



INNOVATION MILE



CITY OF NOBLESVILLE

MASTER PLAN

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ACKNOWLEDGMENTS

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**City of Noblesville Parks & Recreation
Department**

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City of Noblesville Fire Department

City of Noblesville Community Engagement

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City of Noblesville Street Department

City of Noblesville IT Department

Noblesville Chamber of Commerce

City of Fishers

Ruoff Music Center

Blue Sky Technologies

Nickel Plate Arts

Duke Energy

Denison Parking

Henke Development

Hageman Group

Noblesville Main Street



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EXECUTIVE SUMMARY

01.

THE CITY OF NOBLESVILLE HAS DEVELOPED AN ECOSYSTEM TO FOSTER THE ECONOMIC FUTURE OF THE REGION WITH INNOVATION MILE.

“INNOVATION MILE WILL BECOME A DYNAMIC BUSINESS AND TECHNOLOGY HUB THAT WILL SERVE AS AN ANCHOR FOR REVOLUTIONARY THINKING AND A GATEWAY FOR INNOVATION, LEVERAGING AND CATALYZING LONG-TERM GROWTH OPPORTUNITIES AND REINVESTMENT IN THE CITY OF NOBLESVILLE.” —Mayor Chris Jensen

The vision for Innovation Mile was thoughtfully developed in a way that provides flexibility over the years to come and considers the current market demand, workforce, location, and City goals.



Businesses and people that choose to locate and invest at Innovation Mile will benefit from thoughtful urban design, flexible and incentivized building requirements that encourage walkability, an emphasis on smart systems and sustainability, and a major initial City investment in infrastructure.



THIS PLAN DEFINES THE DISTRICT'S LAND USE, MOBILITY, TECHNOLOGY, SUSTAINABILITY, AND PLACEMAKING STRATEGIES.



Green space, common areas, and other recreational uses throughout the District fosters human connections.



Enhanced architecture that encourages walkability and a high level of density in a mix of uses.



Rooftop solar, fiber interconnection, and smart kiosks are a few example of the District's emphasis on technology innovation and sustainability.



Streets within Innovation Mile are accessible and safe for all ages and ability levels.



Green roofs, permeable pavement, and high quality building materials will all be encouraged.





PRIVACY CONCERN?

district wide detention?

CONNECTIVITY
PED
171

Cemetery

ICON

Wood Creek

Building block exercise conducted with stakeholders during the two-day workshop.

02.

INTRODUCTION

REGIONAL CONTEXT

The City of Noblesville considers itself the place where **COMMERCE, CULTURE,** and **COMMUNITY** come together. As the county seat of Hamilton County, Noblesville is at the forefront of progress in one of the fastest-growing counties in the country.

Since 2020, the City has catalyzed incredible growth, resulting in over **\$1 BILLION IN PRIVATE DEVELOPMENT, nearly 1,100 NEW JOBS, over 5,870 NEW RESIDENTIAL UNITS, and nearly 3.6 MILLION SQFT OF NEW COMMERCIAL SPACE.**

Charged by Mayor Jensens's challenge to *"chase the lion and dream big while being strategic in our retention and attraction efforts,"* the City remains focused on improving, growing, and forging an innovative future for the people of Noblesville.

Noblesville is a growing City of roughly 70,000 people that contributes nearly 25,000 jobs to the regional economy. The primary industry sectors represented in Noblesville are Retail (17.5%), Food Services (13.3%), Healthcare (12.9%), and Manufacturing (11.0%). Jobs in Innovative fields such as those in the Professional, Scientific, and Technical Services sector account for only 4.1% of all jobs and are vastly underrepresented in the city. Some of Noblesville's residents are working these jobs in different parts of the region already (11.7% of all Marion County jobs are filled by Hamilton County residents) but many of these jobs just don't yet exist in the region even though the workforce does exist.

The need to capture and retain a greater percentage of the workforce engaged in innovative work was first identified in the Elevate Noblesville: FY2021-FY2025 Strategic Action Plan. It has become a focal point of Mayor Jensen's administration and is at the heart of Innovation Mile.



IDENTIFYING THE NEED FOR INNOVATION MILE

Innovation Mile will become a dynamic business and technology hub that will serve as an anchor for revolutionary thinking and a gateway for innovation, leverage long-term growth opportunities, and catalyze reinvestment in the City of Noblesville.

This vision statement, first stated publicly by Mayor Jensen in September 2021 during his State of the City address, embodies the City of Noblesville's goal to invest in a future that prioritizes innovation, technology, and sustainability.

Since establishing the vision, the City has been hard at work creating this master plan for a district where residents of Noblesville and visitors alike can live, work, play, engage, and learn. A place designed to drive growth from

commercial, headquarters, flex, residential, office, and light industrial uses within our City's targeted industries. A place that uses intelligent, thoughtful urban design to facilitate human interaction.

The proposed master-planned business district will be located between ground north of 141st Street and I-69, between Olio Road and Cyntheanne Road in the southeast corner of the City.

While the build-out of the site may take up to 10 years to fully complete, innovative companies interested in being a part of Noblesville's future have already begun to arrive. The City of Noblesville looks forward to realizing its vision for Innovation Mile through partnerships with innovative firms big and small looking to either plant new roots or expand existing facilities in Noblesville.

SHAPING THE VISION



CITY OF NOBLESVILLE ECONOMIC DEVELOPMENT DEPARTMENT

Completes their department strategic plans and identifies innovation, technology, and sustainability as key growth areas. The land between Olio Road and Cyntheanne Road along I-69, already partially owned by the City, was identified as a key asset ready for development.

SEPT
2021

MAYOR STATES VISION

Presented at the City of Noblesville State of the City event where Mayor Jensen empowered his staff to *"chase the lion and dream big while being strategic in our retention and attracting efforts"*

Led by Economic Development Department Guided by the Mayor's vision to invest in a future that is innovative, technology advanced, and sustainable, the Innovation Mile Steering Committee, led by the Noblesville Economic Development Department, was created.

INNOVATION MILE STEERING COMMITTEE CREATED

JAN
2022

MAR
2022

STEERING COMMITTEE PROCURES CONSULTANT

The Innovation Mile Steering Committee released a public Request for Proposals (RFP) to elicit consultant support for this master plan. WSP USA, Etica, and Hageman were selected as the best team. The stated goals of the consultant selection would be:

- Leverage Emerging Public and Private Investment
- Capitalize on Access and Visibility to I-69 and Adjacent Development
- Support and Stimulate City Business Attraction, Expansion and Retention
- Increase Revenue in the TIF District
- Create an Innovative Business District with Innovative Public and Private Improvements
- Integrate Quality of Place Components
- Align with the City's Strategic Plan
- Develop 40% Design Plans to Support the Built Environment
- Establish a Branded Gateway to Reinforce the Project
- Develop an economic and Fiscal Impact Analysis

Between July and October 2022, the project team held a series of interviews with internal City of Noblesville stakeholders. The purpose of these interviews was to inform folks about the master plan process, identify departmental needs that Innovation Mile might meet, and most importantly, allow these stakeholders to have a say in shaping the master plan layout. Stakeholders from the following departments were interviewed:

- Public Safety
- Parks and Recreation
- Streets Department
- IT Department
- Utility providers

INTERVIEWS WITH INTERNAL STAKEHOLDERS

JUL-OCT
2022

SEPT
2022

TWO DAY DESIGN WORKSHOP

On September 7th and 8th, 2022, the City of Noblesville hosted an in-person design workshop at the Ruoff Music Center – a short distance from the site. The workshop was well attended by Noblesville City staff (25+ City employees) and a wide array of external stakeholders including property owners, members of the Noblesville business community, Hamilton County, City of Fishers and non-profit organizations. In all, more than 40 people attended portions or the entirety of the 2-day workshop. The following is a list of activities that occurred over the course of two days:

- Site Tour
- Case Study Review
- Building Block Exercise
- One-on-one interviews with external stakeholders
- Development of Design Principles

Once the stakeholder interviews, steering committee visioning discussions, and design workshop were complete, the project began assembling all outcomes and objectives into this master plan document.

PROJECT TEAM SHAPE FINAL VISION

JUN
2023

OUTCOMES & OBJECTIVES



Interviews With Internal Stakeholders

During the visioning phase of the Innovation Mile master plan, one-on-one stakeholder meetings were held with key internal and external stakeholders including Public Safety (police & fire departments), Parks and Recreation & Community Involvement, the Streets Department, the IT Department, Duke Energy, and Denison Parking. The purpose of these meetings was to invite stakeholders to help shape the master plan in a meaningful way. Representatives from each department contributed to the following list of key takeaways that became deeply engrained in the District's design.

KEY TAKEAWAYS:

- **Design the District** in the safest way possible with a mix of uses that ensure constant “eyes on the streets” and adequate lighting along trails, roads, and sidewalks.
- **Build a “Park within a Park”** by dedicating plenty of space to passive recreation in a way that is easy to maintain and takes advantage of the natural area along Mud Creek.
- **Prioritize Flexibility** with infrastructure that accommodates, utilities, all modes of transportation, green space, and water retention in a way that is easy to maintain.
- **Encourage Innovation in All Things** by using innovative technology like smart street furniture, interactive kiosks, and intelligent parking management capabilities.
- **Construct the District** in a way that allows the District to grow organically while addressing missing utility and infrastructure needs in phases.

Two-Day Design Workshop

The City of Noblesville's Two-Day Design Workshop provided a creative forum for regional stakeholders to participate in the master planning process.

Attendees kicked things off getting their boots dirty during a morning hike through the site—discovering Mud Creek and walking along the edge of the several corn and soybean fields that currently cover most of the area.

After lunch, stakeholders were seated around five large circular tables each with a scaled map of Innovation Mile. After being equipped with markers, post-it notes, and jumbo building blocks, they created prototypes that included considerations for street design, mixed-use properties, building heights and scale, innovative design, and sustainability and placemaking. They then presented their proposals to one another.

The breakout sessions concluded with a MentiMeter survey that helped refine the vision statement and project goals, guiding Innovation Mile's planning team to consider during the plan's development, and rank what City Stakeholders consider important about the physical layout of the District.

The workshop concluded with the design team and members from the City leadership team reconvening over a map of the site. The group discussed the key themes, recommendations, concerns, and guidance they heard over the previous two days and defined the design principles that would subsequently shape the layout of the site.



KEY TAKEAWAYS:

- There was a consistent desire to minimize impacts to the existing ecology of Mud Creek.
- Construction phasing considerations will be important to making sure the District doesn't grow too big, too quickly.
- Innovation Mile needs to have its own brand and identity that does not compete against Downtown.
- Mixed-use nature of the district is important to achieving a 24/7 user experience.
- Entertainment uses would support visitors to nearby Ruoff center.
- Close coordination with landowners—both supportive and unsupportive will be critical to project success.
- The highest point of the site is along the west side of Mud Creek east of Prairie Baptist Road and north of 141st Street. It was suggested that this might be a good location for a bridge over the creek.
- The pathway of the overhead power lines was brought to attention and will drive planning considerations.
- Exploring the removal of limited access right-of-way fence along I-69 and clearing of trees along this line could help improve visibility to the Innovation Mile corridor.
- Potential additional interstate access at Cyntheanne Road was discussed and was deemed an important future component of success of the project.



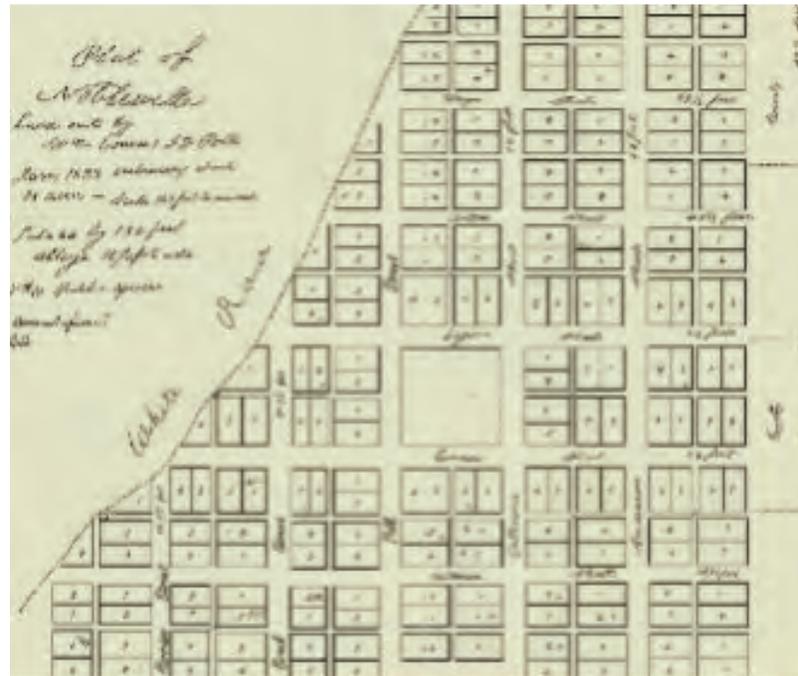
Soybean farm on 77 Acres of land owned by the City of Noblesville.

03.

EXISTING CONDITIONS

The history of planning in the City of Noblesville dates back to its formal platting by William Conner and Josiah Polk in 1823. Then, as now, important decisions were made about the location of homes, roads, farms, and commercial areas. As the City celebrates its bicentennial this year, we also look ahead to the future of Noblesville through Innovation Mile and are again faced with decisions about what shape we'd like that future to take.

Innovation Mile will be a product of the significant culture and identity that is synonymous with the City of Noblesville and, as such, must first analyze existing conditions and how they inform the planned district. In this section, the following four categories of existing conditions will be reviewed: regulatory and policy conditions, physical conditions, site constraints, and employment and occupation conditions.





Regulatory and Policy Conditions: Noblesville has completed many plans, studies, and analyses over the past five years that each play an important role in shaping the City into what it is today. To gain a better understanding of the City's goals, future land use targets, demographics, housing trends, and more, six existing plans and policies were reviewed.

Physical Conditions: underground, surface, and above-ground natural conditions existed on the Innovation Mile site long before the master planning process began and will be around long after it is over. To gain a better understanding of the native flora and fauna, soil, topography, hydrology, and other natural features, a physical conditions assessment was conducted.

Site Constraints: the land on which Innovation Mile is planned is largely undeveloped green and agricultural land. While this type of land is favorable from a development perspective, the lack of existing utilities, sewage, and water infrastructure needs to be addressed. A site assessment was completed to gain a better understanding of what civil infrastructure currently exists on-site and identify what is needed.

Employment and Occupation Conditions: Innovation Mile is an aggressive departure from "well, that's how we've always done it." The land uses proposed in Section 5: Innovative Strategies, include a mix of office, headquarters, flex buildings, commercial, and residential to create a 24-hour, walkable district. Before embarking on this journey, it was important to determine whether the job market and talent pool needed to fill Innovation Mile existed in the area.

REGULATORY AND POLICY CONDITIONS

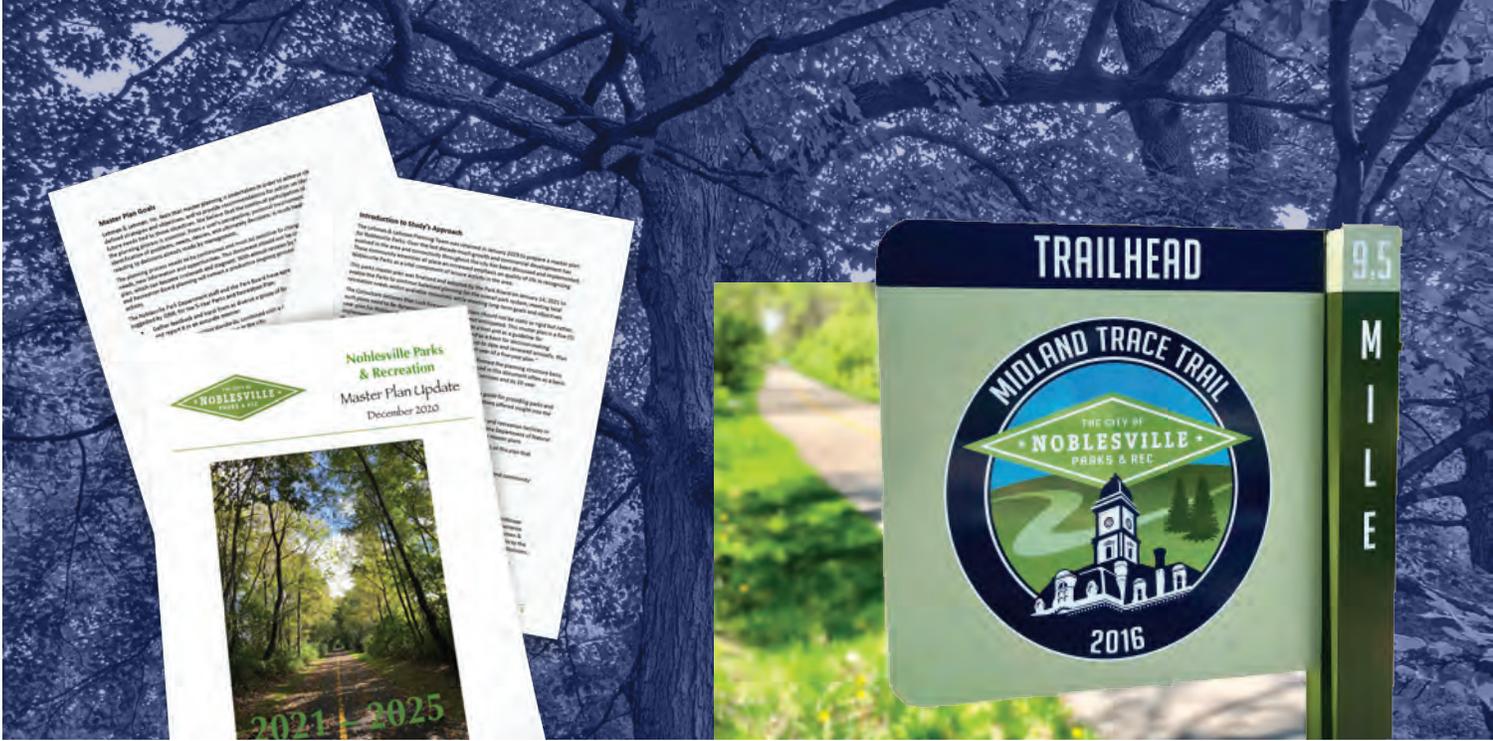


2016 AND 2021 HOUSING STUDY

- Middle housing types are missing in the market.
- So far, investment in Noblesville's housing stock has been concentrated on the extreme ends of the housing spectrum:
 - » *Single-family detached homes.*
 - » *Large multi-family apartment buildings.*
- Investments in multi-modal transportation are critical to attracting a younger generation.
- There is demand for "suburban mixed use" at more than a thousand new units per year for the next four years.
- Almost two-thirds of that demand is multifamily or single-family attached housing.
- Post-grad millennials moving to Noblesville are responsible for 11% of the annual growth citywide between 2010 and 2019.

2020 NOBLESVILLE COMPREHENSIVE PLAN

- Relevant Plan goals include:
 - » *Establishing a multimodal transportation network that connects everyone to key destinations.*
 - » *Designing Complete Communities that can help retain, develop, and draw a variety of enterprises and industries while providing career opportunities that enable people to improve their living standards.*
- Land Use
 - » *Current land use at the site is primarily agricultural with some low density residential.*
 - » *The southeast area of the City where Innovation Mile is located is defined as an Immediate Growth area in the Plan's future land use section.*
- Thoroughfare Plan
 - » *A new interchange at Cyntheanne Road should be considered .*
 - » *Continuing 141st Street east from Prairie Baptist Road to Atlantic Road is being considered.*



2021 NOBLESVILLE PARKS MASTER PLAN

- The plan establishes a goal of providing 13.6 acres of park space per 1,000 residents. To reach this goal, the City needs to create an additional 264 acres of park space over the next 10 years.
- Administrative Division
 - » *Goal 1: Placemaking and Preservation*
 - » *Goal 3: People & Play*
- Park Maintenance Division
 - » *Goal 1: Assure the best possible park experience for all segments of the population*
 - » *Goal 3: Create a program that will promote the growth of native trees and plants within our parks system*
- Recreation Division
 - » *Goal 3: Purposefully create a culture of innovation and excellence*

ALTERNATIVE TRANSPORTATION PLAN

- Defines pathways, greenways, and trails as part of protected open space managed for conservation, recreation, and alternative transportation purposes.
- Stresses the importance of trails and greenways on recreation, open space, public health, and the environment.
- Although it references increasing connectivity, the focus is not on urban transportation but on recreation.

UNIFIED DEVELOPMENT ORDINANCE

- According to the Unified Development Ordinance, the site is located in the Corporate Campus Planned Development District (CCPD). The purpose of this district is to encourage economic development activity and high quality, well-integrated development. There are nine subdistricts within the CCPD, each with subtle differences in preferred build form.



This is Logan Street over White River, now often called the 'Bridge of Flowers'

PHYSICAL CONDITIONS



ECO-REGION

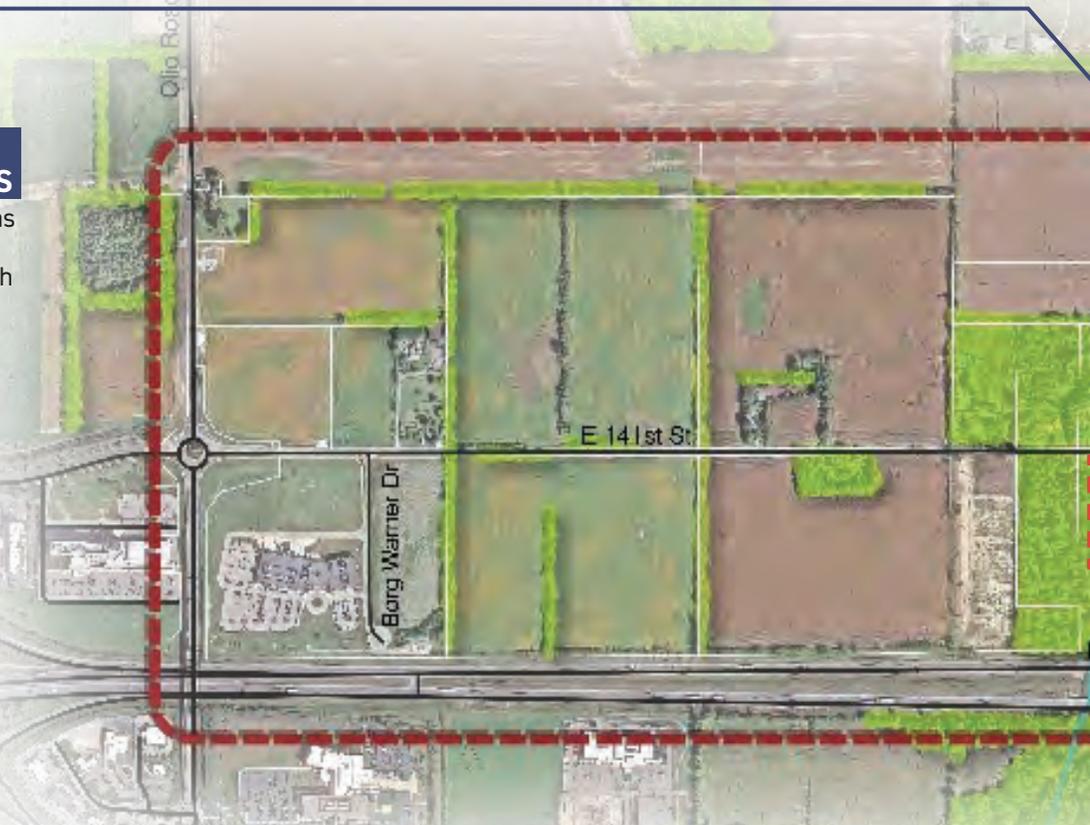
The site sits in the Temperate Broadleaf Mixed Forest biome within the Southern Great Lakes Forest Ecoregion. The latter has been converted from a formerly deciduous forest (primarily made up of beech and sugar maple) to primarily agriculture. Since the ecoregion lost more than 90% of its pre-settlement vegetation and only around 1% of its area is protected, little old-growth forest remains. In the ecoregion, the majority of remaining wetland and aquatic habitats are degraded, though some still contain biologically significant faunas.

Innovation Mile Considerations:

- Protect and expand existing remnants of natural vegetation where possible.
- Plan for the local acquisition of conservation lands where possible.
- Encourage the use of locally appropriate vegetation in landscaping elements.

CURRENT AND FUTURE LAND USE IMPLICATIONS

Current land use is described as “agricultural,” “single-family,” and “vacant.” Immediate growth concentration centers on land between SR 38 and Fall Creek Township (including the site). Future intentions from both the county and city plans show growth radiating to the north. Future land use designations on the site are “Innovation/Flex MU” and “Production” categories. Small areas of “Commercial Corridor” and “Commercial Regional/Hwy” frame the intersection with Cyntheanne Rd and I-69.



HYDROLOGY AND FLOOD PLAIN

The city uses Federal Emergency Management Agency (FEMA) standards for floodplain definition. FEMA defines floodplains as areas that convey surface water from a storm event having a 1% chance to be exceeded in any one year (also referred to as the 100-year flood).

There are more than 5,000 acres of floodplains and 900 acres of wetlands within the Noblesville planning jurisdiction. Within the proposed Innovation Mile site, more than 165 acres are within the Mud Creek floodplain.

Innovation Mile Considerations:

- Mud Creek is characterized in the City’s floodplain designation as a “Rural Corridor Floodplain.” This designation denotes where higher floodplain impact uses are more feasible due to a combination of low existing development pressure and ample land available to allow for proper impact mitigation.
- Permitted uses in the floodway are bridges, trails and greenways, open space, and simple crossings. Encouraged improvements include removing invasive plants, creating parks and trails, and increasing access to the river.

PARKS, GREEN SPACE AND VEGETATION

The Mud Creek waterway appears to have been channelized in places but is well-buffered by mature and healthy forest and vegetation on either side as it passes through the site. The closest public park to the site is Finch Creek Park, a three-mile drive to the northwest. This park is a large, community-style park with pickleball courts, basketball courts, an event lawn, playground, and splash pad.

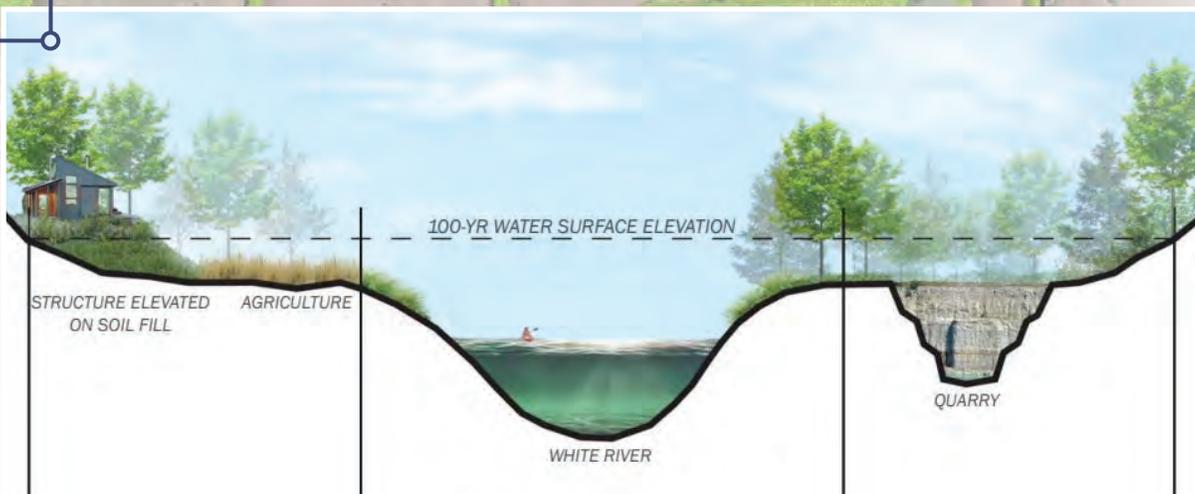
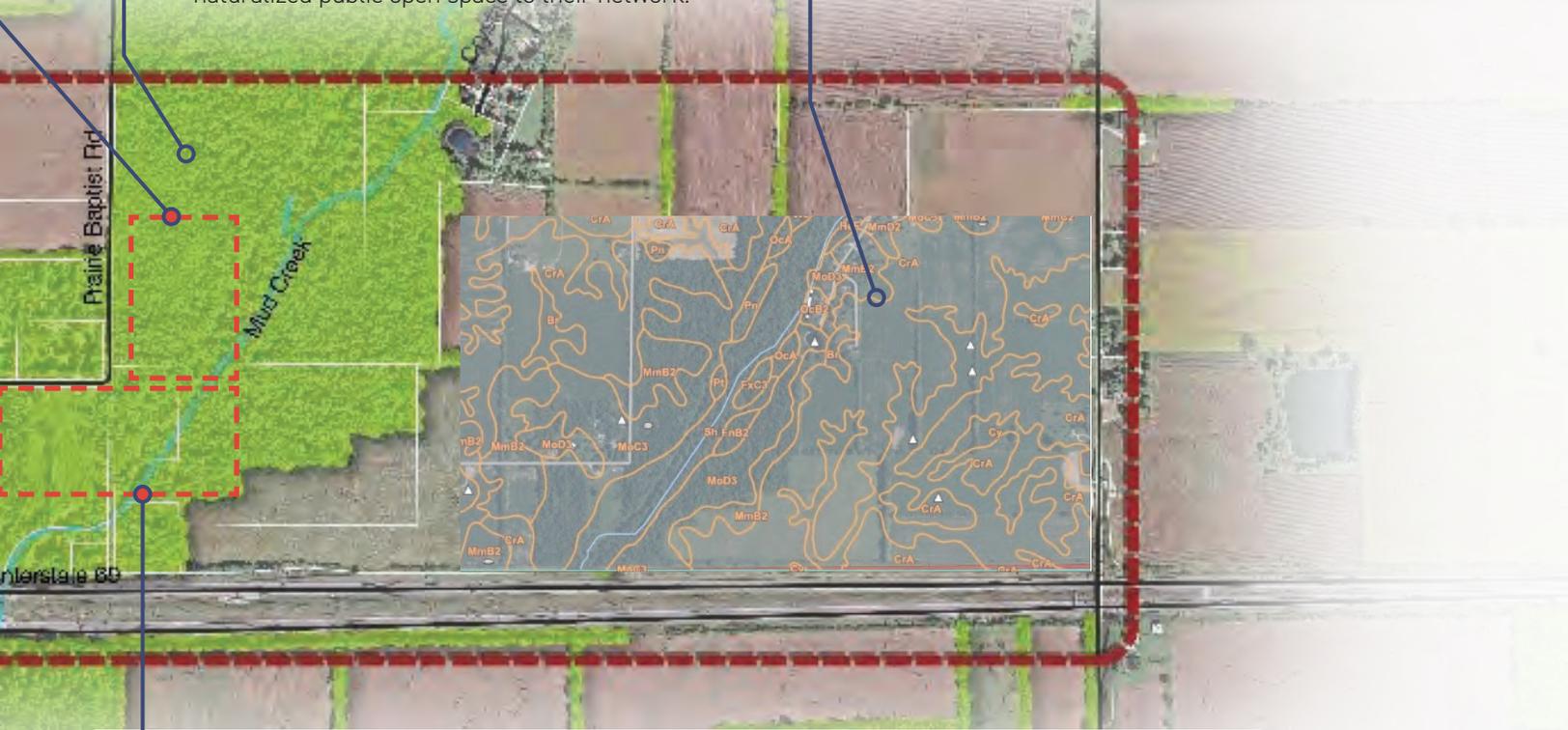
Innovation Mile Considerations:

- Mud Creek presents great opportunity for public open space preservation.
- While the City has many traditional parks like Finch Creek Park, there is a need to add naturalized public open space to their network.

TOPOGRAPHY AND SOILS

The site sits on relatively flat topography, ranging from 815' to 855' above sea-level. The most prominent feature is Mud Creek which bisects the site. The western half has more gentle terrain than the eastern half, although no significant topography exists besides that around Mud Creek.

The dominant soil profile, approximately 42% of the site, is of Crosby silt loam, a fine-loamy subsoil on shallow slopes. Second to this is Cyclone silt loam, which is found on 24% of the site. Both are described by the USDA's National Cooperative Soil Survey as "somewhat poorly draining."



SITE CONSTRAINTS



ELECTRIC

Noblesville's electrical services are provided by Duke Energy. Within the area slated for the Innovation Mile development, electrical lines are limited and sparse. Moreover, the current infrastructure is approximately more than 50 years old and single-phase. Given the potential demand creation of Innovation Mile, the electrical infrastructure in the area will need significant upgrading, build-out, and overall investment.

Land use designations (e.g. commercial, industrial, residential, etc.) require varying levels of power, making land use a primary driver of the level of electrical investment needed. To right size the power infrastructure, it will be critical to engage Duke Energy early on and throughout the development process to discuss land uses and their associated densities within Innovation Mile.

There is an electrical substation in the northwest corner of the district that is earmarked for distribution capability around Hamilton Town Center but not for a new development like Innovation Mile. It may be the case that a new substation will need to be planned to support the additional capacity needs of Innovation Mile.

Duke Energy noted that any new major loads (>10 MW) will require a new substation. Such loads would further impact land required for electrical facilities, approvals for cabling, and lead-time for transformers (approximately one or more years). In such case—and in order for Innovation Mile to be a critical deciding point for the new substation's area supply and location—Duke Energy will need solidarity on the project's commitment from the City of Noblesville.

Innovation Mile Considerations:

- The consideration of renewable energy supply and connection to the grid will require further review of policies dictated by Duke Energy.
- Duke Energy noted that any new major loads (greater than 10 MW) will require a new substation.
- Joint trenching with a telecommunications and cable network and other service providers during the initial lay-out of district services is recommended.



WATER

Innovation Mile's primary water provider is Indiana American Water (INAW), a subsidiary of American Water Company. The water utility company has a strong presence in Noblesville and has met the increasing demand caused by population growth within the last decade with enhancements and investments to the water infrastructure.

The company has committed to ongoing and future investments like an \$18 million water treatment facility and storage tank completed in 2020. The new plant can provide approximately three million gallons of filtered drinking water

and was constructed to be easily expanded as future demand requires. The facility is one of three treatment plants serving the Noblesville community. INAW Noblesville expects to continue expanding services in the future. This is a good sign for a large development like Innovation Mile, which will further expand the services required, because INAW signals it is prepared and can accommodate growth.

Since INAW's Noblesville system has a lot of new development occurring, a significant declining trend has not been observed and is not expected in the planning horizon.

Innovation Mile Considerations:

- There is limited availability of INAW provided services on the land where Innovation Mile will be located, thus INAW should be engaged as a partner during development to ensure new water infrastructure is right-sized for the share of land uses within Innovation Mile.

SEWER & STORMWATER COLLECTION & TREATMENT



The limits and scope of Innovation Mile's sewage responsibilities are spelled out within the Interlocal Agreement for Sewage Works between the City of Noblesville and City of Fishers, executed December 7, 2021. The figure in Appendix C represents the areas serviced by each provider as well as a planning level schematic for future sewer needs. While the western portion of the land served by Noblesville Utilities has an existing sanitary sewer with capacity for expansion of Redevelopment Area 1, a northern sanitary main will need to be constructed by the City of Fishers to service the rest. The area served by the Fishers utility will need to conduct a detailed analysis of the

Mud Creek Interceptor as to not exceed capacity of either the 24" Mud Creek Interceptor located within the slated area, but also the receiving Lift Station on Olio Road.

Enforcement of site stormwater requirements will be the responsibility of the City of Noblesville during the ULURP process. The figure in Appendix B represents a detailed planning level detention network with sub shed areas and routing to planned detention facilities. This preliminary detention pond layout provides a path forward for developers and the City of Noblesville to realize the constraints within Innovation Mile and provide guidance to maximize build out.

Innovation Mile Considerations:

- Early coordination with the relevant utilities is necessary to plan for sewer systems, stormwater collection, and associated treatment processes.
- Flow meters should be installed to track existing average flow rate and wet weather peaking factors of the Mud Creek sewer shed.
- A detailed survey should be conducted during development planning that considers the existing Mud Creek interceptor and how it may impact future build out capacity.



ACCESS

The current road layout around Innovation Mile dictates some key constraints for early site planning regarding service provider and utilities access as well

as the general mobility of future residents and tenants. Below are considerations and how they impact early development of the district.

Innovation Mile Considerations:

- The site is accessible solely from the western end via I-69. This may be leveraged for early on development of the western side for initial project phases. Areas for transportation and manufacturing on the east side of Mud Creek will hinge heavily on a new interchange or road network improvements. Without this new connection, potential development in the near-term is limited to the west side of Mud Creek.
- The limited access to the south side of I-69 also creates access constraints for the development. Due to this constraint, all service and utility provider connections will primarily be planned through the west end of the site. For consideration, this might cause mobility congestion.
- While there are new developments being constructed and planned for north of the site, there is a lack of connectivity to these areas because of the existing road network. In order to connect to these areas, Innovation Mile would require an access road or trail connectivity trail connectivity and would benefit from a new interchange at Cyntheanne Road.
- A noteworthy goal of the Innovation Mile district is to be a pedestrian-friendly, walkable, and bikeable district. To accomplish this, an objective of the district layout is to incorporate mixed-use trails and bicycle paths to serve non-vehicular uses. While new paths can be planned for and built within the district, there is poor bike and pedestrian path connectivity into and out of the site currently. Therefore, the building of new pedestrian infrastructure should be planned in accordance with other initiatives to improve this connectivity across the City of Noblesville so a greater connectivity system is created.

EMPLOYMENT AND OCCUPATION CONDITIONS

Employment Analysis

A workforce analysis was conducted in order to understand the competitive position of the Innovation Mile district. Ability to effectively recruit qualified employees by offering a convenient location and short commute is a key consideration companies will consider when choosing to locate in the district. Using US Census Bureau data from Country Business Patterns 2019 (latest available year) and 2009 (10 years prior) data, an employment analysis of Hamilton County illustrates a highly educated and technically skilled workforce living and working on the northern and northeastern sides of the Indianapolis metro region. Workforce analysis by 2-digit NAICS Code shows three distinct industry clusters. The results of this analysis are shown in Figure 3-1, and industries can be described by four categories: up and coming, active, mature, and off-radar.

1. **Up & Coming:** Above-average growth; below-average concentration (upper-left quadrant in Figure 3-1).

quadrant in Figure 3-1). Industries in this quadrant are in a growth phase, building on a critical mass of talent before reaching saturation.

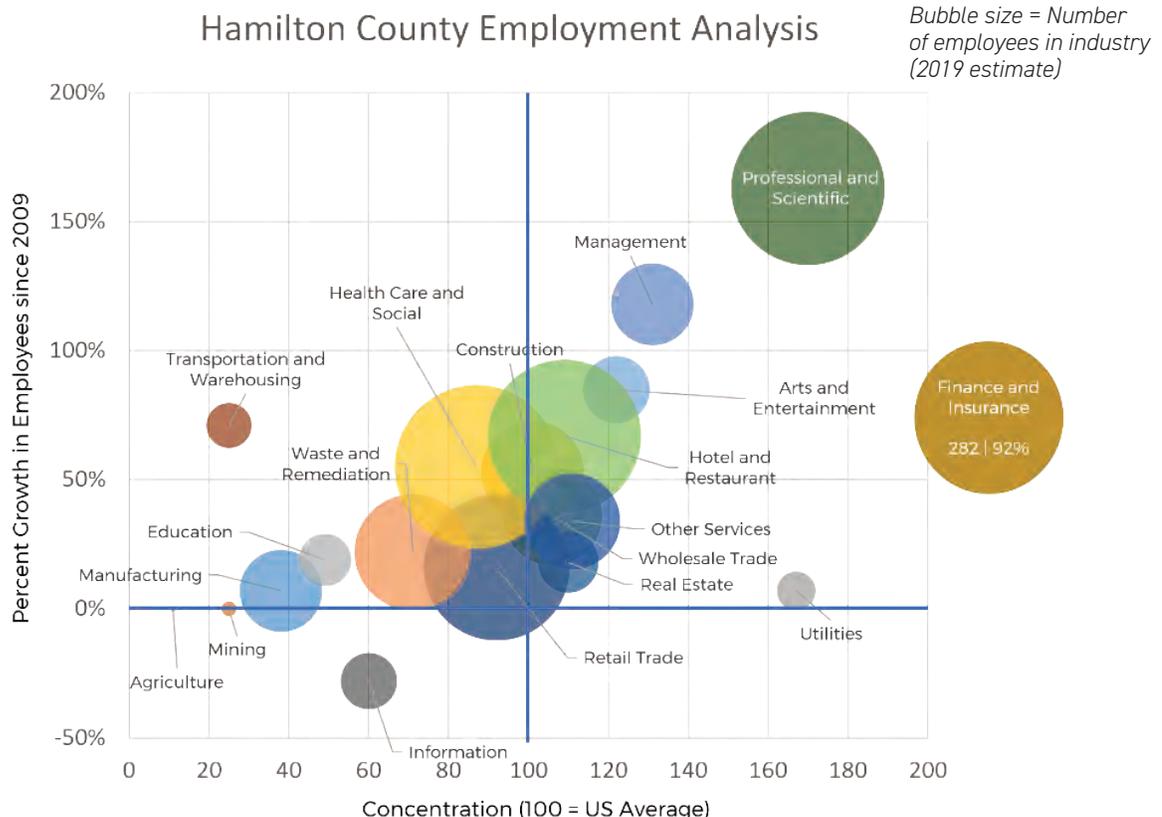
- » Health Care and Social
- » Transportation and Warehousing

2. **Active:** Above-average growth and concentration (upper-right quadrant in Figure 3-1). These industries often represent the market's specialization(s), with the deepest talent pools and brightest growth forecasts. Competition is often fierce, placing growth pressure on wages.

- » Professional and Scientific
- » Finance and Insurance
- » Management

3. **Mature:** Below-average growth; above-average concentration (lower-right quadrant in Figure 3-1). Industries are either very large and experiencing slow growth on a

FIGURE 3-1. Hamilton County Employment Analysis 2009 - 2019



percentage basis, or simply decreasing in competitiveness to other, "hotter" markets.

» None

- 4. **Off-radar:** Below-average growth and concentration (lower-left quadrant in Figure 3-1). Industries in this quadrant are not generating much activity. There is often a tiny pool of specialized talent but companies can be protected from competition.

» Information

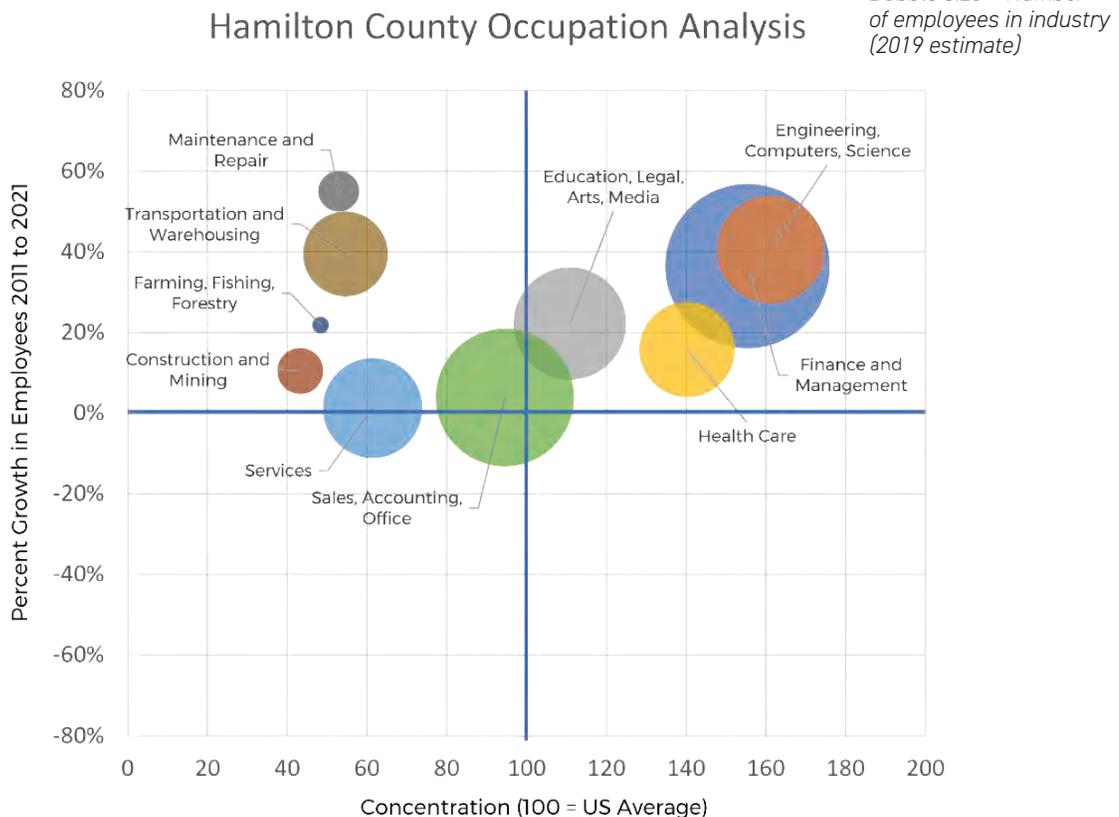
Occupation Analysis

While Employment Analysis is based on job location, Occupation Analysis identifies where workers live. Using US Census Bureau American Community Survey (ACS) 2011 and 2021 data, the analysis indicates that most people with jobs on the northern and northeastern sides of the metro region also live on the northern and northeastern sides of metro region. As people generally like to keep their commutes as short as possible, these job-housing clusters typically form around job centers such as the

proposed Innovation Mile district. By analyzing percent growth of employees between 2011 and 2021 versus employee concentration in the area, it is possible to determine four distinct industry categories:

- **Up & Coming** (upper left quadrant in Figure 3-2)
 - » Maintenance and Repair
 - » Transportation and Warehousing
- **Active** (upper right quadrant in Figure 3-2)
 - » Engineering, Computers, Science
 - » Finance and Management
 - » Education, Legal, Arts, Media
 - » Healthcare
- **Mature** (lower right quadrant in Figure 3-2)
 - » None
- **Off-radar** (lower left quadrant in Figure 3-2)
 - » None

FIGURE 3-2. Hamilton County Occupation Analysis 20011 - 2021





EXISTING CONDITIONS KEY TAKEAWAYS

The following are key takeaways from the Existing Conditions Analysis:

Regulatory and Policy Conditions:

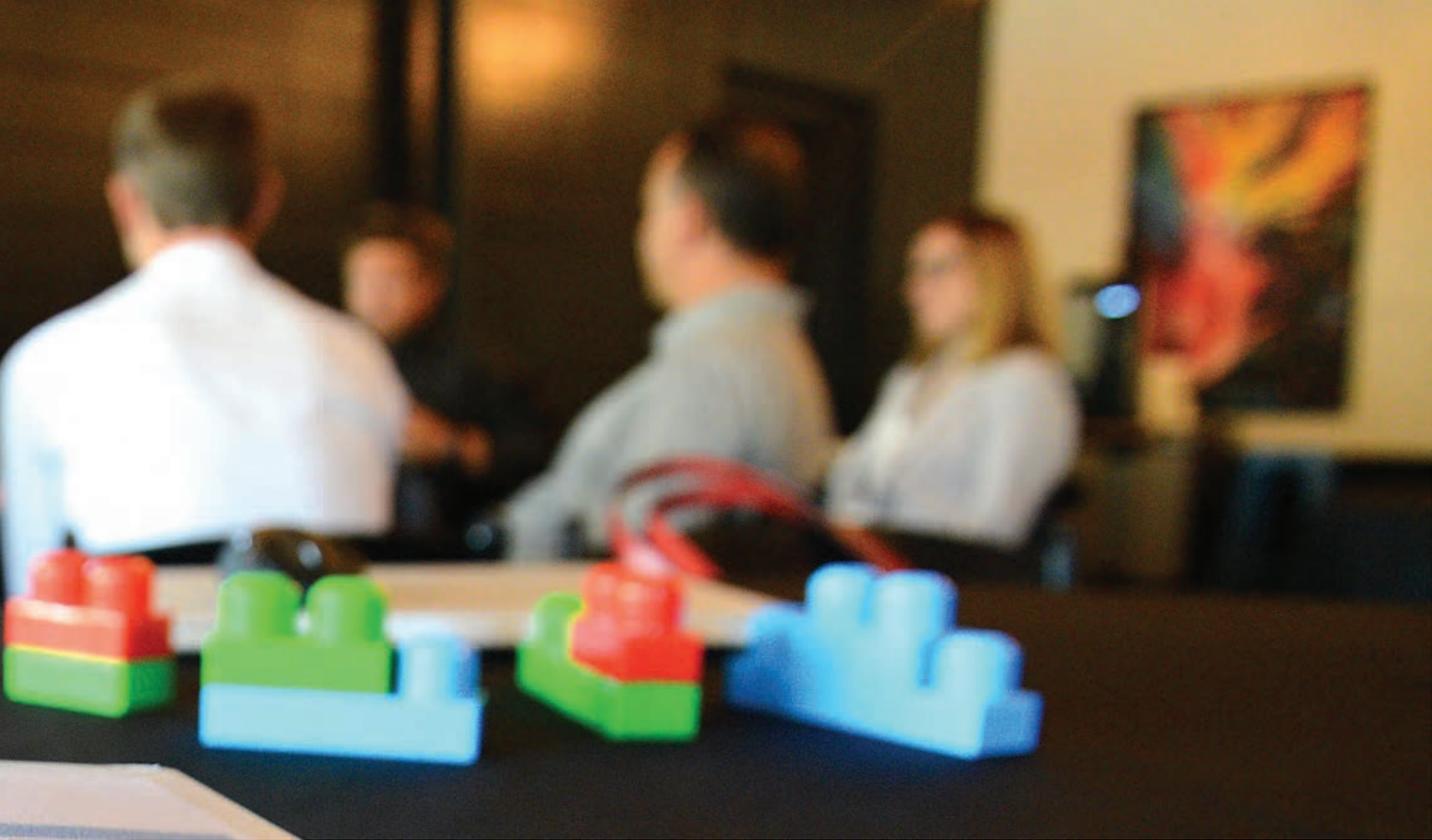
- Innovation Mile provides the opportunity to address several of the most critical needs identified in existing City of Noblesville plans and polices, including:
 - » *Meeting the demand for "suburban mixed use housing."*
 - » *Providing high quality jobs and housing for the post-grad millennial demographic that have played a major role in Noblesville's population increase.*
 - » *Bringing more jobs in innovative fields to Noblesville.*
 - » *Meeting the growing demand for park space.*
 - » *Improved access to non-motorized transportation options.*
 - » *Build on existing land use plan and foster pattern more conducive to a campus-type environment.*

Physical Conditions:

- Innovation Mile has an opportunity to take advantage of unique site conditions along Mud Creek and its peripheral floodplain.
- The topography of the site is mostly flat ranging from 815' to 855' above sea level.
- Building within the Mud Creek floodplain will be limited to pass through uses such as bridges, trails, and retained natural spaces.

Site Constraints:

- There is a distinct lack of existing utilities, sewage, and water infrastructure that will need to be addressed during site development.
- The City of Noblesville should consider Duke Energy, Indiana American Water, and the Fishers Water Quality Team partners in addressing site constraints. Doing so will provide an opportunity for design efficiencies and cost savings.
- Lack of transportation access poses an opportunity for improved vehicular and non-motorized connectivity.



Employment and Occupation Conditions:

- People in the labor pool who reside in Hamilton County specialize most in Scientific, Technical, Finance, and Management.
- The growth in employment in tandem with the growth in population over the past decade in Hamilton County indicates that Innovation Mile has strong talent pool to build from a variety of industries. The labor pool ties very well to the types of land uses (mixed-use, commercial, residential, retail, and potential for industrial uses) that might exist within the district.
- Noblesville, and therefore Innovation Mile, is in a strong position to pursue innovation companies with a science, technology, engineering, and mathematics (STEM) focus.
- The targeted talent pool within the Central Indiana region exists primarily in the northern section of the greater Indianapolis metro area. This means that commutes for this talent pool are compatible with the location of Noblesville and Innovation Mile.
- A potential hurdle for attracting STEM and other targeted labor pools to Innovation Mile is pivoted on marketing: while the labor pool exists, the ecosystem of STEM and innovation needs to be promoted to a wider audience.



04

MASTER PLAN

INTRODUCTION TO THE MASTER PLAN

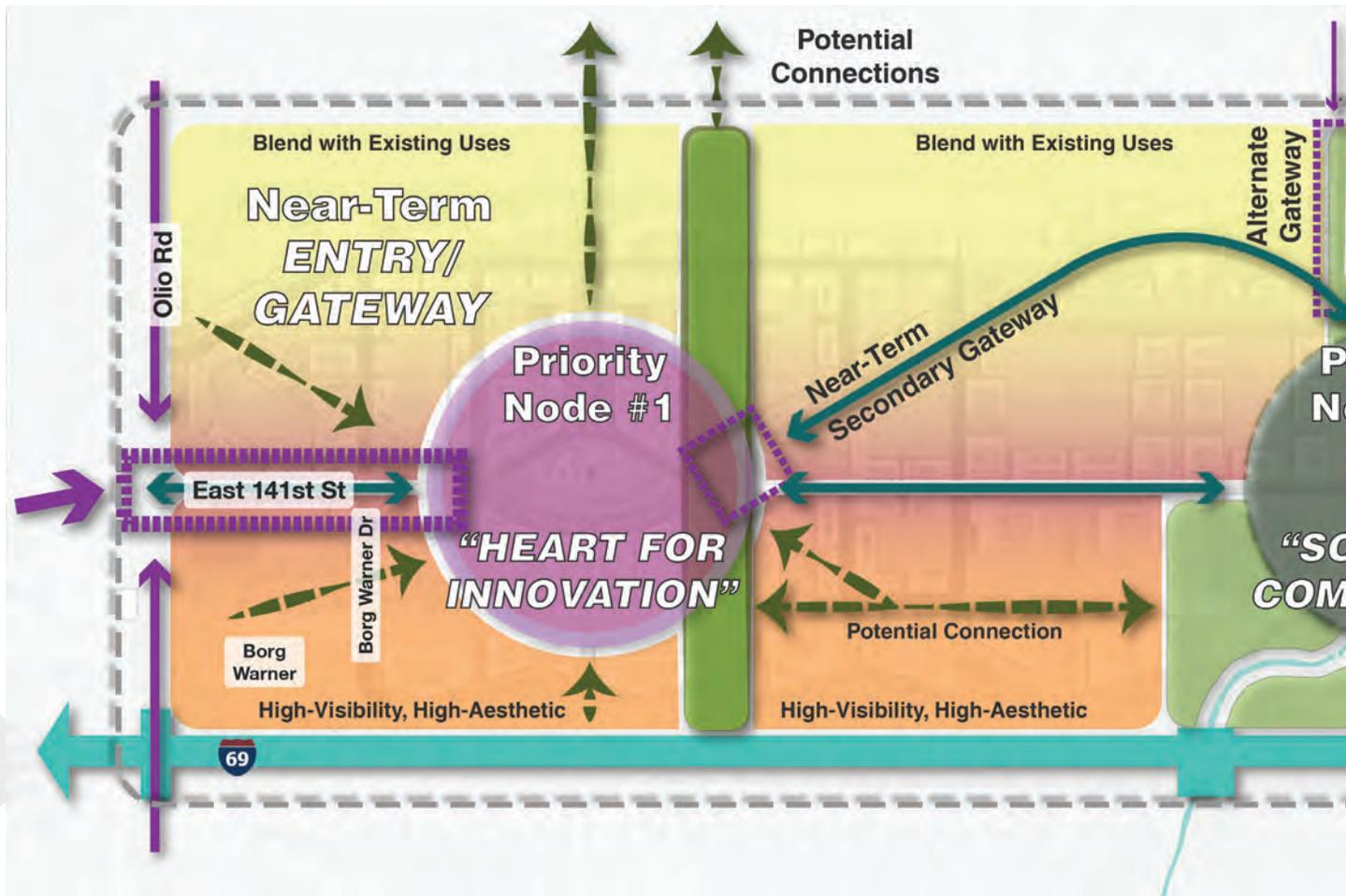
Working through the visioning process with the City and building on the existing conditions review, the Innovation Mile Master Plan provides a comprehensive and strategic physical and policy framework for the development and growth of the district to intentionally foster innovation, creativity, and entrepreneurship. The master plan also seeks to establish an environment that will bring new businesses, research institutions, and stakeholders together in a unique campus environment that will encourage collaboration, the sharing of ideas, and leveraging of resources to the benefit of all within the area.

The driving concept behind the Innovation Mile Master Plan is to create a dynamic and thriving innovation hub and community of innovators who can work together to drive progress in their respective fields and further the economic goals for the City of Noblesville. The Innovation Mile

Master Plan provides the policy infrastructure necessary to support innovation and collaboration to help unlock the full potential of the creative and entrepreneurial individuals who will call it home.

The Innovation Mile Master Plan is premised on a series of detailed innovation strategies that include land use, mobility, smart district, sustainability, and placemaking strategies. The strategies are more detailed layers of policy, requirements, and recommendations that will aid the City and Redevelopment Commission Agency in implementation of the master plan on an incremental and day-to-day basis. The innovation strategies are expanded upon in later chapters of this report. This section of the report will provide an overview of the urban design principles and concept plan for the Innovation Mile district.

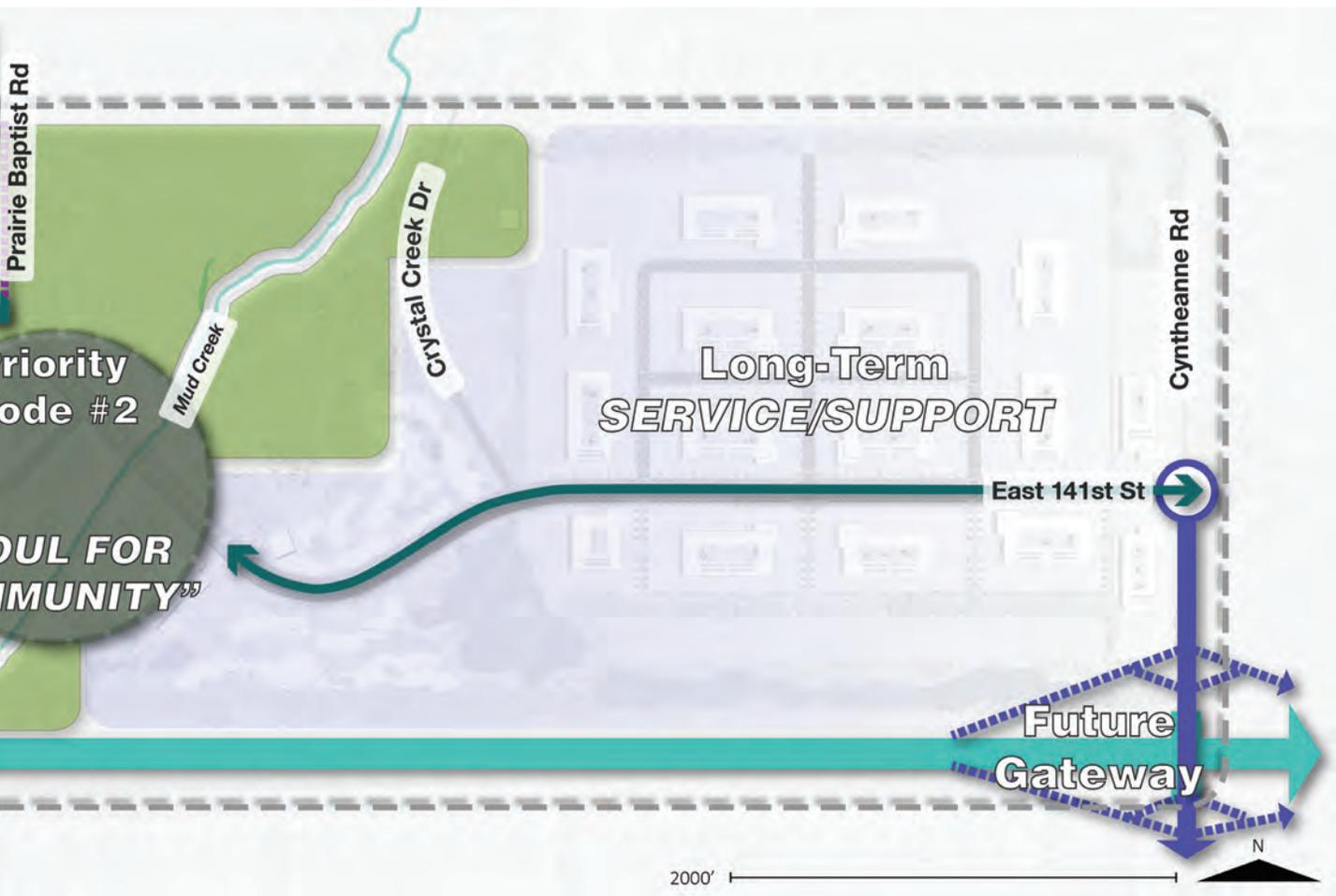
FIGURE 4-1. Map of the Urban Design Principles



URBAN DESIGN PRINCIPLES

The master plan concept and strategies are founded on a collection of urban design principles that were developed and evolved with the City and stakeholders during the master planning process to achieve the vision for the Innovation Mile area. The urban design principles are reflective of the development, land use, and infrastructure strategies and other physical relationships that will be important to achieve the vision set forth in this master plan. Urban design principles range from the identification of nodes and areas of activity to links and connections to adjacent areas such as Hamilton Town Center and location of gateways.

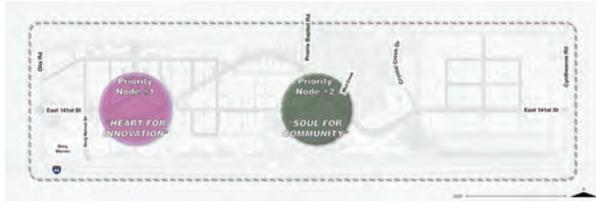
No plan will evolve precisely as drawn on a master plan, thus it is the intention of these urban design principles to provide the City with overall guidance on the physical strategies that have been employed in the master plan concept. Should the need arise to reconsider layout and massing or new opportunities for development arise during implementation, these principles can be utilized by the agencies to review and debate the merits of any given proposal and its ability to help achieve the vision for the master plan.



Furthermore, the urban design principles are not regulatory, but rather they are aspirational and advisory in nature. The following urban design principles apply to the Innovation Mile Master Plan:

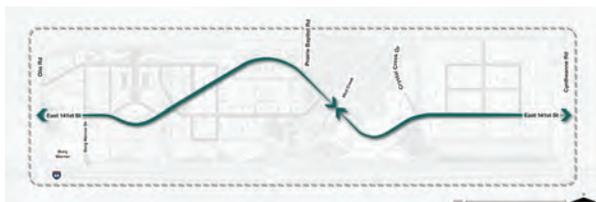
- **Principle #1:** Create distinct nodes of activity within the district.
- **Principle #2:** Provide a unique east-west connection through the district.
- **Principle #3:** Foster a "heart" and core for innovation in the district.
- **Principle #4:** Expand development north of the district core.
- **Principle #5:** Create strong north-south connections to the district core.
- **Principle #6:** Establish a "soul" for the district near Mud Creek.
- **Principle #7:** Provide a hierarchy of gateways at district boundaries.
- **Principle #8:** Increase connections between the district and the adjacent areas.

Principle #1: CREATE DISTINCT NODES OF ACTIVITY WITHIN THE DISTRICT.



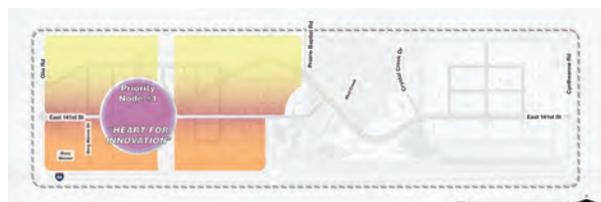
The master plan proposes to create two distinct nodes of activity and development within Innovation Mile, including a new “Heart for Innovation” along East 141st Street near the City-owned parcels and a “Soul for the Community” near the Mud Creek area. By creating distinct anchors along 141st Street, the plan seeks to unite the 2-mile district into a more cohesive place that serves growth for innovation uses and serves as a major amenity for the existing community.

Principle #2: PROVIDE A UNIQUE EAST-WEST CONNECTION THROUGH THE DISTRICT.



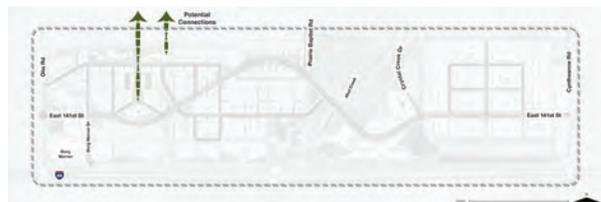
The master plan proposes to provide a unique east-to-west connection through the Innovation Mile district along 141st Street to link the district from Olivo Road to Cyntheanne Road. By transforming 141st Street into a special experience that contrasts the linear and regularized system of roadways in the surrounding areas, Innovation Mile can build a unique character and identity for the area while also linking the gateways to the nodes through a variety of diverse land uses proposed for the area.

Principle #3: FOSTER A “HEART” AND CORE FOR INNOVATION IN THE DISTRICT.



The master plan proposed to focus and facilitate more intense land use development and public space infrastructure both north and south along 141st Street on City-owned parcels to serve as a catalyst for investment in the area and “heart” of innovation within Innovation Mile. Realizing this anchor at the center of the district will establish a new campus-like environment, build the brand and identity, and foster growth north and south of the core. The “Heart” of the district will emphasize activated public spaces and outdoor dining.

Principle #4: EXPAND DEVELOPMENT NORTH OF THE DISTRICT CORE.



The master plan proposes to expand development, mobility, and connectivity out from the core of Innovation Mile to leverage visibility from I-69 to the south and integrate with future planned uses to the north. Increase flexibility for innovation south of 141st Street to allow a range of densities and uses while treating I-69 as prime frontage. Increase density and mixed-uses north of 141st Street to leverage the core while actively transitioning uses to better integrate with planned development in the future.

Principle #5: CREATE STRONG NORTH-SOUTH CONNECTIONS TO THE DISTRICT CORE.



The master plan proposes to establish strong pedestrian, bicycle, and mobility connections from Innovation Mile to the north by utilizing the existing electric utility easement and creating a signature street that links the innovation core with the center of the planned development. Multiple connections to the north will enhance mobility, provide better access, increase use of active transportation, and enhance the campus-like experience that Innovation Mile is seeking to create.

Principle #6: ESTABLISH A “SOUL” FOR THE DISTRICT NEAR MUD CREEK.



The master plan proposes to preserve and enhance the “soul” for Innovation Mile and create a gathering place for the community near 141st Street in the Mud Creek area. This area will contain a variety and mixture of uses and amenities that are easily accessible from other areas of the district including preservation of forests, restoration landscapes, nature trails, and farm play areas north and more active uses such as boardwalks, recreation, gathering and picnic areas, creek play area, and disc golf course to the south.

Principle #7: PROVIDE A HIERARCHY OF GATEWAYS AT DISTRICT BOUNDARIES.



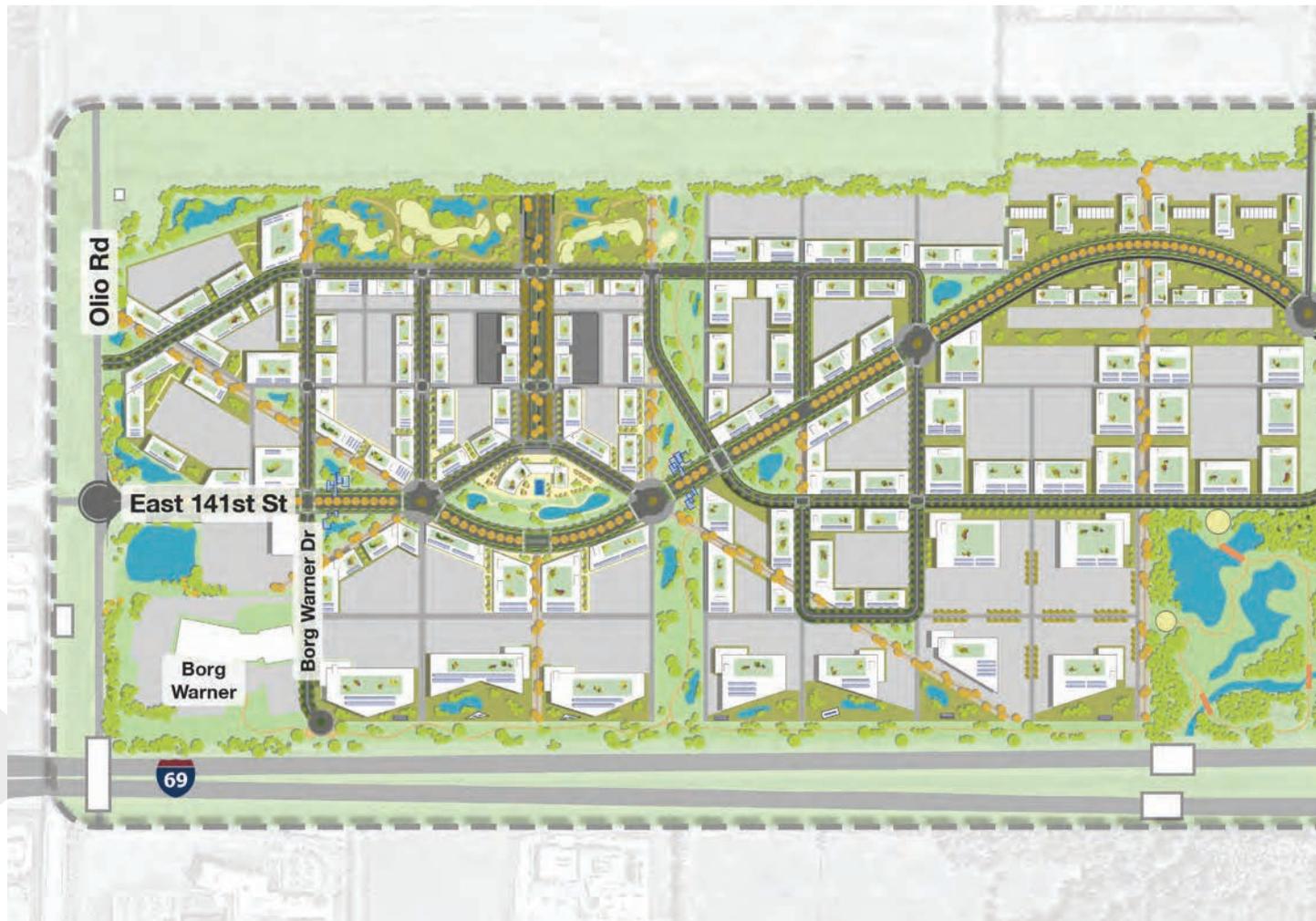
The master plan proposes to create a hierarchy of gateways at the boundaries Innovation Mile that will provide a distinct identity for each point of entry. To the west, the primary entrance from Olivo Road will immediately immerse visitors in a mixed-use, innovative environment with active spaces and places. To the north, a more residential and conservation environment creates a soft entrance to the area that transitions into the core. Finally, to the east, the future gateway provides a more industrial and freight-focused entrance to serve the entire district in the long-term.

Principle #8: INCREASE CONNECTIONS BETWEEN THE DISTRICT AND ADJACENT AREAS.



The master plan proposes to create new multi-modal connections between Innovation Mile and adjacent destinations such as the Hamilton Town Center, St. Vincent Fishers Hospital, Ruoff Music Center, and eventually to Downtown Noblesville and other destinations. A proposed circulator linking the destinations and places internally and externally will reduce congestion, improve sustainability, and provide the type of local mobility options that are desirable by visitors and tenants in Innovation Mile.

FIGURE 4-2. Innovation Mile Concept Plan Map



CONCEPT PLAN

To create a dynamic business and technology hub in the City of Noblesville, it will be critical to transition the physical environment from rural farmland into a sustainable campus experience, including a transformation of land use practices and infrastructure on the site in a way that will build a distinct sense of place and create a space for creativity and collaboration. Each development decision and infrastructure project should contribute to this sense of identity, interconnectivity and walkability through projects that actively build and shape the public realm and brand for Innovation Mile.

The Innovation Mile concept plan seeks to do this by rethinking the existing east-west alignment of 141st Street to establish a unique curvilinear street that creates special moments along its length and organizes the site in a manner that will link all the major destinations within the district. To the west, a new "heart for innovation" with a large multi-use public plaza establishes an anchor for the district along 141st Street and new gateway to the district. The district core is built around a corporate headquarters and mixed-use area and an interconnected grid of streets moving



north, along with a new special boulevard street that will eventually link north into a future development. To the south, campus moves from corporate headquarters to more flexible innovation uses such office, light manufacturing, and other range of commercial uses.

Moving east from the central square, 141st Street moves north from its original alignment framing a new mixed-use office and corporate headquarters district that is linked north and south by a new trail system in the existing utility easement. New public spaces, walkable streets, and shared pedestrian- and bicycle-only paths link the areas visually and physically back to the

innovation core. To the northwest of innovation core, similar corporate headquarters and innovation uses fill out the western portion of the site and create new walking and biking links Ruoff Music Center and establish a mixed-use entry that will create stronger relationships to the existing BorgWarner building and on-going City projects.

Moving to the east, commercial and office uses transition to more framework uses flanking 141st Street and eventually immerses the district into a new "soul for the community" that is centered around Mud Creek. To the north of 141st Street, the area should be conserved, and



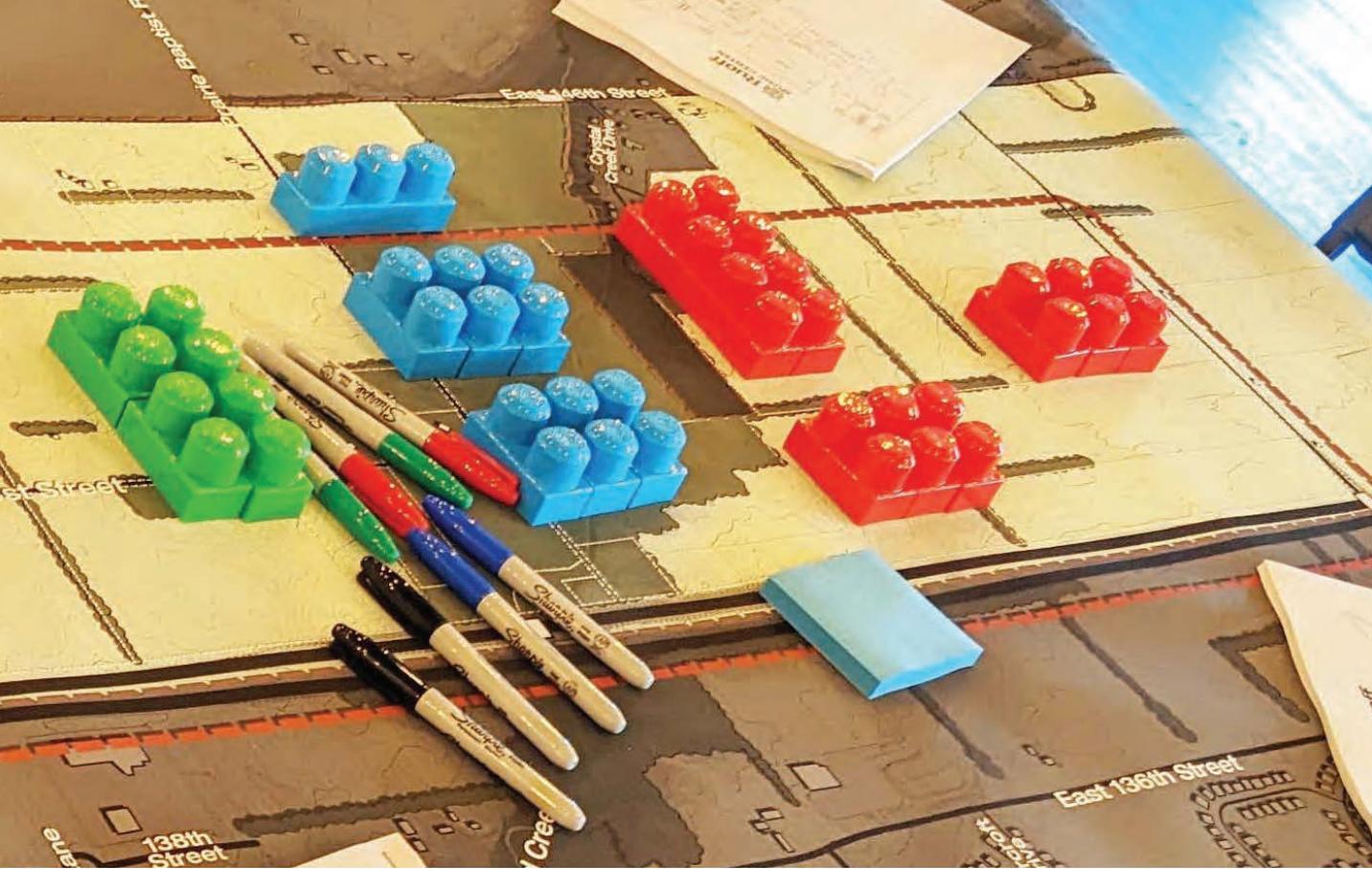
the environment restored with low-impact trails and nature play activities that provide passive amenities for the community. To the south of 141st Street, a new community and nature center will connect with trails, boardwalks, and viewing areas, as well as disc golf, active recreation opportunities, a preserved cemetery, and other lively uses accessible to the public. A new bridge crossing Mud Creek and a separate shared-use path will provide access from the more eastern areas of the district back to the innovation core.

Continuing to the east, the Mud Creek area opens up from the woodlands and 141st Street returns to its original intended alignment connecting all the way to Cyntheanne Road. The easternmost area of Innovation Mile is considered a long-term planning opportunity and is somewhat dependent upon the addition of a future interchange at Interstate 69.

Given improved access to I-69, the area is recommended for expanded innovation uses such as light industrial, flexible innovation, distribution, and larger footprint uses that are supportive of the Innovation Core.

The concept plan for Innovation Mile and associated strategies in the following section provides guidance on layout for land use, street design, and open spaces within the district, as well as guidance on specific tools for mobility, technologies, sustainability, and placemaking that should be including during detailed design of infrastructure, development proposals, and during plan commission reviews.

Land Use Strategies: This element of the master plan provides the requirements and district recommendations for development including building height, setback, ground floor use, upper floor use, and requirements for land use character and urban form, as well as



other requirements for building typologies that include floorplate sizes, floor heights, façade articulation, transparency, lighting, landscaping, and other specific requirements for buildings.

Mobility Strategies: This element of the master plan provides the requirements and district recommendations for interconnectivity within the campus, such as the basics for subdividing land, the design and configuration of streets, location and connectivity of the trail network, and location for a circulator.

Smart District Strategies: This element of the master plan provides the requirements and district recommendations for new technologies and smart systems that will create an environment to attract investors, foster innovation, and create an environment that truly inspires creativity.

Sustainability Strategies: This element of the master plan provides the requirements and district recommendations for improvement that will enhance resiliency of the site and provide more clarity on sustainable infrastructure systems and more opportunities for sustainable live-work-play lifestyles.

Placemaking Strategies: This element of the master plan provides the requirements and district recommendations for open spaces, parks, and shared spaces within the campus including the location and type of amenities, seating, landscaping, public art, branding, and other elements that will boost district identity and provide active and exciting destinations for visitors and residents alike.



A view of the proposed "heart" of Innovation Mile along 141st street.

05.

INNOVATION STRATEGIES

The following strategies apply to the Innovation Mile Master Plan and should be utilized during future phases of work to ensure the vision for the area is accomplished and that the actions of implementation agencies and coordination of private development within the area are aligned. The five innovation strategies include the following:

LAND USE STRATEGY

MOBILITY STRATEGY

SMART DISTRICT STRATEGY

SUSTAINABILITY STRATEGY

PLACEMAKING STRATEGY



FIGURE 5-1. View of the heart of Innovation Mile

LAND USE STRATEGY

Introduction to the Land Use Strategy

The master plan concept is built on a future land use strategy that will help to realize the vision over the long term and guide agency decision-making regarding the quality and character of future development within the District and along I-69. The intention of this future land use strategy is to create a new hub for innovation on the city-owned parcels located immediately adjacent to 141st Street that will foster the growth of Innovation Mile from Olio Road to Cyntheanne Road over time.

The land use strategy was designed to provide the City with a flexible approach to land uses that will require specific uses in some areas

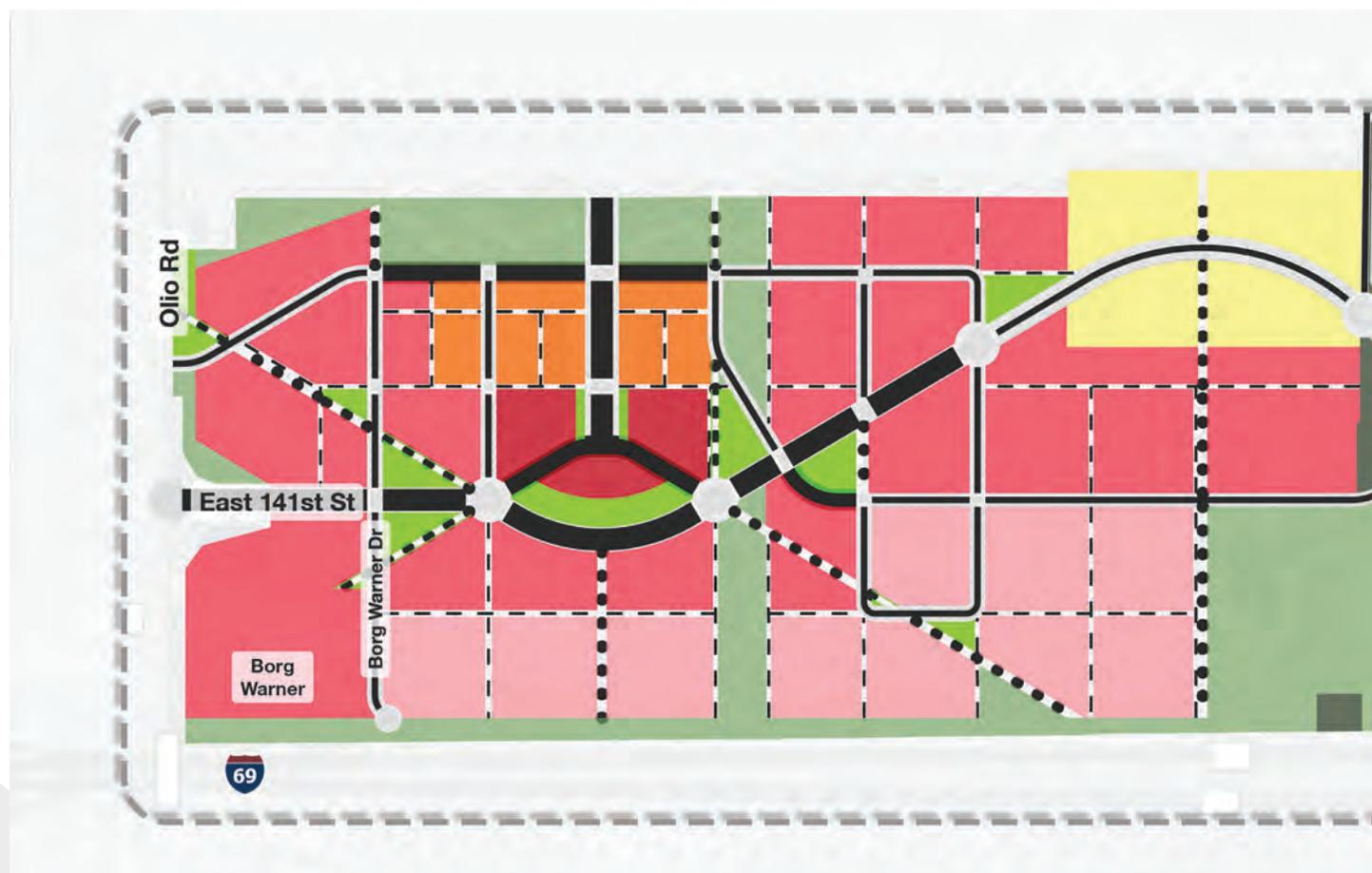
and allow for market responsiveness in others. For instance, the core along 141st Street will become the center and “heart” of the innovation district, thus it will be important that the City require active ground floor retail, commercial spaces, and lively entertainment spaces that will contribute to the vibrancy of the new public square and impact the immediate experiences and perceptions of the area and transform market potential. Additionally, areas of the district in which the City invests in infrastructure should be leveraged to the maximum extent possible so that new development will create the most economic impacts.



Beyond these more use-regulated areas, the land use strategy seeks to provide the City a broad range of flexibility with respect to land uses and associated design standards. This is accomplished by requiring more intense uses in areas where the City wants to create activation and remaining more flexible in others. For example, the City will allow ground floor commercial use along I-69 or along the revised route for 141st Street, but will not require it to be provided in all cases. By retaining the opportunity to include more intense land uses the City allows for flexibility for the development community to respond to the market but do not preclude them from providing a unique or engaging new type of use outside of the core.

As part of this land use strategy, a system was created to provide the City both flexibility with regards to land use and more specificity with regards to the quality and character of architecture within the area. Quality and character are often debatable; however, there are many baseline and fundamental land use controls that can be put in place that will support this project goal, specifically the use of building types with clear requirements for form, massing, orientation, transparency, and other external features. The building types are also allowed within multiple different land use categories, thus increasing flexibility for the City and development community. The land use strategy is illustrated on the future land use plan on this page.

FIGURE 5-2. The Future Land Use Plan Map



Legend | Land Uses

- Campus A - Mixed-Use Headquarters / Office
- Residential A - Mixed-Use Residential
- Public Space A - Conservation Areas
- Campus B - Headquarters / Office (includes all allowable in Campus A)
- Residential B - Multi-Family Residential
- Public Space B - Unprogrammed Open Space Areas
- Campus C - Headquarters / Office OR Industrial Flexible (includes all allowable in Campus B)
- Light Industrial / Manufacturing
- Public Space C - Formal Landscape / Hardscape / Multi-Use Areas
- Community / Institutional

THE LAND USE SYSTEM

Overview of the Land Use System Components

Based on the principles of form-based coding best practices, the land use system is constructed using four fundamental components: a future land use plan, a street hierarchy, character districts, and building typologies. Each component provides an

increasing level of detail regarding the location, character, and detailed requirements for development within the area. The land use strategy and transportation strategy for the area are intentionally integrated and an overview of these components are as follows:

TABLE 5-1. Land Use System Components

FUTURE LAND USE PLAN	STREET HIERARCHY	LAND USE CHARACTER	BUILDING TYPOLOGIES
<ul style="list-style-type: none"> ▪ Assigns the land uses within the study area by parcel. ▪ Identifies the applicable street hierarchy applicable to each parcel. 	<ul style="list-style-type: none"> ▪ Establishes future network of streets to frame growth. ▪ Provides a reference point for assigning more detailed requirements. 	<ul style="list-style-type: none"> ▪ Establishes intention and unique character within the area. ▪ Provide requirements for land uses such as heights, setbacks, and uses. 	<ul style="list-style-type: none"> ▪ Establishes a range of allowable building typologies by character district. ▪ Provides requirements for buildings such as floorplates, facades, projections, transparency, and materials.



About the Future Land Use Plan

The main organizing principle behind the land use strategy is the proposed street network. The street network, which is further detailed in the mobility strategy section of this report, will provide a framework for the growth for the area and character is defined based on a parcels relationship to that network. The role of the future land use plan is to identify each (future)

parcel of development within the area and the associated character district that will help achieve the vision for the area. The future land use plan also identifies the street types that are associated with each parcel that will guide more specific requirements for the character districts and building typologies.



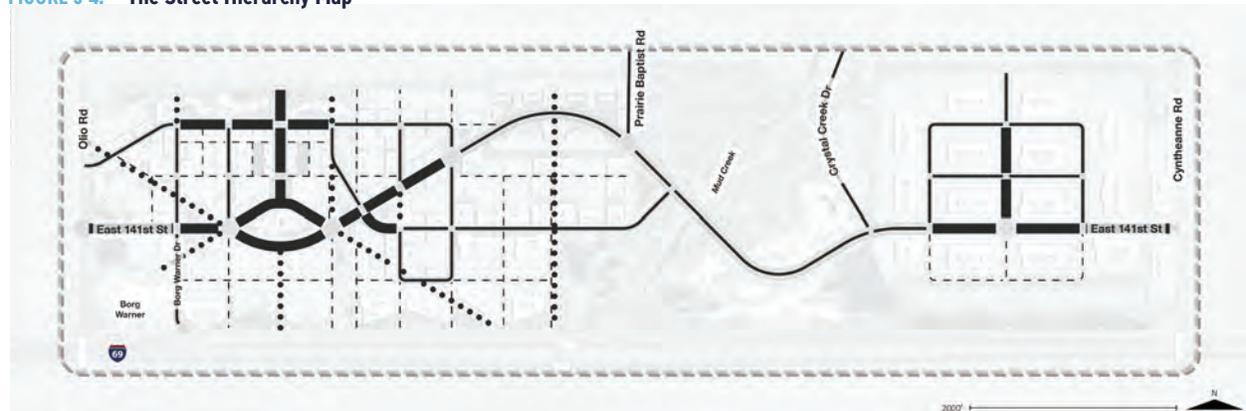
FIGURE 5-3. View of the Special Boulevard Street Looking North Through Innovation Mile

About the Street Hierarchy

The proposed street network throughout the district uses four street types to organize the land uses and assign more detailed requirements. This street hierarchy is intended to inform the land use and development related to the street and open space network by organizing the streets into an order based on function, connectivity, capacity, and character. At the highest level, primary streets are a major determinant for character and activity within Innovation Mile. Primary streets are generally located on major public spaces and shape the core brand and identity for the area, including streets such as East 141st Street and the new signature boulevard connecting north into future development.

Other streets seek to provide additional modes of transportation, allow for service, and access, and increase flexibility for the development moving forward. For example, potential alleys are provided as a tool to allow individual decisions regarding land subdivision to increase access, hide parking internal to the blocks, and allow for flexibility in the overall footprint of development. Depending up on the type of street and the types of intersecting streets, the regulations for land use and building type requirements are adjusted to ensure that a minimum level of urban design and architectural sensitivity is provided throughout Innovation Mile

FIGURE 5-4. The Street Hierarchy Map



Legend | Street Hierarchy

- Primary Street
- ▬ Secondary Street
- Non-Motorized Street
- - Potential Alleys

The street hierarchy applicable to Innovation Mile includes:



PRIMARY STREETS

Primary streets are generally key streets and rights-of-way where we want to require and encourage activity and use that captures the brand and identity of Innovation Mile. These are also streets that would necessitate more “zero lot line” or urban frontages, lots of entrances, increased transparency, and other requirements that will shape a vibrant public realm. The role of the primary street is to maximize the impacts of economic development within the area and serve as main streets through the area connecting Olio Road to Cyntheanne Road. These streets must balance vehicular and non-motorized traffic and may necessitate a range of traffic calming tools (such as speed tables near the public square) and safety measures.



SECONDARY STREETS

Secondary streets generally support and service streets and rights-of-way where the City seeks to retain some flexibility to serve the district, provide loading and service, access parking, and remain flexible to market needs. When interacting with primary streets or non-motorized streets, the role of the secondary street is to maintain connectivity and provide ancillary economic development impacts through the addition of satellite nodes throughout the innovation district.



NON-MOTORIZED STREETS

Non-motorized streets consist of shared use areas and rights-of-way throughout the district that should be included to preserve and enhance cross-district connectivity for pedestrians, cyclists, and other non-motorized means. Non-motorized streets should create links between nodes, key buildings, and public spaces to create a cohesive district.



POTENTIAL ALLEYS

Potential alleys or rights-of-way are included to provide future development with options in terms of land subdivision and access points for parking, loading, service, and other identified needs. Potential alleys will help to break down blocks and foster increased walkability due to the reduction in overall block size and scale.

FIGURE 5-5. View Looking South Over Innovation Mile





About the Character Districts

Character districts are the first point of regulation within the land use system. On principle, there are five types of character within the area: campus uses, residential uses, light industrial/manufacturing use, community/institutional uses, and public spaces. Some of these different character districts are subdivided into additional categories based on slight variation in character. For instance, there are three types of campus uses and two types of residential uses. The intention of the character district element is to provide a base level of requirements for urban form and structure within the Innovation Mile area, including more specific requirements for building height ranges, building façade setbacks from primary and secondary streets, upper floor building setbacks, allowable ground floor uses, and allowable upper floor uses. Each character district includes a clear set of criteria that should be applied during planning review.

One specific point to note about the character districts is regarding the proposed campus type uses. The campus uses—consisting of mixed-use corporate headquarters, offices, light manufacturing uses, and other innovation uses—have been intentionally structured to allow for

flexibility for the developers. This means that the City have included strong requirements for active ground floor uses and more impactful urban form within the core of the area where the City wants to make the most impact, while also leaving flexibility for developers to make incremental decisions outside of the core based on market demand and tenant specifications or needs. For example, Campus Type 1 is the most intense district requiring ground floor commercial, retail, and active spaces. While Campus Type 2 does not require these types of uses, it also does not preclude a developer from providing these if that is an option. The City accomplish this by allowing any type of use allowed in Campus Type 1 to be provided in Campus Type 2. Similarly, Campus Type 3 uses are the most flexible, allowing developers to introduce more manufacturing and industrial type uses that might be supportive of the innovation district. Within Campus Type 3 we allow any use within Campus Type 2 which allows any use within Campus Type 1. This strategy that is intended to create an innovation core without sacrificing opportunities that may arise during implementation and unique developments outside the core that will capture the mission of the master plan.

Land Use Character applicable to Innovation Mile include:

- Campus Type 1 Uses (C1) – Innovation Core
- Campus Type 2 Uses (C2) – Innovation Gateway
- Campus Type 3 Uses (C3) – Innovation I-69
- Residential Type 1 Uses – Mixed-Use Residential (R1)
- Residential Type 2 Uses – Multi-Family Residential (R2)
- Light Industrial/Manufacturing Uses (LIM)
- Community/Institutional Uses (CI)
- Public Space Type 1 Uses (P1) – Formal Public Spaces and Parks
- Public Space Type 2 Uses (P2) – Unprogrammed Open Spaces
- Public Space Type 3 Uses (P3) – Conservation Areas

About the Building Typologies

The second point of regulation in the land use system is the building typologies. **The term “building typology” is almost always debated in the fields of planning and urban design and rarely defined by the same terms.** For the purposes of this master plan, the term building typology is referred to as the categorization of a development project according to similar building form, use, and functional characteristics. Typically, building typologies become established within a community over time and based on the fabric of urban development that is established in a particular context. The building typologies

identified here share some of those similarities; however, unique building topologies have been provided based on the aspirations of the City and the necessity to provide more unique typologies that will build the character of Innovation Mile.

Additionally, the building typologies will provide the City with a set of more detailed criteria for each development project that will ensure that each new building within the area aspires to higher-level and quality of architectural character and design that will meet the goals of district. These design criteria will define more nuanced details of the buildings including typical floor plate widths, floor-to-floor heights, façade articulation, projections, transparencies, materiality, and landscaping and lighting. Furthermore, the building typologies will provide the developers with a visual example of character and typical massing that will be considered during planning review.

Building Typologies applicable to Innovation Mile include:

- Innovation / Headquarters Building (IH)
- Mixed-Use Office Building (MO)
- Shared Innovation / Flexible Building (IF)
- Office Building (OF)
- Mixed-Use Residential Building (MR)
- Residential Apartment Building (RA)
- Residential Townhome Building (RT)
- Flexible / Manufacturing Building (FM)
- Warehouse / Distribution Building (WD)

LAND USE CHARACTER

Campus Type 1 Uses (C1) – Innovation Core

Campus Type 2 Uses (C2) – Innovation Gateway

Campus Type 3 Uses (C3) – Innovation I-69

Residential Type 1 Uses – Mixed-Use Residential (R1)

Residential Type 2 Uses – Multi-Family Residential (R2)

Light Industrial/Manufacturing Uses (LIM)

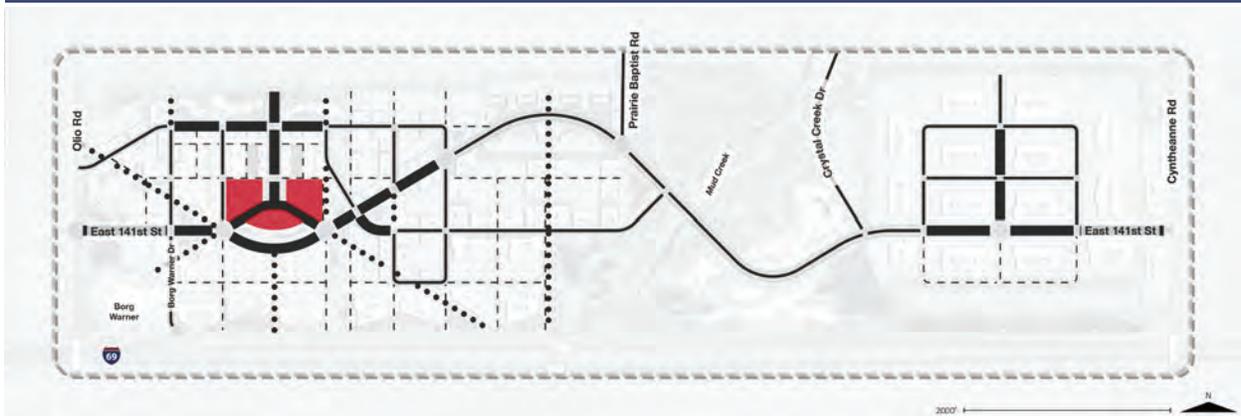
Community/Institutional Uses (CI)

Public Space Type 1 Uses (P1) – Formal Public Spaces and Parks

Public Space Type 2 Uses (P2) – Unprogrammed Open Spaces

Public Space Type 3 Uses (P3) – Conservation Areas

CAMPUS TYPE 1 (C1) - INNOVATION CORE



Legend | Land Uses
■ Community / Institutional

Street Hierarchy
 Primary Street
 Secondary Street
 Non-Motorized Street
 Potential Alleys

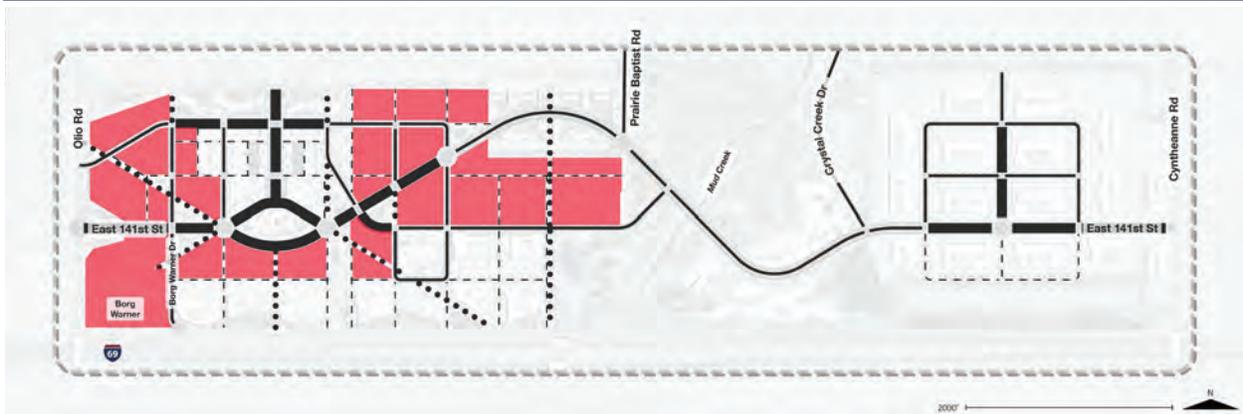
LAND USE INTENTION

The Campus Type 1 (C1) – Innovation Core land use is principally intended to provide mixed-use corporate headquarters and office area in the heart of the district along 141st Street and adjacent to the new public square. This district requires active ground floor uses such as retail, restaurants, bars, entertainment venues, event lawns and other activated uses with offices and headquarters type uses on upper floors on all streets within the Street Hierarchy. District requirements include:



REQUIREMENT	DETAILED STANDARD
Height (Stories/Feet)	Minimum of 3 stories and 44'; and maximum of 5 stories and 68'.
Primary Street Build-to-Line (Feet from the Property Lines)	Zero Lot Line / 0' for building facades; and minimum of 30' for structured parking garages on upper floors.
Secondary Street Build-to-Line (Feet from the Property Lines)	0' to 10' for building facades; and minimum of 30' for surface parking lots/ structured parking garages.
Upper Floor Setbacks (Feet)	Maximum of 30' from the ground floor building façade.
Allowable Ground Floor Uses	Active commercial such as retail shops, restaurants, bars, cafes, and other commercial uses.
Allowable Upper Floor Uses	Offices and corporate headquarters uses; and structured parking uses.
Finished Ground Floor Level	Maximum of 6" above the adjacent grade.

CAMPUS TYPE 2 (C2) – INNOVATION GATEWAY



- Legend | Land Uses**
- Campus B - Headquarters / Office (includes all allowable in Campus A)
- Street Hierarchy**
- Primary Street
 - Secondary Street
 - Non-Motorized Street
 - Potential Alleys

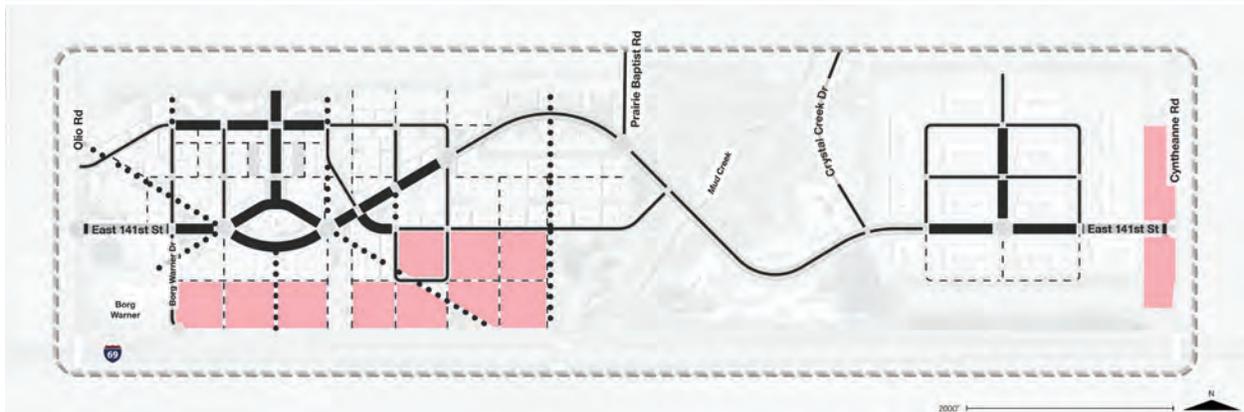
LAND USE INTENTION

The Campus Type 2 (C2) – Innovation Gateway land use is principally intended to provide a more flexible district which will allow for a range of innovation district uses such as headquarters, offices, collaboration, innovation, and light industrial uses with common or creative spaces on the ground floor. Active ground floor uses are only required within the district in areas where a Primary Street or Secondary Street intersect directly with a Non-Motorized Street in the Street Hierarchy. District requirements include:



REQUIREMENT	DETAILED STANDARD
Height (Stories/ Feet)	Minimum of 2 stories and 32'; and maximum of 5 stories and 68'.
Primary Street Build-to-Line (Feet from the Property Lines)	0' to 10' for building facades; and minimum of 30' for surface parking lots / structured parking garages on both ground and upper floors.
Secondary Street Build-to-Line (Feet from the Property Lines)	10' to 20' for building facades; and minimum of 30' for surface parking lots / structured parking garages on both ground and upper floor.
Upper Floor Setbacks (Feet)	Maximum of 30' from the ground floor building façade.
Allowable Ground Floor Uses	Common spaces, creative spaces, and lobbies allowed on all ground floors; and active commercial required for first 80' of intersection of primary streets or secondary streets and non-motorized streets; and all uses allowed in Campus Type 1.
Allowable Upper Floor Uses	Innovation uses and flexible uses; Residential uses; and all uses allowed in Campus Type 1.
Finished Ground Floor Level	Maximum of 6" above the adjacent grade.

CAMPUS TYPE 3 (C3) - INNOVATION I-69 CORRIDOR



- Legend | Land Uses**
- Campus C - Headquarters / Office OR Industrial Flexible (includes all allowable in Campus B)
- Street Hierarchy**
- █** Primary Street
 - Secondary Street
 - Non-Motorized Street
 - - -** Potential Alleys

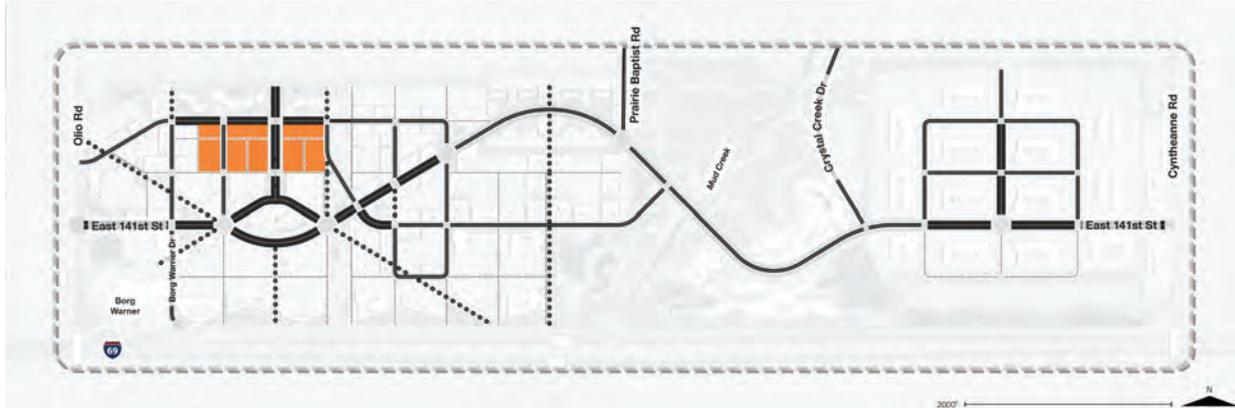
LAND USE INTENTION

The Campus Type 3 (C3) – Innovation I-69 Corridor land use is principally intended to provide the flexibility within the district and along the I-69 corridor and allow for an increasing range of innovation district uses such as headquarters, offices, collaboration, innovation, light industrial, and manufacturing uses. Active ground floor uses are only required within very limited areas where a Primary Streets intersect, or a Secondary Street intersect directly with a Non-Motorized Street in the Street Hierarchy. District requirements include:



REQUIREMENT	DETAILED STANDARD
Height (Stories/ Feet)	Minimum of 1 story and 20'; and maximum of 3 stories and 44'.
Primary Street Build-to-Line (Feet from the Property Lines)	20' to 200' for building facades; and minimum of 20' for surface parking lots; and 20' for the first 80' of primary street building facades.
Secondary Street Build-to-Line (Feet from the Property Lines)	20' to 200' for building facades; and minimum of 20' for surface parking lots; and 20' for the first 80' of primary street building facades.
Upper Floor Setbacks (Feet)	Maximum of 50' from the ground floor building façade, if provided.
Allowable Ground Floor Uses	Industrial and manufacturing uses; and active commercial required for first 80' of intersection of primary streets or secondary streets and non-motorized streets; and all allowed in Campus Type 2.
Allowable Upper Floor Uses	Industrial and manufacturing uses; and all allowed in Campus Type 2.
Finished Ground Floor Level	Maximum of 6" above the adjacent grade for active commercial uses; and maximum of 6' above the adjacent grade for other uses.

RESIDENTIAL TYPE 1 (R1) - MIXED-USE RESIDENTIAL



- Legend | Land Uses**
■ Residential A - Mixed-Use Residential
- Street Hierarchy**
 Primary Street
 Secondary Street
 Non-Motorized Street
 Potential Alleys

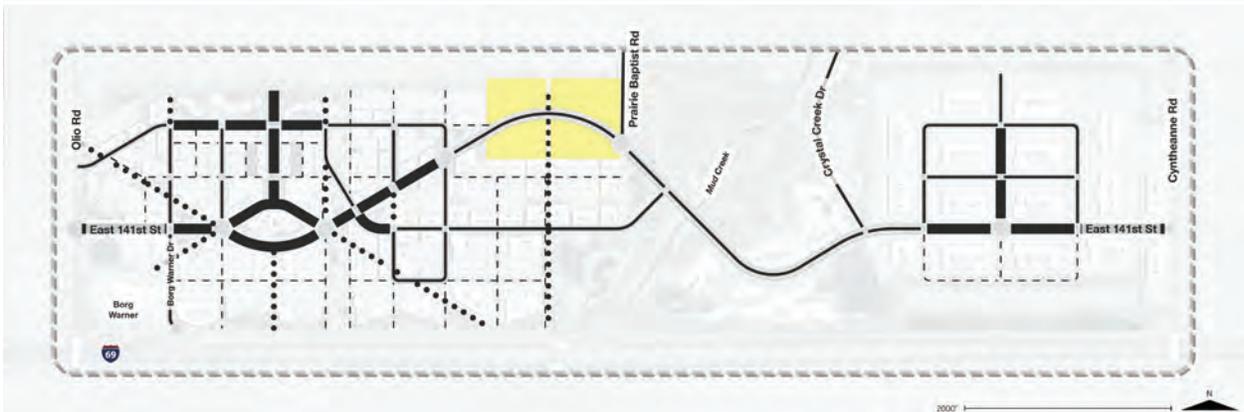
LAND USE INTENTION

The Residential Type 1 (R1) – Mixed-use Residential land use is principally intended to provide for an area of the district that will add vibrancy and 24/7 activation immediately adjacent to the core innovation area. This area will be the main living area within Innovation Mile and consist primarily of ground floor commercial spaces with residential above. District requirements include:



REQUIREMENT	DETAILED STANDARD
Height (Stories/ Feet)	Minimum of 3 stories and 44'; and maximum of 5 stories and 68'.
Primary Street Build-to-Line (Feet from the Property Lines)	Zero Lot Line / 0' for building facades; and minimum of 30' for surface parking lots on ground floors and structured parking garages on upper floors.
Secondary Street Build-to-Line (Feet from the Property Lines)	0' to 10' for building facades; and minimum of 30' for surface parking lots on ground floors and structured parking garages on upper floors.
Upper Floor Setbacks (Feet)	Maximum of 30' from the ground floor building façade.
Allowable Ground Floor Uses	Active commercial such as retail shops, restaurants, bars, cafes, and other commercial uses; and common spaces supporting residential uses such as leasing, community rooms, mailroom, and other amenities.
Allowable Upper Floor Uses	Multi-family residential only.
Finished Ground Floor Level	Maximum of 6" above the adjacent grade.

RESIDENTIAL TYPE 2 (R2) - MULTI-FAMILY RESIDENTIAL



- Legend | Land Uses**
 Residential B - Multi-Family Residential
- Street Hierarchy**
 Primary Street
 Secondary Street
 Non-Motorized Street
 Potential Alleys

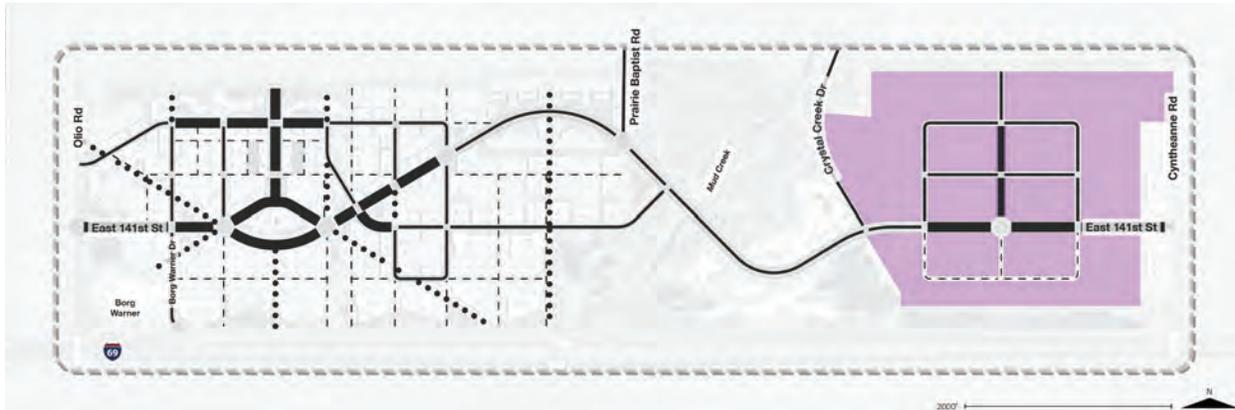
LAND USE INTENTION

The Residential Type 2 (R2) – Multi-family Residential land use is principally intended to provide for a more intensive living district adjacent to the core of the Innovation Mile. This will provide a few different types of living options from leasing to for sale and from apartments to townhomes. District requirements include:



REQUIREMENT	DETAILED STANDARD
Height (Stories/ Feet)	Minimum of 2 stories and 32'; and maximum of 4 stories and 56'.
Primary Street Build-to-Line (Feet from the Property Lines)	30' to 130' for building facades; and minimum of 130' for surface parking lots.
Secondary Street Build-to-Line (Feet from the Property Lines)	Maximum of 30' for building facades.
Upper Floor Setbacks (Feet)	Maximum of 30' from the ground floor building façade.
Allowable Ground Floor Uses	Common spaces supporting residential uses such as leasing, community rooms, mailroom, and other amenities.
Allowable Upper Floor Uses	Multi-family residential only.
Finished Ground Floor Level	Maximum of 3' above the adjacent grade.

LIGHT INDUSTRIAL/MANUFACTURING (LIM)



- Legend | Land Uses**
 Light Industrial / Manufacturing
- Street Hierarchy**
 Primary Street
 Secondary Street
 Non-Motorized Street
 Potential Alleys

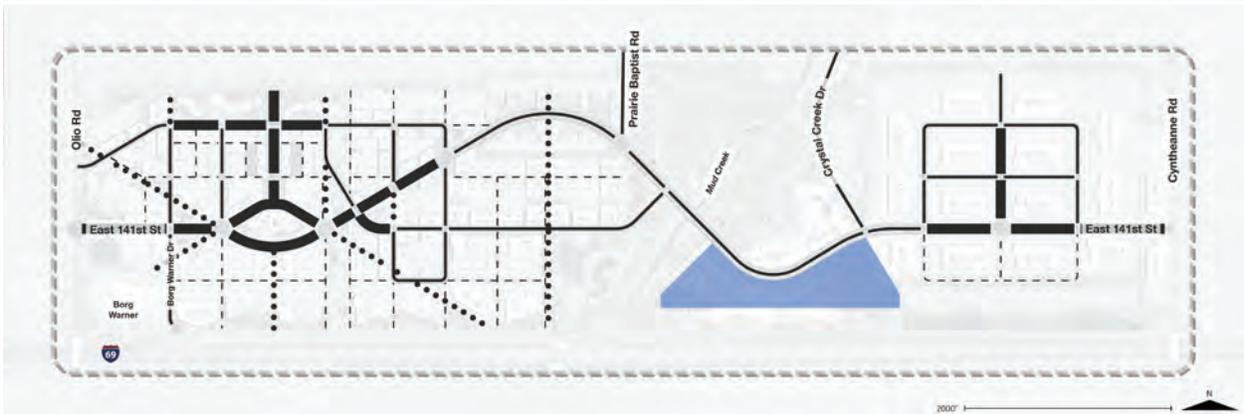
LAND USE INTENTION

The Light Industrial/Manufacturing (LIM) land use is principally intended to provide a range of flexible uses for the long-term that will allow the eastern portion of Innovation Mile to build out with more supportive uses such as manufacturing, production, distribution, and other innovation uses. District requirements include:



REQUIREMENT	DETAILED STANDARD
Height (Stories/ Feet)	No minimum; and maximum of 4 stories and 56'.
Primary Street Build-to-Line (Feet from the Property Lines)	Not applicable.
Secondary Street Build-to-Line (Feet from the Property Lines)	Maximum of 30' for building facades.
Upper Floor Setbacks (Feet)	Maximum of 30' from the ground floor building façade.
Allowable Ground Floor Uses:	Common spaces supporting residential uses such as leasing, community rooms, mailroom, and other amenities.
Allowable Upper Floor Uses	Multi-family residential only.
Finished Ground Floor Level	Maximum of 3' above the adjacent grade.

COMMUNITY/INSTITUTIONAL (CI)



- Legend | Land Uses**
- Community / Institutional
- Street Hierarchy**
- Primary Street
 - Secondary Street
 - Non-Motorized Street
 - - Potential Alleys

LAND USE INTENTION

The Community/Institutional (CI) land use is principally intended to provide a very flexible set of uses for the “soul” of the district along 141st Street and adjacent to the Mud Creek area. District requirements include:



REQUIREMENT	DETAILED STANDARD
Height (Stories/ Feet)	No minimum; and maximum of 5 stories and 68’.
Primary Street Build-to-Line (Feet from the Property Lines)	Not applicable.
Secondary Street Build-to-Line (Feet from the Property Lines)	Maximum of 50’ for building facades; and minimum of 50’ for surface parking lots on ground floors.
Upper Floor Setbacks (Feet)	Not applicable.
Allowable Ground Floor Uses	Community-centric uses such as nature center, arboretum, community center, outdoor theater, outdoor recreation, library, and other uses beneficial to the new district and existing residential areas.
Allowable Upper Floor Uses	Same as ground floor.
Finished Ground Floor Level	Not applicable.

PUBLIC SPACE USES TYPE 1, 2, AND 3



- Legend | Land Uses**
- Public Space A - Conservation Areas
 - Public Space B - Unprogrammed Open Space Areas
 - Public Space C - Formal Landscape / Hardscape / Multi-Use Areas
- Street Hierarchy**
- Primary Street
 - Secondary Street
 - Non-Motorized Street
 - Potential Alleys



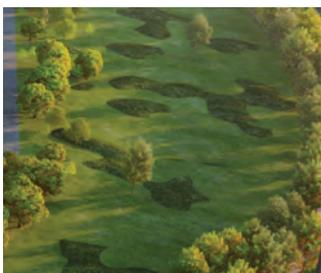
PUBLIC SPACE TYPE 1 USES (P1) FORMAL PUBLIC SPACES AND PARKS

These types of public spaces should be highly integrated into development projects and contain a wide range of amenities from formal hardscaped areas and plazas that support the core of the district and activation of ground floor uses to landscaping, park spaces, and stormwater detention facilities that help capture and treat runoff. Specific areas include spaces adjacent to the improved 141st Street and non-motorized pathways.



PUBLIC SPACE TYPE 2 USES (P2) UNPROGRAMMED OPEN SPACES

These types of public spaces are less programmed than Public Space Type 1 uses, and may include elements such as trails, trailheads, natural landscaping, water features, boardwalks, and other features that support passive recreation activities and connectivity throughout the district. Specific areas include land on the north retained for future development, land along I-69, the utility easement, and the south Mud Creek area.



PUBLIC SPACE TYPE 3 USES (P3) CONSERVATION AREAS

These types of public spaces are very sensitive areas that should be treated sensitively with only low-impact development strategies for pathways and passive recreation activities. This may include uses like soft surface nature trails, tree canopy boardwalks, picnic areas, play areas along the creek, and other very low-impact uses.

See Placemaking Strategies for more details on Public Space Type programming.

BUILDING TYPES

Innovation/Headquarters Building (IH)

Mixed-Use Office Building (MO)

Shared Innovation/Flexible Building (IF)

Office Building (OF)

Mixed-Use Residential Building (MR)

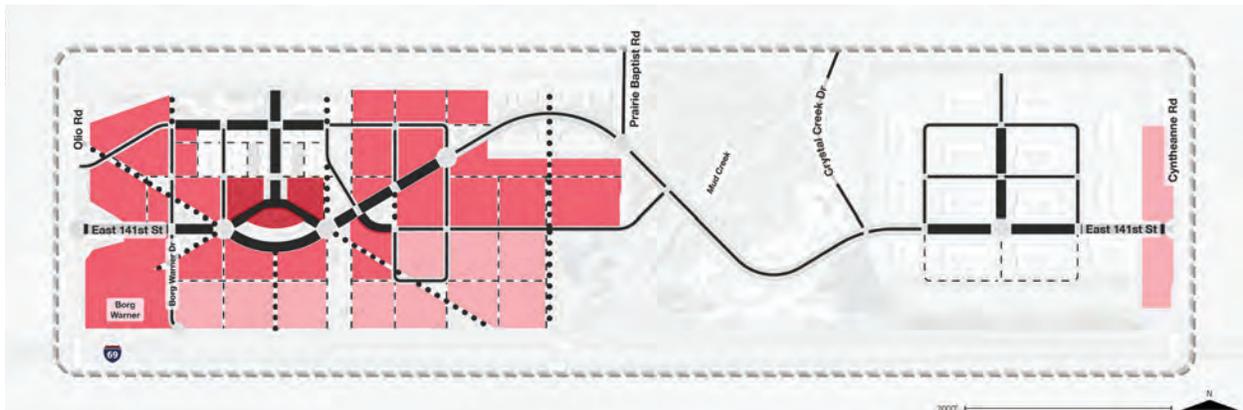
Residential Apartment Building (RA)

Residential Townhome Building (RT)

Flexible Manufacturing Building (FM)

Warehouse/Distribution Building (WD)

INNOVATION/HEADQUARTERS BUILDINGS (IH)



- Legend | Land Uses**
- Campus A - Mixed-Use Headquarters / Office
 - Campus B - Headquarters / Office (includes all allowable in Campus A)
 - Campus C - Headquarters / Office OR Industrial Flexible (includes all allowable in Campus B)
- Street Hierarchy**
- Primary Street
 - Secondary Street
 - Non-Motorized Street
 - Potential Alleys

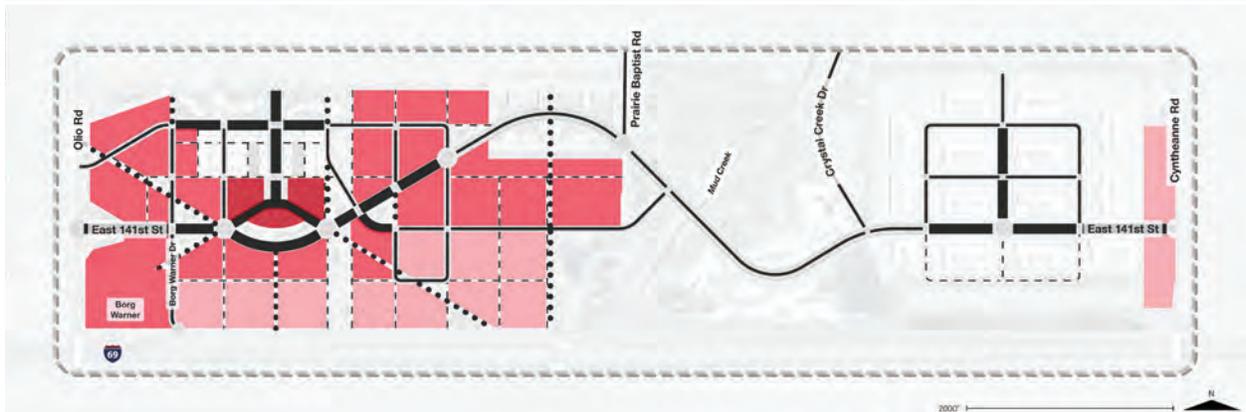
BUILDING TYPE INTENTION

The Innovation/Headquarters (IH) Building Type is one of the critical building types for Innovation Mile. This building type typically includes a singular tenant located on upper floors with ground floor commercial, retail, and common, creative, or collaborative spaces. These building types are allowed within Campus Type 1, 2, and 3 Character Districts. Building Type requirements include:



REQUIREMENT	DETAILED STANDARD
Typical Floorplate Dimension	180' to 200' typical width
Floor Heights (Floor-to-Floor)	20' ground floor; and 10'-12' upper floor.
Building Façade Articulation	Must include vertical plane breaks on all Primary Streets and Secondary Street building facades.
Building Façade Projections or Encroachments	Entrance canopies, light shelves, window louvers, and upper floor outdoor space coverings required.
Building Façade Transparency	Minimum of 50% on Primary Street building facades; and minimum of 30% on Secondary Street building facades.
Building Façade Materiality	High-quality glass, metals, concrete, and wood on all Primary Street and Secondary Street building facades.
Building Façade Lighting	Required on all Primary Street building facades; and adjacent to any non-motorized streets and potential alleys.
Exterior Lighting	Required on all Primary Street building facades; and adjacent to any non-motorized streets and potential alleys.
Landscaping	Required in front of all Primary Street and Secondary Street Build-to-Lines.
Exterior Public Spaces and Courtyards	Required on all Primary Street building facades; adjacent to any non-motorized streets and potential alleys; and adjacent to any Public Space character districts.

MIXED-USE OFFICE BUILDING (MO)



- Legend | Land Uses**
- Campus A - Mixed-Use Headquarters / Office
 - Campus B - Headquarters / Office (includes all allowable in Campus A)
 - Campus C - Headquarters / Office OR Industrial Flexible (includes all allowable in Campus B)
- Street Hierarchy**
- Primary Street
 - Secondary Street
 - Non-Motorized Street
 - Potential Alleys

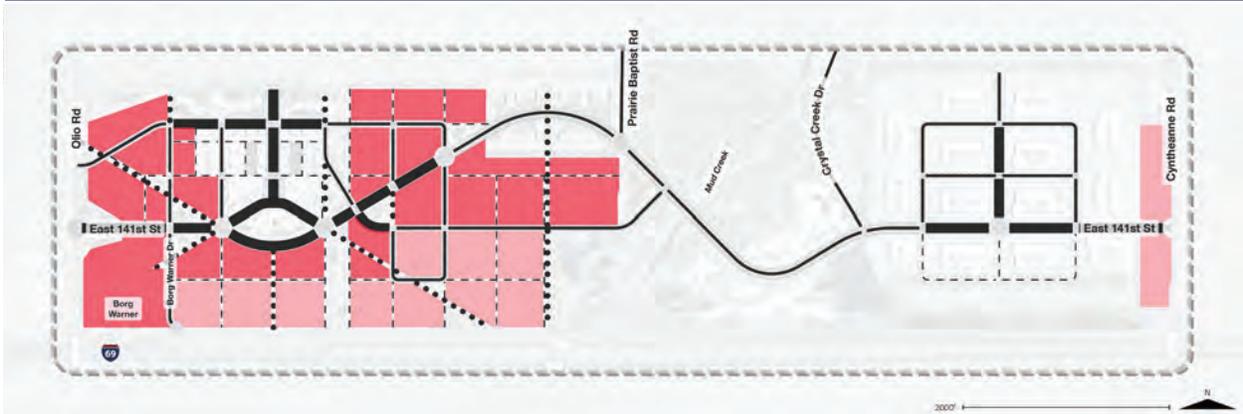
BUILDING TYPE INTENTION

The Mixed-Use Office (MO) Building Type is one of the critical building types for Innovation Mile. This building type typically includes multiple tenants located on upper floors with ground floor commercial, retail, and common spaces. These building types are allowed within Campus Type 1, 2, and 3 Character Districts. Building Type requirements include:



REQUIREMENT	DETAILED STANDARD
Typical Floorplate Dimension	80' to 100' typical width
Floor Heights (Floor-to-Floor)	15' ground floor; and 10'-12' upper floor.
Building Façade Articulation	Must include vertical plane breaks on all Primary Streets and Secondary Street building facades.
Building Façade Projections or Encroachments	Entrance canopies, light shelves, window louvers, and upper floor outdoor space coverings required.
Building Façade Transparency	Minimum of 50% on Primary Street building facades; and minimum of 30% on Secondary Street building facades.
Building Façade Materiality	High-quality glass, metals, concrete, and wood on all Primary Streets; and flexibility on Secondary Streets.
Building Façade Lighting	Required on all Primary Street building facades; and adjacent to any non-motorized streets and potential alleys.
Exterior Lighting	Required on all Primary Street building facades; and adjacent to any non-motorized streets and potential alleys.
Landscaping	Required in front of all Primary Street and Secondary Street Build-to-Lines.
Exterior Public Spaces and Courtyards	Required on all Primary Street building facades; adjacent to any non-motorized streets and potential alleys; and adjacent to any Public Space character districts..

SHARED INNOVATION/FLEXIBLE BUILDING (IF)



- Legend | Land Uses**
- Campus B - Headquarters / Office (includes all allowable in Campus A)
 - Campus C - Headquarters / Office OR Industrial Flexible (includes all allowable in Campus B)
- Street Hierarchy**
- Primary Street
 - Secondary Street
 - Non-Motorized Street
 - Potential Alleys

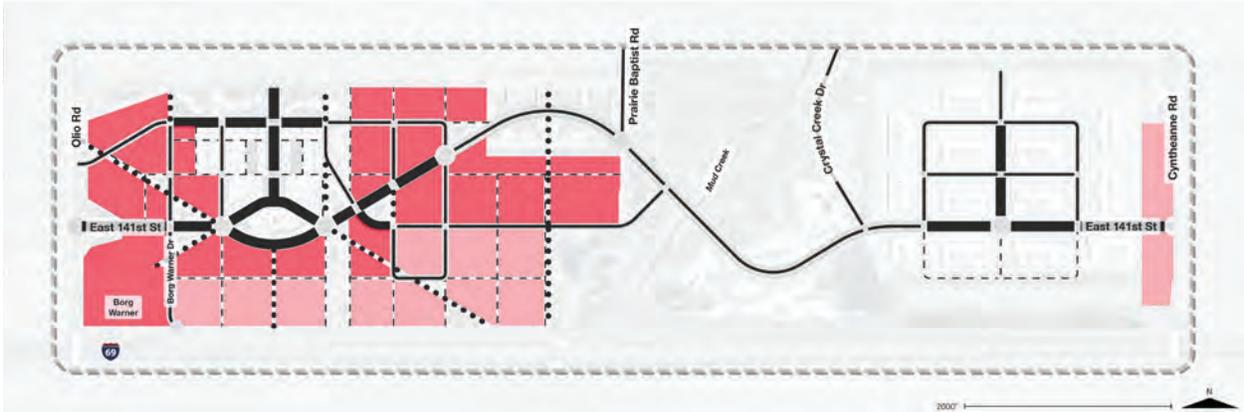
BUILDING TYPE INTENTION

The Shared Innovation/Flexible (IF) Building Type is a supportive building type for Innovation Mile that provides greater flexibility on the ground floor. This building type typically includes multiple tenants located on upper floors with ground floor common spaces, creative, collaborative, or parking uses. These building types are allowed within Campus Type 2 and 3 Character Districts. Building Type requirements include:



REQUIREMENT	DETAILED STANDARD
Typical Floorplate Dimension	140' to 180' typical width
Floor Heights (Floor-to-Floor)	15-20' ground floor; and 10'-14' upper floor.
Building Façade Articulation	Must include vertical plane breaks on all Primary Streets and Secondary Street building facades.
Building Façade Projections or Encroachments	Entrance canopies, light shelves, window louvers, and upper floor outdoor space coverings required.
Building Façade Transparency	Minimum of 50% on Primary Street building facades; and minimum of 30% on Secondary Street building facades.
Building Façade Materiality	High-quality glass, metals, concrete, and wood on all Primary Streets; and flexibility on Secondary Streets.
Building Façade Lighting	Required on all Primary Street building facades; and adjacent to any non-motorized streets and potential alleys.
Exterior Lighting	Required on all Primary Street building facades; adjacent to any non-motorized streets and potential alleys; and flexibility on Secondary Streets.
Landscaping	Required in front of all Primary Street and Secondary Street Build-to-Lines.
Exterior Public Spaces and Courtyards	Required on all Primary Street building facades; adjacent to any non-motorized streets and potential alleys; and adjacent to any Public Space character districts.

STANDARD OFFICE BUILDING (OF)



- Legend | Land Uses**
- Campus B - Headquarters / Office (includes all allowable in Campus A)
 - Campus C - Headquarters / Office OR Industrial Flexible (includes all allowable in Campus B)
- Street Hierarchy**
- Primary Street
 - Secondary Street
 - Non-Motorized Street
 - Potential Alleys

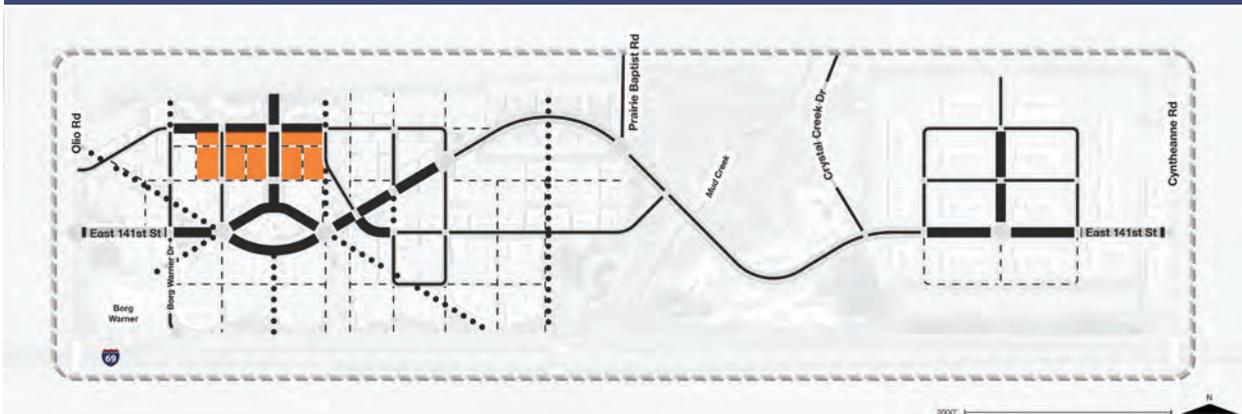
BUILDING TYPE INTENTION

The Standard Office (OF) Building Type is a supportive building type for Innovation Mile that provides greater flexibility on the ground floor. This building type typically includes multiple tenants located on upper floors with ground floor office, common spaces, or parking uses. These building types are allowed within Campus Type 2 and 3 Character Districts. Building Type requirements include:



REQUIREMENT	DETAILED STANDARD
Typical Floorplate Dimension	80' to 100' typical width
Floor Heights (Floor-to-Floor)	15' ground floor; and 12'-14' upper floor.
Building Façade Articulation	Must include vertical plane breaks on all Primary Streets and Secondary Street building facades.
Building Façade Projections or Encroachments	Entrance canopies, light shelves, window louvers, and upper floor outdoor space coverings required.
Building Façade Transparency	Minimum of 50% on Primary Street building facades; and minimum of 30% on Secondary Street building facades.
Building Façade Materiality	High-quality glass, metals, concrete, and wood on all Primary Streets; and flexibility on Secondary Streets.
Building Façade Lighting	Required on all Primary Street building facades; and adjacent to any non-motorized streets and potential alleys.
Exterior Lighting	Required on all Primary Street building facades; adjacent to any non-motorized streets and potential alleys; and flexibility on Secondary Streets.
Landscaping	Required in front of all Primary Street and Secondary Street Build-to-Lines.
Exterior Public Spaces and Courtyards	Required on all Primary Street building facades; adjacent to any non-motorized streets and potential alleys; and adjacent to any Public Space character districts.

MIXED-USE RESIDENTIAL BUILDING (MR)



Legend | Land Uses

■ Residential A - Mixed-Use Residential

Street Hierarchy

- Primary Street
- Secondary Street
- Non-Motorized Street
- Potential Alleys

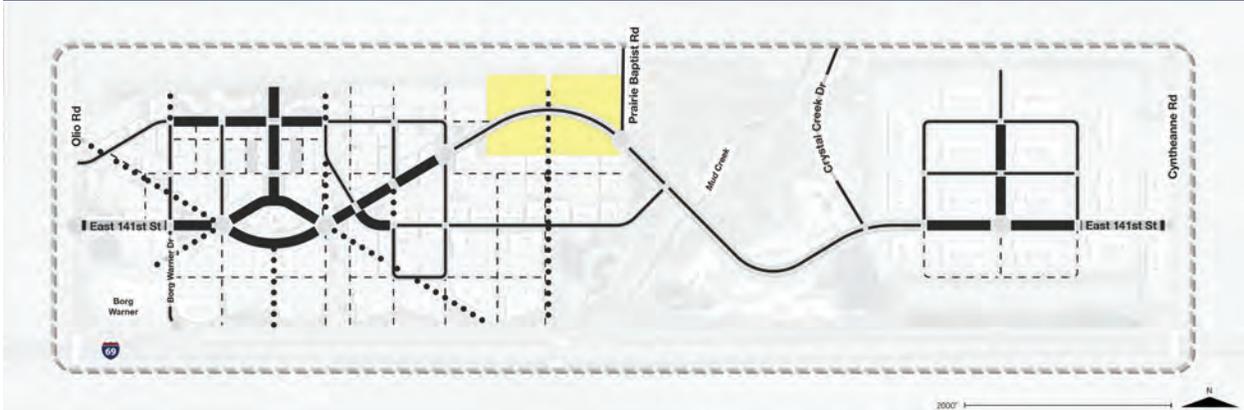
BUILDING TYPE INTENTION

The Mixed-Use Residential (MR) Building Type is a supportive building type for Innovation Mile that provides increased living options and fosters more of a 24/7 life within the district. This building type typically includes residential located on upper floors with ground floor commercial and common spaces. These building types are allowed within Campus Type 2 and Residential Type 1 Character Districts. Building Type requirements include:



REQUIREMENT	DETAILED STANDARD
Typical Floorplate Dimension	70' to 80' typical width
Floor Heights (Floor-to-Floor)	15' ground floor; and 10'-12' upper floor.
Building Façade Articulation	Must include vertical plane breaks on all Primary Streets and Secondary Street building facades.
Building Façade Projections or Encroachments	Entrance canopies, light shelves, window louvers, balconies for units, and upper floor outdoor space coverings required.
Building Façade Transparency	Minimum of 50% on Primary Street ground floor building facades; and minimum of 30% on Secondary Street ground floor building facades; no requirements on upper floors.
Building Façade Materiality	High-quality glass, metals, concrete, and wood on all Primary Streets; and flexibility on Secondary Streets.
Building Façade Lighting	Required on all Primary Street building facades; and adjacent to any non-motorized streets and potential alleys.
Exterior Lighting	Required on all Primary Street building facades; adjacent to any non-motorized streets and potential alleys; and flexibility on Secondary Streets.
Landscaping	Required in front of all Primary Street and Secondary Street Build-to-Lines.
Exterior Public Spaces and Courtyards	Required on all Primary Street building facades; adjacent to any non-motorized streets and potential alleys; and adjacent to any Public Space character districts.

RESIDENTIAL APARTMENT BUILDING (RA)



Legend | Land Uses

Residential B - Multi-Family Residential

Street Hierarchy

- Primary Street
- Secondary Street
- Non-Motorized Street
- Potential Alleys

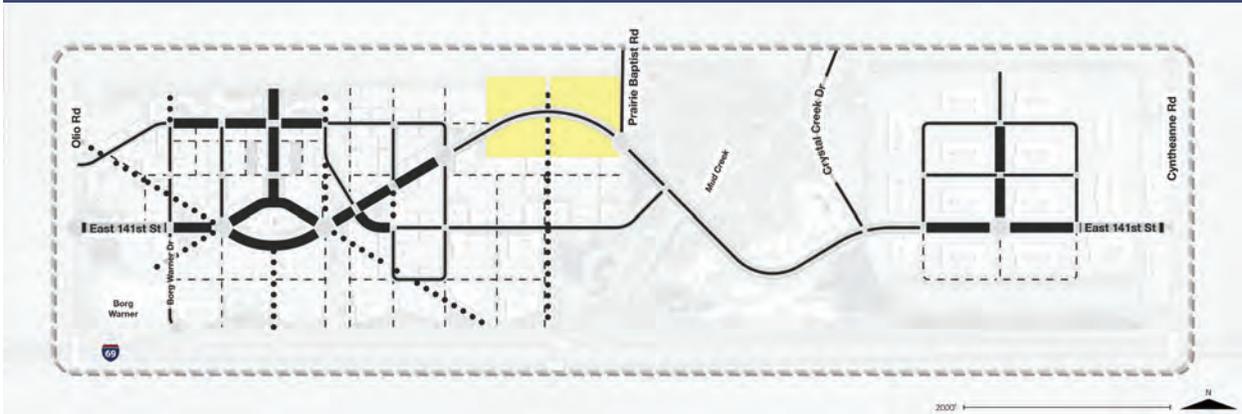
BUILDING TYPE INTENTION

The Residential Apartment (RA) Building Type is a supportive building type for Innovation Mile that provides increased living options and fosters more of a neighborhood feel along 141st Street. This building type typically includes multiple residential located on upper floors with ground floor common spaces. These building types are allowed within the Residential Type 2 Character District. Building Type requirements include:



REQUIREMENT	DETAILED STANDARD
Typical Floorplate Dimension	70' to 80' typical width
Floor Heights (Floor-to-Floor)	15' ground floor; and 10'-12' upper floor.
Building Façade Articulation	Must include vertical plane breaks on all Secondary Street building facades.
Building Façade Projections or Encroachments	Entrance canopies, light shelves, window louvers, balconies for units, and upper floor outdoor space coverings required.
Building Façade Transparency	Minimum of 30% on Primary Street ground floor building facades; and minimum of 30% on Secondary Street ground floor building facades; no requirements on upper floors.
Building Façade Materiality	High-quality glass, metals, concrete, and wood on all Secondary Street building facades.
Building Façade Lighting	Required on all Primary Street building facades; and adjacent to any non-motorized streets and potential alleys.
Exterior Lighting	Required on all Secondary Street building facades; adjacent to any non-motorized streets and potential alleys.
Landscaping	Required in front of all Secondary Street Build-to-Lines.
Exterior Public Spaces and Courtyards	Required on all Secondary Street building facades; adjacent to any non-motorized streets and potential alleys; and adjacent to any Public Space character districts.

RESIDENTIAL TOWNHOME BUILDING (RT)



Legend | Land Uses

Residential B - Multi-Family Residential

Street Hierarchy

Primary Street

Secondary Street

Non-Motorized Street

Potential Alleys

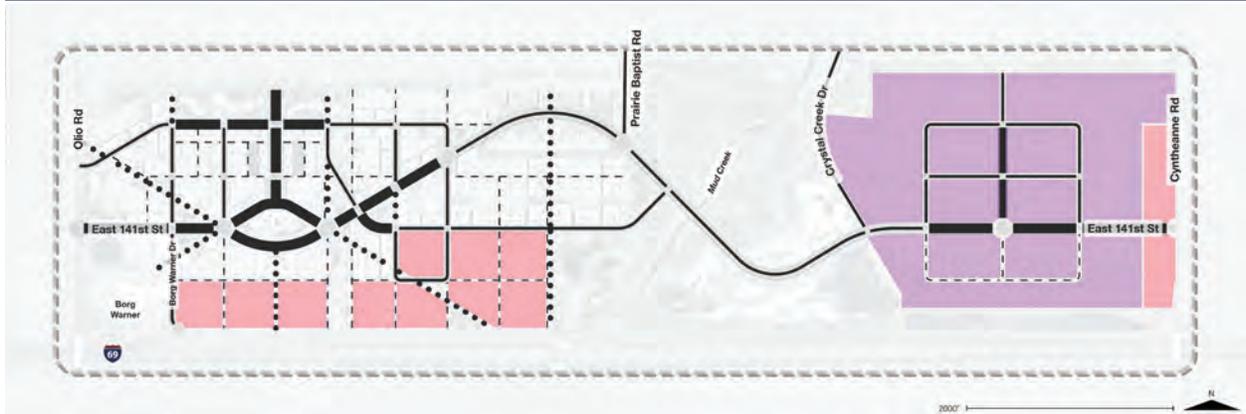
BUILDING TYPE INTENTION

The Residential Townhome (RT) Building Type is a supportive building type for Innovation Mile that provides increased living options and more diversity of neighborhood feel along 141st Street. This building type typically includes residential and rear parking located on ground and units on upper floors. These building types are allowed within the Residential Type 2 Character District. Building Type requirements include:



REQUIREMENT	DETAILED STANDARD
Typical Floorplate Dimension	40' to 50' typical width
Floor Heights (Floor-to-Floor)	12'-15' ground floor; and 10'-12' upper floor.
Building Façade Articulation	Must include vertical plane breaks between individual units that include entrances.
Building Façade Projections or Encroachments	Entrance canopies and coverings required; balconies for units allowed.
Building Façade Transparency	No requirements.
Building Façade Materiality	High-quality glass, metals, concrete, and wood on all Secondary Street building facades.
Building Façade Lighting	Required on all Primary Street building facades; and adjacent to any non-motorized streets and potential alleys.
Exterior Lighting	Required on all Secondary Street building facades; adjacent to any non-motorized streets and potential alleys.
Landscaping	Required in front of all Secondary Street Build-to-Lines.
Exterior Public Spaces and Courtyards	No requirements.

FLEXIBLE/MANUFACTURING BUILDING (FM)



- Legend | Land Uses**
- Campus C - Headquarters / Office OR Industrial Flexible (includes all allowable in Campus B)
 - Light Industrial / Manufacturing
- Street Hierarchy**
- Primary Street
 - Secondary Street
 - Non-Motorized Street
 - Potential Alleys

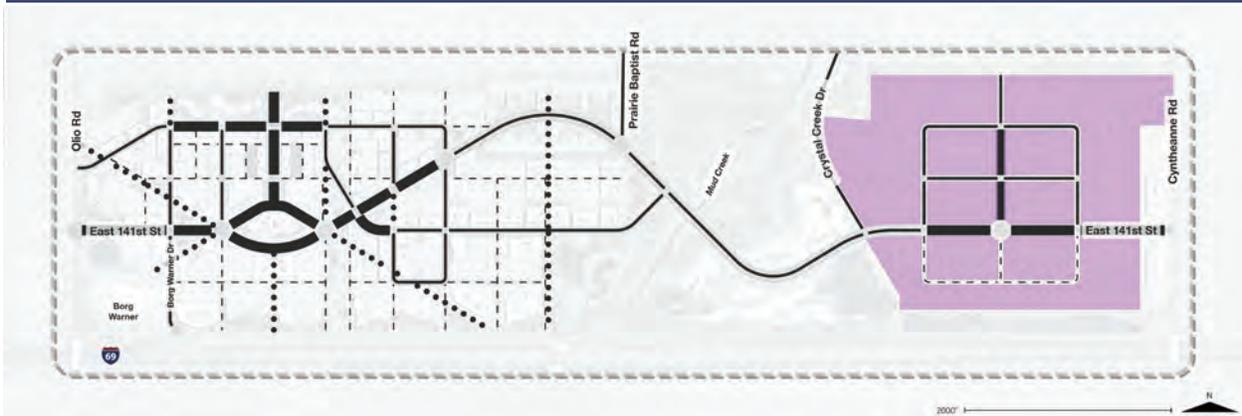
BUILDING TYPE INTENTION

The Flexible/Manufacturing (FM) Building Type is a supportive building type for Innovation Mile that provides increased flexibility in uses for areas along I-69 and east of the Mud Creek area. This building type typically includes single tenant buildings with a variety of uses on ground and upper floors (if applicable). These building types are allowed within the Campus Type 3 and Character District. Building Type requirements include:



REQUIREMENT	DETAILED STANDARD
Typical Floorplate Dimension	200' to 350' typical width
Floor Heights (Floor-to-Floor)	20'-35' ground floor; and 12'-15' upper floors (if applicable).
Building Façade Articulation	Must include vertical plane breaks on Primary Street Building Facades and facades that are visible from I-69.
Building Façade Projections or Encroachments	Entrance canopies, light shelves, and window louvers required.
Building Façade Transparency	Minimum of 10% on Building Facades on Primary Streets, Secondary Streets, and Non-Motorized Paths.
Building Façade Materiality	High-quality glass, metals, concrete, and wood on all Primary Street Building Facades and facades that are visible from I-69. Low reflectivity materials are required.
Building Façade Lighting	Required on all Primary Street building facades; and adjacent to any non-motorized streets and potential alleys; and facades that are visible from I-69.
Exterior Lighting	Required on all Primary Street building facades; adjacent to any non-motorized streets and potential alleys; and facades that are visible from I-69.
Landscaping	Required in front of all Primary Street Build-to-Lines.
Exterior Public Spaces and Courtyards	Required at the intersections of Primary Streets and facades that are visible from I-69.

WAREHOUSE/DISTRIBUTION BUILDING (WD)



Legend | Land Uses
 Light Industrial / Manufacturing

Street Hierarchy
 Primary Street
 Secondary Street
 Non-Motorized Street
 Potential Alleys

BUILDING TYPE INTENTION

The Warehouse/Distribution (WD) Building Type is a supportive building type for Innovation Mile that provides increased flexibility in uses east of the Mud Creek area. This building type typically includes single tenant buildings with limited uses on ground and upper floors (if applicable). These building types are allowed within the Residential Type 2 and Light Industrial/Manufacturing Character Districts. Building Type requirements include:



REQUIREMENT	DETAILED STANDARD
Typical Floorplate Dimension	200' to 400' typical width
Floor Heights (Floor-to-Floor)	20'-35' ground floor; and 12'-15' upper floors (if applicable).
Building Façade Articulation	Must include vertical plane breaks on Primary Street Building Facades.
Building Façade Projections or Encroachments	Entrance canopies, light shelves, and window louvers required.
Building Façade Transparency	Minimum of 10% on Building Facades on Primary Streets, Secondary Streets, and Non-Motorized Paths.
Building Façade Materiality	High-quality glass, metals, concrete, and wood on all Primary Street Building Facades. Low reflectivity materials are required.
Building Façade Lighting	Required on all Primary Street building facades; and adjacent to any non-motorized streets and potential alleys.
Exterior Lighting	Required on all Primary Street building facades; adjacent to any non-motorized streets and potential alleys.
Landscaping	Required in front of all Primary Street Build-to-Lines.
Exterior Public Spaces and Courtyards	Required at the intersections of Primary Streets.



FIGURE 5-6. View Looking South Over Innovation Mile

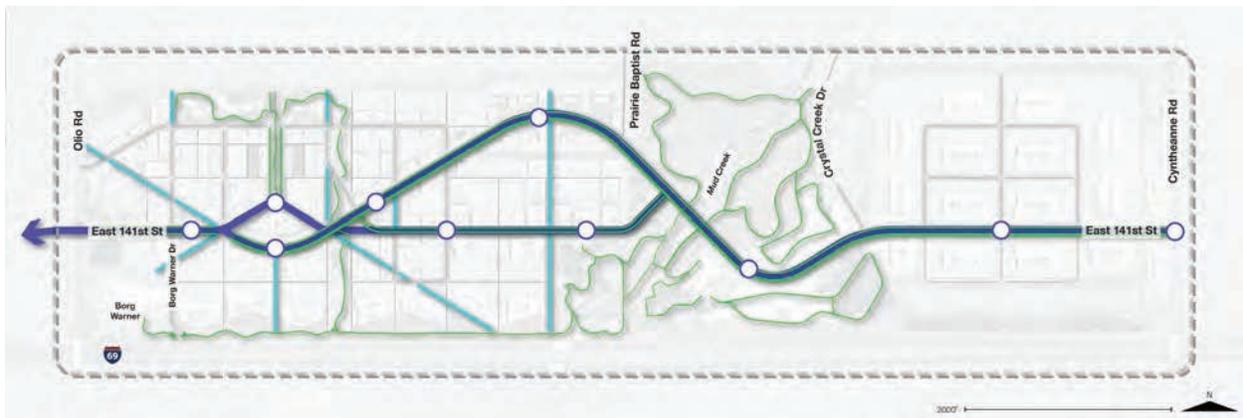
MOBILITY STRATEGY

The master plan concept is built around a mobility strategy that will unite the diversity of place types and land uses within the Innovation Mile campus into a singular, cohesive district and provide extensive access by all modes of transportation. The intention of the mobility strategy is to create an interconnected system of streets, sidewalks, trails, and shared paths that will link all existing and future development across the district back to the Innovation Core and “heart” located along East 141st Street. The mobility strategy also seeks to use the Mud Creek area as a bridge to link the western and eastern portions of the district to further augment the creation of a “soul” that will support the district and adjacent communities.

The mobility strategy was designed to provide the City with clarity on the type of on-street and off-street pedestrian, bicycle, and mobility

infrastructure and services that will be necessary to foster the Innovation Mile district, while also providing some flexibility for the City with respect to land subdivision and requirements for new infrastructure as part of Developer-driven projects. One example of this flexibility is the provision of a “potential alley” network as part of the Street Type plan. The decision about the need for an alley to service a particular parcel can be made on an individual basis moving forward depending upon the specific development proposal for a given site. The mobility strategy is also intended to provide guidance on the location and design for any City-initiated or TIF-funded projects within the district such as the realignment and improvements to East 141st Street through the core and moving east in the future toward Cyntheanne Road.

FIGURE 5-7. The Mobility System Map



Legend | Mobility System

- Street Network System
- Trails
- Shared Paths
- Circulator
- Circulator Stop

About the Mobility System

Mobility options are critically important for innovation districts, as they facilitate the movement of people and ideas that will drive innovation and economic growth. Effective mobility options are key to the success of innovation districts because they allow people to move quickly and easily within the district, reducing the time and cost associated with commuting, and making it easier for people to connect with each other. Mobility options also play a critical role in attracting and retaining talent to an innovation district. If a district is easy to get to and has good transportation options around and within its boundaries, it is more likely to be seen as an attractive place to work and do business. This, in turn, can help drive economic growth, create jobs, and increase competitiveness.

Safety is crucial in any mobility system, but it is especially important in this district where there are a lot of different types of mobility options, such as walking, cycling, future public transportation, and autonomous vehicles. Safety in a mobility system is generally important because it will help accomplish other strategies

set for in this plan including the establishment of walkable land use, promote and increase sustainability, support ongoing economic development, and enhance the quality of life for employees and residents within Innovation Mile.

The mobility system in the Innovation Mile is designed to provide multiple modes of travel such that they are integrated and augment one another, and the land uses they serve. This system will connect destinations within the Innovation Mile such as the district core to the Mud Creek area and beyond to future development areas, as well as key places beyond its border. This plan recommends that transportation to and from the district should primarily rely on a proposed circulator service connecting the district core to adjacent Hamilton Town Center, Ruoff Music Center, and residential areas. The primary gateway for vehicles to Innovation Mile will remain 141st Street. Mobility within the district is designed for the safe travel of vehicles, freight, pedestrians, and cyclists using improved street infrastructure, a trails system, and an interconnected shared path system.



FIGURE 5-8. View of Innovation District Core

The mobility system components include the following:

THE STREET NETWORK PLAN

The Street Network plan provides guidance on the location and types of streets proposed within the Innovation Mile area, along with more details on the design configuration, dimensions, and cross section. The Street Network plan also aligns the design of the street with intended land uses and established utility corridors to support future development. The street network will accommodate vehicles, parking, bicycles, pedestrians and personal mobility devices to augment mobility through and around the district to foster an environment of collaboration and creativity. The Street Network plan also lays out rights-of-way that provide space for public utilities often placed on both sides under sidewalks and other buffer strips.

THE TRAILS NETWORK PLAN

The Trails Network Plan provides guidance on the alignment and amenities associated with the interconnected network of trails proposed within the Innovation Mile area, along with identified destinations and centers of activity throughout the area. The trails network plan will link the district core with the far reaches of the district and existing facilities outside the district through a network of plazas, parks, and open spaces that will offer a range of benefits to users and neighborhood residents, including improved physical health, mental well-being, social connectivity, and opportunities for collaboration.

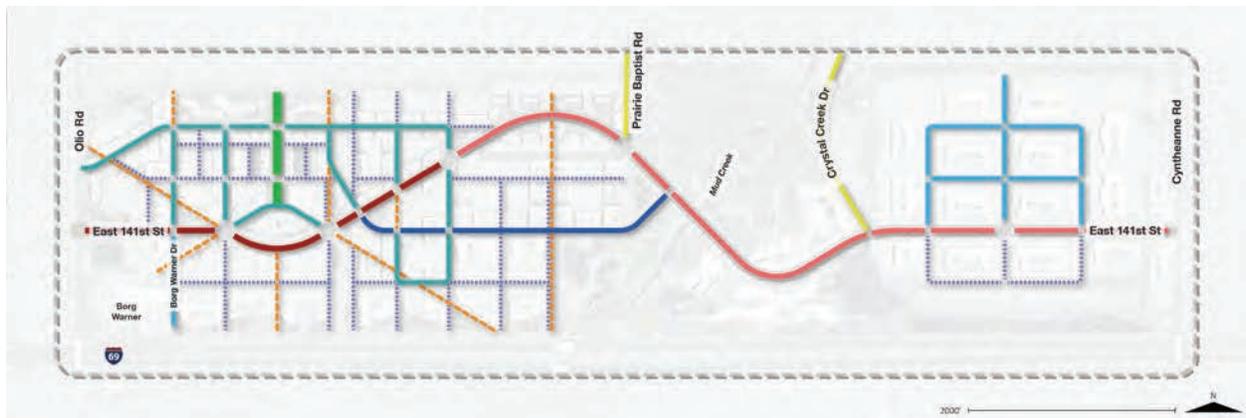
THE SHARED PATH SYSTEM PLAN

The Shared Path System Plan provides guidance on the location and programming of a network of shared mobility paths link buildings and core public plazas within Innovation Mile together both physically and visually to create corridors that directly link tenants to each other and foster direct collaboration and interactivity. The shared path system will accommodate pedestrians, cyclists, and personal and e-mobility devices and provide a safe and convenient space for all non-motorized transportation within the district.

THE CIRCULATOR SYSTEM PLAN

The Potential Circulator System Plan is a proposed solution to guidance on the alignment and stops associated with a shuttle service that could link the surrounding areas to Innovation Mile and provide inter-mobility within the district itself. A circulator is important to provide convenient and efficient movement of groups and individuals that need to collaborate and create with other colleagues within the district. The proposed circulator system is also important because it will foster the creation of a campus community and create a more sustainable campus environment. The Circulator System Plan is a future potential aspiration of Innovation Mile.

FIGURE 5-9. The Street Network Plan



Legend | Street Typology

- | | | |
|---|---|---|
| ■ Type A – East 141st Street Core Area | ■ Type E – Typical Service Street | ■ Existing Streets |
| ■ Type B – East 141st Street Non-Core Area | ■ Type F – Special Boulevard | |
| ■ Type C – East 141st Street Old Alignment | ■ Type G – Special Shared Street | |
| ■ Type D – Typical Commercial Street | ■ Type H – Potential Alley | |

About the Street Network

An interconnected street network and complete street approach is the foundation of the mobility system, serving all modes of transportation including walking, cycling, public transit, and vehicles. A complete street system will improve safety, increase mobility, promote physical health, support sustainability, and enhance economic activity within the Innovation Mile district. Complete streets play an important role in supporting innovation campuses, which are typically designed to foster innovation, collaboration, and entrepreneurship across a variety of industries and fields. Accessibility and inter-connectivity are particularly important for the Innovation Mile plan. A complete network implemented within the district will provide the right type of environment that will attract key talent, foster creativity, enhance accessibility, and provide opportunities for innovation on a moment's whim.

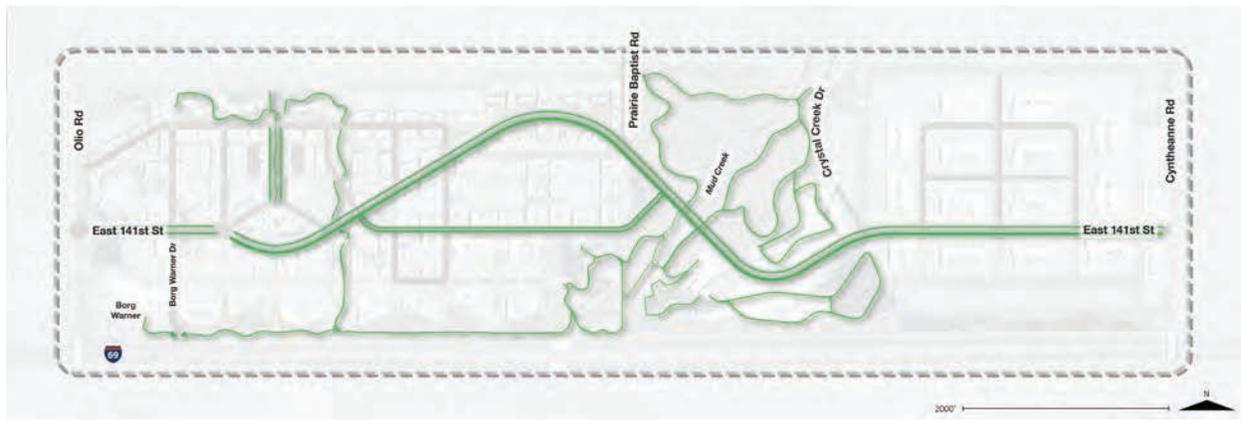
The street network is a key strategy to establishing the area's character and is a predominant component of the public realm. The street network also links parks, plazas, and passive spaces to one another to form a network of public space throughout the district. The Street Network Plan is implemented using

eight Street Types assigned to the district as part of this plan have been calibrated to the designed character districts. The location and configuration of street type has been considered in relation to adjacent land uses, potential traffic volumes, typical vehicles used, need for service and loading, and accommodation of pedestrian and bicycle travel along them. Each street type provides a right-of-way (ROW) width, number of lanes, on street parking, sidewalk width, bike lane width, and other pedestrian and bicycle amenities that are required.

Street Types applicable to Innovation Mile include:

- Street Type A – East 141st Street Core Area
- Street Type B – East 141st Street Non-Core Area
- Street Type C – East 141st Street Old Alignment
- Street Type D – Typical Commercial Street
- Street Type E – Typical Service Street
- Street Type F – Special Boulevard
- Street Type G – Special Shared Street
- Street Type H – Potential Alley

FIGURE 5-10. The Trails Network Plan



Legend | Mobility System
— Trails

About the Trails Network

The trail system introduces recreation to the district and provides connectivity within Innovation Mile’s key natural areas, as well as linking them to one another. Most trails are located at Mud Creek preservation and along the utility easement. The trail network is almost fully independent of the street grid and yet connected to it by multiple access points and select trails along the street network.

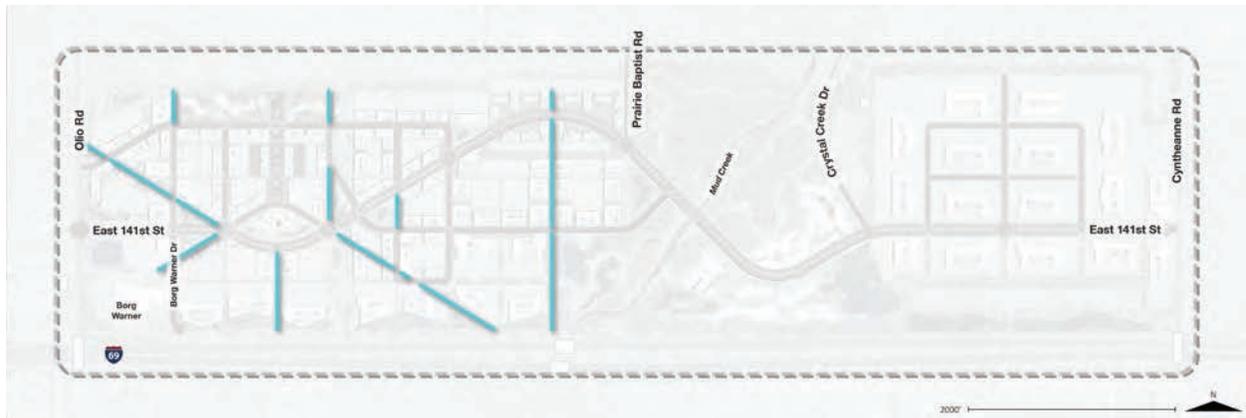
Trails along the utility easement take advantage of this undevelopable area and promote its natural features. They harness this zone to maintain the natural vegetation and habitat of the area, and link it directly to Mud Creek preservation area the prime natural and recreational amenity in Innovation Mile. Mud Creek combines natural preservation areas to the north and recreation facilities to the south, as well as a visitor center at its center. This is the “soul” of the district and provides an opportunity to demonstrate innovation in the context of climate and resiliency. The trail system is the means by which native habitat is preserved and integrated in the variety

of uses the district has to offer. The organic meandering path of the trails provides access to the street network and establishes a parallel experience to that the district offers, one of nature alongside and in reciprocity with the built environment. The trails along the street network enhance the urban experience by augmenting with recreational amenities. They are located primarily along the special boulevard leading to the district core, and 141st Street at the center of the district leading to Mud Creek.

FIGURE 5-11. Example of the Trails Network



FIGURE 5-12. The Shared Path System Plan



Legend | Mobility System
— Shared Paths

About the Shared Path System Plan

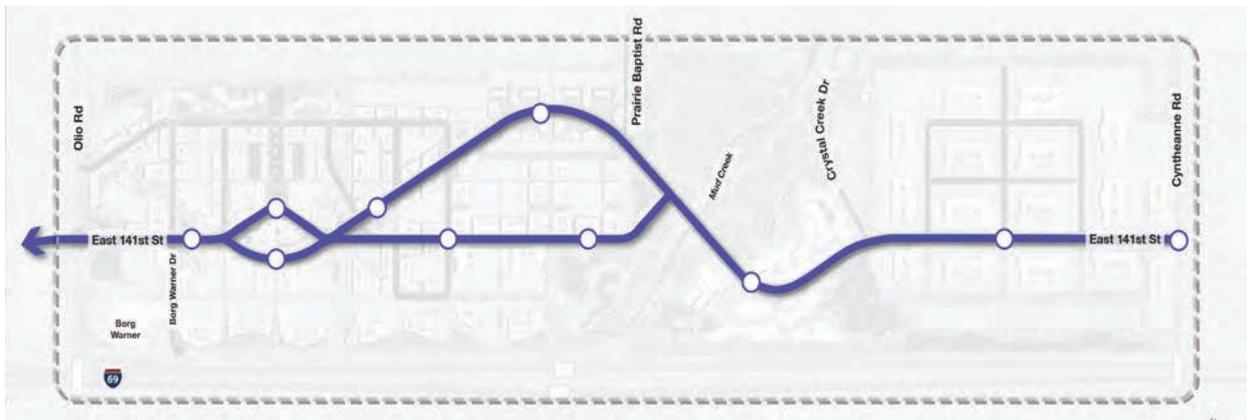
The Shared Path system reinforces the inter-district connectivity by providing protected travel routes for pedestrians and cyclists. This network is a key component of the public realm and links public spaces to one another. Additionally, it provides through block connections and assists in creating public spaces at various scales. Consequently, most public spaces in the district are adjacent to shared paths. Shared paths diversify the spatial experience of the district and encourage pedestrian and non-motorized travel, which contributes to the reduction of vehicular miles travel within the district, thus supporting sustainability and safety in Innovation Mile. It is important to note that the Shared Path system is both a street type and an individual distinct component of the mobility system. Shared paths are considered a street type since their layout complements the street grid and similar to other streets in the system, and because they are used to link different land uses within Innovation Mile. At the same time, this network is intended for non-motorized mobility and is focused on connectivity between public land uses, fulfilling additional circulation goals and making it a distinct mobility strategy. The Shared Path Network in Innovation Mile augments the street network and provides additional connections between key district

land use concentrations. To the west, the paths link existing development south of 141st Street with the future development north of it at the western end of the core. At the most Eastern corner of the core is an additional intersection point between two shared paths; the north-south segment that cuts across the mixed-use residential buildings, and the southeast segment that connects the office/flexible and industrial uses to the core. South of the core is a shared path that provides workers at the industrial and office/flex complexes with a direct connection to the core of the district. At the center of the district is a north-south shared path that brings residents from the northernmost end of the district and workers along the existing 141st Street to the recreational programs at the southernmost edge of the district. This segment also provides an opportunity for connection to future development north of Innovation Mile.

FIGURE 5-13. Example of Shared Path System



FIGURE 5-14. District Circulator Plan



Legend | Mobility System

- Circulator
- Circulator Stop

About the District Circulator

The proposed District Potential Circulator is a motorized shuttle system intended to provide connectivity between Innovation Mile and key adjacent employment centers and residential clusters outside of the district such as the Hamilton Town Center and Ruoff Music Center. System stops will be located near Innovation Mile's public and most densely populated areas to increase use and accessibility. While the system's main intent is to address public transit needs to and from the district, it will augment interconnectivity and accessibility as well, with stops placed along key district destinations.

The proposed circulator's route within Innovation Mile will travel in the west-east orientation through 141st Street and will provide access to all district's land uses along this corridor. The route splits at the eastern end of the core to provide access to the residential uses to the north, and the office/flexible and industrial uses at the center of the district. At Mud Creek and to the west, it travels along 141st Street and provides service to the industrial complex in the eastern area of the district.

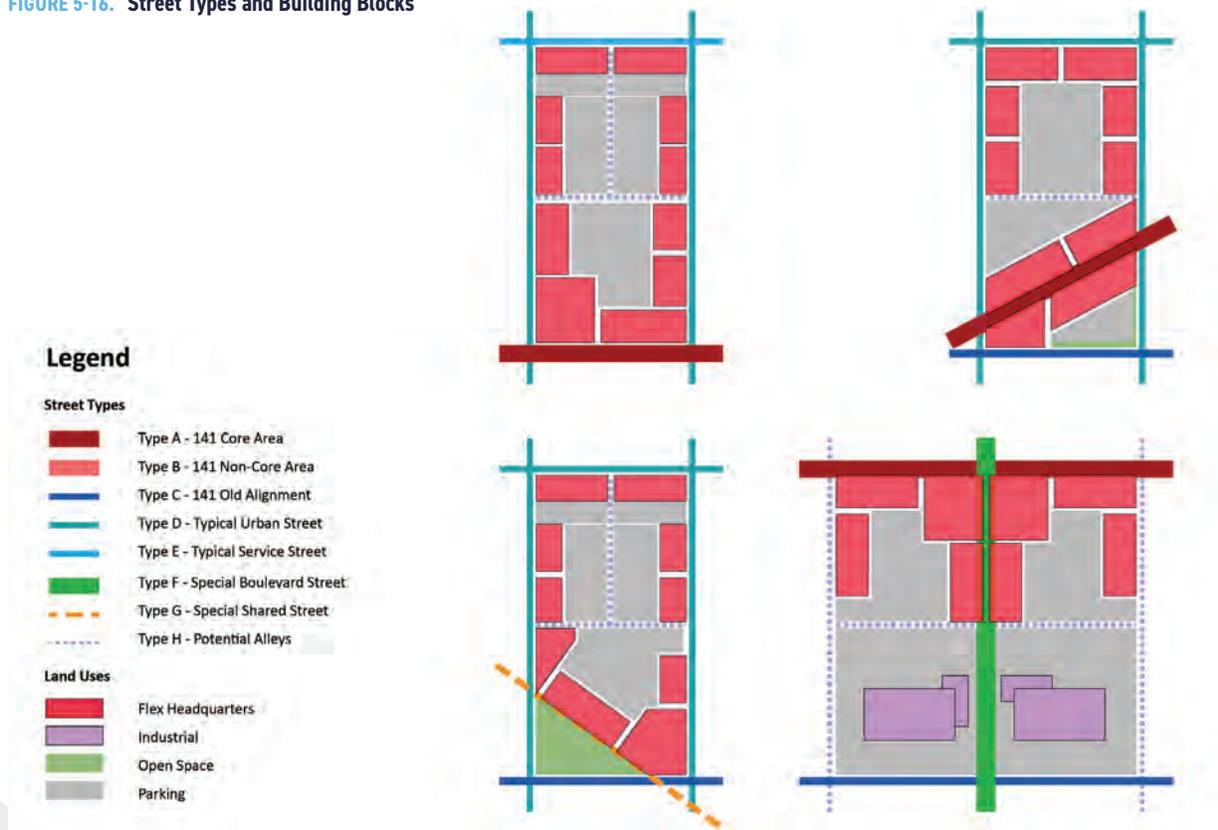
The circulator's stops are integrated with building uses and densities in Innovation Mile to maximize service efficiency and use. Where possible, stops are located near public spaces

and retail nodes to enhance the traveler's experience, and promote both businesses and the use of public spaces. The westernmost stop in the district is located along 141st Street between the existing development south of 141st Street and future development to the north. Two stops are located at the north and south edges of the core to maximize service at the densest employment and mixed-use cluster in the district. Two additional stops are at the flexible/office and industrial campuses east of the core providing additional service to Innovation Mile employees. The stations to the east are located near the residential cluster (north) and the Flexible/Office and recreational center (south). To the east of these stations is a station at the community center at Mud Creek, which supports visitors, as well as two additional stations further east that support the employees of the industrial cluster on the easternmost edge of the district.

FIGURE 5-15. Example of Circulator Shuttle



FIGURE 5-16. Street Types and Building Blocks



Mobility System and Typical Blocks

District blocks in Innovation Mile are flexible and designed to optimize the compatibility between street types and the land uses along them. They support and encourage vehicular or bicycle access to and from the district, and pedestrian or bicycle mobility within the district. The typical block dimension in Innovation Mile is 500' by 500' (street center line to center line). Considering the various rights-of-way of the street types proposed in this master plan, this dimension strikes a balance between walkability and ability to accommodate building footprints for the multiple uses anticipated in Innovation Mile, as well as surface parking that adheres to the common parking ratios associated with such building types in the region.

The Innovation Mile mobility strategy has a direct relationship with land use. Areas with higher building densities and land uses that

attract heavier pedestrian or vehicular traffic are located along streets that are suitable for such traffic and provide drivers, cyclists, and pedestrians the infrastructure they need for safe and efficient travel. Roads with large volumes of freight traffic for example, are located further from the district core so they won't burden the streets and cause congestion. The typical 500' by 500' block can be subdivided by alleys to increase walkability and service access when large building footprints aren't required. Such subdivision allows the blocks to include different land uses and provide flexibility with regards to phasing and development so the blocks don't have to be developed all at once. Additionally, the potential alleys provide land use that need frequent service access from side streets such that regular vehicular flow is not interrupted.

STREET TYPES

Street Type A - East 141st Street Core Area

Street Type B - East 141st Street Non-Core Area

Street Type C - East 141st Street Old Alignment

Street Type D - Typical Commercial Street

Street Type E - Typical Service Street

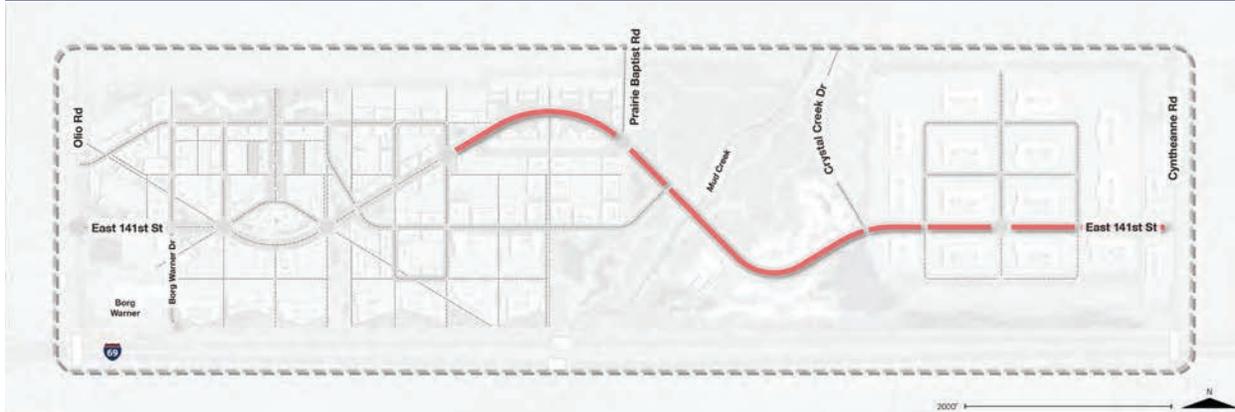
Street Type F - Special Boulevard

Street Type G - Special Shared Street

Street Type H - Potential Alley



STREET TYPE B - EAST 141ST STREET NON-CORE AREA

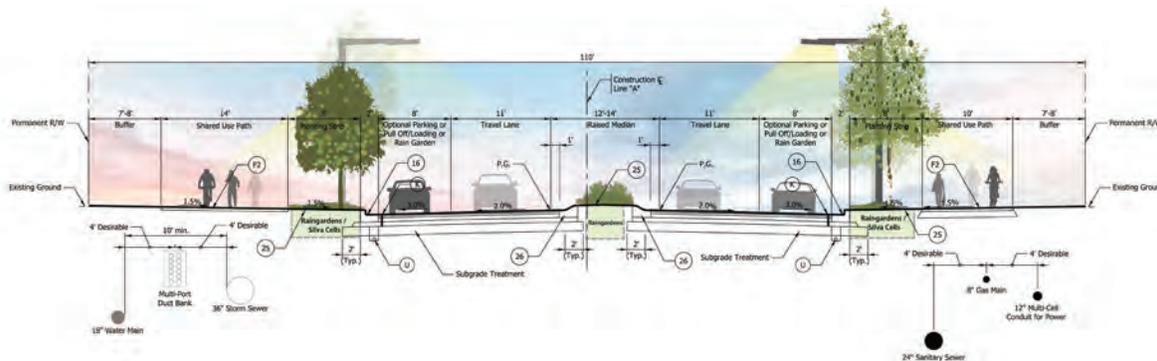


STREET TYPE INTENTION

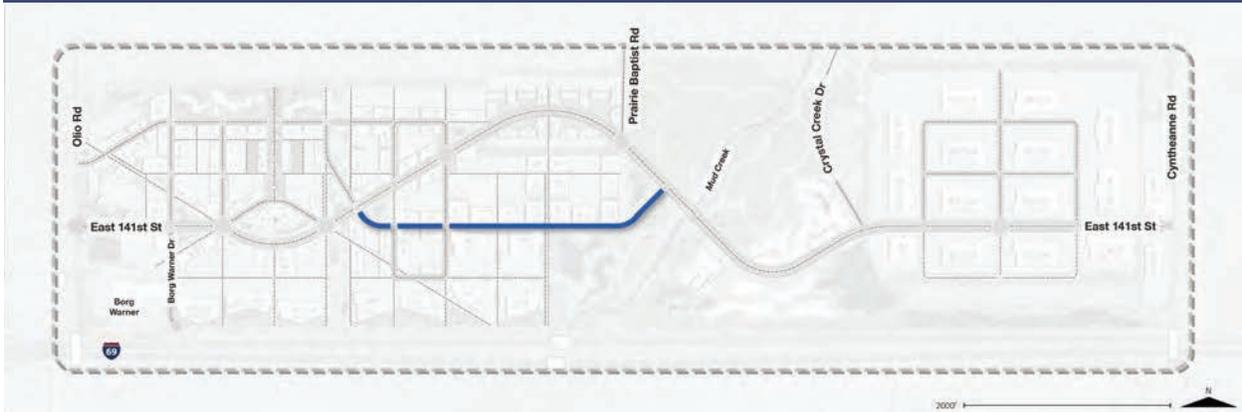
Street Type B – East 141st Street Non-Core Area is a two-way street located along the prime corridor of the district and serves its central and eastern segments. Land uses along this street type include public spaces, residential, recreation, office, flexible use innovation spaces, and industrial. This street type is designed to accommodate vehicles, cyclists and micromobility users, and pedestrians. It provides each user with the necessary amenities by separating the travel lanes by mode using on street parking, raised curb, and a tree lawn.

REQUIREMENT	DETAILED STANDARD
Typical Classification	Secondary Arterial
Typical Right-of-Way (ROW)	110' (from property line to property line)
Median (Landscaping and vegetation)Q	12' wide, 1' high above finished road surface, 2% slope from center line towards gutter
Travel Lane (Two-way Street)	1 lane in each direction, 11'-12' wide, 2% slope towards gutter
Parking Lane (On street)	1 lane in each direction, 8' wide, 3% slope towards gutter
Bike Facilities (Location varies)	1 lane in each direction, 5' wide, 3' wide raised buffer from parking lane, 2% slope towards gutter
Sidewalk Facilities (Location varies)	6' wide, 8' tree zone buffer from bike lane, 1.5% slope towards gutter
Lighting	Two directional street lighting; towards sidewalk and road, zero cutoff, no sodium halide lighting
Pedestrian Amenities	Landscaping, two directional street lighting; towards sidewalk and road, light posts within 6' wide tree lawn, street trees, 12' multi-use trail on the south side
Loading and Service	Not allowed

FIGURE 5-18. Typical Cross Section for Street Type B



STREET TYPE C - EAST 141ST STREET OLD ALIGNMENT

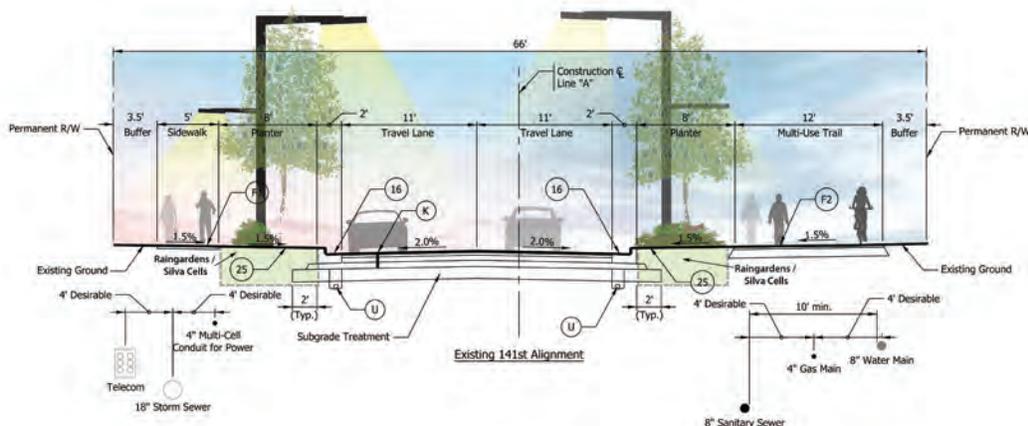


STREET TYPE INTENTION

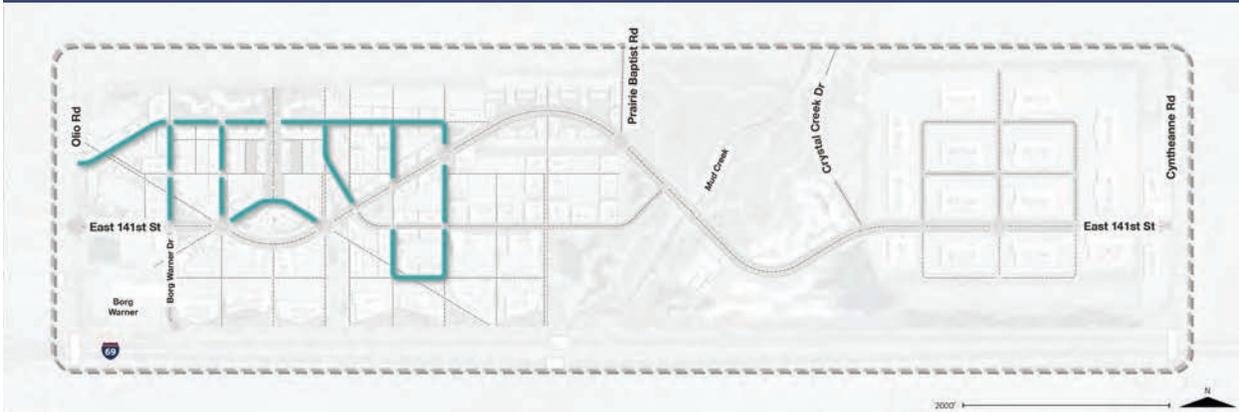
Street Type C – East 141st Street Old Alignment is a two-way street located along the existing 141st Street segment in the central area of the district. Land uses along this street type include, public spaces, recreation, office, flexible use innovation spaces, and industrial. This street type is designed to accommodate vehicles, cyclists and micromobility users, and pedestrians while accounting for predominantly vehicular and freight users. Pedestrian, cyclists, and micromobility travel is along a shared path, buffered by a tree lawn from vehicular travel lanes.

REQUIREMENT	DETAILED STANDARD
Typical Classification	Collector
Typical Right-of-Way (ROW)	60' (from property line to property line)
Median (Landscaping and vegetation)	N/A
Travel Lane (Two-way Street)	1 lane in each direction, 11'- 12'wide, 2% slope towards gutter
Parking Lane (On street)	N/A
Bike Facilities (Location varies)	5' wide within multi-use trail
Sidewalk Facilities (Location varies)	5' wide, 5' tree zone buffer from road, 1.5% slope towards gutter, 5' buffer from property line
Lighting	Two directional street lighting; towards sidewalk and road, zero cutoff, no sodium halide lighting
Pedestrian Amenities	Two directional street lighting; towards sidewalk and road, light posts within 5' wide tree lawn, street trees, 12' mixed use trail on the south side, 5' buffer from property line
Loading and Service	Allowed

FIGURE 5-19. Typical Cross Section for Street Type C



STREET TYPE D - TYPICAL COMMERCIAL STREET

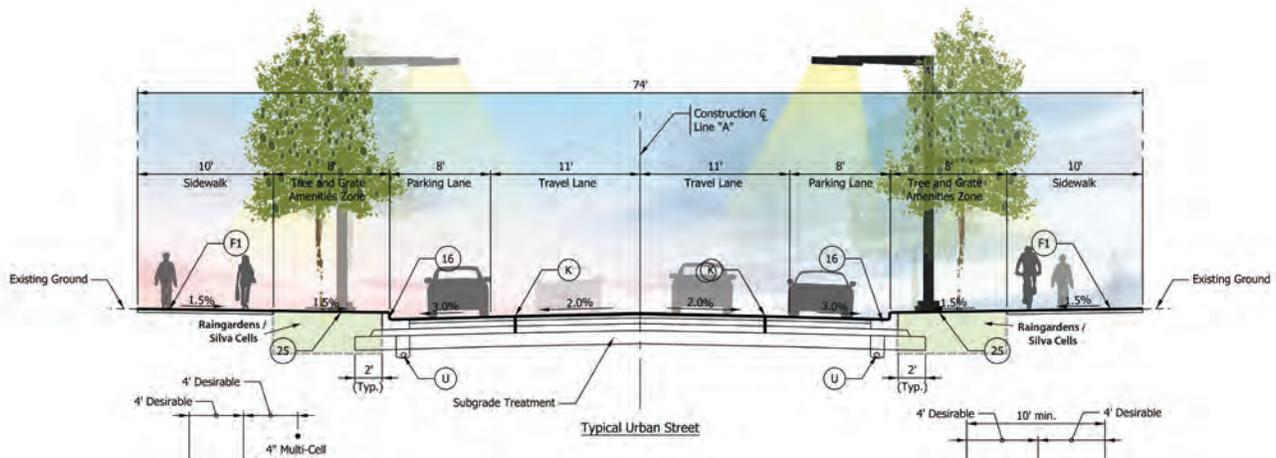


STREET TYPE INTENTION

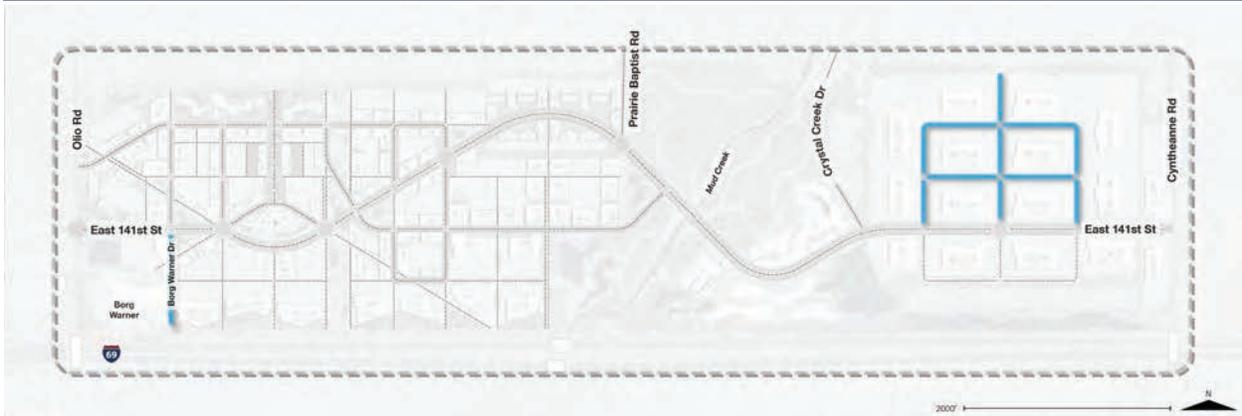
Street Type D – Typical Commercial Street is a two-way street located throughout the district core serving primarily the northwestern area of the district. Land uses along this street type include, public spaces, mixed-use retail and residential, office, flexible use innovation spaces, and industrial. This street type is designed to accommodate vehicles and pedestrians and provides each user with the necessary amenities by separating the travel lanes with a tree lawn buffer and on-street parking.

REQUIREMENT	DETAILED STANDARD
Typical Classification	Local
Typical Right-of-Way (ROW)	70' (from property line to property line)
Median (Landscaping and vegetation)	N/A
Travel Lane (Two-way Street)	1 lane in each direction, 11'- 12' wide, 2% slope towards gutter
Parking Lane (On street)	1 lane in each direction, 8' wide, 3% slope towards gutter
Bike Facilities (Location varies)	N/A
Sidewalk Facilities (Location varies)	10' wide, 6' tree zone buffer from road, 1.5% slope towards gutter
Lighting	Two directional street lighting; towards sidewalk and road, zero cutoff, no sodium halide lighting
Pedestrian Amenities	Light posts within 6' wide tree lawn, street trees
Loading and Service	Not allowed

FIGURE 5-20. Typical Cross Section for Street Type D



STREET TYPE E - TYPICAL SERVICE STREET

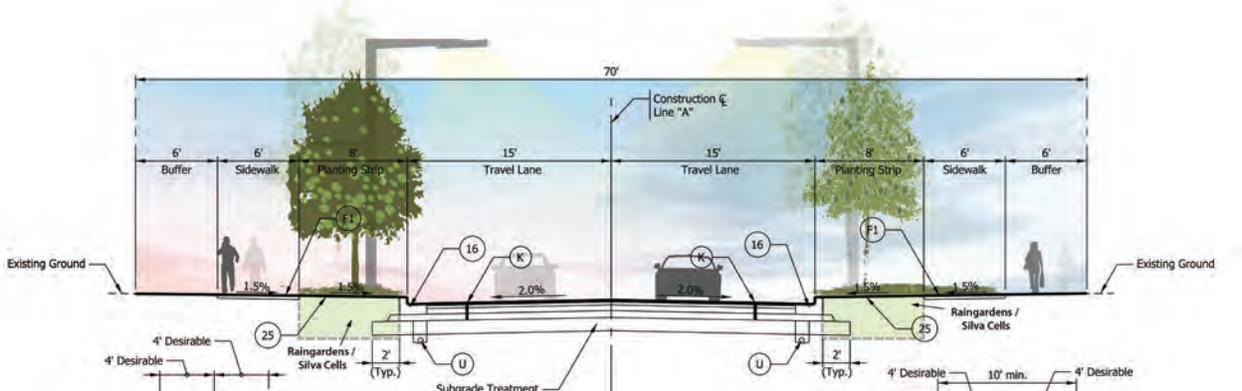


STREET TYPE INTENTION

Street Type E – Typical Service Street is a two-way street located in the eastern area of the district. The land use along this street type is solely industrial, built to accommodate large volumes of truck traffic serving warehousing and logistics centers. This street type is designed to accommodate vehicles and pedestrians and provides each user with the necessary amenities by separating the travel lanes.

REQUIREMENT	DETAILED STANDARD
Typical Classification	TBD
Typical Right-of-Way (ROW)	70' (from property line to property line)
Median (Landscaping and vegetation)	N/A
Travel Lane (Two-way Street)	1 lane in each direction, 11'- 15' wide, 2% slope towards gutter
Parking Lane (On street)	N/A
Bike Facilities (Location varies)	N/A
Sidewalk Facilities (Location varies)	6' wide, 14' tree zone buffer from road, 1.5% slope towards gutter
Lighting	Two directional street lighting; towards sidewalk and road, zero cutoff, no sodium halide lighting
Pedestrian Amenities	Single direction street lighting towards road, light posts within 14' wide tree lawn, street trees,
Loading and Service	Allowed

FIGURE 5-21. Typical Cross Section for Street Type E



STREET TYPE G - SPECIAL SHARED STREET

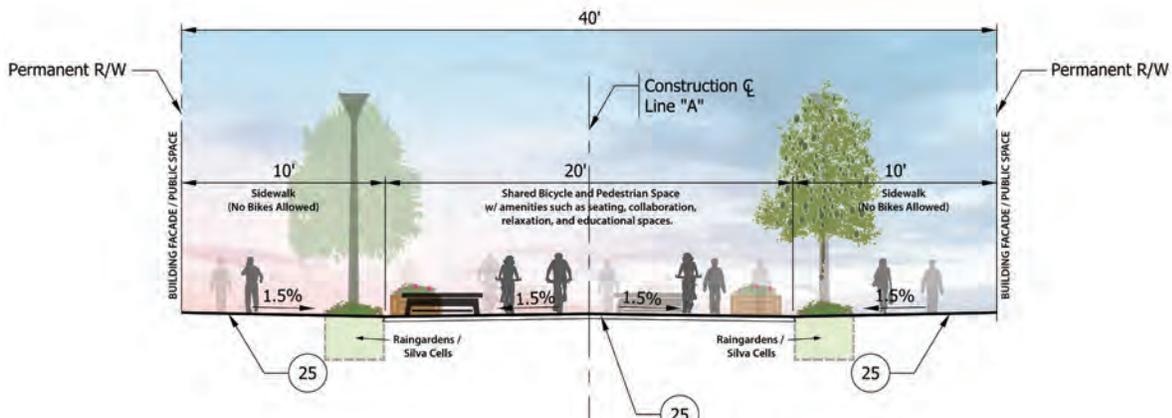


STREET TYPE INTENTION

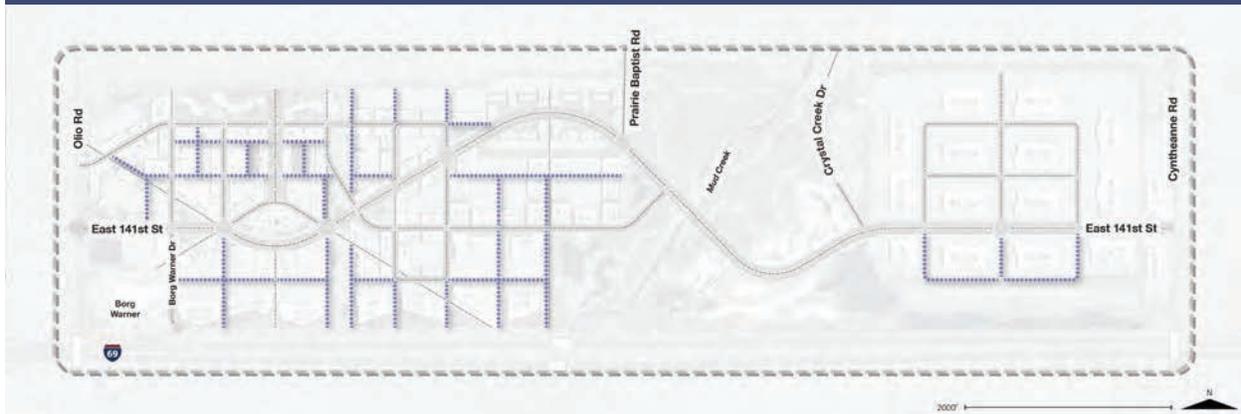
The Street Type G – Special Shared is a single-lane pedestrian- and cyclists-only pathway located throughout the western area of the district. This street type links all public spaces in the western section of the district to one another, creating the public space network. Land uses along this street type include public spaces, mixed-use retail and residential, office, flexible use innovation spaces, recreation, and industrial. It is composed of a 12' wide shared path, with vegetation and landscape buffer on each side, and varied distance from property line.

REQUIREMENT	DETAILED STANDARD
Typical Classification	TBD
Typical Right-of-Way (ROW)	40' (from property line to property line)
Median (Landscaping and vegetation)	N/A
Travel Lane (Two-way Street)	N/A
Parking Lane (On street)	N/A
Bike Facilities (Location varies)	Shared bike lanes and pedestrian 12' wide multi-use trail, 1.5% slope towards both side of the trail, varied width landscape and vegetation buffer between train and property line
Sidewalk Facilities (Location varies)	N/A
Lighting	Pedestrian-scaled lighting utilized on edges to provide lighting to common areas, zero cutoff, and no sodium halide lighting.
Pedestrian Amenities	Shared bike lanes and pedestrian 12' wide multi-use trail, 1.5% slope towards both side of the trail, varied width landscape and vegetation buffer between train and property line
Loading and Service	Not allowed

FIGURE 5-23. Typical Cross Section of Street Type G



STREET TYPE H - POTENTIAL ALLEY

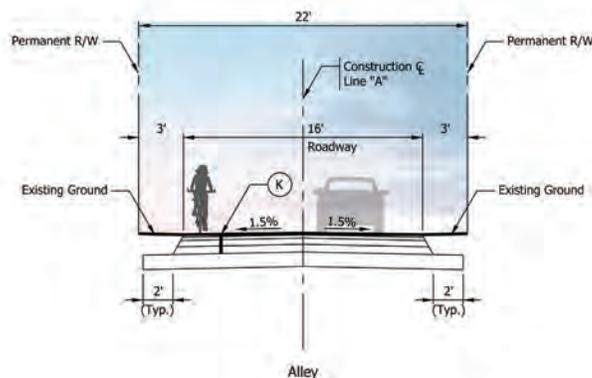


STREET TYPE INTENTION

The Street Type H – Potential Alley is a single lane street that can potentially be located within each block. These streets are meant for service and parking access and provide each block the flexibility to include diverse land uses and the corresponding building footprints. While this street type is designed to accommodate primarily vehicles, its 22' wide ROW and 3' wide buffer from property line considers occasional cyclists and pedestrians.

REQUIREMENT	DETAILED STANDARD
Typical Classification	Alley
Typical Right-of-Way (ROW)	22' (from property line to property line)
Median (Landscaping and vegetation)	N/A
Travel Lane (Two-way Street)	1 lane, 1.5 % slope from center line towards gutters on both sides of the street
Parking Lane (On street)	N/A
Bike Facilities (Location varies)	Shared bike and vehicular
Sidewalk Facilities (Location varies)	N/A
Lighting	N/A
Pedestrian Amenities	N/A
Loading and Service	Allowed

FIGURE 5-24. Typical Cross Section for Street Type H







SMART DISTRICT STRATEGY

Smart District initiatives are actions that Innovation Mile can implement to attract investors and inspire all its tenants and visitors to set the district apart as truly innovative.

From a construction standpoint, it's vital to realize decisions made today will have a lasting impact for decades to come. By implementing Smart District strategies today, Innovation Mile will be ready for the future impacts of extreme weather, smart technology implementation, phase-down of fossil fuels, and other widescale

and broad paradigm shifts.

Placing these innovation strategies at the forefront of Innovation Mile design puts Noblesville at the heart of delivering a sustainable, forward-thinking, and economically fair and prosperous society. By catering to the needs of its workers, visitors, and operators in dynamic and intuitive ways, a new dimension of interaction will set the Innovation Mile apart.

Fundamentally, this is not about creating entirely new experiences, especially since district users would not benefit through complete reinvention. Instead, value creation lies within

the enhancement of existing experiences through tactical implementation of spatial design and leveraging technology. Through this lens, technology is an enabler of enhanced user experiences rather than the focal point of the experience.

The value created through driving innovation is, in part, the result of data gathering, data-driven insights and automation. These insights are valuable in that, if they are understood and acted upon appropriately, then they will translate to improved user satisfaction among tenants, visitors, and residents, and overall operational

cost savings.

The following Vision Elements are used to categorize Innovation Strategies:



INNOVATION & EXPERIENCE

Develop tools for a unique and differentiating experience through subtle leverage of technology. Users should feel at ease with a seamless experience individually curated for their needs.



OPERATIONS & SECURITY

Promote a model of secure and efficient development that takes advantage of digital transformation to automate building functions and systems.



MOBILITY & CONNECTIVITY

Serve the site with a high-quality, future-focused, multi-modal transportation system with an emphasis on convenience, safety, electrification, access, regional traffic patterns, and transit-oriented amenities.



ECONOMIC ACTIVITY

Reinforce traditional safety and security measures to improve overall staff operations efficiency and user comfort.

INNOVATION & EXPERIENCE

Initiative #1: District Fiber Network

Initiative #2: District Data Network



Initiative #1: DISTRICT FIBER NETWORK



Telecommunications refers to connectivity enabling voice, internet access, media distribution, energy metering, security and all other devices which exist in a district to provide high-speed communications. The inter-connectivity between devices to the processing environments, whether on-site or provided in a cloud data center, is essential in today's digital age. A connected telecommunications network is a requirement for district operation.

This connectivity is often framed as dark-fiber which refers to the installation of fiber optic cabling but without connecting the cables, i.e., an unlit fiber connection. The rapid rollout of 5G (high bandwidth functionality to users) drives an increased concentration of fiber (capable of

fulfilling 5G requirements) connectivity which in turn drives planning those backhaul routes. Backhaul routes are the data transmission connectors from the wireless access point (or mobile service provider equipment) back to the local on-site internet service provider demarcation point that links back to the internet and supported services.

Ultra-fast networks are necessary for today's data-rich, data-consuming systems and users. The ability to link buildings, utilities, information systems, and other district elements can be the difference between a regular district and an innovative district. Therefore, a robust telecommunications network is considered as foundational to Innovation Mile operations.

PLANNING CONSIDERATIONS

Termination destinations for fiber optic routing should be determined early on to mitigate additional trenching and landscape destruction to lay new cabling after roads have been built. Early planning also enables joint trenching to be planned for with electrical, utilities, road work, etc.), costs can be shared amongst collaborating entities therefore reducing construction costs. The use of joint trenches is approved by Duke Energy.

Designating what equipment and buildings are to be connected, for what purpose, and the manner of connectivity (wired, wireless, trenched, overhead) is pivotal for planning purposes. A mix of trenched wired connections with wireless extension (by means of Wi-Fi Access Points or 4G/5G signaling equipment with a radius of 290 feet (TIA568) from the edge distribution point) is recommended for the initial layout of services.

Edge distribution points are at the edge of the network from where wired connections feed IP-based devices. These are normally above-ground enclosures that have conduits running underground to devices, e.g. traffic light controller, irrigation controller, wireless access point, security camera. Equipment (e.g., switches, PON ONT devices) within the edge distribution point enclosure must be industrial rated due to the lack of environmental conditioning.

Moreover, the early planning of segregated service access design is pivotal for coordination with service providers. Designation of access for providers to maintain transmission and upgrade services in the future should be coordinated with the provider to understand their technical needs.

NEXT STEPS

- 1. Set clear connection goals.** Define the buildings, facilities, equipment, and district elements that would benefit from a communications network connection - for example, traffic signals, water towers, pump stations, etc. This plan should include specific objectives and outcomes of the network and shall include the type of service providers that need to be accounted for with base district operations. This shall be done in connection with the requirements for Initiative #2: Data gathering requirements for services provided, public safety, as well as utilities will help define right-sizing of connectivity.
- 2. Review existing IT infrastructure.** Take inventory of existing technology end-device infrastructure in other Noblesville projects, and capture lessons learned. This should be done especially for equipment that may be connected, including traffic lights, signals, etc. It also may be useful to note how previous pathways and connectivity were implemented. Existing City technology standards will need to be followed and coordinated with the IT Department to effectively support the network. Furthermore, previous pathways shall be gathered through discussions with Zayo and other service providers. This will allow for the appropriate planning to tie into the City network where appropriate.
- 3. Investigate Public Agency Partnerships.** Creating a joint network could result in cost and resource savings. Communication between Public Safety (Police & Fire), Duke Energy, public utilities, planning, and street departments should be coordinated to understand what the needs of each entity are within the district as build-out planning is occurring.
- 4. Determine the network transmission method.** Determine what additional equipment is needed to complete the network to achieve connectivity goals. For example, will the district utilize all fiber cabling to each building and equipment needing connection or will there be some shorter-distance copper installed? What assets are considered most critical and need additional redundancy? Each method of connectivity will need to be weighed for pros/cons.
- 5. Determine costs and implementation.** Costs can be high for installing telecommunications. Establishing an implementation strategy that meets funding availability will provide the most successful outcomes. This may include joint partnerships to split costs between public agencies or using external grants/funding streams. This step also includes prioritizing necessary infrastructure should funding become limited.

Initiative #2: DISTRICT DATA NETWORK



Digital displays, Wi-Fi access and real-time facilities management are some of the examples enabled by investing in a district data network. This network leverages the investment in the dark fiber previously presented. The network is responsible for the relaying of data from field devices to the district data center or the cloud or the City's data processing facilities.

Messaging to the public and collection of data through internet of things (IoT) and cloud-connected devices for real-time data analysis leverages the District Telecommunications Network (Initiative #1) but further augments base capabilities through deployment of switches, routers, and servers housed within the, e.g., district data center.

Solutions enabled by a district data network also include 5G applications and public Wi-Fi, which may be leveraged by tenants and guests for even faster and seamless connectivity. This is an

attraction for districts pursuing innovation and increased collaboration.

Furthermore, the district data network supports Smart City features, like smart energy metering, smart lighting, security monitoring (cameras, footfall traffic, gunshot detection), etc. Herein lies the primary costs in deploying a district data network: data center costs including build-out, servers, network equipment, licensing, and Software as a Service (SaaS) applications.

This initiative is an expansion of Initiative #1. Furthermore, this initiative is foundational to Initiatives #3 District Utility Management System and #4 Smart City Furniture. This initiative may also enable enhanced capabilities of other initiatives such as wireless/mobile connectivity for SaaS platforms and interoperability with third-party analytics.

PLANNING CONSIDERATIONS

Physically, a designated on-premise District Data Center will be required to house the network equipment. It is recommended that the space chosen to house the District Data Center also house the District Control Center and necessary equipment and control machinery.

The City's existing data center at City Hall is proposed to serve as the redundant (secondary) data center to back up the operations of the primary data center. A dedicated internet link between these two data centers are fundamental to enabling this functionality. Currently, the City Hall data center has two full-sized, four-post racks that are empty with space to accommodate two to three more racks. The IT Department maintains the room, facilities maintains the cooling, and Schneider Electric maintains the APC Battery backup. The room is cooled with two 5-ton HVAC units and an APC Symmetra 40 kW unit. The room is connected to the building generator and there are two fiber trunks that provide redundancy.

Operations planning should consider the capacity of the City's IT department to administrate and manage the infrastructure at Innovation Mile or what agreements are needed with third-party service providers. These agreements should be service-focused with data (insights) sharing back to the City including revenue shares.

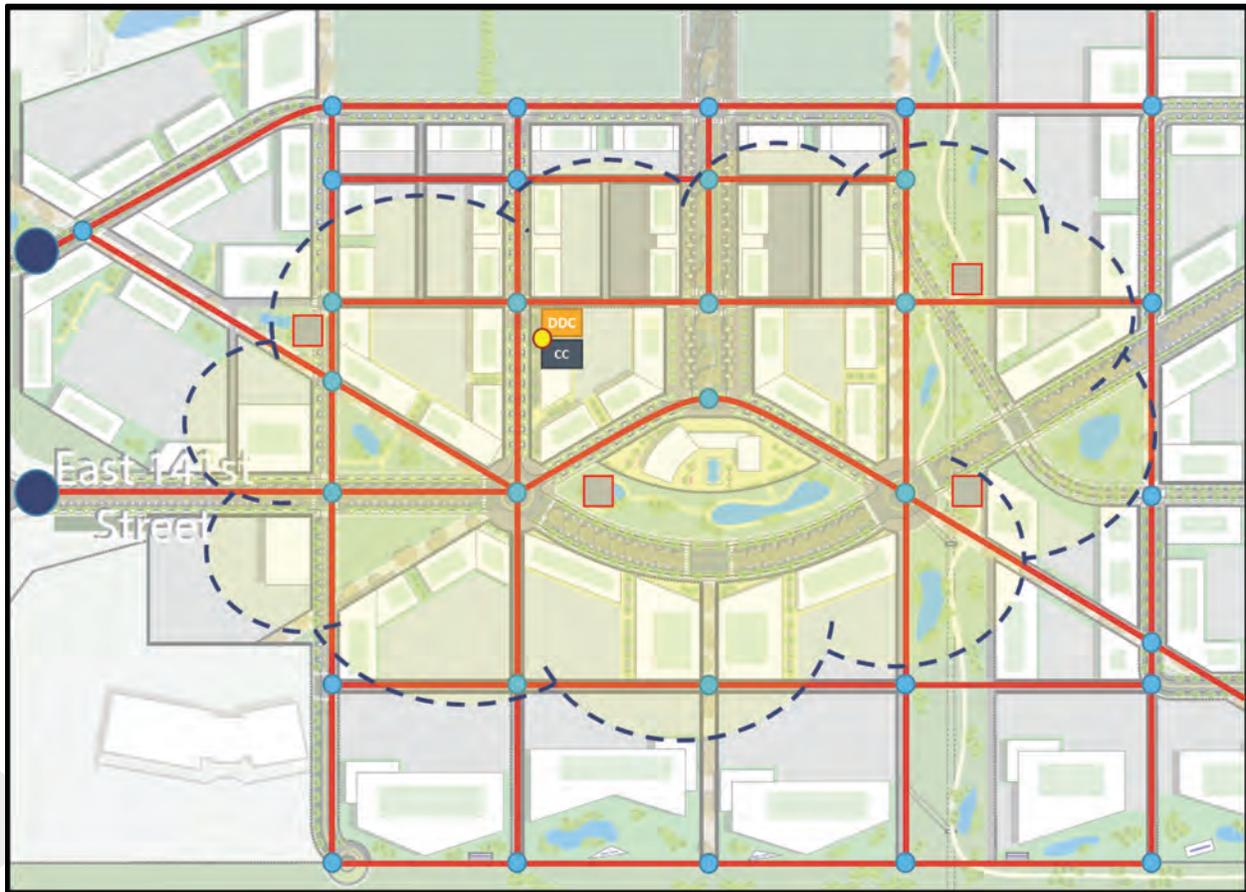
With the amount of data captured, a datalake and common data environment will need to be planned for specifications of which to be developed during subsequent phases of the district. Specific considerations shall be around the space required for network equipment on premise (physical) vs services in the cloud (virtual). It may be feasible to leverage the use of cloud services to support on-premise and City Hall data center infrastructure.

Space will also be needed for at least two redundant Internet Service Provider (ISP) Service Point of Entry (SPOE) spaces to consolidate entry into the district.

NEXT STEPS

- 1. Further define the connectivity vision.** The roadmap to a district data network begins with building off the connectivity goals set out in the telecommunications network plan (see step 1 of Initiative #1 next steps, which includes defining assets needing connection and objectives of the network). Further development of specific use cases and outcomes enabled by the district data network is required and may be defined by a user experience design during detailed design phases. Here, consideration of user personas and architectural impacts supportive of desired outcomes would be delivered. Determining what a district data network can do for Innovation Mile is vital along with specific criteria, timeframes, and success metrics. This step should be done in tandem with the visioning of Initiative #3.
- 2. Define the ecosystem of connectivity.** Various stakeholders play critical roles in making a district data network; however, operation within traditional government silos will not lead to fruitful or desired outcomes. Building off the defined vision, Innovation Mile planners will need to initiate and coordinate conversations with the right stakeholders (Fire, Police, Public Safety, Utilities, and other City planning agencies, developers, etc.).
- 3. Define governance.** A district data network will utilize a common data environment and data sharing between stakeholders. As such, coordination between stakeholders must include IT-related discussions to define what data is to be shared and how. Moreover, clear responsibilities around network management must be established along with a data policy and cybersecurity strategy that compliment or enhance the current and future City policies.
- 4. Technology procurement.** The precise devices, systems, and network for each desired outcome will differ according to Innovation Mile's unique vision. Before procuring these systems, device capabilities and specifications need to be developed in accordance with the vision and governance along with City technology standards and approvals.

FIGURE 5-25. Illustrative Layout of Smart District Initiatives #1 and #2



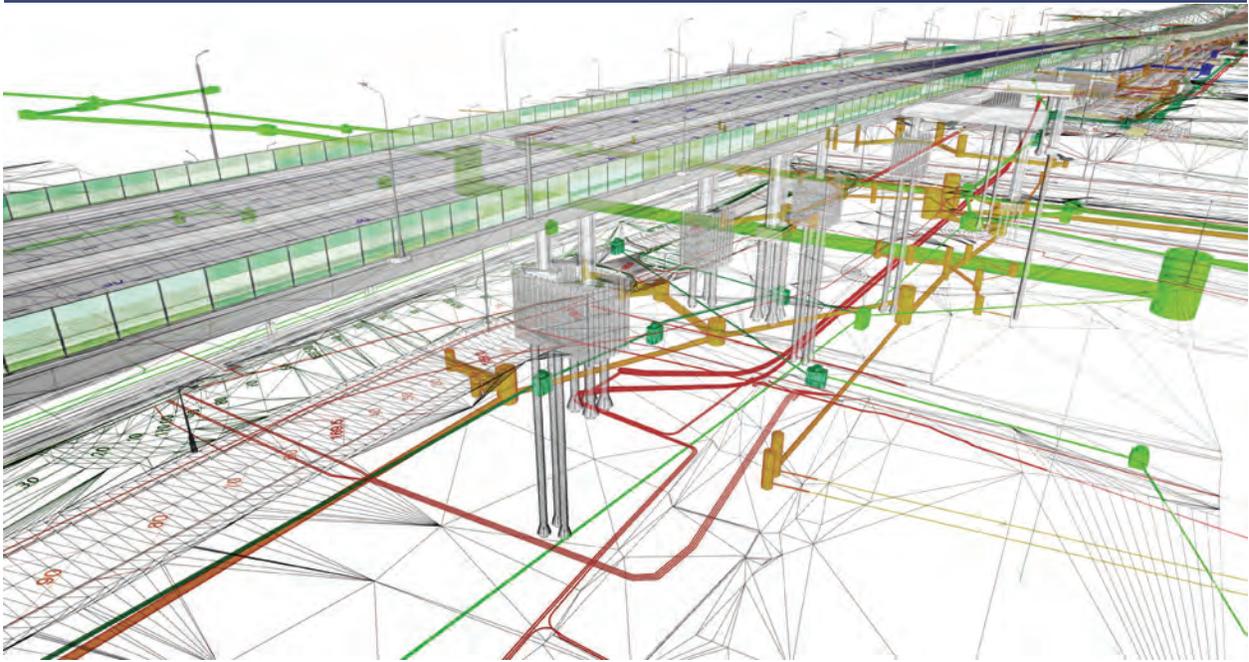
OPERATIONS & SECURITY

Initiative #3: District Utility Management System

Initiative #4: Smart Street Furniture



Initiative #3: DISTRICT UTILITY MANAGEMENT SYSTEM



A District Utility Management System is comprised of several systems integrated for improved data capture and interoperability. This, in turn, enables certain use cases like enhanced operational efficiency, security monitoring, and granular energy management through smart and connected devices.

While a district data network (Initiative #2) may be foundational to such a management system, this initiative specifies the desired use cases and the required systems integration. The result is an interoperability platform that centralizes various smart solutions in a single district management system. It integrates different smart systems in a building or district, enabling them to communicate and work together.

The District Utility Management System will enable the City to deliver on a selection or all of the following functions:

- **Building automation/management:** Temperature and environment optimizing based on occupancy, air quality, weather, and other inputs.
- **Energy and water metering:** Deployment of smart metering devices by Duke and Fishers that permit Innovation Mile to also ingest consumption data allowing the district, the tenant, and the utility to understand usage trends. Furthermore, granular smart meters can be deployed either by the district or written into the development guidelines for tenants/developers to provide which allows metering of end uses (equipment, specific buildings, lighting, signaling, EV charging, etc.)
- **Enhance Security monitoring:** Services might include visitor management to secure spaces, gunshot detection, CCTV analytics, enhanced emergency and evacuation solutions, and connection to public safety.
- **Traffic signaling:** Pedestrian and vehicular traffic control system could adapt signals from data collected from sensors, edge devices, and video systems.
- **Streetlights:** Cameras, photocells, and other sensors for real-time monitoring.

- **Parking insights:** Deployment of sensors for management and analytics of parking throughout the district (could include EV charging).

This initiative informs what is required for Initiative #4 Smart Street Furniture.

Security management and monitoring will require an integrated approach between developers, tenants, the City, and Police to ensure security-related equipment can be supported by the district data infrastructure and district architecture. Development guidelines issued to developers should reference the requirement for providing systems and devices which support district-outcomes, e.g., granular

metering to support sustainability initiatives or cameras to support improved security. Moreover, this may include citywide changes or requirements that apply, including requiring security cameras for parking lots over a certain size.

The District Utility Management System shall enable proper and enhanced management of district operations, especially if planners desire Innovation Mile to be an icon of sustainability and advanced performance. Depending on district needs (operations, carbon footprint, and service resilience), the development of this initiative is to be determined.

PLANNING CONSIDERATIONS

Innovation Mile planners might consider designing in accordance with Level of Detail (LOD)-300 to create a Digital Twin. Early planning around identifying digital twin expectations will determine the engineering design specifications.

Specific priority outcomes of the district utility management system will inform the designs of both the telecommunications and district data networks. Therefore, desired outcomes of this initiative must be specified ahead of district telecommunications layout since it informs the result of cabling and networking infrastructure.

NEXT STEPS

1. **Prioritize use cases and desired outcomes.** In tandem with the district data network vision (Initiative #2), the desired outcomes of a district utility management system must be defined. This vision will inform the overall technology and connectivity vision for the district – effects of which will influence the overall data network and telecommunications planning. As such, it is vital to prioritize the use cases and desired outcomes of a district utility management system. Laying the foundation for systems integration is easier provided during initial design phases when foundational networks (Initiatives #1 and #2) are being designed in tandem. The development of this vision may include stakeholder workshops and user experience design during the next phase of work. This work will consider personas, architecture, and space considerations supportive of these desired outcomes and culminate with a detailed roadmap.
2. **Define key performance indicators (KPIs) and success metrics.** Based on the desired use cases and outcomes, baseline metrics and KPIs to measure success will need to be defined. This informs technology strategies defining the type of data required.
3. **Coordinate device selection and systems integration.** Devices shall be specified based on what capabilities are required for KPI data capture. A series of devices shall be housed under individual system silos, which will need to be integrated for data share within the common data platform.
4. **Infrastructure planning.** Foundational infrastructure will need to be designed in support of system integration. This includes the conduit, pathways, wireless connectivity, and space build-out that is part of the implementation of the telecommunications and district data networks (Initiatives #1 and #2).

Initiative #4: SMART STREET FURNITURE



Smart street furniture equips traditional streetlighting, benches, trash cans, etc., with the ability to support edge distribution points, IoT sensors and technology to serve and enable additional user and operational experiences.

Utilizing smart street furniture will enable the City to deliver on a selection or all of the following functions by leveraging the furniture as the network edge:

- Internet/5G Equipped Beacons
- Streetlights with occupancy sensors, speakers, Wi-Fi, etc.
- Trash cans with fill-level sensor
- Shuttle stops with real-time digital signage and camera analytics
- Benches with charging stations
- Security cameras. Foot traffic sensors or gunshot detection that provides potential-criminal activity to the police

PLANNING CONSIDERATIONS

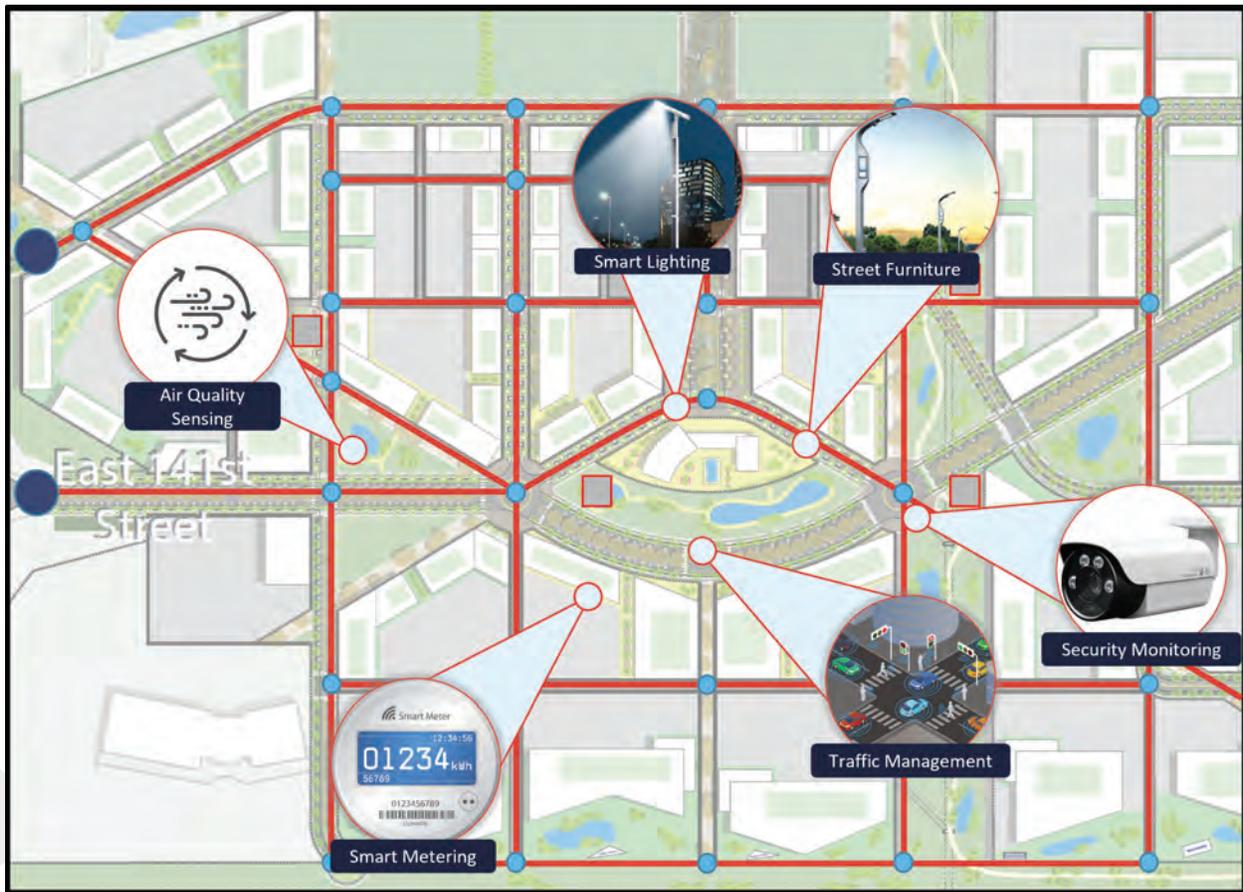
During the procurement and design of street furniture, the City planners should take into consideration the need for dedicated electrical circuits, weight and wind-bearing capacity, internal support for fiber terminations, and

connection back to the joint trench which enables data flow from furniture to control room/cloud servers. Constant electrical supply would also be required.

NEXT STEPS

- 1. Define the type of furniture required.** The type of furniture shall be decided based on the vision and devices required by the vision of the district data network (Initiative #3). Integration of data capturing devices into the physical realm of Innovation Mile is a critical step to ensure holistic feel from a district beautification standpoint.
- 2. Define owner of furniture and maintenance provider.** As part of the stakeholder strategy for the district data network, it should be noted who owns and operates data capturing elements. For example, if streetlights are owned and maintained by Duke Energy, then it must be decided how management of smart lighting is implemented.
- 3. Coordinate design with engineers.** Data capturing device specifications should be built into the plan for the district data network. Once these requirements are outlined, device selection and procurement must be considered when selecting smart street furniture. This is because device selection will have specific electrical, spatial, weight, and connectivity requirements for the furniture. Coordination of such is required in partnership with engineers and furniture procurement teams. Lastly, the look of such furniture will need to be confirmed by placemaking entities to ensure compliance with Innovation Mile design principles.
- 4. Furniture Procurement.** Final selection of street furniture shall be in accordance with the district data network plan, engineering design, and placemaking of the district.

FIGURE 5-26. Illustrative Layout of Smart District Initiatives #3 and #4



- Fiber Optic Cabling / Joint Trench
- Maintenance Manhole
- Connection to ISP
- Public Wi-Fi Coverage (Phase 1)

MOBILITY & CONNECTIVITY

Initiative #5: Digital Parking Management

Initiative #6: Electrical Vehicle Charging

Initiative #7: Alternative Transit



Initiative #5: DIGITAL PARKING MANAGEMENT



For a district like Innovation Mile, where most tenants, employees, and visitors will be traveling via car to the area, parking management is critical for managing road traffic, delivering improved visitor experiences, security but also for potential revenue generating purposes.

There are numerous parking management platforms with a robust set of capabilities depending on what technology and software are

provided. Such solutions may include parking spot reservation, real-time parking availability insights, mobile app integration, or parking data analytics for administrative decision making. The City's current parking management provider makes use of manual parking systems but there is interest in automated processes leveraging technology in future which bodes well for this district as adopter of enhanced practices.

PLANNING CONSIDERATIONS

The climate of Noblesville necessitates that the type of parking management is based on camera sensors instead of in-ground sensors. The specifications of camera-based sensor is to be determined, including the communication protocols, data metrics, and

power requirements. Leveraging the district data network offers backbone connectivity for real-time insights and law enforcement (incentives include compliance and revenue generation) depending on the functionalities of the sensor chosen.

NEXT STEPS

- 1. Analyze existing parking management strategy.** Within the City of Noblesville, what is the current parking management strategy and how has it worked for desired goals of the City? What inefficiencies or lack of abilities exist with this existing model?
- 2. Develop additional capabilities desired.** Based on the initial critique of existing parking management, the City should identify future-focused capabilities they would like to include in the new district. To do this, decision makers must develop an idea of what is important for district operation and user experience. From

previous workshops, planners have noted that data capture and analytics on parking usage is vital for continuous planning purposes.

- 3. Research parking management solutions and providers.** Depending on the capabilities desired, a set of best-fit solution providers must be vetted and compared. The comparative lens here shall be through hardware required, software packages, and cost of implementation. Maintenance considerations should be developed here alongside the vendor selected and the entity providing on-going maintenance.

FIGURE 5-27. Illustrative Layout of Smart District Initiative #5



— Fiber Optic Cabling / Joint Trench

● Maintenance Manhole

● Connection to ISP

○ Public Wi-Fi Coverage (Phase 1)

● Parking Sensors / Cameras (locations to be confirmed once detailed design progresses)

Initiative #6: ELECTRICAL VEHICLE CHARGING



Electric vehicle (EV) charging stations are becoming increasingly important for new developments as EV rollout is increasingly adopted across the United States. Some charging stations have advanced features – like granular metering and network connectivity – while others are more basic.

There are three levels of chargers: Level 1 (120V AC plug), Level 2 (240V AC plug), Level 3 (480V DC plug). The level of charger should be informed by robust and well-thought-out deployment strategy considering existing EV charging inventory in the area, type of user, and infrastructure ownership model.

PLANNING CONSIDERATIONS

EV charger design requires coordination with planners to determine type and quantity, with Duke Energy to confirm power availability, and with a provider for procurement and installation.

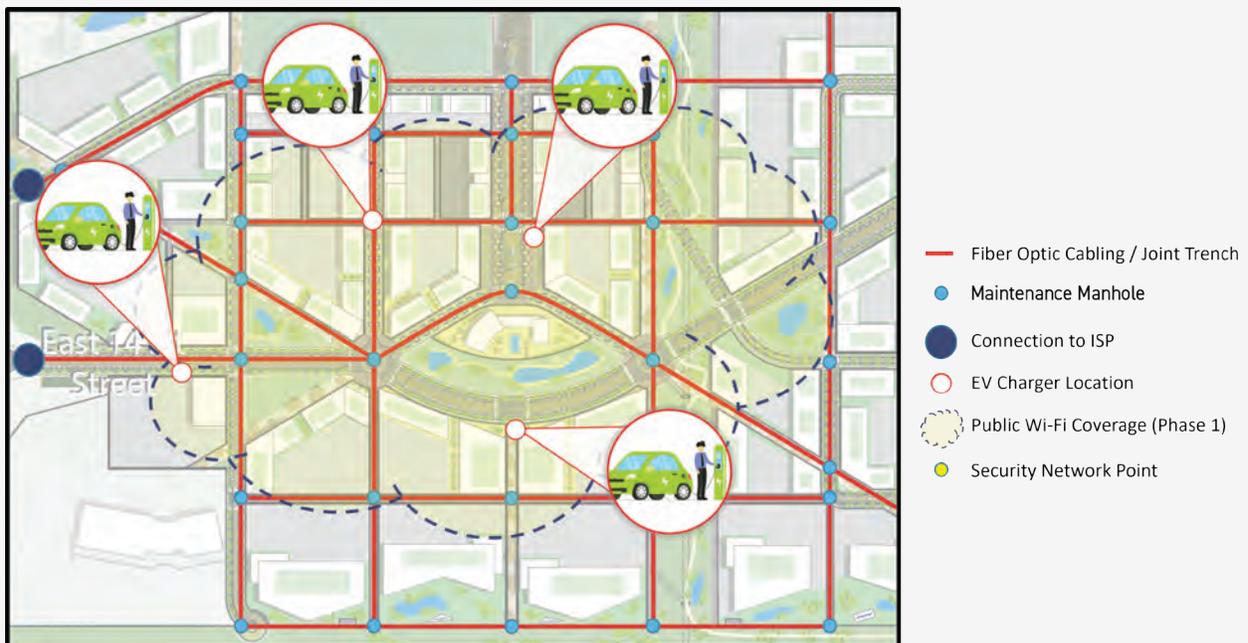
Moreover, Innovation Mile planners must define and lay out EV charging locations based on a strategy for on-street, surface lots, parking garages, and building connection (should it be required).

Stakeholders involved in planning EV charger locations include Duke Energy as the utility provider, commercial organizations (service providers), local BMV, citizens and NPOs to ensure the effective and equitable placement of chargers. This initiative requires collaboration with Duke to determine the additional power loads and electrical supply needs.

NEXT STEPS

- 1. Right-size deployment strategy.** Finding the balance between the types of EV charging is paramount for success and optimizing implementation cost and electrification. Taking inventory of what EV charging exists in the area and what the City has learned from previous deployments must be leveraged in deciding the amount and type of charging infrastructure at Innovation Mile. Moreover, defining the type of EV driver – local commuter versus long-distance traveler – is critical for influencing charging type.
- 2. Decide on EV ownership model.** There are various ownership models for EV charging infrastructure, each of which have their own partnership requirements. One model may be revenue-generating for either the City or a third party that owns and maintains the stations. Another model might be individual business/developer-based ownership that may be free to users while they shop or dine in the district.
- 3. Identify optimal locations.** As the Innovation Mile planners decide on what land parcels to sell versus maintain ownership of, the EV charging strategy should be coordinated with accordingly. The decided upon ownership model(s) will also inform the locations available and designated for deployment. Aside from location, the selected sites must have proper electrification, lighting, and safety provisions – this will need to be coordinated with partners, including Duke Energy. Typical vehicle miles traveled (VMT) is a common metric used in determining EV placement and ensures gaps in infrastructure is filled strategically. Land use assignment will also drive the quantity and location of chargers as it dictates the concentration of vehicles. Future climate changes considered will aid in selecting locations that are lower in risk to impact and may ensure continued operations.

FIGURE 5-28. Illustrative Layout of Smart District Initiative #6



Initiative #7: ALTERNATIVE TRANSIT



Micromobility solutions, including electric pedal-assist bikes and electric scooters, offer a powerful means to support district transportation needs at a pedestrian scale. Recognizing that electric scooters are currently prohibited within Noblesville, the adoption of electric scooters within the Innovation Mile should utilize geographical boundaries which restricts the use of scooters as soon as they leave the district. E-scooter use has proliferated nationwide and has proved to be a popular option for many people in all places. With planned pedestrian trails, Innovation Mile can further meet the demand for walking and bicycling infrastructure by offering micromobility solutions.

Enabling micromobility and shared transportation options will reduce the number of vehicles moving through the facility grounds and support a sustainable, pedestrian-friendly district. Moreover, pedestrian-focused transit options improve accessibility and allows users to save time moving from place to place when completing short trips.

This is currently not permitted in Noblesville; thus, an exception/by-law will be required in order to progress this initiative. There was interest expressed by Ruoff Music Center that sees the benefit in micromobility between the venue and other entertainment or accommodation options that Innovation Mile may offer.

PLANNING CONSIDERATIONS

Early engagement with micromobility providers will be required to designate zoning and location of docking stations. Docking stations require planning to designate power needs and impact on existing street network. While not necessary,

it is suggested that Innovation Mile streetscape designers take into account bicycle pathways and how shared-road use impacts vehicle turning, speed, and other conditions.

NEXT STEPS

1. Understand local laws and regulations.

Shared micromobility service operators are only permitted to operate within certain parameters set by local authority regulations. Regulation occurs primarily at State and local government levels. For Innovation Mile, this would be by the City of Noblesville and State of Indiana. Some micromobility solutions are not currently permitted in Noblesville, and therefore an exception/by-law must be considered and executed. In doing so, the City should set clear geographical boundaries for the operation of micromobility services.

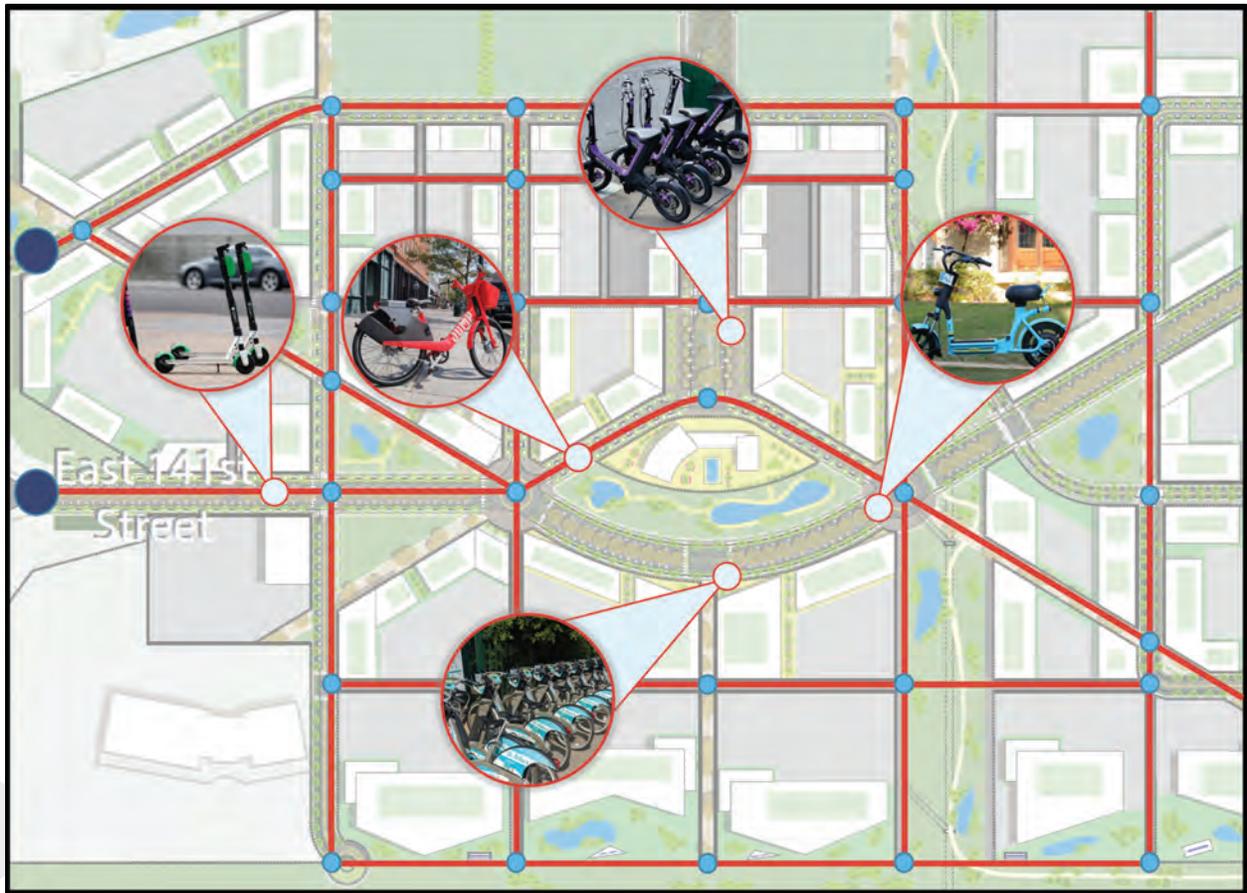
2. **Engage a micromobility provider.** The City may solicit micromobility providers via an RFI or RFP for providing of micromobility solutions. The type of solution (bike, scooter, etc.) may be decided ahead of time or designation could be left to the responder of such an RFI/RFP. The City should require responders to share revenue, resourcing, management, maintenance, and labor plans.

3. Designate and coordinate micromobility zones.

To start operations and fund the micromobility solution, Innovation Mile planners and the provider will need to carefully choose high-density zones, thus guaranteeing a certain level of revenue. Identifying shared goals and strong partnerships here will result in a respect for regulations, bring profit to the business, and offer services that people love.

4. **Parking & Street Design.** Giving preferences to micromobility transport will impact street and pathway design throughout Innovation Mile. The best way to accelerate adoption and ensure safety is to reduce car speed limits in designated areas, optimize bike lane placement, designate car-free zones, and locate docking stations throughout the district.

FIGURE 5-29. Illustrative Layout of Smart District Initiative #7



- Fiber Optic Cabling / Joint Trench
- Maintenance Manhole
- Connection to ISP
- Interactive Kiosk

ECONOMIC ACTIVITY

Initiative #8: Digital Signage and Kiosks

Initiative #9: Innovation Mile Portal



Initiative #8: DIGITAL SIGNAGE AND KIOSKS



Self-serving interactive informational kiosks provide users with engaging digital content for route planning, transit updates, maps, virtual concierge services, district/city news and operations communication. When enabled with data generation and analytics, kiosks can

serve as digital signage platforms to generate additional media revenue. Moreover, as visitors interact with signage throughout the facility, these platforms could collect user data to drive operational insights and personalize user experience.

PLANNING CONSIDERATIONS

Kiosk or digital signage needs will require coordination with planners to determine quantity, placement, and power demands. Locations should be prioritized in retail areas

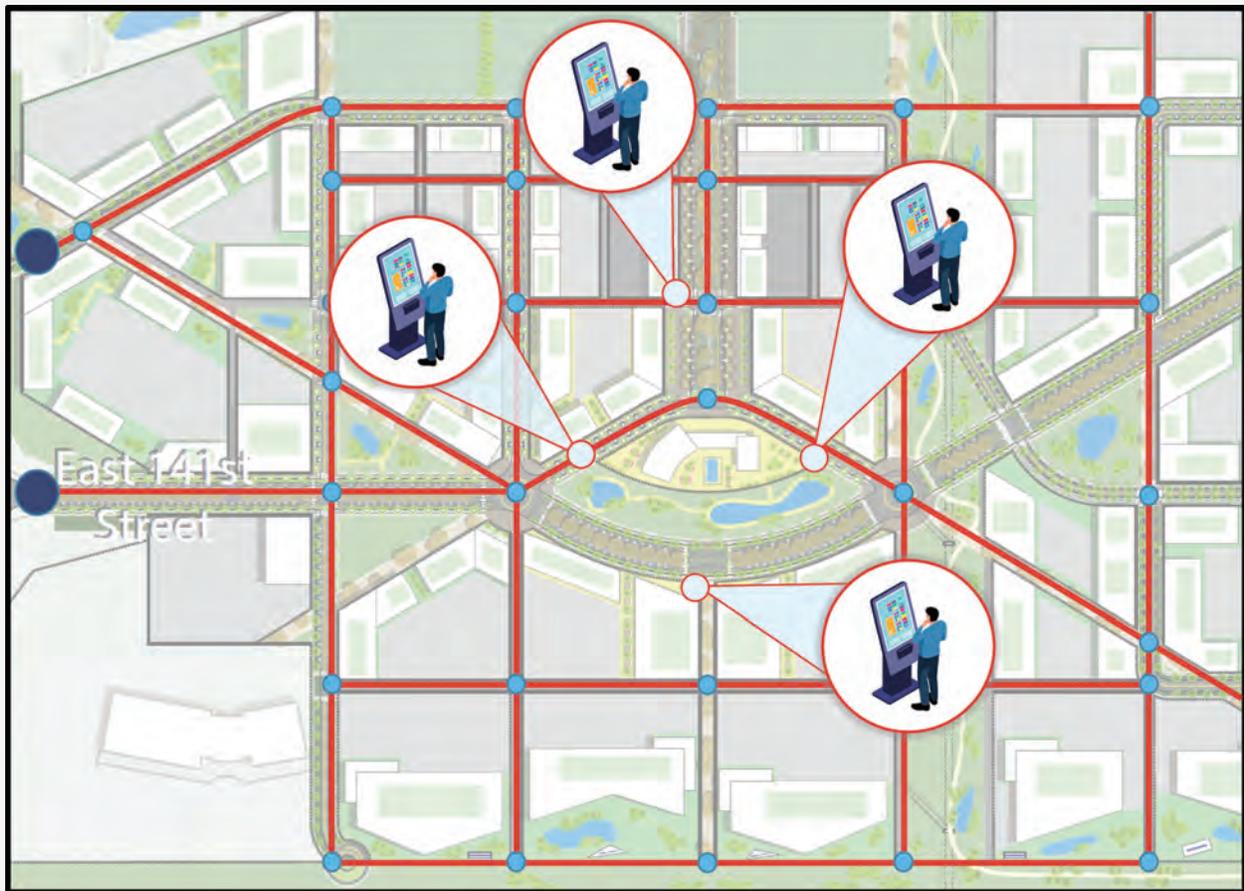
and places where visitors frequent. As such, kiosks may be standalone, in building lobbies, integrated with bus-stops, or in other high-visibility areas.

NEXT STEPS

- 1. Define goals and requirements.** Planners must first decide what use the interactive kiosks will have: wayfinding, digital maps, amenity information, chatbots, emergency features, etc. Moreover, if revenue generation through advertising is desired, a strategy must be developed for marketing.
- 2. Research digital signage and kiosk providers.** Depending on the capabilities desired, a set of best-fit solution providers

must be vetted and compared. The comparative lens here shall be through hardware required, software packages, and cost of implementation. Maintenance considerations should be developed here. Designing these elements should be done in accordance with the Engineering Department, Planning Department, and district placemaking strategy.

FIGURE 5-30. Illustrative Layout of Smart District Initiative #8



— Fiber Optic Cabling / Joint Trench

● Maintenance Manhole

● Connection to ISP

○ Interactive Kiosk

Initiative #9: INNOVATION MILE PORTAL



The Innovative Mile Portal is a one-stop connection to online services for both visitors to the district and for business tenants. The interface can take on the form of a native mobile application or a responsive web-browser thin

client. Services may include digital district maps, amenity locations, electricity/water usage reports, bill paying, facilities requests, space reservations, and dining options.

PLANNING CONSIDERATIONS

Since this initiative is reliant on software development, there are few construction and permitting considerations for its deployment. As such, Innovation Mile staff may consider early

marketing and kickoff to test portal features and integration with mobile devices.

NEXT STEPS

- 1. Define goals and requirements.** Planners must first decide what use the portal will serve: messaging platform, billing & collections, wayfinding, digital maps, amenity information, chatbots, emergency communication features, etc.
- 2. Market involvement.** Depending on the capabilities desired, a set of best-fit solution providers must be vetted and compared. The comparative lens here shall be through

what capabilities the software offers and the cost of implementation/licensing. Ongoing maintenance support considerations should be defined here. If an existing software solution does not suffice for Innovation Mile goals, then Innovation Mile staff should research software developers who might be able to create an app to their liking that encompasses all wanted features.

FIGURE 5-31. Illustrative Layout of Smart District Initiative #9



— Fiber Optic Cabling / Joint Trench

DDC District Data Center (DDC)

● Maintenance Manhole

● Connection to ISP

Control Center

Public Wi-Fi Coverage (Phase 1)

● Service Point of Entry (SPOE)



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SUSTAINABILITY STRATEGY

Districts offer unique and expansive opportunities for sustainable development often not available to smaller projects. At this scale, designers and stakeholders can work to effectively share resources across the district and with the broader community; leverage communal infrastructure to improve efficiency and resiliency; and create opportunities for future tenants, visitors, and residents to expand their understanding and ability to live more sustainable lives.

Sustainability Vision Elements

The sustainability vision for the Innovation Mile district has been broken down into five Vision Elements, listed here, to help categorize potential Sustainability Strategies:

Resiliency: Create an environment and infrastructure that is robust enough to meet operational needs under a range of future conditions. Focus on flexible spaces, future climates, and electrical and mechanical system resiliency.

Health and Wellness: Promote healthy lifestyles and wellness for the district's tenants and visitors. This includes both physical and mental health in indoor and outdoor environments.

Equity and Community: Prioritize equity, accessibility, and community empowerment within the district and beyond. The district can be an agent of change and provide key resources to the local public.

High Performance Design and infrastructure: Design high performance systems to drive energy and water efficiency across the development. This could include a district microgrid with battery storage, distributed renewable energy, and efficient design standards for individual buildings.

Certifications and Story: Promote the sustainability vision and story to engage and draw in tenants and visitors. Certifications are one of the best ways to convert sustainable design to market value.

RESILIENCY

Initiative #1: Site Planning and Water Management

Initiative #2: Energy Storage



Initiative #1: SITE PLANNING AND WATER MANAGEMENT

Even in a dense urban environment, natural site planning and water management is critical. An effective plan can boost resilience in stormwater and flood management, reduce water consumption, and provide natural habitat, placemaking, and ecosystem services for humans and native species.

PLANNING CONSIDERATIONS

Understanding the demands of the community and the impacts on the environment will be critical for determining where and how the water management systems should be designed. Setting sustainability goals and metrics will aid

in the process from design through construction. Careful consideration should also be taken to understand what sort of long-term repairs and changes to the systems will be made.

STRATEGIES UNDER CONSIDERATION

A range of strategies should be used dependent upon the placement and financial considerations of the project. Low-impact development (LID) strategies are generally considered to be high impact relative to their cost and include things such as: bioswales, porous pavement, rain gardens, and green roofs. Preservation and conservation efforts should also be made to ensure the viability of the native and existing flora and fauna in the district. These efforts

can translate into lower cost over time for water infrastructure, and increased benefits for people and place. Use of rooftop space is an often-overlooked space for implementation of strategies. However, these spaces are great for rooftop rainwater harvest systems or green roofs to save water, improve energy efficiency in buildings, and remove water and debris from entering the stormwater system too rapidly.

NEXT STEPS

Develop LID design and locations for confirmed strategies. Strategies like bioswales and rain gardens should be implemented by the district as straightforward and low-cost investments in passive water management and beautifying the district. Planners in the concept phase should determine where and at what scale they want to implement these strategies, and how they will tie into stormwater infrastructure.

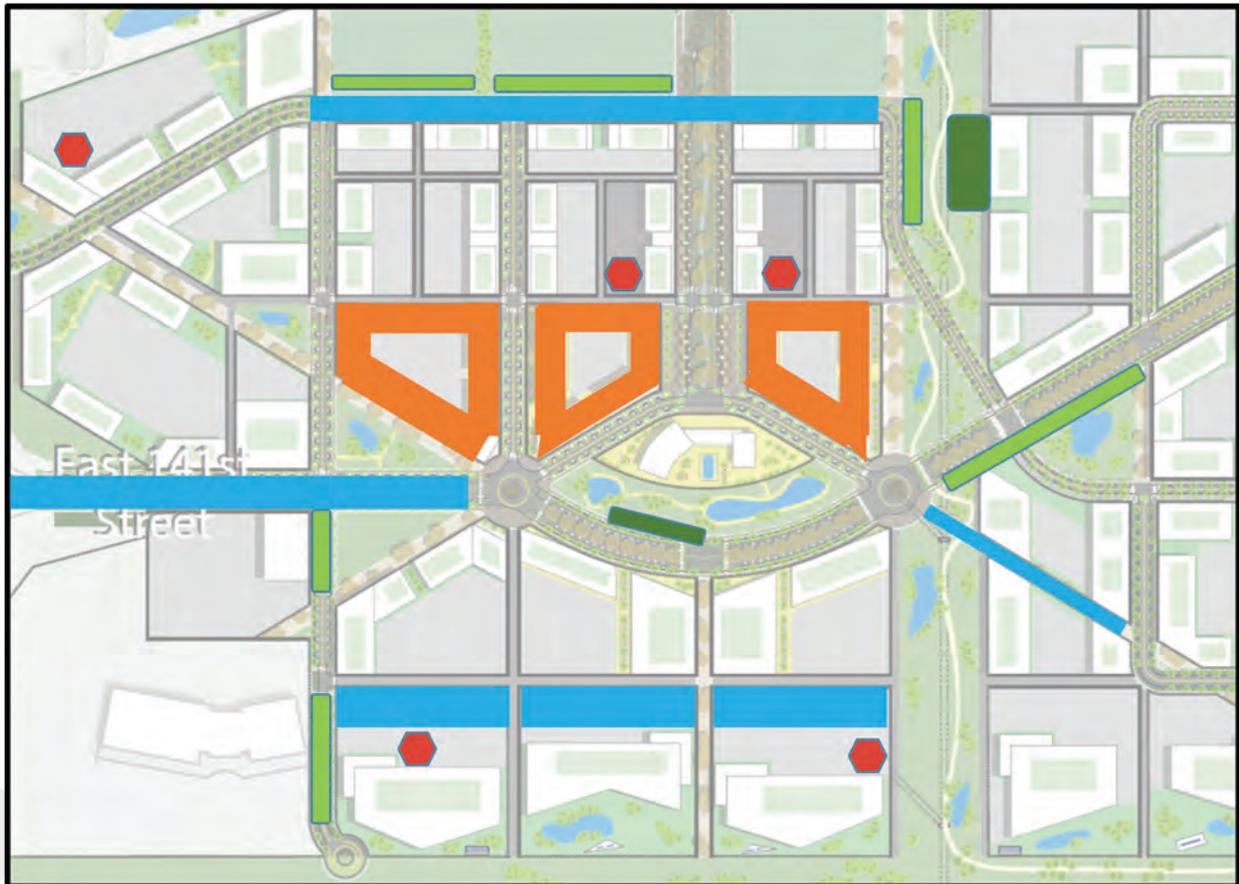
Green roofs and porous pavements are strategies that should be discussed further, as they involve some additional capital and planning. Green roofs have some performance and environmental benefit but reduce space available for rooftop solar. Porous pavements

should be considered in the concept road and trail design planning.

Engage Departments. Collaboration between the engineering, planning and development, and stormwater departments will need to occur to determine the best locations and means for developing the LID strategies laid out in the case studies and examples listed above. Decisions should be informed by both aesthetic and performance needs.

Renderings throughout this master plan include LID design elements like previous pavement and green roofs wherever possible to help support the vision.

FIGURE 5-32. Initiative #1: Water Management Planning



-  Bioswales or rain gardens
-  Urban Agriculture
-  Permeable Pavement
-  Green Roof
-  Rainwater Catchment Tank

District Placement

- Example locations shown here
- Can be integrated into typical streets, walkways, and landscaping.

Initiative #2: ENERGY STORAGE

Improving the sustainability of the energy systems through renewables, demand response, and storage for grid control will be critical for grid resiliency, energy cost savings, and decarbonization. Energy storage systems can have significant savings and ROI all while helping to decarbonize.

PLANNING CONSIDERATIONS

An understanding of the demands and end-goals for energy usage should be established, as well as studies of effective district strategies. When considering microgrids it is important to investigate sizing and placement, energy sources, and additional infrastructure necessary for their success. This includes coordinating with the utility around interconnection policies

and timelines; shared capital investment for infrastructure like transmission conduit and sub stations; energy tariff structures and limitations; and demand response opportunities. If well-coordinated, these systems can be beneficial to the utility, the microgrid owner and operator, and individual tenants.

STRATEGIES UNDER CONSIDERATION

For battery storage, central or local battery storage are two possible strategies to pursue, each with their own pros and cons. Use of integrated central and distributed controls can help manage these resources, as well as integrate into the Io) to allow quick response to changes in use or lapse of any infrastructure. Distributed energy resources, such as localized solar, can feed the battery storage and decarbonize energy usage for the district. Renewable and stored energy can drastically reduce energy demand charges across the district, often paying back the cost of the system in a few short years. The storage system also provides a level of resilience to district

customers and building operators. Enormous costs can be saved by reducing downtime from the grid, especially for technology, advanced manufacturing, or laboratory/R&D tenants. Centralizing the emergency power system allows tenants to also avoid the necessity of installing their own backup power, adding significant savings value for generators and electrical distribution. Tenant fees can also support maintenance costs, in addition to the revenue from energy. This backup power system can include a mix of energy sources, often lithium-ion, but can be supported by fossil fuel generators or even fuel cells depending on runtime and power requirements.

NEXT STEPS

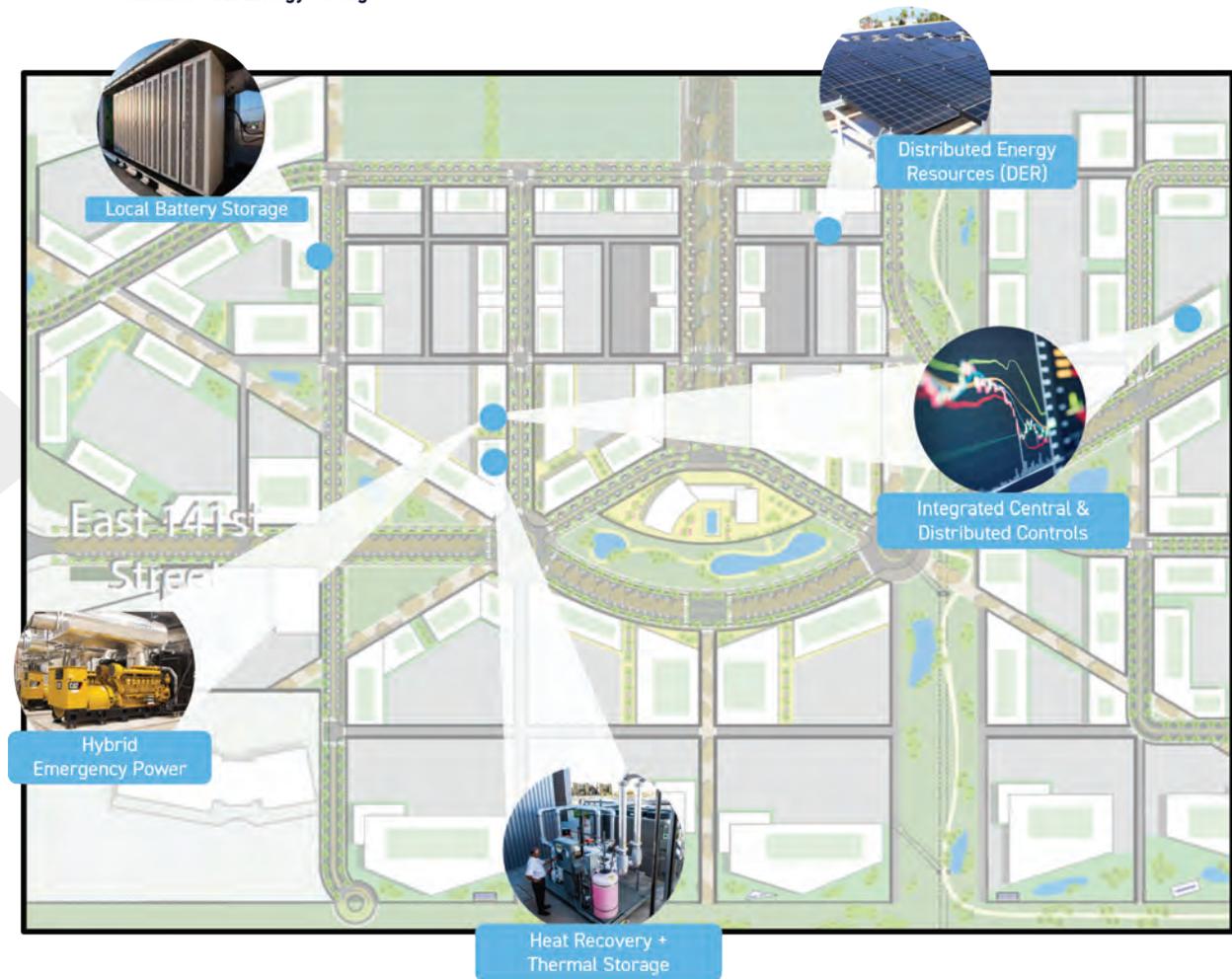
Feasibility Assessment. The case for energy storage should be assessed for viability in terms of total cost of ownership, sustainability impact (energy, carbon, resiliency), and constructability. Quickly developing planning-level energy modeling and electricity demand profiles can allow designers to review the energy cost savings potential based on the

utility tariff structure and capture the impact of renewable energy and battery storage systems on those costs. The study should also include other operational costs (centralized maintenance, replacement costs), capital costs, value to developers and customers to assess the financial feasibility of a battery storage system.

Engage utility provider. Stakeholders should work with Duke Energy to determine how storage can be implemented in the district. Working with the utility provider to ascertain what resources are available and how this system will tie-in to the grid at large.

Inclusion in Certification Language. To ensure that battery storage is prioritized for new buildings within the district, battery storage should be specified in certification language. Refer to High Performance Design and Infrastructure for possible areas of integration, and how this technology could be incentivized.

FIGURE 5-33. Initiative #2: Energy Storage



EQUITY AND COMMUNITY

Initiative #3: Waste Management



Initiative #3: WASTE MANAGEMENT

Effective waste management is a critical component of building sustainable and resilient communities. As our population grows and consumption patterns change, the management of waste becomes increasingly important to minimize its environmental impact, conserve resources, and protect public health. A sustainable waste management system is essential for districts to address these challenges and create a more sustainable future. By reducing waste generation, promoting recycling and resource recovery, and engaging the community, districts can minimize their environmental footprint, conserve valuable resources, protect public health, stimulate economic growth, and pave the way for a more sustainable future.

PLANNING CONSIDERATIONS

A combination of infrastructure (waste management facilities, receptacles, vehicles, signage, etc.) and best practices implemented to reduce and manage waste created by the district, and to increase recycling and reuse

rates. By reducing waste, the district can save resources and keep the district clean and appealing for visitors. Working with Republic Services, the district should be able to determine the answers to the next steps below.

NEXT STEPS

Identify streams and scales of waste. A study should be performed to determine what types of waste will be produced within the Innovation Mile district and in what quantities. These numbers will allow the district to set benchmarks and put resources into the correct waste management strategies.

Engage local utilities and private partners. Innovation Mile stakeholders should work with these groups to determine how the waste streams can be reduced and managed. Working with private partners will help manage and sort waste at the source prior to its collection. Local

utilities can help the district to understand the waste management facilities and tools available as well as the costs of maintaining them.

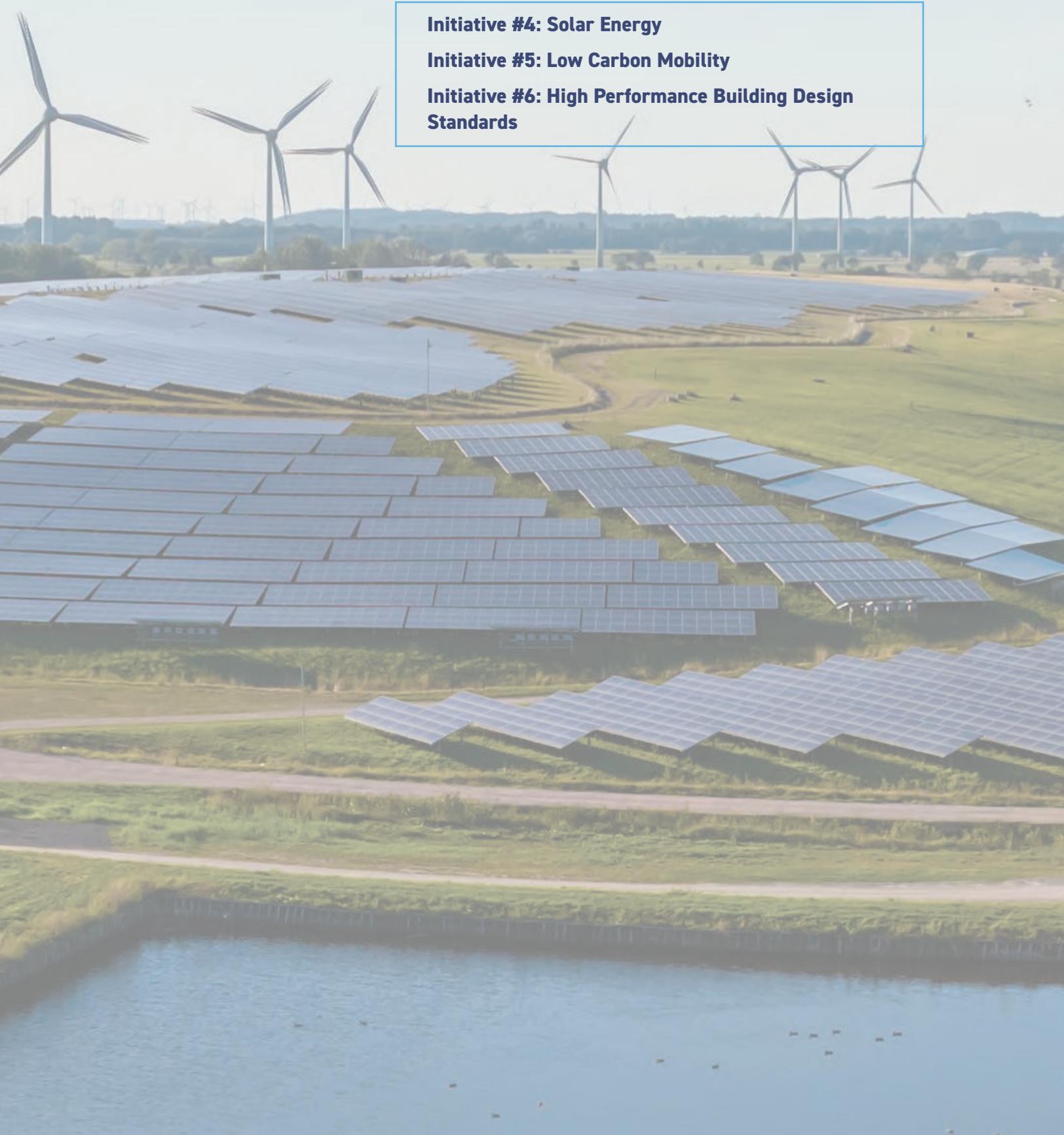
Begin drafting a sustainable material management plan. Once waste streams and quantities are determined, the focus should be on creating a plan to examine how the district can reduce the release of toxic chemicals, maximize material use, and right-size the waste management process to deter material streams to landfills.

HIGH PERFORMANCE DESIGN AND INFRASTRUCTURE

Initiative #4: Solar Energy

Initiative #5: Low Carbon Mobility

**Initiative #6: High Performance Building Design
Standards**



Initiative #4: SOLAR ENERGY

Utilizing the power of the sun is a simple, but effective tool in reducing emissions related to energy production. Solar photovoltaic (PV) installations can also help to offset utility costs and bolster energy reserves to improve the district's resiliency in emergencies.

PLANNING CONSIDERATIONS

Solar energy should be part of a holistic district energy vision based on the energy demand of the site and targets for energy and carbon savings. Plans should be made to determine where to place arrays, energy storage, and other infrastructure needed to implement solar energy technology. This should consider present and future needs. If the systems are tying into existing grid infrastructure, a dialogue between the utilities provider and the district will need to occur.

It is important that buildings be solar-ready (electrically and structurally), even if solar isn't installed on Day 1. This allows for the placement of solar technology later without an added cost related to any structural changes.

Federal tax incentives have been continued and expanded under the Inflation Reduction Act including a 30% federal tax incentive for renewables (and batteries), and an available additional 10% for domestic content. Leveraging these and other possible incentives working with the utility or additional grants will maximize the ROI for these investments.

STRATEGIES UNDER CONSIDERATION

Rooftop solar PV should be maximized through requirements and incentives to individual developer teams (see Initiative #5 High Performance Building Design Standards). These systems can provide energy directly to the buildings or be stored in energy storage systems. Solar canopies should be deployed by the District over surface parking areas and can be tied to EV charging stations, to provide

shading and rain cover, while maximizing the solar potential and decarbonization for the district. Energy storage systems can be integrated into buildings and canopies, as well as any other technologies the District deems appropriate. These can help reduce peak demand and provide energy when the PV is not producing at capacity.

NEXT STEPS

Engage utility provider. Future engagement with Duke Energy will allow options available to be communicated, whether net metering or energy offsets are pursued. The district will also have to coordinate with the energy provider to determine what scale of solar can be tied into the grid. The planning and development department will be critical for developing the infrastructure and laying out the planning of when and how the solar systems should be installed.

Identify energy-related risk and resilience opportunities. A study should be undertaken to determine what solar providers exist in the region, costs associated with installation and acquisition of the technology, and what infrastructure exists and will need to be put in place to support these efforts. Planners should also determine what the Load requirements should be determined for the District, to better strategize how solar will be utilized to offset it.

Determine location and scale of solar. Solar can be used in a variety of settings, and investigation will determine how it can be used and where it might be placed. Solar canopies could help to

offset EV charging costs or rooftop solar could work for individual buildings or be tied together for battery storage.

The table below is an overall assessment of the total rooftop solar potential. If the district were to achieve even 50% of this total solar potential, the savings could help to offset other strategy costs or peak demand costs.

TABLE 5-2. Rooftop Solar Potential for the District

FACTOR	UNIT
1,187	kWh/kW
116,739	SF (total rooftop)
1,389	kW
1,648,973	kWh/yr
\$170,000	Savings per yr
48.20	EUI Offset (kBtu/sf/yr)

Initiative #5: LOW CARBON MOBILITY

A range of low carbon mobility options can help connect the district and improve accessibility and health. By reducing carbon emissions, improving public health, enhancing energy efficiency, stimulating economic growth, and promoting social equity, the District can be

environmentally responsible, socially inclusive, and economically vibrant. Through the adoption of sustainable transportation options and the development of robust infrastructure, the District can shape a future where mobility is efficient, clean, and accessible to all.

PLANNING CONSIDERATIONS

It will be important to involve stakeholders early in the process of defining the boundary of the planning area, modes of transportation, timelines of implementation and demand and usage studies. The layout of the mobility methods will need to fit within the boundaries of the district on both a geospatial level and a grid level, bringing technologies online that can be supported by the energy production methods discussed in other sections.

It will be key to quantify emissions as a metric for improvements on carbon release from transportation, and to help create benchmarks for progress. Investing early on in tools to get this data and to track it will pay dividends as

the district develops and progresses. Similarly, the District will need to work with various stakeholders to understand ridership patterns and critical transportation hubs and stops to ensure that all members of the district are incentivized to utilize the low carbon mobility options presented to them.

The City should consider mandating EV charging stations for new buildings and developments. The installation of EV charging will require partnerships with utilities, private stakeholders, and the district governance to ensure that the incentives and infrastructure are in place to support the charging stations.

NEXT STEPS

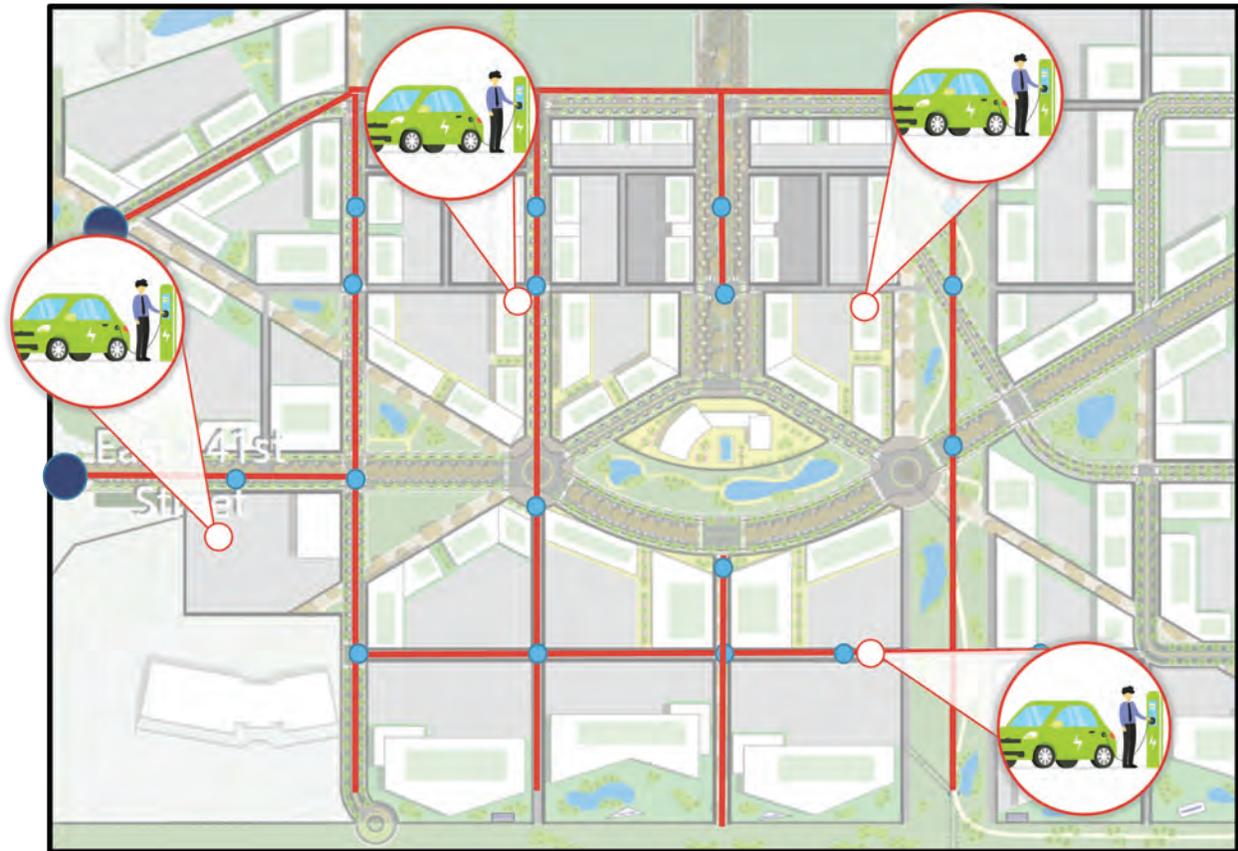
Engage Streets and Engineering departments.

Planners should work with these departments to set targets, determine strategies, and understand barriers to implementation of said strategies.

Perform an analysis of transportation methods and tenant needs. A study should be conducted to understand the transportation needs of

the District as well as the potential layout of transportation systems and hubs to minimize carbon impact. This study should look at transportation networks already in place like buses, light rail, bike lanes, while investigating the impacts the District will have on this.

FIGURE 5-34. Initiative #5: Low Carbon Mobility



- Joint Trench with Electrical
- Maintenance Manhole
- Connection to Internet Service Provider
- Potential EV Charger Location

Initiative #6: HIGH PERFORMANCE BUILDING DESIGN STANDARDS

The level of sustainable design performance achieved across the Innovation Mile district will be due in large part to the strategies deployed by development and design teams for individual building projects and parcels. In order to meet the vision outlined in this master plan, it is essential that guidance and requirements for sustainable design practices are effectively passed on to these development partners.

PLANNING CONSIDERATIONS

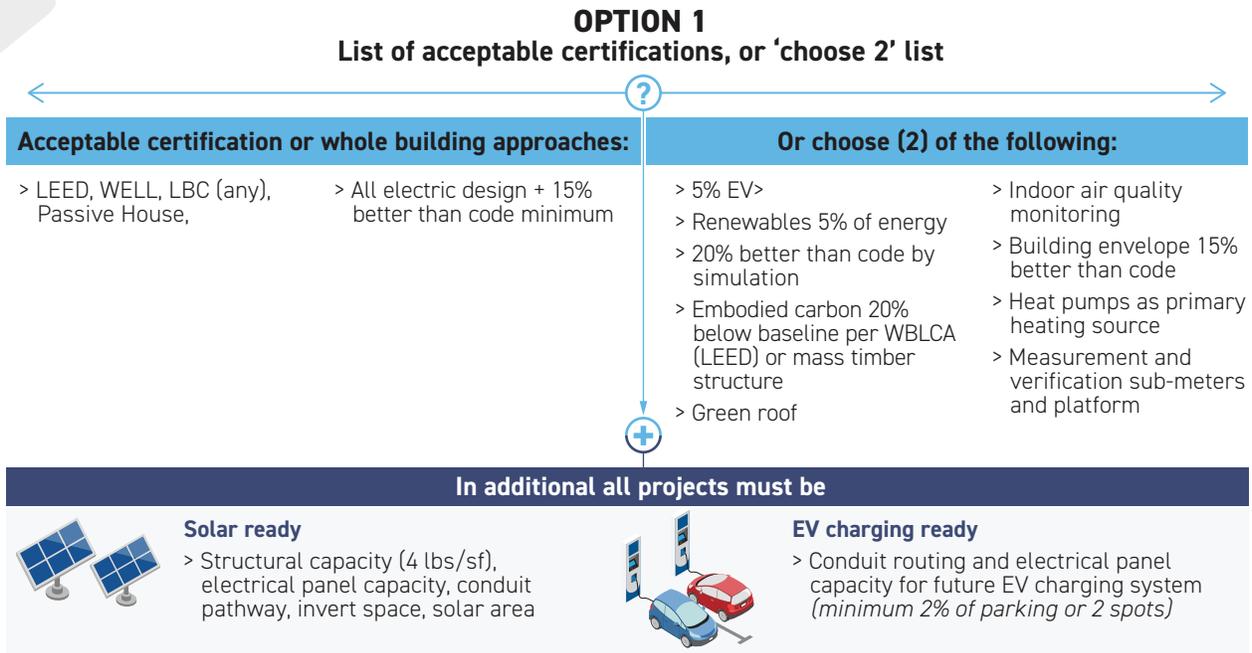
Project sustainability requirements can be conveyed in several ways including in a building performance standard as part of development agreements, entitlement requirements, or tenant lease agreements.

The building performance standard should hold developers accountable for implementing sustainable design elements, provide flexible and realistic expectations for design teams, and add value to the project and the district at large.

STRATEGIES UNDER CONSIDERATION

There are many ways to structure sustainability requirements. Based on conversations with the District planners and stakeholders, the City are recommending two possible approaches, which can be developed in more

detail. Below are possible approaches with a preliminary list of sustainable design elements that could be included (details shown in the following Options 1 and 2 graphics).



OPTION 2 Sustainability scorecard or point system



Development teams must achieve (6) points from the list below:

1 POINT	<ul style="list-style-type: none"> > 2% of energy from renewables > Green roof > Urban agriculture 	<ul style="list-style-type: none"> > Indoor air quality monitoring > Energy and water dashboarding > EV parking for 2% of spots (min 2) 	
2 POINTS	<ul style="list-style-type: none"> > 5% of energy from renewables > Mass timber structure > Whole building life cycle assessment showing a 20% reduction in embodied carbon > Energy use 25% below code (based on simulation) 	<ul style="list-style-type: none"> > Amenity space available for community programming or emergency response > EV parking for 10% of spots > Building envelope performance exceeds code by 15% (per IECC area weighted calculation) 	<ul style="list-style-type: none"> > Lighting power below code by 15% (per IECC lighting allowance) > Heat pumps as primary heating source > Measurement and verification sub-meters and platform
3 POINTS	<ul style="list-style-type: none"> > LEED certified > 2+ green globes > 10% of energy from renewables 	<ul style="list-style-type: none"> > All electric design (excluding emergency power generation if needed) 	
4 POINTS	<ul style="list-style-type: none"> > LEED Silver > 3+ Green Globes 	<ul style="list-style-type: none"> > WELL certified > 20% of energy from renewables 	
5 POINTS	<ul style="list-style-type: none"> > LEED Gold > LBC Coreles 		
6 POINTS	<ul style="list-style-type: none"> > Net zero energy or carbon > LEED platinum 	<ul style="list-style-type: none"> > LBC petal or full certification 	



In additional all projects must be:



Solar ready

- > Structural capacity (4 lbs/sf), electrical panel capacity, conduit pathway, invert space, solar area



EV charging ready

- > Conduit routing and electrical panel capacity for future EV charging system (minimum 2% of parking or 2 spots)

TABLE 5-3. High Performance Building Design Standards

CERTIFICATION	FOCUS/SCOPE	COMMUNITY BENEFITS	LEVELS OF CERTIFICATION
LEED	Location & Transportation, Sustainable Sites, Materials & Resources, Water Efficiency, Indoor Environmental Quality, Innovation, Regional Priority	Communities could use the rating systems to encourage greener construction of commercial buildings, homes, or neighborhoods.	<ul style="list-style-type: none"> ▪ 40-49 Points Certified ▪ 50-59 Points Silver ▪ 60-79 Points Gold ▪ 80-100 Points Platinum
Living Building Challenge (LBC)	Place, Water, Energy, Health, Happiness, Materials, Equity, Beauty	Communities could use this system as the basis for a green building program.	<ul style="list-style-type: none"> ▪ 100% Living ▪ 40-90% Petal ▪ Energy Only NetZero ▪ Energy
WELL	Air, Water, Nourishment, Light, Movement, Thermal Comfort, Sound, Materials, Community, Innovation	Communities could use this as a basis for improving quality of living in the built environment.	<ul style="list-style-type: none"> ▪ 50 Points Silver ▪ 60 Points Gold ▪ 80 Points Platinum
Green Globes	Project Management, Site, Energy, Water, Materials & Resources, Emissions, Indoor Environment	Communities could use this protocol as the basis for a voluntary program that encourages construction of greener commercial buildings.	<ul style="list-style-type: none"> ▪ 35-54% One Globe ▪ 55-69% Two Globes ▪ 70-84% Three Globes ▪ 85-100% Four Globes

NEXT STEPS

Determine the district’s goals for building performance. The City will finalize goals around green buildings they most desire for implementation. If human health is a top priority, WELL would be a good certification to pursue. If the district is seeking strong integrated design and energy performance, then perhaps LEED or LBC would be better. Once the planners are set on their goals, a decision about certification(s) will be clearer.

Assess the pros and cons of the different certifications. Certifications all require a fee and involve documentation and work that will add cost in certain parts of the project, but over the long-term could lead to cost savings, improved tenant well-being, and reduced environmental impact. Once goals are in place, the cost-benefit of each certification under consideration should be investigated to determine what certification(s) make sense for the District's goals.

CERTIFICATIONS AND STORY

Initiative #7: Community Scale Certification System



Initiative #7: COMMUNITY SCALE CERTIFICATION SYSTEM

Choosing a certification system, such as International Living Future Institute (ILFI) Living Community Challenge or LEED ND, can help guide the district to achieving sustainability-related goals, while also providing external proof of the district's commitment to sustainability. The systems provide a useful framework for making sustainable design choices that add value to the project, attract development partners and tenants, and support certification for individual buildings.

TABLE 5-4. Community Scale Certification System

CERTIFICATION	FOCUS/SCOPE	REQUIREMENTS	KEY STRATEGIES	KEY STAKEHOLDERS
LEED ND	Holistic, emphasizes smart site selection and growth, human scale development, and efficient buildings and infrastructure.	Achieve minimum 40 points out of 110 possible (43 credits)	<ul style="list-style-type: none"> Measure and analyze ongoing performance Identify synergies & composite solutions. 	<ul style="list-style-type: none"> Multidisciplinary group of design professionals Local supporting partners Applicant acting as team leader
ILFI LCC	Holistic, emphasizes regeneration through net-positive performance and using nature as a design guide.	Submit Vision & Master Plan for approval and achieve all 7 "petals" *Re-cert is required	<ul style="list-style-type: none"> Set net-positive performance targets Conduct visioning and planning process to achieve community consensus behind effective strategies 	<ul style="list-style-type: none"> Community Property owners Developers Municipalities
EcoDistricts	Holistic, emphasizes equity, resilience and climate protection.	Submit documents for approval: <ul style="list-style-type: none"> Imperatives and Commitment Roadmap Biennial progress reports 	<ul style="list-style-type: none"> Implement framework for flexible but rigorous process to drive equitable sustainable development projects 	<ul style="list-style-type: none"> Neighborhood groups Property owners Developers Utilities Municipalities
WELL Community Standard	Focused on health and wellness, emphasizing inclusiveness, integration and resiliency.	<ul style="list-style-type: none"> Achieve minimum 50 points out of 140 possible (110 features) 	<ul style="list-style-type: none"> Implement prescriptive design strategies Measure & analyze ongoing performance 	<ul style="list-style-type: none"> Community stakeholders Property owners Tenants

PLANNING CONSIDERATIONS

District certifications should be selected early in the design and development process. It is much easier to plan around a certification program and level of accreditation before too many development agreements for individual parcels

have been reached. Furthermore, pursuing a district certification can help attract large tenants, as it often makes their certification process or realizing other sustainability goals, much easier.

NEXT STEPS

Certification Assessment. Based on the sustainability vision laid out in the master plan, the next step would be to complete a district certification assessment. This would include an in-depth review of district certification systems to see if they align or provide the appropriate structure to achieve the goals stated.

A preliminary scorecard would be developed to assess what level of certification the district might achieve if pursued. This assessment would also develop the business case for pursuing district certification, and a strategy for leveraging it to attract tenants and increase property value.



Mud Creek
Park / 1 Mile

FIGURE 5-35. The Open Space Plan



PLACEMAKING STRATEGY

Placemaking is critical to the creation of vibrant campus environments, especially innovation districts. Building placemaking strategies into Innovation Mile will create a strong sense of community that will be inviting and accessible to all members while fostering an environment of experimentation, collaboration, and creativity. Overall, placemaking can play a critical role

in creating a campus environment that is both functional and enjoyable for its users regardless of their purpose on the campus. The integration of placemaking tools through the district will create a dynamic, flexible, and supportive environment that encourages people to think outside the box and push the boundaries of what is possible.



Open Space Plan

The master planning of Innovation Mile gives special attention to the planning and design of its public realm. As such, the open space plan is a defining component of the district's infrastructure and most of the open spaces in the district are made fully accessible to the public. All open spaces have vegetation at different densities to support ecological connectivity throughout the district and participate actively in sustainable stormwater

management. The open spaces in the district are at different scales and are distributed such that convenient and quick access is provided to all residents and visitors of the district from any point. Innovation Mile's open space plan highlights and details the placemaking tools implemented in open spaces, makes a distinction between types of open spaces, and defines key district destinations as they relate to open space projects in support of its public realm and innovation goals.



*Aerial view of the Central Plaza,
looking east*



FIGURE 5-36. Central Square

Destinations and Places

The Central Square

The Central Square is the core of Innovation Mile. Placed along 141st Street, the Central Square is where public spaces and mixed land uses meet and create an active and vibrant urban environment for visitors and residents alike, to enjoy public events, outdoor dining, shopping, public art, and social interaction. Surrounded by ground floor retail, with signature architecture buildings that create a large public plaza, and at the beginning of the Special Boulevard, the core is the civic center of Innovation Mile. Arriving from the west, two medium-scale triangular parks mark the entrance to the Central Square. Past the parks, 141st Street splits to two roads that surround the square. To the north is a mixed-use office building with ground-floor retail and the entrance to the Special Boulevard that leads to additional mixed-used blocks along it, and brings together retail, residential, and employment uses. To the south are additional mixed-used

office and flexible industrial buildings. The two roads that surround the square meet again on its eastern end at yet another park, the Utility Easement park that connects the district in the north-south axis.

The Central Square is comprised of both hard and softscapes. To the north is the plaza, which hosts a variety of activities and provides its visitors multiple amenities such as sitting and dining furniture, shade structures, water features, landscape design, and more. At the center of this plaza is a building with signature architecture, which is what Innovation Mile will most be recognized by. On the southern end of the Central Square, is a park with large water features and a carefully designed landscape. These elements are part of a district-wide stormwater management strategy and will be used to collect, retain, and filter water. Additionally, the vegetation in the park, and the sitting and shading amenities provided, invite visitors to stroll, linger, and play.



*View of the Special
Boulevard, looking north*

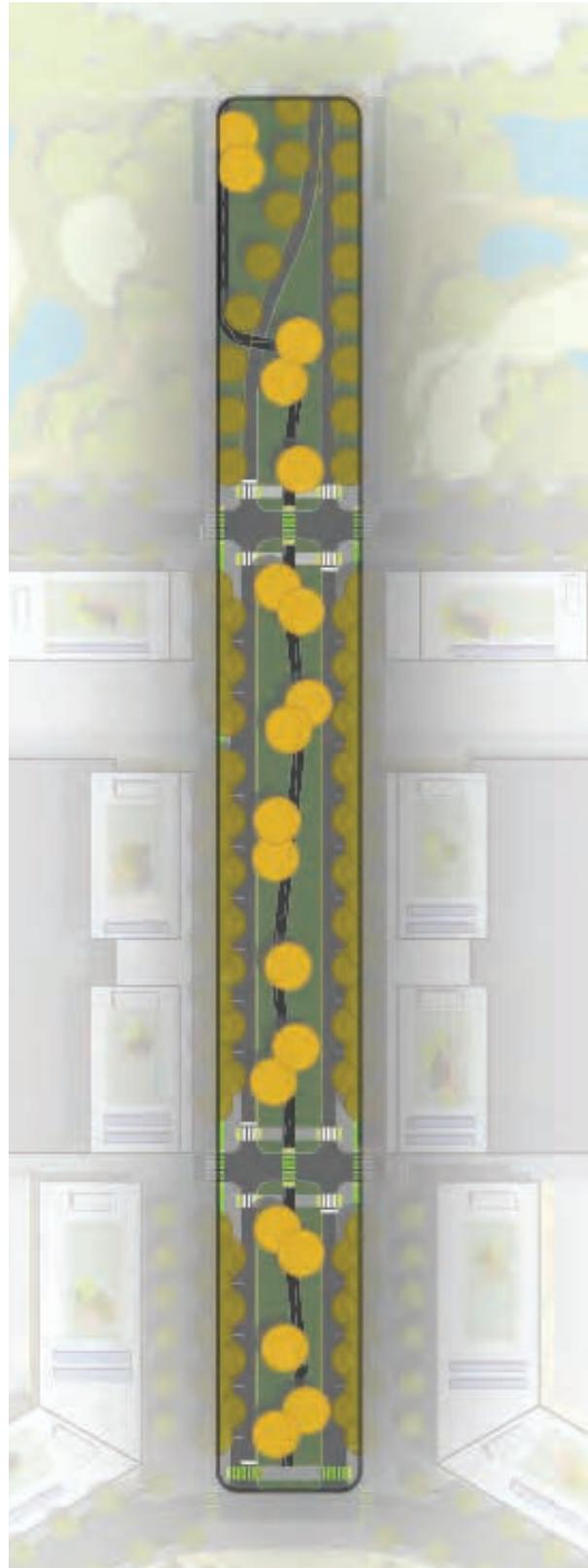
SPECIAL BOULEVARD

The Special Boulevard

The special boulevard can be viewed as a linear urban park that brings together people from the shops, businesses, and apartments built along it. This is a place to walk, bike, and enjoy a planned and pop-up event, as well as the urban scenery of contemporary architecture and active street fronts. While vegetation and landscape design are incorporated extensively in the Special Boulevard, this is an urban space where nature and urban environment meet.

The Special Boulevard connects the core to the northernmost edge of Innovation Mile, forming a direct connection to potential future development north of the district. The boulevard ROW is 156', of which 38' are dedicated to vehicles (one 11'-wide driving lane and one 8'-wide parking lane in each direction). The remaining 118'-wide area gives clear priority to pedestrians and cyclists, and includes shared paths, wide sidewalks, amenities for pedestrians and cyclists, shade structures, and more.

FIGURE 5-37. Special Boulevard





Aerial View of the Central Plaza, looking north

THE UTILITY EASEMENT PARK

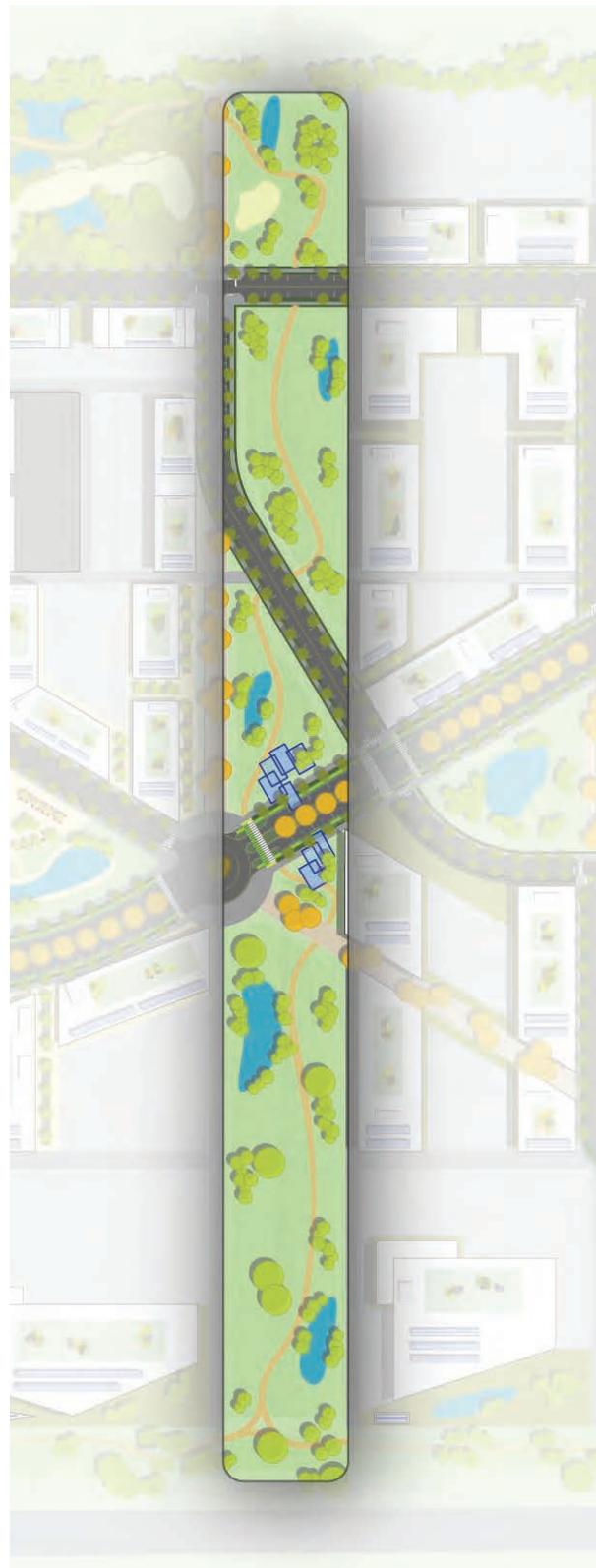
FIGURE 5-38. Utility Easement Park

The Utility Easement Park

The Utility Easement Park takes advantage of the area under the power lines that run north-south in the middle of the district and turns it into a public park. Since this area could not be developed, it will host dense vegetation, water features, trails, sitting and shading amenities, and other spaces for visitors and residents alike.

Alongside its minor role in stormwater management and native habitat conservation, this linear park serves various purposes at each segment and, as such, may have a different character in each one. Along its northern blocks it is a landscape buffer between the office/flexible uses to the east and the mixed-use residential uses to the west. It separates the two uses and assists in reducing light and noise pollution.

At the center, where it intersects two shared paths and the Central Square, visitors can enjoy another medium-sized park with ground-floor retail to the east, or the Public Plaza in the Central Square to the west. South of this intersection, the Utility Easement Park buffers parking of industrial/flexible uses and office/flexible uses and provides them with views which may increase the value of the buildings facing it.





View of the Mud Creek Park and Trail, looking northeast

MUD CREEK CONSERVATION AREA, “THE SOUL”

FIGURE 5-39. Mud Creek Conservation Area



Mud Creek Conservation Area

Mud Creek Conservation Area is a major natural land which the Innovation Mile Master Plan designates as conservation area. This area is an amenity for the region, and includes trails, recreational activities, a visitors center, and more. It preserves and protects the natural habitat of this land and provides opportunities for educational programming.

North of 141st Street the design intervention is very light and aims to keep nature intact as

much as possible. Trails are introduced and accessibility is provided, both to the extent that the existing ecological system is not burdened. South of 141st Street, more recreational activities are introduced, with sports and play amenities, visitors center, and more. Overall, the area Mud Creek accounts for is roughly one quarter of the district, which is a testament to Innovation Mile’s commitment to sustainability.

PUBLIC SPACE NETWORK

The public space network in Innovation Mile is a critical piece of its spatial and civic infrastructure. These spaces are a platform for social interaction for visitors and residents alike and have the potential to make the district a regional destination. They can be visited throughout all hours of the day, and host programs for the wide range of users and residents of Innovation Mile. All public spaces in Innovation Mile are connected to one another, either directly or through the street network, especially the Shared Paths network. The public spaces are distributed strategically throughout the district to complement employment land uses, enhance activity along mixed-use areas, and create spaces for community interaction

near residential land uses. While some public spaces, specifically the plazas, will primarily include hardscape paving elements, most public spaces will utilize vegetation and softscapes, thereby increasing previous surfaces throughout the district. This approach contributes to stormwater management in the district and its sustainability as a whole.

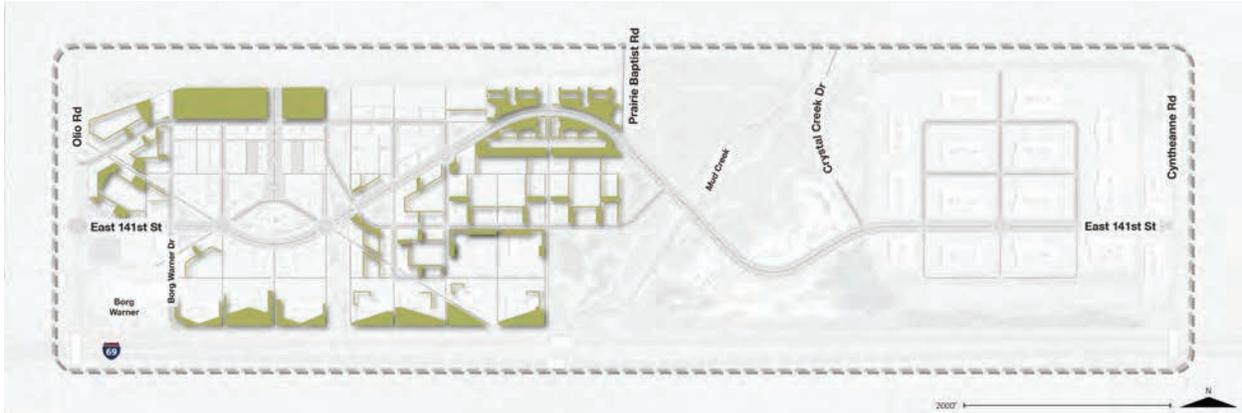
Three key typologies of public space, which are discussed in the next few pages, exist in the district:

- Campus Lawns
- Parks
- Plazas

FIGURE 5-40. Aerial View of Gateway Park



CAMPUS LAWNS



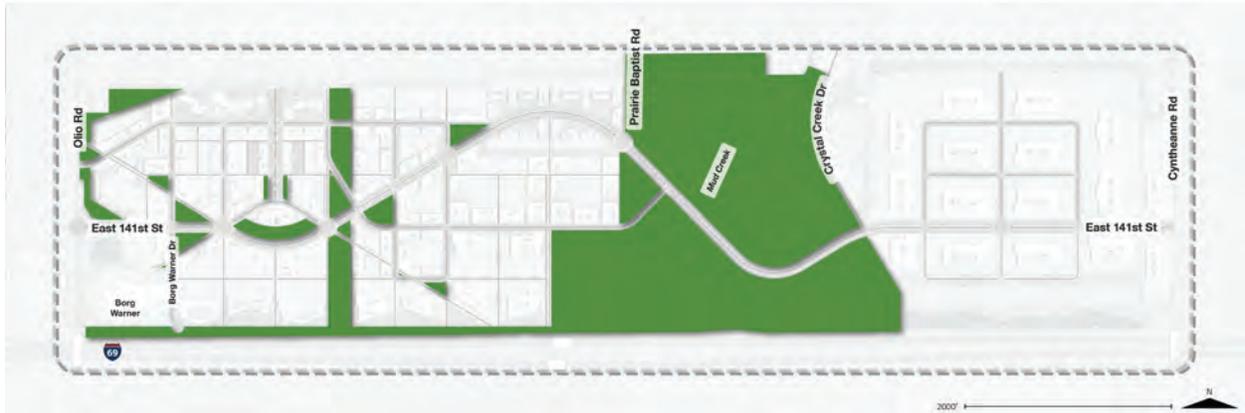
Campus lawns in Innovation Mile are typically located near headquarters campuses and large employment centers. They are used as an outdoor space for employees to augment the indoor work environment as well as a natural buffer from adjacent land uses to mitigate noise, light and sound pollution. The smaller campus lawns are located primarily between buildings and provide employees with spaces to take breaks in, host events, and interact with colleagues from adjacent buildings. The larger campus lawns found along I-69 and south of the residential uses cluster east of Mud Creek serve a similar purpose and in addition are a separate

land uses from one another. The campus lawn along I-69 provides visual and sound separation from the highway, and the lawn south of the residential cluster provides separation from the Office/Flexible use complex. Placemaking tools used in these spaces are vegetation and trees for shade and sound/visual separation, water features for stormwater management, furniture for seating and dining, and limited paths connecting these different elements to one another. The limited programming of the spaces provides flexibility with regards to use and allows to utilize these spaces for lunch breaks as well as company events.

FIGURE 5-41. Campus Lawn



PARKS



Parks in Innovation Mile are a key component of its social and sustainable infrastructure and are the spaces where people and nature meet. In addition to traditional placemaking elements such as vegetation, seating and dining furniture, and paths, the parks provide a verity of spaces and amenities for social interaction and recreational activities such as, but not limited to, playgrounds, dog runs, sports fields, and more. The parks also manifest the district’s sustainable approach. These densely vegetated areas include pervious surfaces and water features and are carefully designed to collect, retain, and release wastewater in an environmentally conscious and efficient manner.

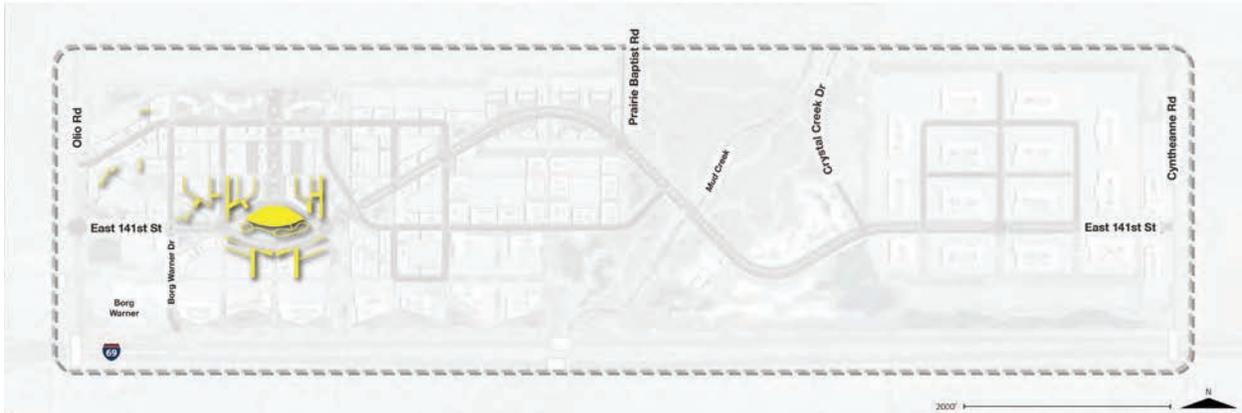
Parks in Innovation Mile are of various scales and are accessible from the street network and from the Shared Path system, thus offering a completely non-motorized access for all users. Small- to medium-scale parks are distributed

throughout the district and are located at the intersection of the street network and the Shared Paths. The parks that border primary streets will also be designed to accommodate retail users from adjacent businesses. The two large scale parks in the district are designed in response to the site’s existing conditions: The Utility Easement Park and Mud Creek Conservation Park. The park under the utility easement provides recreational amenities along the power lines that run north-south. Mud Creek Conservation area introduces recreational and educational facilities to the existing natural habitat in Innovation Mile, thus preserving the natural landscape and providing visitors with an opportunity to engage with it. Through its connectivity, accessibility, and variety of amenities, the park system in Innovation Mile is a service not only to its inhabitants, but also to the surrounding communities.

FIGURE 5-42. Utility Easement Park



PLAZAS



Plazas in Innovation Mile are located primarily near the core and are in proximity to mixed-use clusters to enhance the diverse population these uses attract. The plazas are the spaces where employees, visitors and residents meet to dine, shop, and engage in regular or pop-up events. While parks are mostly associated with leisure, plazas are dynamic urban spaces where daily activities take place. They are often regarded as civic spaces, open and accessible and

inviting to all. The plazas are primarily paved with hardscape pavers and include amenities such as trees and shading structures, seating and dining furniture, public art, and water features. The hierarchy of plazas in Innovation Mile is organized such that the central plaza is in the district core, and smaller plazas are distributed in the surrounding blocks, mostly between buildings with grand floor retail, where the activity is enhanced by the plaza.

FIGURE 5-43. Innovation District Main Plaza



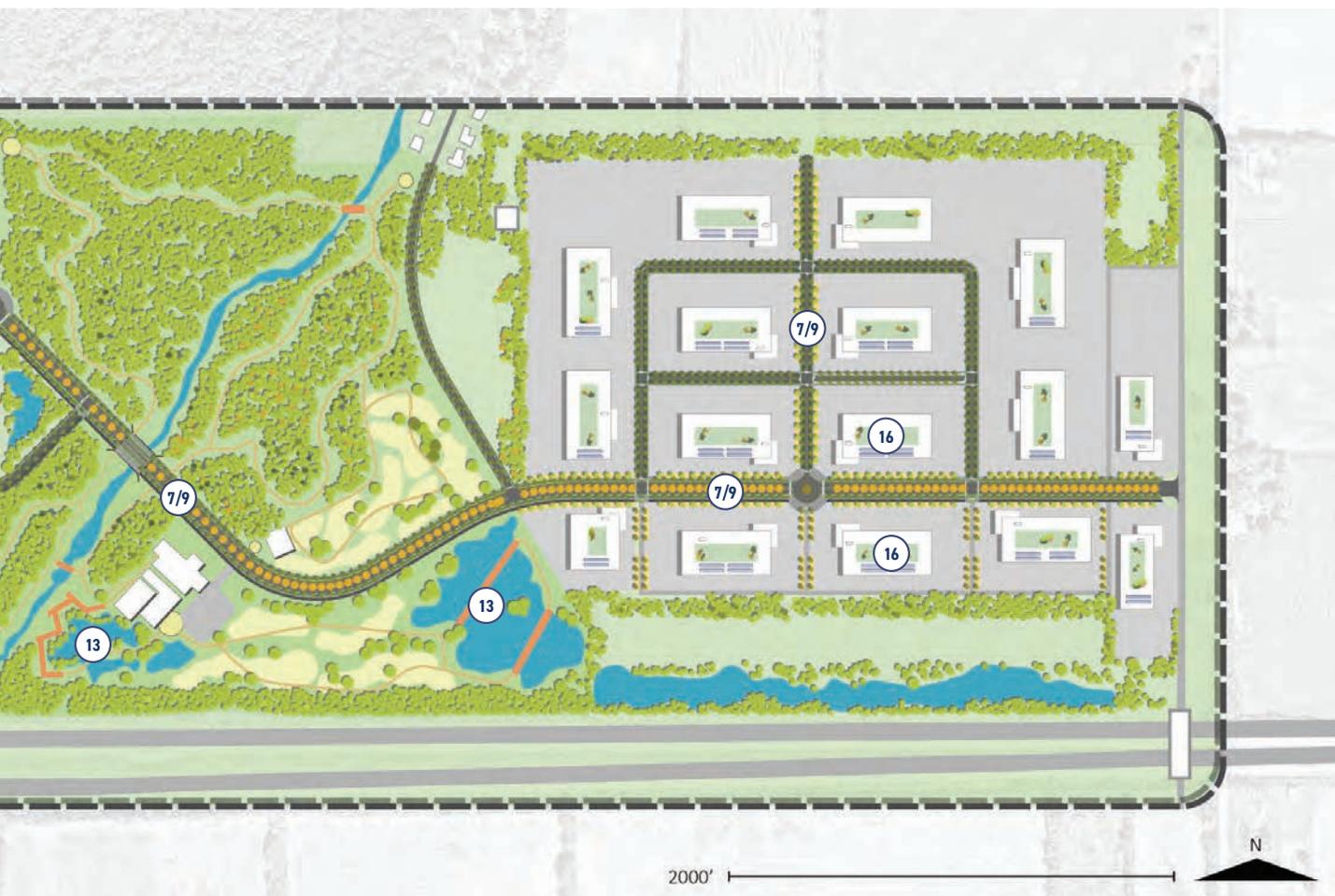
PLACEMAKING TOOLS



FIGURE 5-44. Map of Opportunities for Placemaking Tools

Placemaking Tool Recommendations

The placemaking tools recommended as a part of this master plan include a variety of programming and infrastructure elements that will further help to create a vibrant campus environment for Innovation Mile that will foster creativity and collaboration. The following recommended locations can be viewed as a minimum condition, and we further recommend that additional placemaking tools be considered on a project-by-project basis as part of individual developments and infrastructure projects throughout implementation. The remainder of this section provides an overview of each placemaking tool and general locational requirements within the district.



Placemaking tools include the following:

1. Food and Beverage Amenities
2. Wi-Fi and Technology
3. Dog Runs and Pet-Friendly Amenities
4. Play and Recreation Equipment
5. Events and Programming
6. Public Art Installations and Street Art
7. Street Trees *(located throughout)*
8. Park and Street Furniture *(located throughout)*
9. Lighting *(located throughout)*
10. Wayfinding and Signage *(located throughout)*
11. Pocket Parks
12. Landscape Design *(located throughout)*
13. Water Features
14. Bioswales and Rain Gardens *(located throughout)*
15. Landscaping Buffers
16. Green Roofs *(located throughout)*



1) FOOD AND BEVERAGE AMENITIES

Food trucks, concession stands, or other food and beverage options create active public spaces and encourage people to interact with one another, especially in an outdoor setting. These establishments promote use of outdoor spaces and contribute to the vibrancy of public spaces. They can be temporary as a pop-up event, or permanent in coordination with seating and dining furniture in public space. Several spaces in Innovation Mile can accommodate such establishments, from parking lots to parks, however the most suitable is the main plaza at the core.

LOCATION: Provide food trucks, concession stands, or other food and beverage options that create a sense of community and encourage people to gather and socialize. Possible locations include all public spaces.



2) WI-FI AND TECHNOLOGY

Wi-Fi access, charging stations, and similar technology tools enable people to stay connected and engaged while in public spaces. Mobile devices of all kinds are a common sight and allow visitor to extend indoor activities to outdoor spaces, including work related activities. Such connectivity also supports operational functionality with regards to district-wide management and coordination – from parking management to shared facility use. In Innovation Mile these tools can be used throughout all public spaces and support the district's technological goal.

LOCATION: Provide Wi-Fi access, charging stations, and other technology tools that enable people to stay connected and engaged while in public spaces, such as parks, plazas, and campus lawns.



3) DOG RUNS AND PET FRIENDLY AMENITIES

Dog runs and pet friendly amenities support pet owners and encourage them to use public spaces. Pet ownership can originate in multiple reasons, some of which are related to physical or mental impairment. These amenities increase the inclusivity of public spaces and encourage individuals with impairment to use outdoor spaces. In innovation Mile such amenities can be installed throughout the district, along all street types and trails. Dog runs specifically can be installed in proximity to residential and mixed-use residential parks.

LOCATION: Provide dog runs and pet-friendly amenities in parks adjacent to residential and mixed-use residential land uses.



4) PLAY AND RECREATION EQUIPMENT

Playgrounds, sports fields, and other recreational amenities encourage physical activity and social interaction. They are used by people of all ages and address a variety of educational and social needs. These amenities will increase the attractiveness of the districts and will be used by residents and employees alike. In Innovation Mile they can be placed in parks of all scales and near buildings of higher densities.

LOCATION: Install playgrounds, sports fields, and other recreational amenities that encourage physical activity and social interaction. Possible locations include parks adjacent to residential land uses and accessible by Innovation Mile circulator.



5) EVENTS AND PROGRAMMING

Planned public events and programming are the most direct tools to activate public spaces. They attract visitors, employees, and residents alike and stimulate a sense of connection. They encourage people to engage with one another and provide activities that are accessible for all. In Innovation Mile events can take place in all public spaces, and specifically in plazas, and parks. The central plaza at the core provides the most appropriate space for large, organized events.

LOCATION: Host temporary installations, pop-up events, and other activities that activate the park space and encourage people to engage with the environment and each other. Possible locations include all types of public spaces, primarily in plazas.



6) PUBLIC ART INSTALLATIONS AND STREET ART

The installation of sculptures, murals, or other forms of public art within the Innovation Mile district can create a sense of place and encourage people to gather and interact. Public art can foster a sense of cultural enrichment and celebrate cultural diversity through the expression of diverse content. It can stimulate creativity and innovation and inspire collaboration across diverse disciplines. Public art also plays an important role in branding the district and establishing an identity for the area, which will in turn result in increased development, increased commercial activity, and increased revenue for the City and Tax Incremental Financing (TIF) district.

LOCATION: Incorporate public art installations, sculptures, and murals, temporary and permanent, throughout the district. Possible locations include all types of public spaces, along major streets, street intersections and roundabouts.



7) STREET TREES

Street trees have a key role in creating safe and inviting urban environments. They provide shade for pedestrians and cyclists, protect them from vehicles, calm traffic, reduce air pollution, assist in stormwater management, and are crucial for urban ecology. They are natural ecological links between the parks and provide habitat for urban wildlife. Trees are planned throughout Innovation Mile along all street types (except alleys) and in all public spaces.

LOCATION: Plant trees along all streets and paths in the district, except the alleys. Tree species selection should consider orientation and shade on pedestrian, cyclists and buildings. Trees are to be planted throughout the district where feasible.



8) PARK AND STREET FURNITURE

The inclusion of public seating areas in Innovation Mile will create a comfortable, usable, and active campus environment where people socialize, debate, wait for the circulator, or simply people-watch. It also helps create a sense of place where people can see others, be seen, and feel safe, and therefore entices more people to linger and relax. The seating should be made of durable, high-quality materials. It should complement and visually reinforce the design of other streetscape elements. It should be located under shade, where possible, and should be adjacent to transit, places with high pedestrian use, businesses, and public spaces.

LOCATION: Provide comfortable and inviting seating areas to make the parks more hospitable and encourage people to linger, and the streets more attractive for pedestrians and cyclists. Possible locations include public spaces, along major streets, and street intersections.



9) LIGHTING

Street and public space lighting contribute significantly to their safety and character. Adequate lighting reduces crime and traffic accidents and is important to creating an inviting public realm. Current innovations in this field, from solar to LED bulbs, include lighting fixtures and systems that reduce energy consumption significantly. Lighting fixture design has the potential to be a signature element in the district's character as well. In innovation Mile, all public spaces and streets will be lit, with lighting levels adjusted to reduce light pollution and no disturbance to urban wildlife, while providing safe and inviting environments.

LOCATION: Use creative lighting techniques to highlight street scene and public space features and create a welcoming and safe environment for evening and nighttime activities.



10) WAYFINDING AND SIGNAGE

The addition of wayfinding and signage within the Innovation Mile district will help visitors to navigate the area and find their way around the area. The campus is quite large and complex in its geography, so better orientation in the district will link buildings, facilities, and programs effectively and provide clear way of locating businesses, services, and destinations. There are many benefits to improved signage including improved accessibility, reduced congestion, increased foot traffic, improved branding and identity, and enhanced user experience.

LOCATION: Install signs, maps, and other wayfinding tools to help people navigate the park and find their way to different attractions and amenities. To be installed throughout the district and primarily at intersections, near high density building clusters, and at the core.



11) POCKET PARKS

Pocket parks are smaller scale parks which can be introduced to Innovation Mile at any phase of development. These parks have intimate scale and provide outdoor sitting, dining, shade, and play equipment. These are spaces where members of the community meet and engage with one another. In Innovation Mile pocket, parks can be located between buildings and near all types of development, especially mixed-use residential and residential uses.

LOCATION: Provide pocket parks with seating and dining furniture, shade structures, and more to encourage visitors to engage and linger. Possible locations are between buildings where feasible, along street network and primarily the shared paths system.



12) LANDSCAPE DESIGN

Landscape design is site specific and contributes to the creation of a sense of place. Using native plants, outdoor furniture, lighting and other placemaking tools, landscape design composes outdoor spaces that define urban environments and their character and are a key to achieve their sustainability. In Innovation Mile, landscape design will be implemented throughout all streets, public parks, and spaces.

LOCATION: Use plants, trees, and other landscaping elements to create a visually appealing and inviting park and streetscape environment.



13) WATER FEATURES

Water features in urban environments are often used for beautification purposes and can be a form of public art. Moreover, they have an important role in stormwater management and water treatment, they contribute to urban ecology, to microclimates, and act as spatial markers. Water features in Innovation Mile are encouraged in all parks such that water is accessible and can be engaged with by all users.

LOCATION: Provide water features in parks and campus lawns in support of overall site stormwater management strategy.



14) BIOSWALES AND RAIN GARDENS

Bioswales and rain gardens are flexible and highly practical stormwater management features. Using plants, they retain and partially treat water before releasing it back to the ground or the municipal sewer system. These are powerful features as they can be installed in urban environments in various locations and at different scale, at street intersection and in public parks. The use of plants allows them to be integrated in the overall landscape design such that they are part of the design intent. In Innovation Mile, these features are installed along streets, at intersections, and in all types of public spaces.

LOCATION: Provide water features in parks campus lawns and streets (where applicable) in support of overall site stormwater management strategy.



15) LANDSCAPING BUFFERS

Landscape buffers are a tool in which vegetation, specifically trees are used to separate built elements from one another. They can be used to provide privacy, hide visually disturbing or distracting infrastructure elements, absorb noise, provide natural light screen, and to filter air. These buffers are a landscape design element and can be designed specifically for any of the purposes described above, at various scales. A key strength of this tool is that at a large scale it can double as public space. Specifically, they can be used to separate land uses that may be in conflict. An example for this is the linear campus lawn between the residential buildings and the Office/Flexible buildings in the north-central area of the district.

LOCATION: Provide trees and lawns to be used as buffers between land uses that may interfere one another with regards to light, noise, and air pollution.



16) GREEN ROOFS

Green roofs are a tool in which vegetation is planted on roofs of existing buildings and can take various forms, such as vegetable gardens, lawns, and more. This tool can be integrated with the stormwater management strategy and is effective in reducing the building's carbon footprint, as it provides another layer of insulation and reduces the need for mechanical heating/cooling. Additionally, it provides another type of semi-public space for the building's residents/tenants. Green roofs should be installed on all buildings within Innovation Mile.

LOCATION: Install green roofs on all buildings throughout the district to reduce heat, conserve stormwater and provide additional public space.

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06.

FUNDING AND FINANCE

Market-driven development is expected to drive the development of sites within Innovation Mile. Innovative firms interested in setting new or expanding existing roots within Noblesville will proceed through the review process, meeting the land use requirements established by this plan and privately funding their buildings. It is, however, important to acknowledge the substantial up-front investment associated with the supporting infrastructure that will facilitate this development and establish a sustainable funding source to maintain it.

Section 6 identifies potential TIF strategies and other discretionary funds that the City of Noblesville may be able to implement to meet the infrastructure costs. This section also defines a phased plan for infrastructure and real estate development that is both cost effective and right sized.



TIF AND ABATEMENT STRATEGIES, OTHER INCENTIVES

Existing TIF Districts and Future Expansion:

Noblesville already has significant experience in establishing and operating TIF districts. Three existing TIF districts exist in the immediate area around Innovation Mile: Bergen Tegler, Corporate Campus East and Hamilton Town Center. The Bergen Tegler TIF district currently covers the western portion of the Innovation Mile district, west of Prairie Baptist Road.

According to the TIF's documentation, the Bergen Tegler T29510 Fund 508 was created to assist with the funding of three road projects: Olio Road from 141st Street to SR 38, Tegler Drive/141st Street from Olio to Prairie Baptist Road, and improvements to Boden Road from Campus Parkway to SR 38. It was created on September 8, 2017, and expires July 15, 2045. In 2017, the plan was amended to remove certain parcels from the area and designated BorgWarner as a designated taxpayer for purposes of capturing increases in depreciable personal property assessed value.

In order to maximize the potential revenue generation to help fund the City's investment and infrastructure and innovative projects as defined in section 5, it is recommended that the City consider the following strategies.

Potential TIF District Options:

1. Create a new TIF district for the eastern portion of the Innovation Mile site.
2. Expand the Bergen Tegler District to include the entire Innovation Mile site.
3. Expand the Bergen Tegler District to include the entire Innovation Mile site and merge with the other two TIF districts to broaden the taxable base and gain efficiency in combining multiple infrastructure projects.
4. Explore inclusion of a portion of the sales tax as a debt service source since residents of the planned residential development are expected to frequent Innovation Mile's retail establishments.

State of Indiana TIF Option A: INNOVATION DEVELOPMENT DISTRICT (IDD):

Designation as an Innovation Development District (IDD) allows for the capture of designated state and local incremental tax revenues which can be invested in support of the IDD and the growth of the state's high-technology economy. Effectively an enhanced TIF district, an IDD may capture all incremental sales, state income, and property tax revenue for the purpose of financing a larger set of assets than simply public infrastructure during the term of the designation.

If the Indiana Economic Development Corporation (IEDC) determines, after notifying and collaborating with the executive of the units where the project will be located, the IEDC may designate a geographical area within the unit as an IDD. For projects that contemplate a proposed capital investment of less than \$2 billion, the executive of the local unit must consent to the designation and execute an agreement with the IEDC outlining:

- The boundaries of the IDD
- The proposed use of the incremental revenue captured by the district

- The amount of property tax increment that will be transferred to the city, town, county, or school corporations with territory within the IDD
- Construction management and demolition costs
- Costs directly associated with the redevelopment or rehabilitation of property
- Furniture, Fixtures & Equipment (FF&E), if non-movable
- Permitting costs directly related to redevelopment or rehabilitation for projects that contemplate a proposed capital investment of at least \$2 billion, the IEDC may designate an IDD without an agreement with the executive unit

Designation of an IDD instead of a TIF district allows the City, in conjunction with the IEDC, to designate funds for commercial demolition, construction, and non-movable FF&E costs in addition to general infrastructure projects on public land. Increased flexibility in funding projects may be advantageous in competitive efforts to attract expanding businesses.

State of Indiana TIF Option B: CERTIFIED TECHNOLOGY PARKS

Designation of some portion of Innovation Mile as a Certified Technology Park could support the development of key infrastructure for the site. The purpose of the Certified Technology Parks program is to support the attraction and growth of high-technology business in Indiana

and promote technology transfer opportunities. Designation as a Certified Tech Park allows for the local recapture of certain state and local tax revenue which can be invested in the development of the park.

Other Transaction Structures: **FINANCING TOOLS AND FUNDING MECHANISMS**

In addition to TIF options and structures, there are many other strategies available for capturing some of the increased land value created by innovative development. With some methods, the City would be the primary land owner, acquiring and assembling land through purchases. With another set of methods, the City could seek to partner with developers (or a single master developer) in order to oversee general development patterns without becoming a direct owner.

In order to expedite the development, the City can play a role in lot assemblage & land purchases to allow for the following transaction structures:

Land Acquisition:

- Sale of entire parcel to Developer.
- Ground Lease of entire parcel to Developer.
- Sale of certain development rights (lots) to developer – those would be for the private development component, while City retained the public sector infrastructure.
- Lease of certain development rights to developer – those would be for the private development component, while City retains the public sector infrastructure.
- In either of the partial sale/lease options, Developer could be engaged to construct the public infrastructure component or City could construct it itself.

Post-Construction:

- For previous sale option, Developer would construct public infrastructure and then sell the public infrastructure component to City after completion.
- For previous sale or lease options, Developer would construct public infrastructure and then lease the public infrastructure component to City after completion.
- For previous sale or lease options, Developer would construct public infrastructure and then grant an easement for the public infrastructure component to City after completion.
- In all cases, City could engage the Developer for an O&M Agreement for public infrastructure.

If Developer assembles lots and purchases land:

Land Acquisition:

- Developer would sell certain development rights to City for City to build the public infrastructure component.
- Developer would lease certain development rights to Metro for Metro to build the public infrastructure component.

Post-Construction:

- Sale back of Developer-Constructed public infrastructure component after completion.

- Lease back of Developer-Constructed public infrastructure component after completion.
- Easement back of Developer-Constructed public infrastructure component to City.
- In all cases, City could engage the Developer for an O&M Agreement for public infrastructure.

Value Capture Options:

- If City owns the land, City could collect proceeds from the Developer Ground Rent or (Partial) Building Lease.
- The City could expand an existing or create a new TIF District with a portion of the tax revenue dedicated to debt service for any public infrastructure financing.

- Similar to a TIF structure (and if allowable in Indiana), the City could collect Payments in lieu of Taxes (PILOT) as a substitute for real taxes and dedicate a portion to project debt service or O&M with the balance going to the City/School District. This differs from TIF in that the payment would flow through City Development Department, rather than the taxing authorities. So, similar to a rental agreement, the governing document would be a contract.
- Combining Ground Rent & PILOT into a single payment for greater City flexibility in the use of the proceeds (again, dependent upon regulations).



Mud Creek
Park / 1 Mile

GRANT ELIGIBLE OPPORTUNITIES

One of the most flexible federal grant funding programs for developing new infrastructure is the **US Economic Development Administration's (EDA) Public Works and Economic Adjustment Assistance (PWEAA)**. The program offers federal assistance for planning, design and construction level work and can cover roads and streets, sidewalks, public utilities including broadband, water, and sewer in terms of infrastructure and offers flexibility beyond these cost categories. The PWEAA funding source is recommended as a primary target for initial grant-seeking activity to catalyze Innovation Mile development.

In terms of Indiana grant programs, through the Indiana Economic Development Corporation, the State offers the **Industrial Development Grant Fund (IDGF)**, which aids municipalities with the costs associated with extending public infrastructure (including utilities, roads, sewer) to serve industrial developments.

A detailed Activity-Funding Opportunity Matrix can be found below for additional funding opportunities related to specific cost activities associated with developing Innovation Mile.

TABLE 6-5. Innovation Mile Activity-Funding Opportunity Matrix

GRANTING AGENCY	US ECONOMIC DEVELOPMENT ADMINISTRATION	INDIANA STATE FUNDING (IEDC)	US DEPARTMENT OF TRANSPORTATION	US DEPARTMENT OF ENERGY	
Grant Program	Public Works and Economic Adjustment Assistance (PWEAA)	Industrial Development Grant Fund	Charging and Fueling Infrastructure	BRIC	Grid Innovation Program (GRIP)
Granting Agency					
Streets and Roads	P, D, C	P, D, C			
Bridge	P, D, C	P, D, C			
Water/Wastewater	P, D, C	P, D, C			
Sidewalks	P, D, C	P, D, C			
Office buildings	P, D, C	P, D, C			
Public Wifi		P, D, C			
Digital signage and kiosk					
EV charging			P, D, C		
Smart lighting	P, D, C				
Street furniture	P, D, C	C			
Local Battery Storage				P, D, C	P, D, C
Microgrid				P, D, C	P, D, C
Hybrid emergency power				P, D, C	P, D, C
Distributed Energy generation					P, D, C

P= Planning D= Design C= Construction



RECOMMENDED DEVELOPMENT AREAS



REDEVELOPMENT AREA 1: TOP PRIORITY

The priority for development is centrally located within the Innovation Mile district and consists primarily of city-owned parcels of land that amount to approximately 77 acres. The Innovation Mile Master Plan calls for a wide range of uses within this area that will be necessary to foster a core for innovation and new major public spaces and corporate and innovation headquarters. Key projects include a realignment of 141st Street, two new roundabouts, a signature boulevard street, multiple commercial and service streets, and a major central square and multi-use public space.

Of the approximately 40 acres of land planned for new development, the plan can accommodate between 1.3 – 2.5 million square feet of new mixed-use headquarters or office, flexible innovation uses, and mixed-use residential with approximately 265,000 square feet of new retail and between 254 – 487 new residential units.

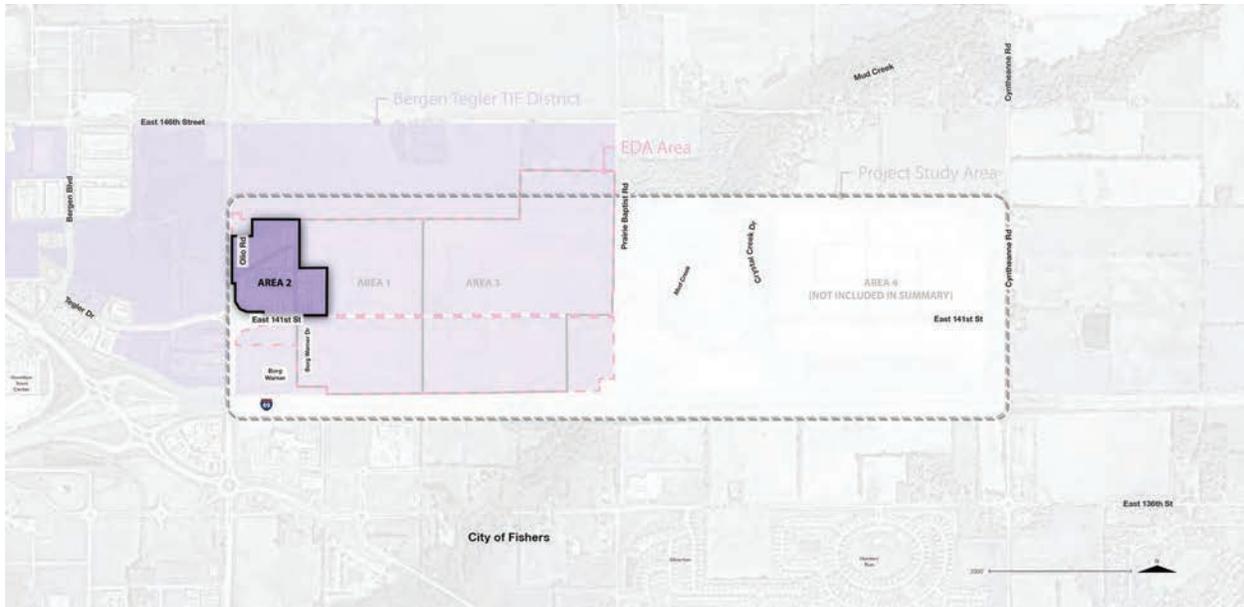
Private development within this area should be facilitated through a request for proposals for master development of the entire area. Land should be considered

part of the financial incentive package and awarded to the selected developer, along with the provision of TIF revenues generated in previous phases and TIF on proposed developments to pay for new infrastructure that will shape future development.

The City anticipates a substantial infrastructure investment in this area including full removal of 141st Street in its current alignment; construction of the 'wave' road divided boulevard with raised median, sidewalks, and planters; two roundabouts (one on either end of the central square); all necessary service streets, lighting and landscaping; a mix of underground and above-ground on-site detention facilities including an above-ground detention pond within the central square; and the extension of sanitary sewers and water mains.

Estimated infrastructure Investment: \$29.6 million

Estimated Annual TIF Tax Revenue after Full Buildout: starting at \$5.4 million per year



REDEVELOPMENT AREA 2

A second major redevelopment area is located along Olivo Road just north of 141st Street and includes privately owned land exclusively in which there are ongoing discussions about future redevelopment. Key projects within the area include multiple campus headquarters, innovation, or mixed-use office/residential buildings, new street infrastructure, smaller public spaces, and a shared-use path that will eventually link Ruoff Music Center to the core of Innovation Mile.

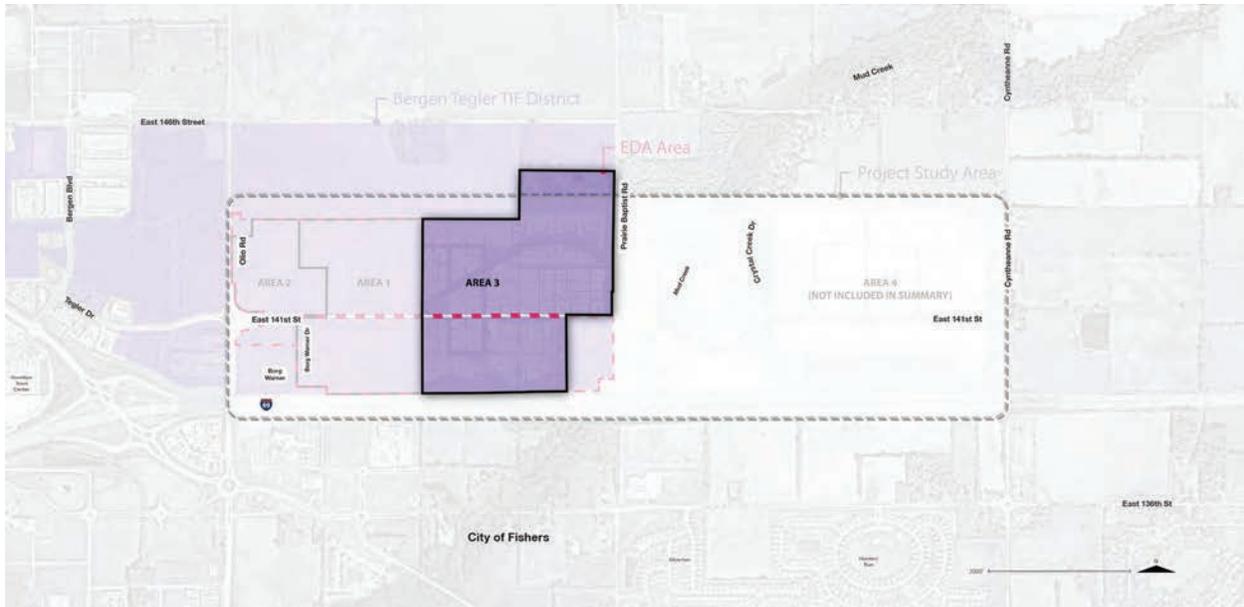
This area is planned for 19.6 acres of developable land with between 629,000 and 1.3 million square feet of new commercial space, approximately 91,000 square feet of supportive retail, and between 18-35 units of new residential.

The City anticipates a relatively low cost of infrastructure investment through this area, taking full advantage of 141st street as it exists today but reconstructing it to a divided

boulevard equipped with parallel parking, raised median, sidewalks, and lighting and landscaping elements. Multiple new services streets may be constructed north of 141st Street in addition to a pedestrian path that connect the heart of Innovation Mile northwesterly towards Ruoff Music Center. Innovative stormwater measures will be put in place, including bioswales and rain gardens, to limit the amount of water returned to the existing detention system that currently runs along Olivo Road. The existing Indiana American water main currently running along Olivo Road will be extended into the site via several smaller service mains and laterals.

Estimated infrastructure Investment: \$4.7 million

Estimated Annual TIF Tax Revenue after Full Buildout: starting at \$2.6 million per year



REDEVELOPMENT AREA 3

The third development area occurs primarily on privately owned land and is dependent on the successful acquisition of the area and requires realignment of 141st Street to the area north of its existing alignment to Prairie Baptist Road. This area would include increased corporate, headquarters, innovation, and flexible uses both north and south of 141st Street along with added residential uses further to the east. Small centers of mixed-use around the public spaces and a several roundabouts create entry points to the area. This portion of the master plan north of 141st Street establishes about 80 acres of new land for development that can support up to 1.5–3.4 million square feet of new uses with 215,000 square feet of supportive new retail and 165–431 new residential units. Assumed through land acquisition, this land can be solicited for developers following the completion of the new 141st Street alignment.

A portion of this area falls to the south of the existing 141st Street alignment. This area is also privately owned land that would be developed through public solicitations once land acquisition is complete. This area

would establish approximately 33.67 new acres for development with the capacity to support up to .5–1.5 million square feet of new innovation, headquarters, office, and industrial type uses along with up to 35,000 square feet of supportive retail.

The City anticipates a substantial infrastructure investment in this area including full removal of 141st Street in its current alignment; construction of the 'wave' road divided boulevard with raised median, sidewalks, and planters; two roundabouts; all necessary service streets; lighting and landscaping; a mix of underground and above-ground on-site detention facilities; limited sanitary sewer work with lateral connections; and a water main extension with service lines.

Estimated infrastructure Investment: \$28.8 million

Estimated Annual TIF Tax Revenue after Full Buildout: starting at \$9.5 million per year