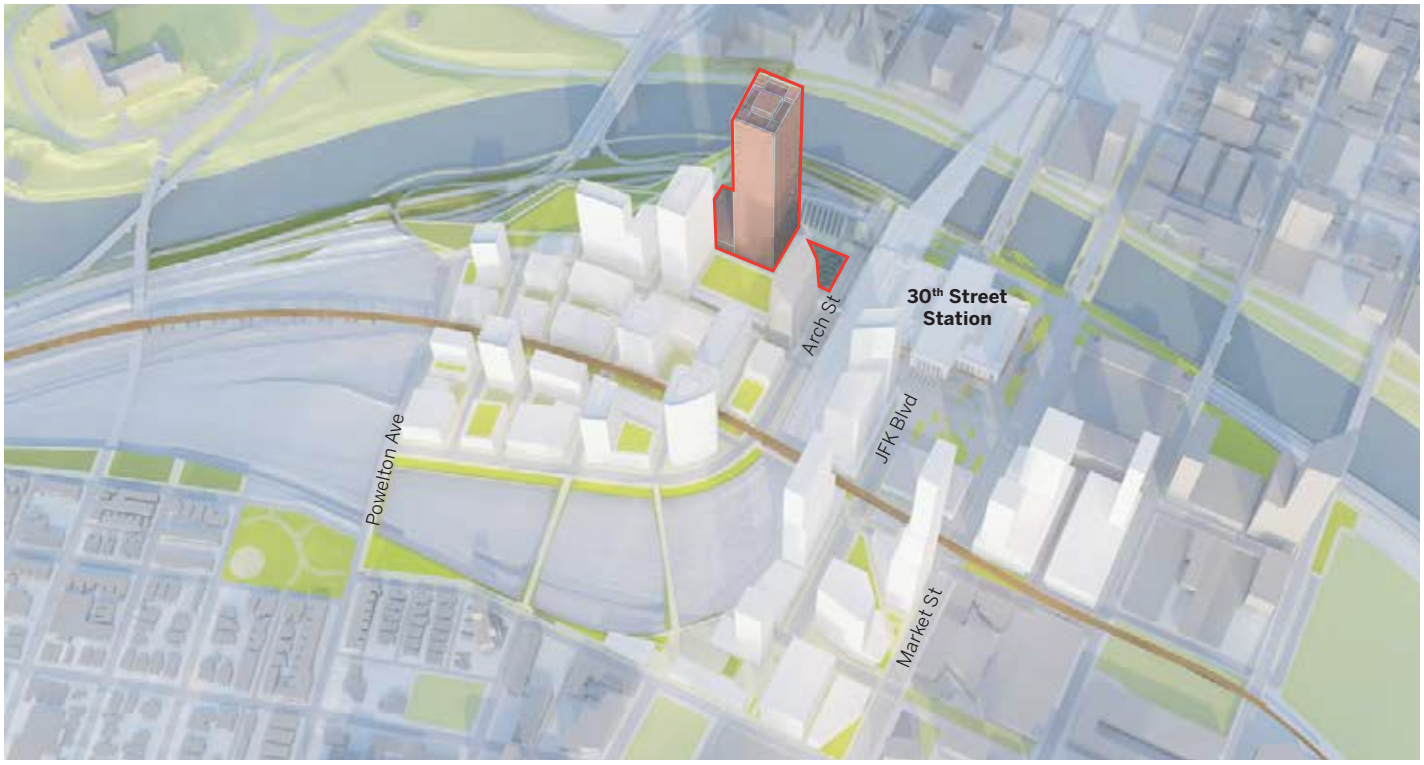
Extension of the riverfront trail and boardwalk in this Phase will also establish a much desired western trail along the river and connect from the station to future development along the waterfront.

4.1.6 Phase 4: Expanding Rail Yard Development to the North

Phase 4

Phase 4 is a continuation of the mixed-use development of previous phases, pushing the neighborhood deeper into the rail yards. An extension of Powelton Avenue will form an important vehicular and pedestrian connection into the yards from Powelton Village. Schuylkill Bluffs – the park capping the Northeast Corridor – will be partially realized in this phase, offering new green space and linkages down to the river.

4.1.7 Phase 5: Delivering a New Transportation Center and Northeast Corridor Tower



Phase 5

A landmark tower at the Arch Street Transportation Center caps further investment in passenger facilities tied back to 30th Street Station. The Far North Concourse – a future transit expansion envisioned to accommodate high-speed rail – is developed in conjunction with this tower, the tallest in the District Plan. The Arch Street Transportation Center neighborhood, a contemporary high-density development tethered to 30th Street Station, will be completed in this phase.

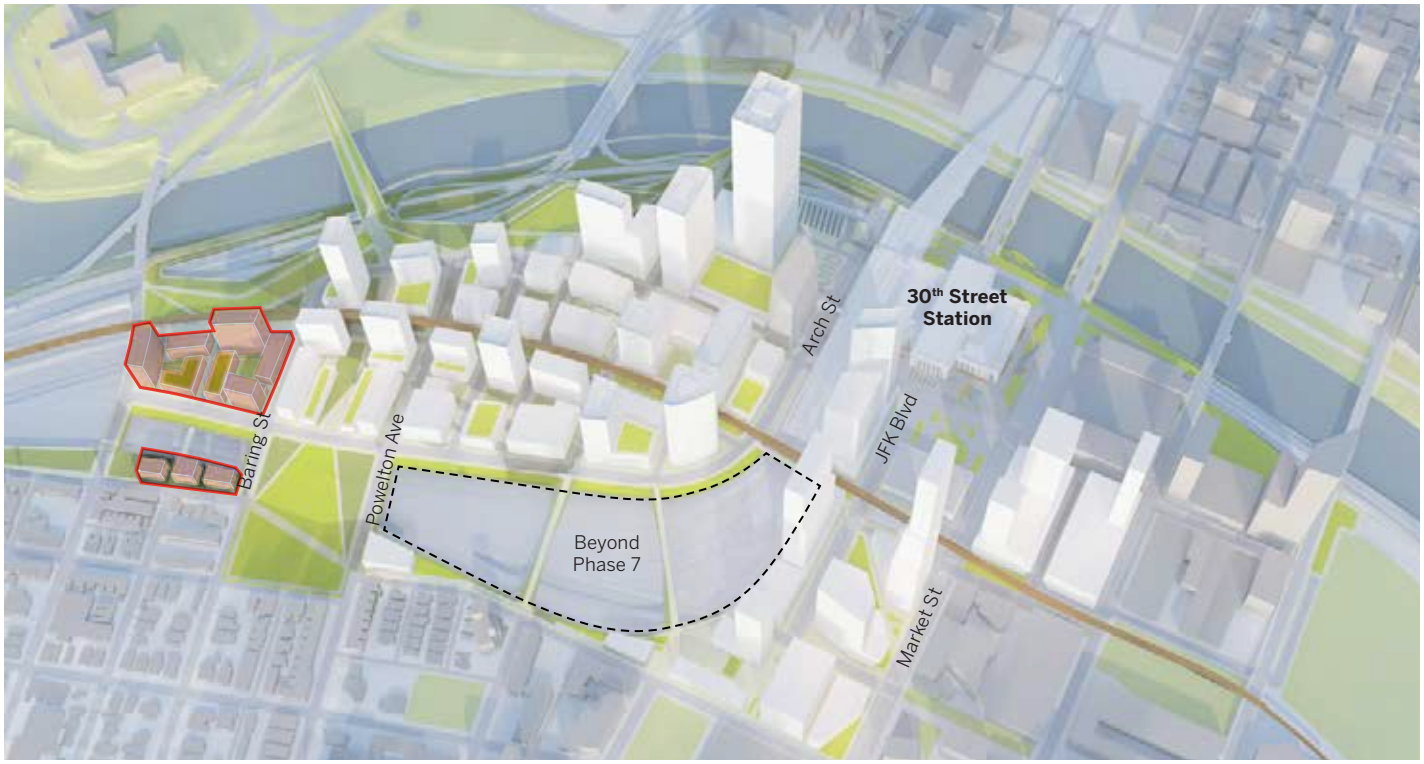
4.1.8 Phase 6: Expanding Rail Yard Development around Drexel Park

As the success of earlier mixed-use development in the yard drives up land value and demand, Phase 6 will focus on building a vibrant residential community.

Phase 6 begins with the expansion of Drexel Park to create an anchor amenity for both the new residential community and existing residents in Powelton Village and Mantua. It will also become a key pedestrian route into the site from the west. A mid-block easement connects the park on the west to the Pearl Street Bridge on the east, which extends over the river. This bridge, a key infrastructure amenity for the rail yard neighborhood, lands on the Schuylkill River banks and provides direct access to the Art Museum and other Parkway institutions.

An at-grade transit line along the Arch Street Extension will provide transportation support for this northern rail yard neighborhood.

4.1.9 Phase 7: Expanding Rail Yard Development to Spring Garden

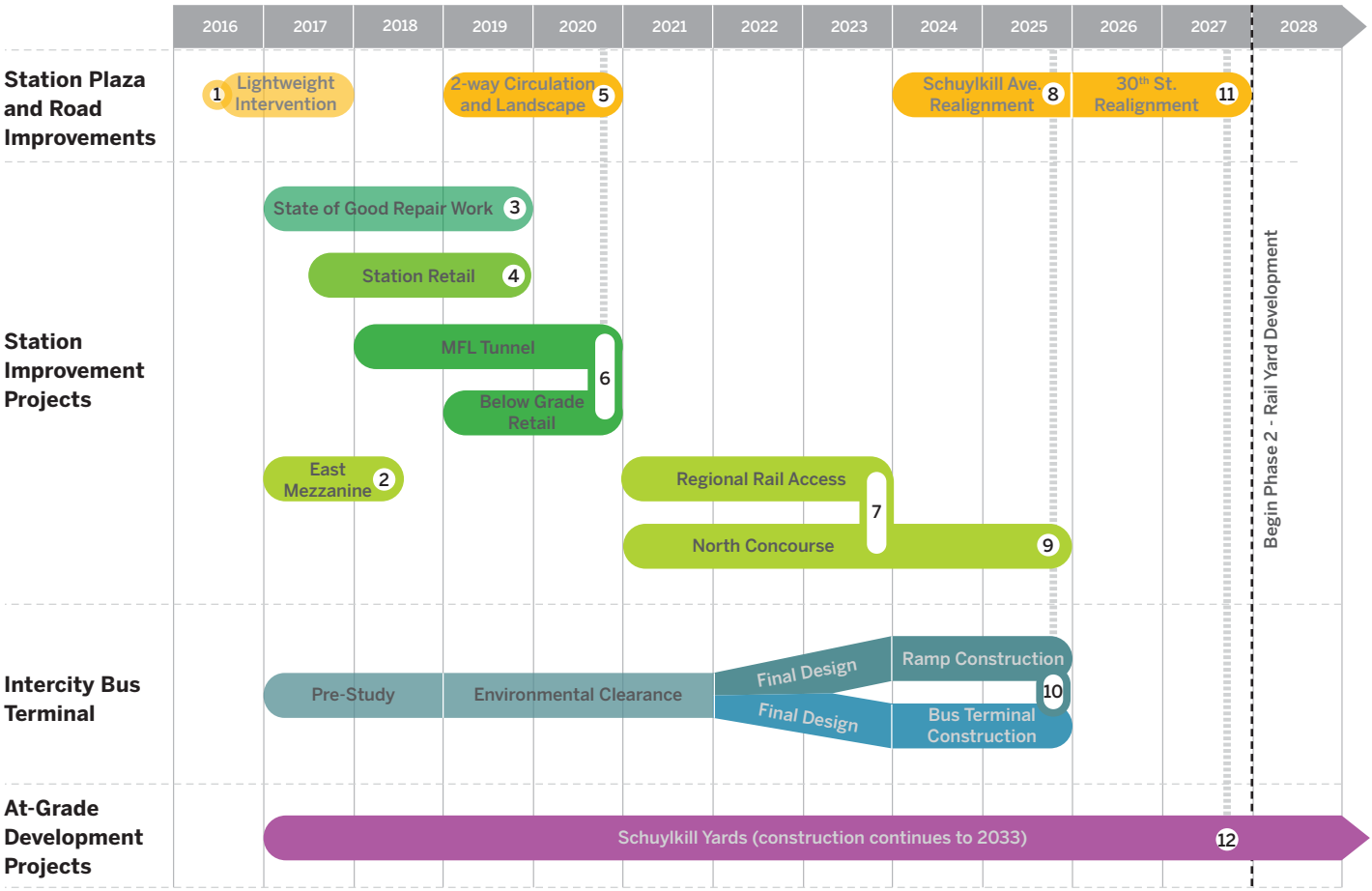


Filling in the final pieces, Phase 7 continues the residential development north in the rail yards. This marks the completion of the rail yard development, bringing a seamless extension of new city fabric from 30th Street Station all the way north to Spring Garden Street.

Potential far future development above the Powelton Yard is not included in this phasing strategy but would follow Phase 7. Design of the edges and connections over Powelton Yard does not preclude future development in this area.

4.2 EARLY PROJECTS

4.2.1 Near-Term Project Phasing



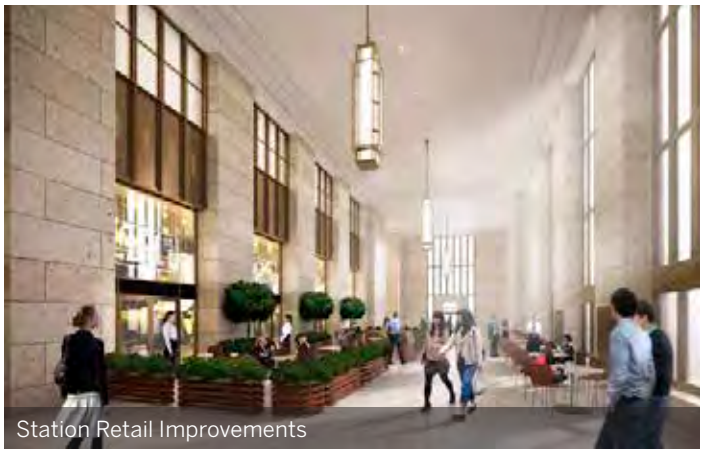
Early win projects are achievable within the next 10 years These projects are critical in setting the foundation for long-term District success. Early catalysts are identified based on potential impact, alignment of support from stakeholders, and immediate needs.

1. Begin Step 1 of Station Plaza work – lightweight interventions to reconfigure curbside function and create new, temporary public space.
2. Complete code compliance work and reopen the East Mezzanine for access to Regional Rail.
3. Complete interior and HVAC State of Good Repair Work.
4. Complete reconfiguration and re-tenanting of existing station retail at the South Concourse.
5. Complete Step 2 of Station Plaza work, aligned with the completion of MFL tunnel and new retail below plaza.
6. Complete construction of new retail and public space below Station Plaza and open MFL-to-station tunnel link.
7. Open stairs and elevators connecting the North Concourse with Regional Rail.
8. Complete Step 3 of Station Plaza work, aligned with North Concourse opening, Arch Street facade renovation, and opening of the new Intercity Bus Terminal.
9. Complete the New North Concourse with access to Amtrak platform and new retail offerings.
10. Open the new Intercity Bus Terminal and complete I-76 ramp reconfigurations.
11. Complete Station Plaza Step 4 – realignment of northern 30th Street in preparation for rail yard development.
12. Built-out Amtrak's parcel at 30th Street and JFK Boulevard

4.2.2 Near-Term Projects: Station Improvements

The near-term projects emerging from the District Plan will focus on improvement and expansion of passenger facilities at 30th Street Station as well as public realm upgrades at Station Plaza.

These projects are listed here indicatively, along with preliminary cost estimates. All costs will continue to be refined as design of each project is advanced beyond the Master Plan stage. Projects fall within the purview of multiple different Principals and stakeholders, whose collaboration will be necessary to fund and ultimately realize the vision.


Station Retail Improvements


New North Concourse


Connection to Market-Frankford Subway and Trolley

State of Good Repair (2017-2020)	
Interior Work	$63.0M
HVAC Work	$9.0M
Total	$72.0M
Exterior Facade Restoration (funded separately)	*$64.0M*

Market-Frankford Subway Connection (2017-2021)	
Tunnel Below Lower 30th Street	$4.0M
Underground Retail Concourse	$22.5M
Total	*$26.5M*

New Passenger Facilities (2017-2026)	
Regional Rail East Mezzanine	$5.0M
New North Concourse	$31.5M
Total	*$36.5M*

Station Retail (2017-2019)	
Retail Repositioning and Upgrades	$6.5M
Total	*$6.5M*

4.2.3 Near-Term Projects: Station Plaza, Road Improvements, and Intercity Bus Terminal

Step 1: Lightweight Intervention (2016-2017)	
Repurpose Little Market Street	$1.5M
Total	*$1.5M*

Step 2: Circulation and Landscape Upgrades (2018-2020)	
East Portico Improvement	$1.0M
Station Plaza Landscape and Public Realm	$73.5M
Taxi Queue Reduction and Upgrade	$0.5M
Market Street Improvements	$1.5M
Total	*$76.5M*

Step 3: Plaza Edges and Riverfront (2024-2025)	
Arch Street Improvements	$1.0M
30th Street Improvements	$1.0M
Schuylkill Avenue Re-alignment	$5.0M
Riverfront Promenade	$34.0M
River Boardwalk	$5.0M
Total	*$46.0M*

Step 4: 30th Street Re-alignment (2026-2027)	
Re-alignment North of JFK Boulevard	$22.0M
Total	*$22.0M*

Intercity Bus Terminal (2018-2026)	
I-76 EB Ramp Reconfiguration	$20.0M
I-76 WB Ramp Reconfiguration	$12.0M
Intercity Bus Terminal	$17.0M
Service Road and Landscape	$13.5M
Service Road Down to Track	$1.0M
Total	*$63.5M*


Station Plaza


Access to the River


Intercity Bus Terminal at Arch Street

4.3 STATION PLAZA PHASING STRATEGY

This section outlines four steps for incremental phasing of Station Plaza, tied to interior improvements and infrastructure phasing. Although full realization of Station Plaza relies on long-term infrastructure investments, approximately 75 percent of the Plan can be realized in Phase 1 of District implementation – an early win for the Plan and a catalyst for at-grade and rail yard development.

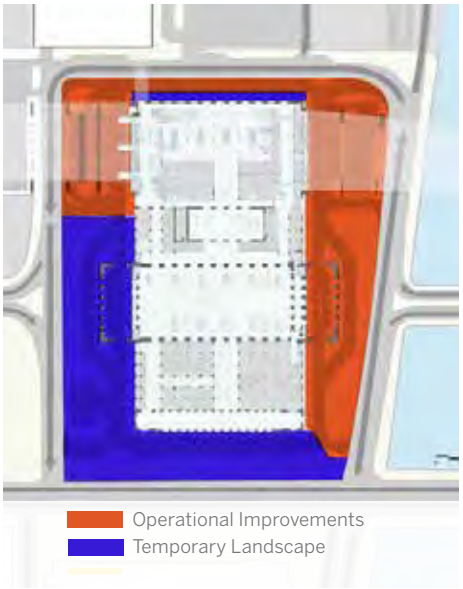
Test It! The Porch is a successful example of an iterative, data-driven approach to civic space and placemaking. Now in its second incarnation, the Porch not only offers lessons for Station Plaza programming, but also suggests a strategy for informed, adaptive implementation of circulation improvements.

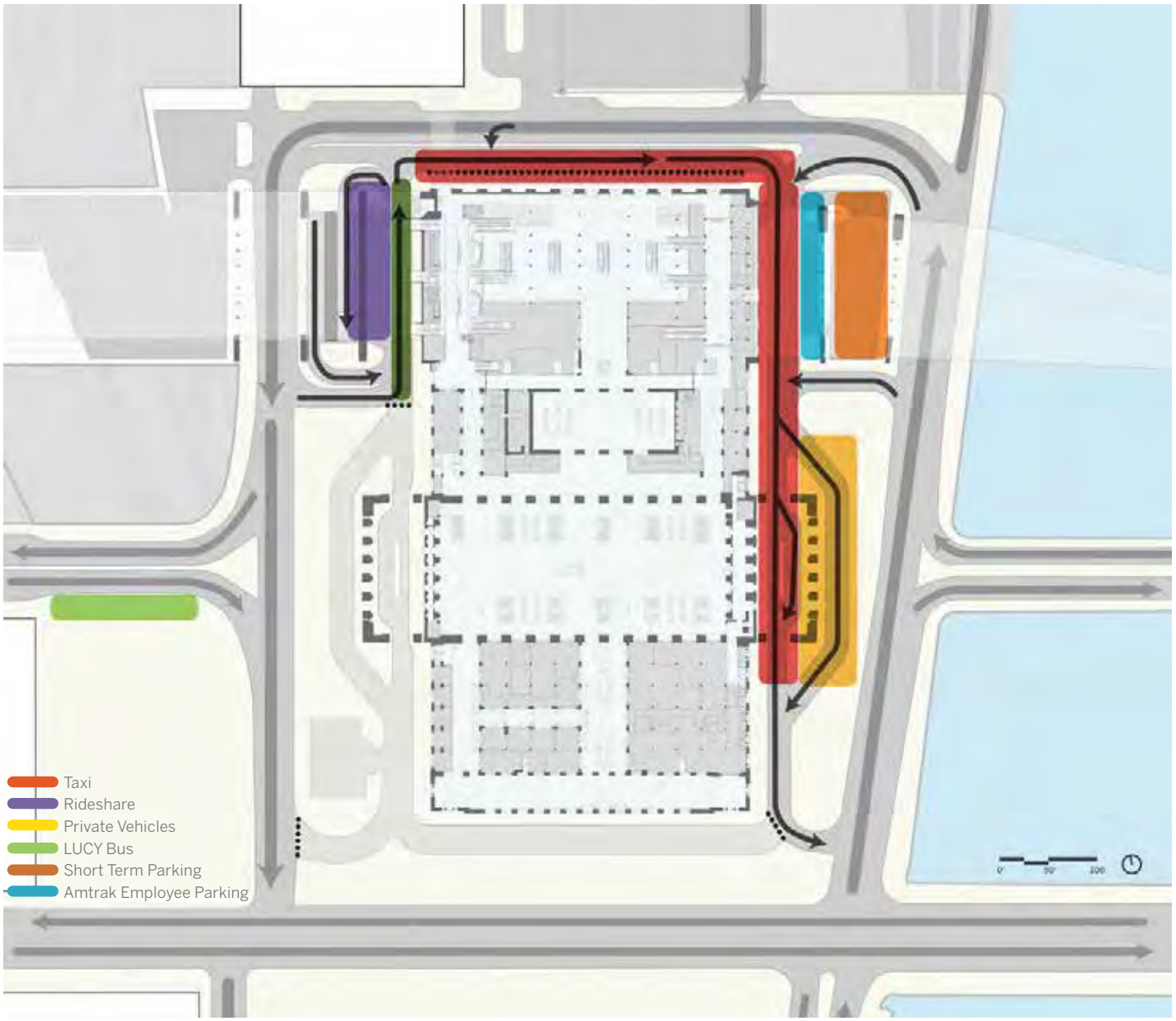
4.3.1 Existing Condition

Traffic today circulates around the station block in a one-way loop. All four sides of Station Plaza are used for vehicular circulation and surface parking, with taxi operations concentrated on the east and north sides, private car and rideshare pickup/dropoff at both porticoes, the Amtrak Thruway bus at the West Portico, Amtrak employee and police parking beneath the SEPTA viaduct, and short-term parking distributed throughout.

4.3.2 Step I

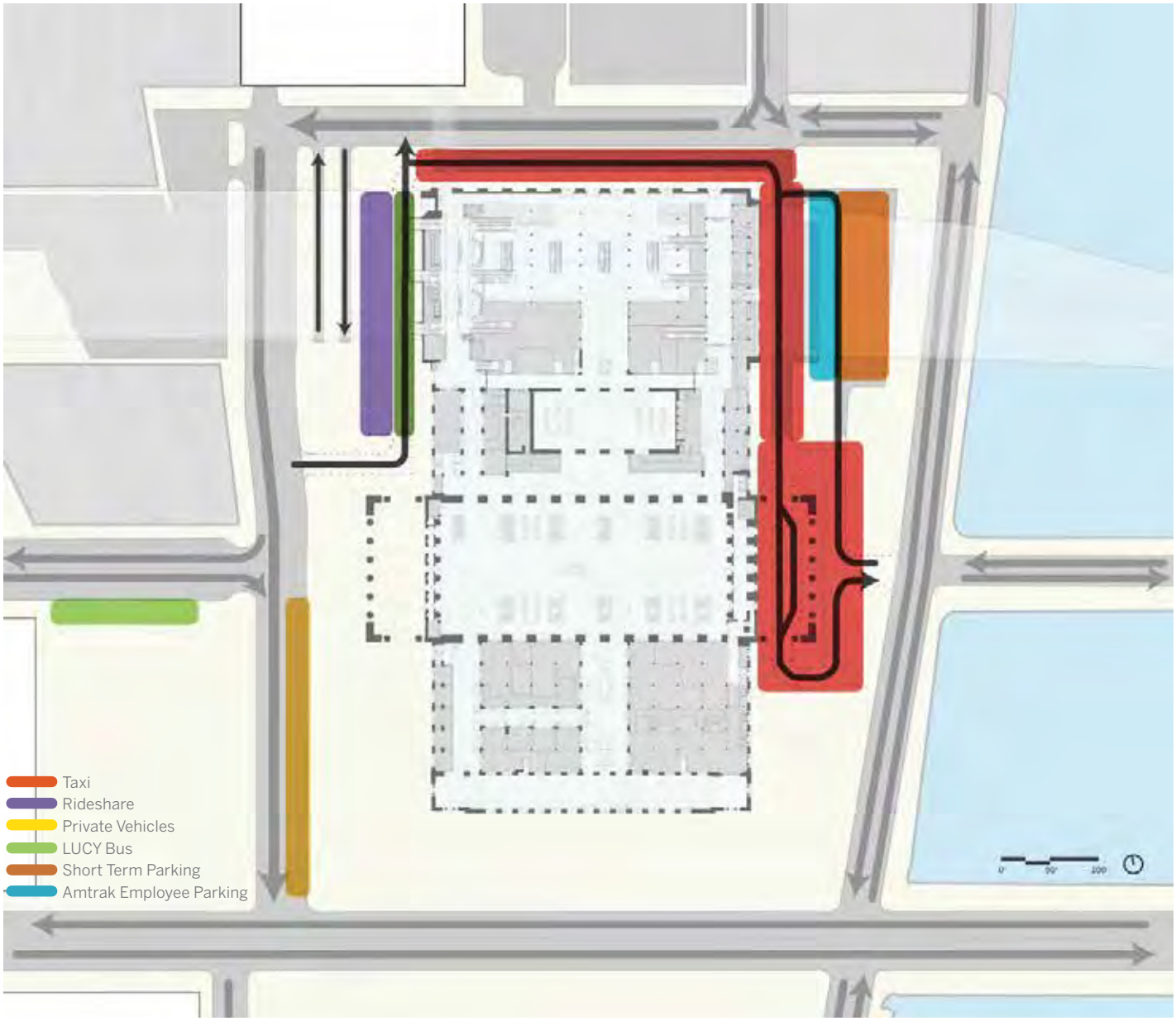
Inspired by the success of the Porch, Step I proposes lightweight interventions to reconfigure curbside function and create new, temporary public space. This is an opportunity to test and optimize several new circulation patterns in advance of any infrastructure investment. Specifically, the Plan calls for the closure of Little Market Street and the West Portico, shifting rideshare and bus service to the West SEPTA viaduct, and reducing the taxi queue at Arch Street by one lane. This reconfiguration of vehicular functions will simultaneously open pedestrian desire lines from the southwest corner and from JFK on the east. The pop-up nature of the Porch can be extended northward to the south side of the station, integrating more closely with station retail. The West Plaza can be programmed and enlivened with temporary movable furnishings and plantings.





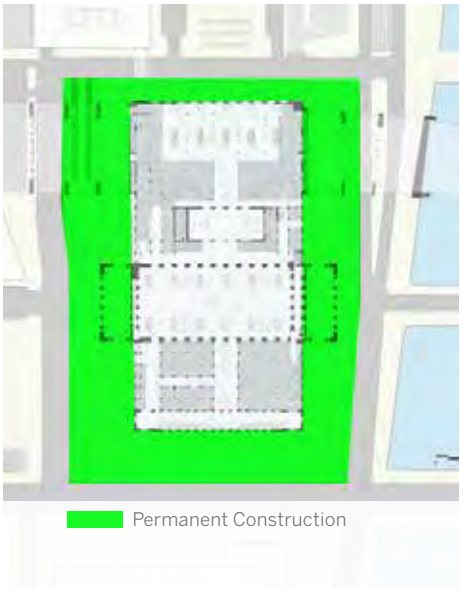
4.3.3 Step II

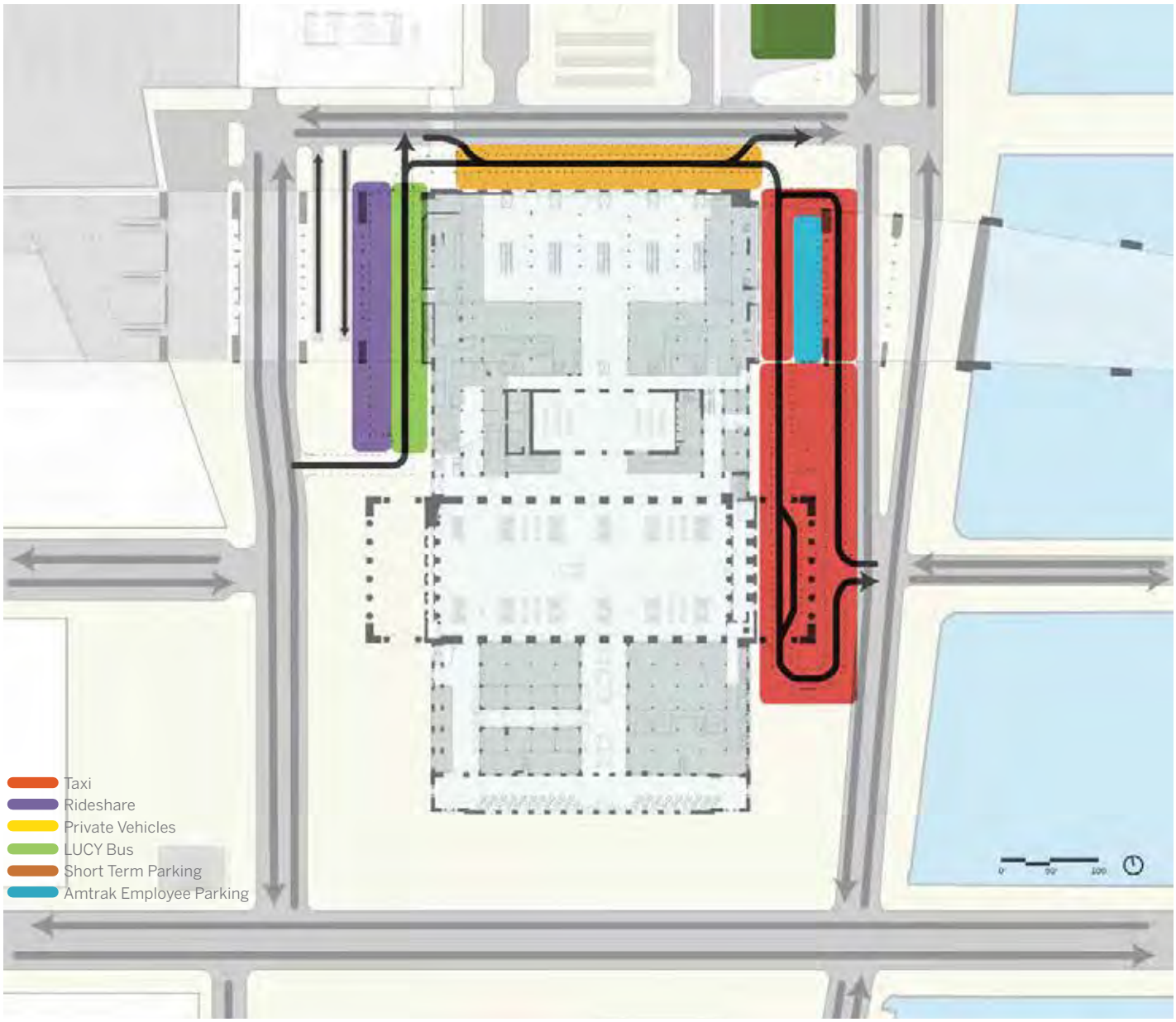
Step II requires investments in signalization at JFK on the east of the station and at the I-76 on- and off-ramps. These infrastructure improvements allow for two-way circulation on Schuylkill Avenue and enhanced taxi movement to and from the station. The eastern curb on 30th Street is to be built in its final location, to accommodate two-way circulation on 30th Street in a future phase. In the interim, the extra lane can be used as a lay-by for private vehicles to pick up and drop off. These improvements to infrastructure, along with the improvements to the interior and facade of the station and the underground retail connection to the SEPTA Market-Frankford and Trolley Lines, will enable the final construction of nearly 75 percent of the plaza. The areas to be completed include the West Plaza, the expansion of the Porch at the south, and the East Portico. The space will include new paving, curbless design, permanent plantings, and furnishings.



4.3.4 Step III

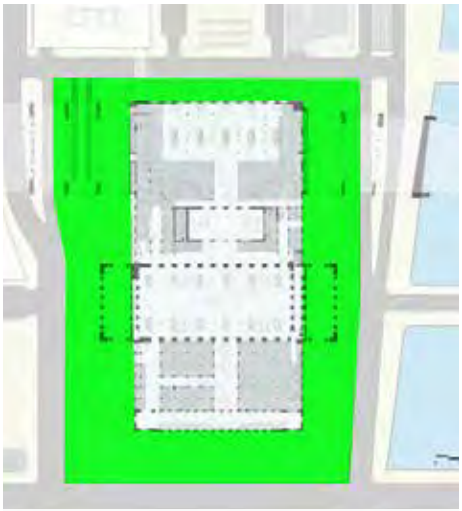
Step III occurs in tandem with the North Concourse renovation, Schuylkill Expressway ramp reconstruction, and the subsequent rebuilding of Schuylkill Avenue. This work will ensure the two way road network is complete around the station. It will allow for a pick-up/drop-off space on Arch Street – serving the North Concourse drop-off – and completes both plaza and streetscape improvements at the northeast corner of the block.





4.3.5 Step IV

Step IV is the realignment of 30th Street between JFK Boulevard and Arch Street to enable the street's extension into rail yard development. It makes no major changes to Station Plaza itself, with only minor curb and sidewalk work required. Consequently, Step IV can wait for development to drive rail yard infrastructure investment without slowing the realization of Station Plaza and its catalytic role in District improvement.



Station Plaza as a Continuous Surface Providing Seamless Access to the Station (Ribbon Alternative)

The West Plaza Prioritizes Access for Pedestrians (Urban Canopy Alternative)

4.4 RAIL YARDS DEVELOPMENT STRATEGY

4.4.1 A Flexible, Cost-Efficient Approach

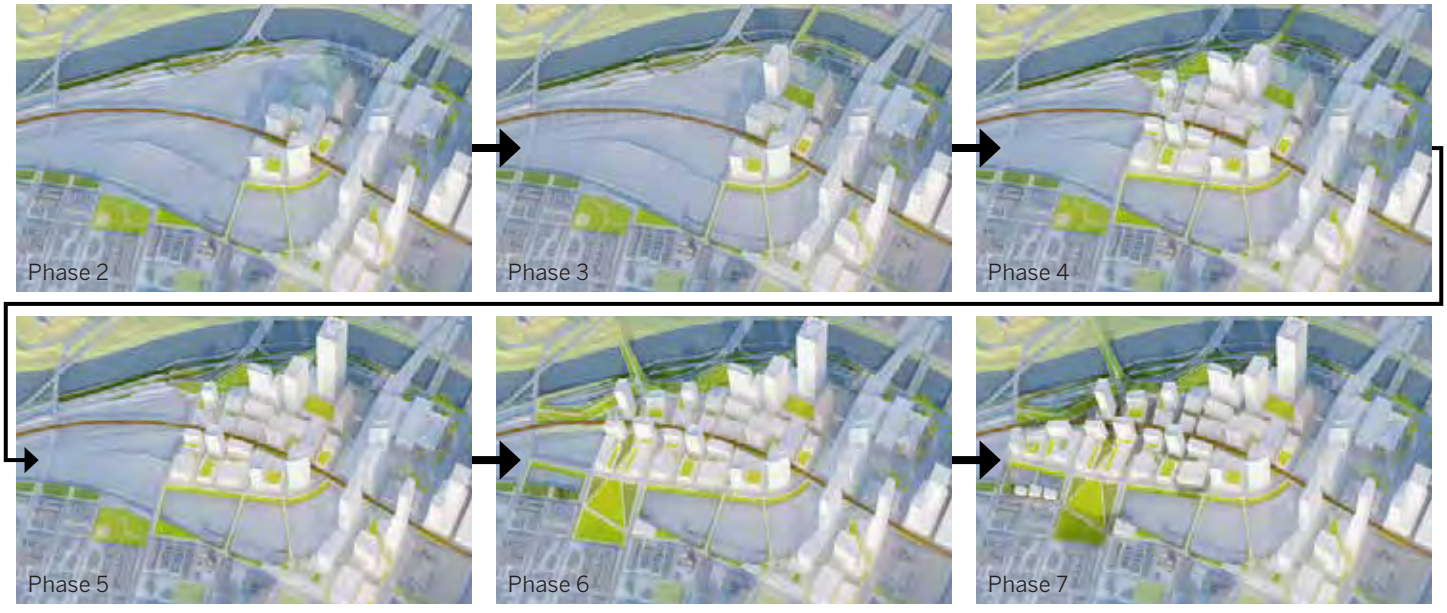
The strategy to develop the air rights over the rail yards at 30th Street Station is a deliberately unique proposition unlike other railroad-related real estate development projects seen recently in the United States. The vision for Philadelphia is grounded on reconciling the intense desire of stakeholders to expand the city to the Schuylkill River with the extraordinary cost of construction over active railroads and the unique pressures and constraints of the Philadelphia real estate market. Taking these three factors into consideration requires an acknowledgment that construction of horizontal infrastructure required to support vertical buildings will need to be advanced in an incremental fashion over several decades – rather than all at once on day one – in order to be economically feasible. This approach is different from other significant American railroad air-rights projects such as Hudson Yards in New York, Burnham Place at Washington Union Station, or even Millennium Park in Chicago – where the "capping" over the railroad was not phased over time but rather facilitated by a singular, sweeping structural raft as the initial, catalytic infrastructure investment intended to minimize risk of building over the tracks. The Philadelphia project could likely not afford such a big, upfront investment, nor does it makes sense as a strategy to enable long-term phasing. The proposed development strategy is more modest, more flexible, and more incremental.

This concept builds on the roughly 40 acres around the station that already exist at a raised deck level today, spanning from Walnut Street north beyond Arch Street and from the Schuylkill River west to 31st Street. All or portions of Arch, Market, Chestnut, Walnut, 29th, and 30th Streets within the District are raised above rail and other infrastructure below. The proposed development would add an additional 55 acres at full build.

The strategy offers flexibility, cost savings, and an ability to realize the Plan incrementally over time. As the Plan takes shape, new blocks and buildings will tether back to existing deck areas, growing over time like a puzzle being slowly assembled. Within each phase, individual platform areas will allow for safe construction and risk mitigation in the same way a single, long-span deck would. In a way, the development of Cira Centre was a first phase of this strategy, and its relationship to Arch Street and 30th Street Station is similar to future buildings in the MOW Yard. The only area in the Plan requiring long-span transfer structures akin to other overbuild decks is the major park envisioned over the Northeast Corridor, although here the deck would be supporting only park space and not serving as the foundation for large buildings.

Additional complexities of building over the rail yards – which would face each successive phase of development – have been considered at a concept level and are currently being studied in more detail to understand construction and operational impacts, including cost. These include:

- Replacement of existing overhead catenary with a low-profile system
- Changes to train signalization and controls, where necessary
- Reorganization and consolidation of Maintenance of Way Yard



Extent of Decking Over Rail Yards

4.4.2 Understanding the Deck: Maintenance of Way Yard

Within the **Maintenance of Way (MOW) Yard**, existing maintenance and storage functions could be consolidated, leaving this area available for fairly standard at-grade development. Structural systems are flexible and mostly typical, depending on specific maintenance functions that exist below. Columns and cores are located to avoid maintenance areas, but are otherwise conventional and do not require structural transfers. Because existing facilities will be consolidated and replaced, foundations and subsequent vertical construction will be typical. Raised infrastructure will connect to building sites at 2-3 levels above grade, with the area below used for either maintenance functions – where necessary – or structured parking.

1. Vertical development with columns and cores to grade
2. Raised horizontal infrastructures: streets, sidewalks, and utilities
3. Raised horizontal infrastructure: interstitial zones between buildings
4. Potential areas below deck for structured parking (Type 2A)
5. Area below deck for maintenance of way functions (Type 2B)
6. Standard Foundations, mostly typical construction practices
7. CSX High Line
8. Maintenance of Way Yard

4.4.3 Understanding the Deck: Penn Coach Yards

Within the eastern rail yards, including the **Penn Coach Yard** (maintenance tracks) and **Northeast Corridor** (active tracks), vertical development is built directly over existing tracks, which the Plan assumes will remain unchanged. Here, buildings and infrastructure are sited strategically to allow columns to be coordinated with the tracks below. Parallel to the tracks, this allows a standard lateral system composed of steel bracing; perpendicular to the tracks, a more complicated moment frame will be required above the trains. This will also act as a structural transfer for building cores that cannot go down to grade. An extremely tall first story adds to structural complexity. Foundation and lower-level construction is complicated and requires temporary track shut-downs. Once the first elevated level is complete, however, the platform allows for standard construction of the rest of the building.

1. Vertical development with columns to grade and raised cores
2. Raised horizontal infrastructures: streets, sidewalks, and utilities
3. Raised horizontal infrastructure: interstitial zones between buildings
4. Allowable touchdown areas based on lateral clearance requirements
5. Catenary replacement below the deck
6. Complex foundations, limited column placement and operational challenges
7. Penn Coach Yard maintenance tracks (Type 3A)

4.5 DISTRICT ZONING

4.5.1 Guidelines

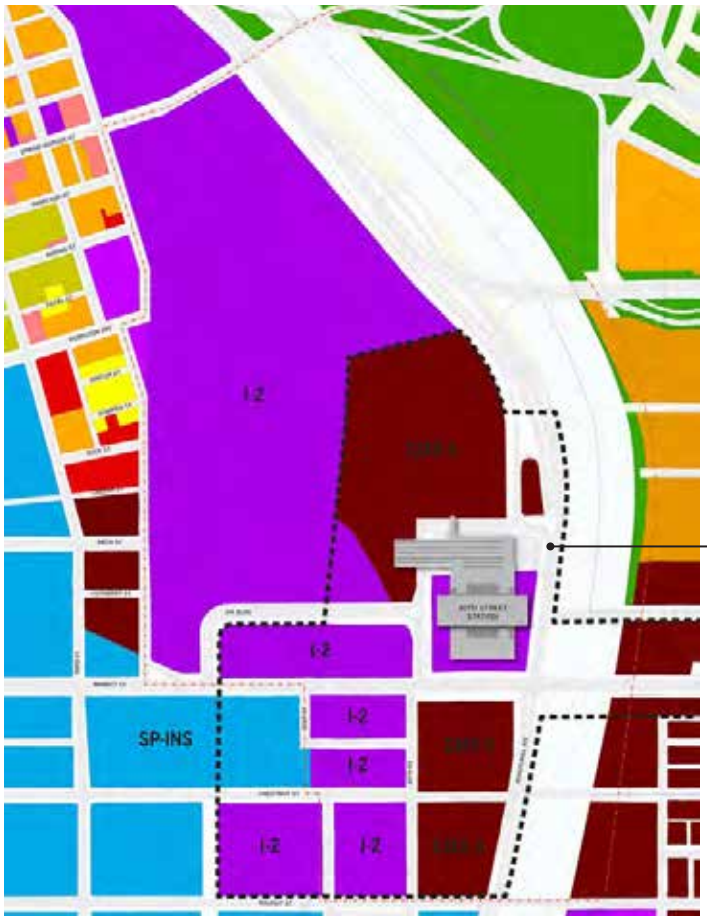
The Plan recognizes the need for re-zoning to encourage the future development and land uses envisioned herein. As the Plan moves forward, the re-zoning guidelines below are intended to serve as a starting point for discussions with stakeholders over the following decades of District transformation. They are based on the Plan's development and building program for 2050 and beyond.

Existing Zoning

All parcels in the District today are defined by two zoning districts:

- **I-2** is a medium intensity industrial classification, with maximum 5 floor area ratio (FAR).
- **CMX-5** is a Center City core commercial mixed-use classification. The District's CMX-5 parcels have a maximum 16 FAR due to their location within the Center City / University City FAR Map, a designated zone around major transit nodes.

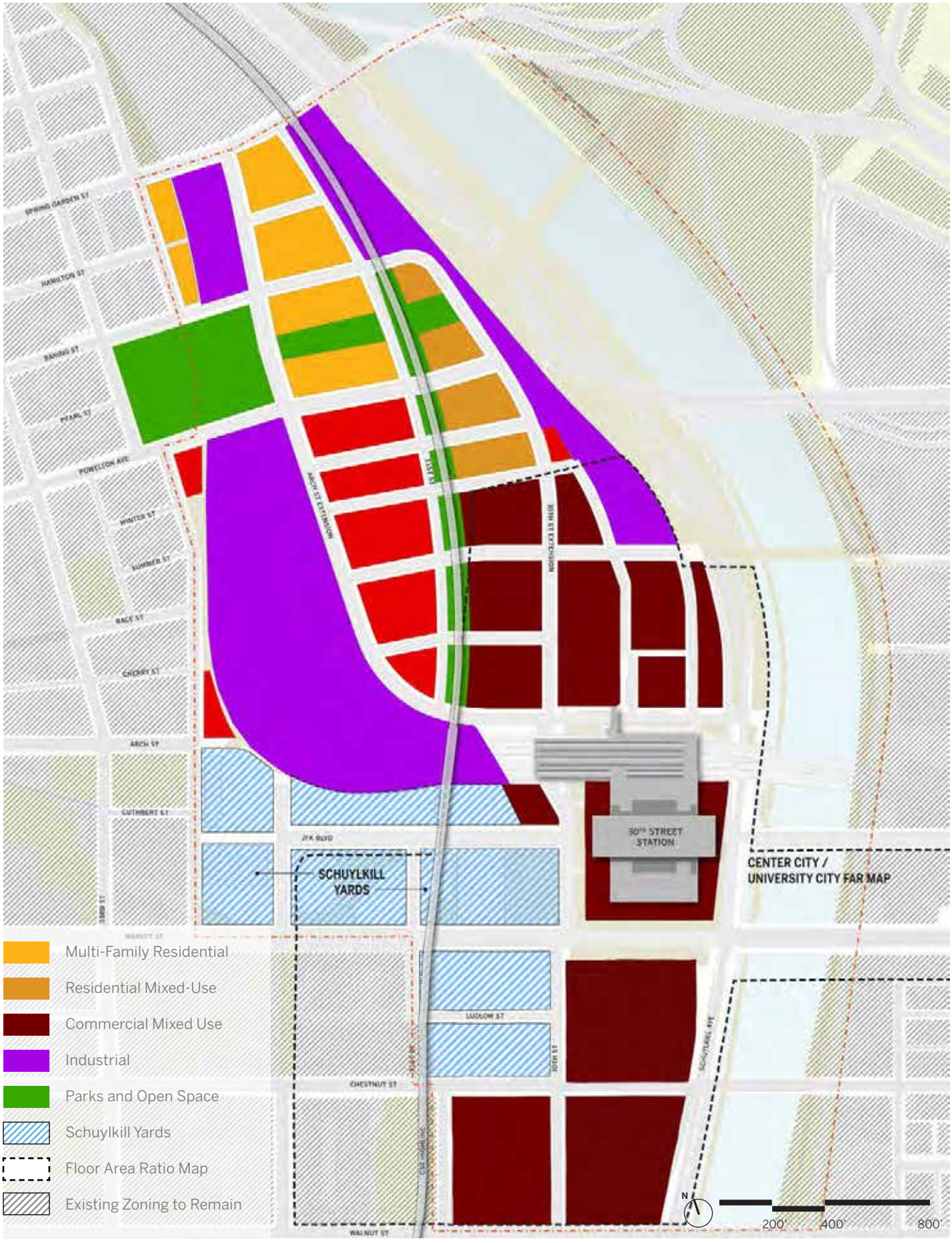
Existing Zoning Map: Center City and University City



Center City / University City FAR Map

Guidelines for Future Zoning

- Establish clear parcel boundaries within the rail yards that delineate public right-of-way (ROW) from development parcels.
- Apply a high-density commercial mixed-use designation to the southeast and southwest quadrant of the rail yards to encourage transit-oriented development near 30th Street Station.
- Apply a high-density residential mixed-use classification in the northeastern portion of the rail yards.
- Apply a multi-family residential classification in the northwest portion of the yards, closest to the existing Powelton Village and Mantua neighborhoods.
- Consider a special overlay to apply additional density, height, and design regulations to support the vision for this unique district.
- Zoning for Schuylkill Yards will be implemented separately by Drexel University and Brandywine.


SPRING GARDEN ST
HAMILTON ST
BANNER ST
PEARL ST
POWELTON AVE
WINTER ST
SUMMER ST
RACE ST
CHERRY ST
ARCH ST
CUTHBERT ST
3RD ST
MARKET ST
JFK BLVD
ARCH ST EXTENSION
30TH ST EXTENSION
30TH STREET STATION
SCHUYLKILL YARDS
CENTER CITY / UNIVERSITY CITY FAR MAP
LUDLOW ST
CHESTNUT ST
WALNUT ST
30TH ST
SCHUYLKILL AVE
Multi-Family Residential
Residential Mixed-Use
Commercial Mixed Use
Industrial
Parks and Open Space
Schuylkill Yards
Floor Area Ratio Map
Existing Zoning to Remain
N
200'
400'
800'

4.6 GOVERNANCE OPTIONS

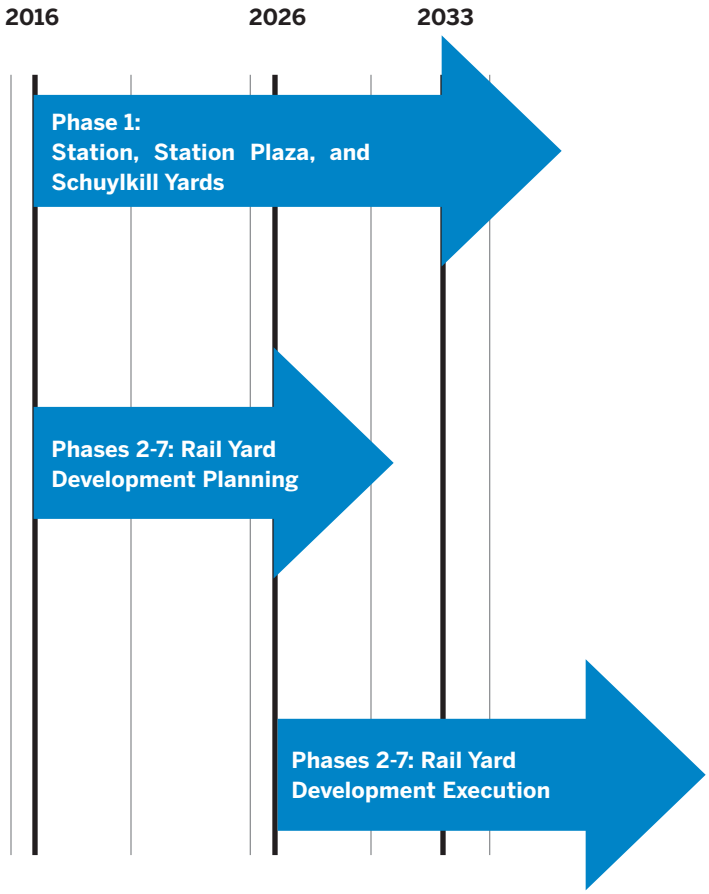
4.6.1 Overview

Implementation of the District Plan requires capable, committed, and sustained leadership. Implementation must address key issues including the need for significant infrastructure investment that cannot be funded through land value alone, the need for incentives to make development financially viable, a long-term development time line estimated to be 35 years, and multiple land owners that have varying objectives. As such, leadership must be able to execute infrastructure investment, secure incentives, update and refresh the District Plan over time, and coordinate multiple land owners to achieve a common outcome.

For purposes of crafting a Governance Strategy for the District Plan, there are three distinct implementation initiatives, each of which has different considerations for Governance. These initiatives include:

1. **Phase 1 Station, Station Plaza, and Schuylkill Yards**, which includes all Phase 1 improvements and build out of sites outside of the rail yards
2. **Phases 2-7 Rail Yard Development Planning**, which includes more detailed business planning, technical assessment, and financial planning for Phases 2 through 7 of the District Plan
3. **Phases 2-7 Rail Yard Development Execution**, which includes construction of overbuild infrastructure, creation of development parcels, and disposition of sites for vertical development for Phases 2 through 7.

Phase 1 has already partially begun, as Drexel University is moving ahead with planning and early-phase design for its Schuylkill Yards project. Rail yard planning, a more detailed infrastructure and development planning effort for just the rail yard, can also begin in 2016 and is expected to last for ten years given the complexity of the development and the time needed to absorb the more immediately viable development in Phase 1. Execution of development in the rail yard is proposed to begin in 2026.



4.6.2 Phase 1: Station, Station Plaza, and Schuylkill Yards

Phase 1 development is anticipated to take place over the next 17 years. It encompasses Schuylkill Yards, the Amtrak site at 30th Street and JFK Blvd, other parcels outside the rail yard, and station and Station Plaza improvements. Execution of this Phase 1 development consists of the following:

- Development of Schuylkill Yards and other sites outside the rail yard could result in 7.8 million gross square feet of vertical development. This development is anticipated to provide $515 million in land value to land owners, in net present value terms.
- Infrastructure projects include station improvements, station retail redevelopment, Station Plaza, and the intercity bus terminal. These infrastructure projects are anticipated to cost $240 million, in net present value terms, and exclude infrastructure costs associated with Schuylkill Yards.

Station Improvements

Station improvements include state of good repair investments, the below-grade connection from the station to the Market-Frankford Line, and redevelopment of the North Concourse. Amtrak owns the station, and will therefore be charged with determining the governance structure for implementation. Governance options include:

- Amtrak executing these improvements independently to ensure alignment with Amtrak objectives.
- Amtrak may choose to partner with a private-sector program manager to execute these investments. This program manager may bring expertise and experience, but more importantly, it would be able to offer full-time dedication to these improvements. Because Amtrak manages stations across the country with varying needs and investment programs, the program manager may be able to focus and advance these improvements more efficiently.

Station Retail Redevelopment

Amtrak has a strong commercial opportunity to redevelop the station's retail space, which could enhance Amtrak customer experience, strengthen the brand of 30th Street Station as a destination within Philadelphia, and generate revenue for District Plan implementation. This project would consist of updating the retail layout and leases within the station so that the retail provides an improved amenity for passengers and sets the stage for further District development. Governance options include:

- Amtrak could undertake this redevelopment independently.
- By choosing to partner with a private entity to execute the retail development, Amtrak may be able to extract more value and complete the project in a more timely manner. The entity could be either an asset manager or a retail developer.
- An asset manager would serve as Amtrak's owner's representative in managing the redevelopment, negotiating new leases, and overseeing operations in exchange for a fee. Examples of this model include Chicago Union Station and Grand Central Terminal in New York City.
- A retail developer would pay Amtrak for the retail space through a master lease or other structure, bring capital for the redevelopment effort, build out the redeveloped retail, and manage it over its lease term. A retail developer would be invested and involved in the process over the longer-term, ensuring quality, shared incentives, and commitment to any needed modifications as a result of changing markets and trends. Examples of this model include Washington Union Station, Fulton Center in New York, and Denver Union Station.

Because of the need to set the stage relatively quickly for the District, and the role station retail could play in terms of "early wins" for the District, bringing in a private entity with expertise in the area may help to expedite the process, ultimately benefiting Amtrak and the District as a whole.

Amtrak Site Development

Amtrak also owns an approximately 23,000 square foot site west of the station that may have financial value. The District Plan assumes that this site will be developed in Phase 1. Governance options for its development include:

- Amtrak could solicit competitive offers for the site as a single development opportunity, with or without the assistance of a development manager.
- Amtrak could package this asset with the retail space inside the station as a combined development opportunity for a developer. The strength of this option is that the design of both the interior of the station and this adjacent site could be more cohesive, improving the value for both sites. Furthermore, these two projects could be completed in a coordinated time line, and done by an entity whose sole purpose is to maximize value from these sites.
- Amtrak may be able to merge this parcel with adjacent sites to develop in partnership with other District development. The strengths of this option are similar to the former, in which the development could be completed in a more cohesive time line and with complementary design.

4.6.2 Phase 1: Station, Station Plaza, and Schuylkill Yards

Station Plaza Development

The development of Station Plaza consists of a few projects, impacting three land owners: PennDOT, the City of Philadelphia, and Amtrak. This project includes developing a new signature open space at the station and reconfiguring the roads surrounding the station for optimal circulation. Governance options include:

- Amtrak could lead the Station Plaza effort, given that Station Plaza will impact Amtrak's front door, with PennDOT and the City contributing and weighing in on the execution.
- Amtrak could partner with an entity specialized in public space operations and development, such as the University City District or a private entity with public space design expertise.
- Amtrak and Partners could create a special-purpose entity ("SPE") solely dedicated to the purposes of building and operating Station Plaza. A SPE would navigate the complexities of designing Station Plaza, manage community relations, raise capital, and prepare and update business plans. The SPE could be represented by the three land owners, as well as other stakeholders, such as Drexel University and the City of Philadelphia. The strength of this option lies in the SPE's ability to dedicate its full focus to this project, while the other parties involved have many other obligations, and their missions are not solely dedicated to public space development.

Additionally, the Station Plaza development and retail redevelopment inside the station could be merged and executed together. This merging of scope would ensure a more cohesive identity and higher-value, coordinated program with respect to retail, advertising, and events. This could be done through:

- The SPE
- A third-party private developer.

Intercity Bus Terminal Development

The District Plan proposes the development of an intercity bus terminal north of the station on Amtrak-owned land, and requires the reconfiguration of the I-76 ramps owned by PennDOT. Implementation of the bus terminal will require a coalition of District stakeholders, given the involvement of multiple landowners and beneficiaries. Governance options for this project include:

- PennDOT could lead the development of the intercity bus terminal. PennDOT owns the land critical to realizing the project, namely the ramps that need to be reconfigured to allow for efficient terminal operations. Further, the intercity bus terminal will promote travel by bus and aligns with PennDOT's mission to support a "sustainable transportation system." Delivery of the bus terminal will also require land owned by Amtrak, specifically, the site of the parking deck that is proposed to be replaced by the facility. PennDOT and Amtrak could agree to transfer the Amtrak-owned property to PennDOT or to a special-purpose entity as discussed below, through either a lease or purchase agreement.
- The intercity bus terminal involves multiple landowners and multiple beneficiaries. To ensure these interests are well-represented in the development of the facility, a special-purpose entity could be formed to develop the project. Key parties include the two landowners (Amtrak and PennDOT) and important stakeholders such as the City, which benefits from a new amenity for Philadelphia and may serve as an important funding source. The SPE may also have representation from bus operators that will use the facility and Drexel University, a major stakeholder that would benefit from the relocation of intercity bus boarding and alighting from the area planned for its Schuylkill Yards redevelopment.

Schuylkill Yards and Other Private Development

Drexel University owns parcels west of the station and is already moving forward with development planning for those parcels, along with its Master Developer, as Schuylkill Yards. The vast majority of the vertical development in Phase 1 will be at Schuylkill Yards. Phase 1 also includes parcels south of Market Street that are envisioned for new development. The successful buildout of Schuylkill Yards and other Phase 1 parcels, like the station and Station Plaza investments, will create a brand for the District and a precedent for large-scale mixed-use development in the District setting the stage for future phases. Once Phase 1 is complete, the District will need to expand and remain competitive. The rail yard allows Drexel University, those that locate at Schuylkill Yards, and future businesses and institutions to expand in the District.

Phase 1 Collaboration

Phase 1 involves a range of land owners and stakeholders. As discussed, there are several opportunities for collaboration by merging initiatives. Regardless of whether the parties choose to merge initiatives, Phase 1 requires general collaboration to ensure coordinated infrastructure planning and ensure joint advocacy to improve prospects for funding and approvals.

An advisory committee consisting of the land owners and other parties such as the City should convene to track progress, exchange ideas, pursue funding opportunities, and discuss opportunities for collaborating on specific initiatives.

4.6.3 Phases 2-7 Development Planning

Before development execution can occur in the rail yard, extensive planning will need to be completed. Rail Yard Development Planning will include, but it is not limited to, developing a long-term business plan, raising capital for infrastructure projects, building support for the physical design that will work with the needs of Amtrak, SEPTA, PennDOT, NJ TRANSIT, and CSX, beginning the marketing of the lands to large-scale users, and keeping the Plan fresh to reflect market trends and expectations.

Land in the rail yard is controlled by Amtrak and SEPTA. Because infrastructure spans both parties' lands and both parties' railroad operations, coordination under a single umbrella could ensure a more effective and compatible development plan. Governance options for this include:

- Amtrak and SEPTA could execute this planning effort independently.
- Amtrak and SEPTA could hire a development manager that would guide the planning process. The development manager would need to receive approval from both Amtrak and SEPTA for every business decision.
- Amtrak, SEPTA and Partners could create a special-purpose entity (SPE) to carry out the development planning effort. An SPE brings advantages in terms of multi-agency, specialized expertise, and day-to-day focus on the successful transformation of the rail yard. An SPE could facilitate development planning for the rail yards that takes a more holistic approach to planning and design across current property ownership boundaries. The SPE could be controlled by Amtrak and SEPTA and potentially include representation from other public stakeholders such as the City, State and/or PIDC, especially since rail yard development will rely on funding from several outside parties, and impact multiple stakeholders.

Because the core missions for Amtrak and SEPTA are ultimately transportation related and although there may be some in-house expertise at both of these agencies, the District Plan recommends creating an SPE whose sole purpose is dedicated to the rail yard planning effort, maximizing efficiency and improving outcomes. Creating an SPE and providing it with the financial and human resources to undertake Rail Yard Development Planning will likely take one to two years, and includes the sponsors (Amtrak/SEPTA) and its partners executing the following activities:

- Deciding on mission, responsibilities, authority, decision-making process, sources of funding, and Board representation for the SPE;
- Incorporating the SPE;
- Securing appropriate staff with technical expertise, including construction, finance, and development experience.

4.6.4 Phases 2-7 Development Execution

Rail Yard Development Execution consists of two major components; the construction of the rail yard infrastructure and the disposition of sites for real estate development, as encompassed in Phases 2 through 7. Governance options for this include:

- Amtrak and SEPTA could execute this development process independently. However, development is not the core missions for these two entities.
- Amtrak and SEPTA could pool their land and hire a development manager that would guide execution, but ultimately would need to receive approval from both Amtrak and SEPTA for every business decision within the process.
- The SPE formed for rail yard development planning could also be responsible for its development execution.
- Amtrak and SEPTA could select a master developer that would execute development of the rail yard.

The SPE and the development manager options provide Amtrak and SEPTA with more voice and control in the execution of the rail yard development, whereas designating a master developer would allow Amtrak and SEPTA to monetize their land value more rapidly. By pooling land, Amtrak and SEPTA could share both costs and value. Similarly, two land owners in the King's Cross neighborhood of London pooled their land, partnered with a development firm, and created a joint corporation that planned and developed a new neighborhood. The three parties shared proceeds so even if a higher-value commercial use located in a part of the neighborhood formerly owned by one party, all parties would benefit. Conversely, even if the corporation built a high-cost public space in an area formerly owned by one party, all parties would share in the cost.
The most appropriate strategy for Rail Yard Development Execution is not a decision that needs to be made as part of the District Plan process, rather it should be made as a result of the Rail Yard Development Planning activities that should commence when the District Plan is adopted.

4.7 COST-BENEFIT ANALYSIS

4.7.1 Overview

The 30th Street Station District Plan presents a unique opportunity for economic development in Philadelphia and along the Northeast Corridor. New infrastructure and real estate will create a new, transit-oriented place to live, work, study, and visit. Few districts around the world offer the attributes available at the 30th Street Station District – a location adjacent to premier healthcare and education institutions, large assemblages of land, proximity to one of the country's most successful downtowns in Center City, and connectivity to Pennsylvania's primary Northeast Corridor station within walking distance. Unlocking the value of these attributes requires expansive infrastructure and amenities. Roads, utilities, parks, bridges, and extension of transit services are needed to make much of the District developable. Districts around the world – including London's King's Cross, New York's Hudson Yards, Washington's Capitol Riverfront, and Denver's Union Station District – provide models of highly-competitive mixed-use development. Each of these have succeeded by leveraging market forces and leading with investment in catalytic infrastructure and a world-class public realm to attract private investment.

The Plan features residential, office, retail, hotel, cultural, and one or more anchor uses. The anchor use would pioneer development in the rail yard and could be a major institution or employer that brings activity, establishing a brand for the rail yard and advancing the District's overall brand.

In total, District development entails $10 billion of investment over 35 years, including an estimated $3.5 billion at Drexel's Schuylkill Yards. In net present value terms, this includes $3.9 billion in private investment for development of the buildings in the District, plus $1.14 billion in transportation improvements to the station and District infrastructure, excluding infrastructure investment associated with Schuylkill Yards.

Financial Analysis	
NPV of Land Proceeds	$500M
NPV of Infrastructure Costs	($1,140M)
NPV of Surplus (Gap)	($640M)
NPV of City Fiscal Benefits	$2,220M
NPV of State Fiscal Benefits	$1,570M
NPV of Adjusted Surplus (Gap)	**$3,150M**

4.7.2 Financial Feasibility

Economic analysis identified the financial feasibility of the Plan by comparing revenues from land development against the cost of the infrastructure needed to make development viable and competitive. It relies on several assumptions underpinning the Plan, particularly that the station and transportation services will be enhanced; the public realm, including Station Plaza, will be transformed into one of the next great public spaces in Philadelphia; the increased and enhanced retail in the station and area will activate the District; Drexel's Schuylkill Yards project will be successfully developed; and new infrastructure will stitch together both Schuylkill Yards and Center City with development in the rail yard. The analysis assumes that, because of this infrastructure, public realm and anchor development, rental rate growth in the District will outpace construction cost growth, increasing land value over time.

The analysis found that the Plan faces a financial gap – land value is lower than the cost of infrastructure – but that fiscal benefits from Plan development could offset that gap. The Plan anticipates a long-term development timeline of approximately 35 years across multiple phases, with future phases benefiting from value creation in earlier years. Fiscal benefits consider taxes generated 20 years beyond the final development, through 2075, in order to fully account for the District's tax value. Taxes generated from development can serve as an important funding source to pay for infrastructure as they have for many other large-scale district developments. In total for the District, and on a net present value basis, net land proceeds (land proceeds less any required development subsidy for office and hotel developments) equal $500 million compared to $1.14 billion for total infrastructure costs. In net present value terms, the total gap for the Plan is approximately $640 million.

City and State taxes generated by Plan development could offset the gap through commitments from the City and State. The estimated net present value of City and State fiscal benefits is approximately **$3.8 billion,** representing $2.2 billion in City fiscal benefits and $1.6 billion in State fiscal benefits. These combined City and State fiscal benefits are more than double the estimated total net present value of infrastructure costs, $1.14 billion, and significantly outweigh the overall project gap of $640 million.

4.7.3 Non-Financial Benefits

The proposed public and private investment in the District will not only generate $3.8 billion in fiscal benefits, but will create important non-financial benefits for the City and State, including:

Jobs

Development in the District has the potential to be home to **40,000 jobs** when fully built. These new jobs will serve also as a catalyst and multiplier for other jobs and economic activity beyond the District. Furthermore, construction of District infrastructure and real estate will also create 68,000 construction job-years, or an average of 1,700 full-time equivalent construction jobs over the District's 35-year development timeline.

Catalyzing Private Investment

Infrastructure investment will also catalyze significant private investment in the form of new real estate development that will be home to jobs, residents, institutions, stores, and visitors. The analysis shows that $1.14 billion of infrastructure investment will underpin the development of over 18 million square feet or $3.9 billion of private real estate development in net present value terms – a 3.4-to-1 return of private investment to public infrastructure. Government has made major infrastructure investments in other large-scale districts, unlocking private investment. For example, in the Denver Union Station neighborhood, $488 million of public sector infrastructure investment catalyzed $2 billion in private investment – a 4-to-1 return.

City Competitiveness

The District will create new, modern spaces and amenities in a location with excellent access. This development better positions Philadelphia to compete for businesses and talent that may consider alternative locations on the Northeast Corridor or around the world. The District provides a rare opportunity for growth-driven innovation-economy companies to incubate, expand and grow to large company scale in a vibrant mixed-use urban center.

Transit Improvements

The District will be a transit-oriented development that provides those living and working in the District with convenient transit connections throughout the Philadelphia region and along the Northeast Corridor. This access will support economic development for the region and improve an important aspect of workers' and residents' quality of life.

Quality of life

There will be new parks, riverfront access, retail, cultural, and potentially institutional uses that will improve the quality of life for the population of the region and in particular Philadelphians living in and near the District.

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City of Philadelphia
CSX
Delaware Valley Regional Planning Commission
Drexel University
NJ TRANSIT
Philadelphia Industrial Development Corporation
PennDOT
Schuylkill River Development Corporation
SEPTA
University City District
University of Pennsylvania

Civic Advisory Group
Drexel Area Property Association
Lancaster Avenue Business Association
Mantua Civic Association
Mantua Community Improvement Committee
Mount Vernon Manor
People's Emergency Center
Powelton Village Civic Association
West Powelton Concerned Community Council
West Powelton/Saunders Park RCO

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PHILADELPHIA

30TH STREET STATION DISTRICT PLAN

Prepared by: Skidmore, Owings & Merrill LLP
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