

Prospect North District Framework and Guidelines for Development

A report prepared for the
Prospect North Partnership

Metropolitan Design Center
University of Minnesota

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METROPOLITAN DESIGN
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Many people provided input and review of portions of this document. These include the entire Prospect North Partnership Executive Committee and the Partnership’s management team. Individuals who provided written review comments were Julie Kimble, Dick Gilyard, Colleen Carey, John Wall and Jeff Barnhart. Other comments during review meetings were received from Caren Dewar, Pierre Willette, Kjersti Monson, John Doan, and Jon Commers. We also appreciated input from the Prospect Park 2020 group.

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Executive Summary

PROSPECT NORTH

Prospect North represents an unprecedented opportunity to create an innovation district that drives economic development and creates a bridge between the two cities of Minneapolis and St. Paul. Located on the new LRT line linking the Twin Cities, Prospect North is immediately adjacent to the University of Minnesota, one of the major teaching and research institutions in the country. As of January, 2015, the 370-acre district consists of mostly underutilized land ripe for development with an engaged surrounding community that supports innovative future-oriented growth.

The purpose of this document is to state the shared vision for Prospect North to provide a framework for planning the public realm and district systems and to provide guidelines for development.

THE VISION

Prospect North is envisioned as a dynamic engaging place that attracts, connects and inspires thinkers, doers and makers who power the region's new economy.

The opportunity for an innovation district next to the University of Minnesota that drives economic growth is the overarching principle at the heart of the Prospect North vision. In addition, the community aspires to be a model for sustainability and resilience, healthy living, diversity and equity, lifelong learning and a center for design, arts and culture.

INNOVATION DISTRICT

According to a recent report from the Brookings Institution, an innovation district is defined as “a geographic area where leading-edge anchor institutions (such as Universities) and companies cluster and connect with start-ups, business incubators and accelerators.”

Innovation districts are emerging in many cities in the United States and around the world. To attract young creative scientists, designers and entrepreneurs, the new innovation districts are “physically compact, transit-accessible, and technically-wired and offer mixed-use housing, office, and retail.” (Katz and Wagner, *The Rise of Innovation Districts*.)

BENEFITS

A previous economic analysis prepared by the Prospect Park 2020 group estimated that full development of approximately 80 acres in the Minneapolis area of the Prospect North district alone would result in the creation of over 7,000 jobs, while the current assessed value of the property would rise from \$43 million to nearly \$900 million. This results in current real estate taxes in the district of under \$2 million rising to over \$25 million (*Prospect Park 2020*). As of the date of this report an Economic Impact Analysis is being undertaken to understand the difference between Prospect North's development over time with one-off projects (the conventional approach) compared to an intentional district approach.

THE DISTRICT FRAMEWORK

To create the kind of development envisioned in Prospect North, an intentional district framework including a vibrant public realm is essential. This document presents the district framework, suggested guidelines and initial implementation actions. These include the planning and implementation of Green Fourth Street and a signature public place in the heart of the district as well as improving the street grid to unlock land value and extending the pedestrian street network to connect major spaces.

GUIDELINES FOR DEVELOPMENT

This document includes guidelines for development required to achieve the Prospect North vision. *District scale* guidelines pertain to the district as a whole and are to be agreed to by the Prospect North Partnership. *Project scale* guidelines pertain to individual development projects and buildings and will be used to assess individual projects against the guidelines supporting the vision.

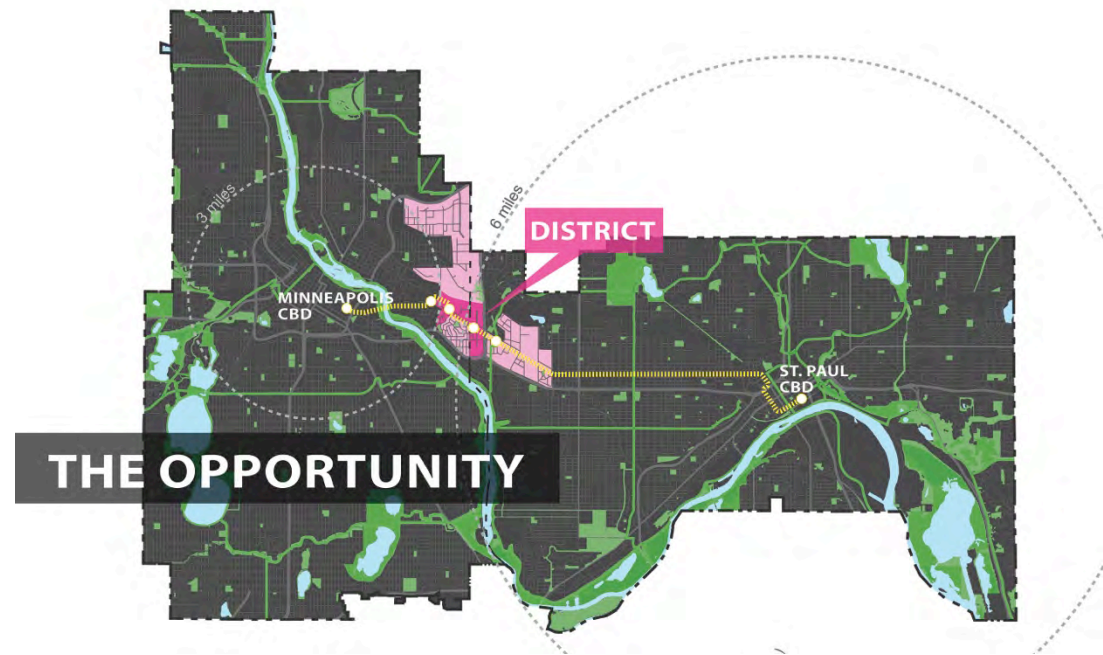
Part 1: Introduction and Vision

PROSPECT NORTH

Prospect North represents an unprecedented opportunity to create an innovation district that drives economic development and creates a bridge between the two cities of Minneapolis and St. Paul. Located on the new LRT line linking the Twin Cities, Prospect North is immediately adjacent to the University of Minnesota, one of the major teaching and research institutions in the country. Prospect North is also adjacent to the University's Bio-discovery Zone and includes other research-oriented facilities such as the University Enterprise Laboratory. As of January 2015, the 370-acre district consists of mostly underutilized land ripe for development with an engaged surrounding community that supports innovative future-oriented growth.

PURPOSE OF THIS DOCUMENT

The purpose of this document is to state the shared vision for Prospect North, to provide a framework for planning the public realm, and to provide guidelines for development. It will be used as an information resource and a planning tool to shape development. It will also be used as a metric for project evaluation in determining Partnership support to advance projects that are in alignment with the guidelines.



This document is in four parts.

1. *Part One* provides an introduction to the forces shaping the development—principally the emerging new economy. *Part One* also identifies each of the eight key elements of the vision and their desired outcomes.
2. To create the kind of development envisioned in Prospect North, district systems including a vibrant public realm is essential. *Part Two* of the document presents a framework for the district and identifies initial implementation actions.
3. *Part Three* of the document includes the guidelines required to achieve the vision. The district framework and guidelines in this document are intended as an overlay to complement existing planning and development guidelines created by the Cities and other governing agencies. It also provides an immediate guide to development for future projects and projects now planned in the district.
4. *Part Four* of the document includes a summary of action items for the Partnership and individual project guidelines. At the end of the document are Appendices and References.

The New Economy *An Unprecedented Opportunity*

Prospect North represents an unprecedented opportunity for the greater Minneapolis-St. Paul metropolitan area to grow the new economy and to ensure the economic viability for this metropolitan region for generations to come. But it is important to seize the moment and not allow Prospect North be developed in ways that repeat the forms of the old economy and the assumptions of the last century, which would preclude the greatest economic possibilities we have had in a very long time.

Why Prospect North

Prospect North has all of the elements necessary to make it the seedbed of the current economic revolution: adjacent to one of the largest research universities in the country, at the center of a dynamic urban area, and with excellent multi-modal transportation links. It also has a key component in place: a collaborative, multi-sector partnership that is interested, organized and ready to lead. The time for action is now to development the Prospect North district in a way that encourages growth and innovation.

What's the New Economy?

The Minneapolis-St. Paul metropolitan area has a chance of becoming one of the most important cities in what the economist Jeremy Rifkin has called the “third industrial revolution.” Industrial revolutions involve a transformation in how we make things and they affect almost every aspect of how we live and work. The second industrial revolution of

the early 20th century depended on capital-intensive assembly line production, large centralized hierarchical organizations, and the disaggregation of cities into dispersed, single-use residential, commercial, and industrial zones, linked primarily by the iconic technology of that revolution: the private car.



3D PRINTING

The third industrial revolution, instead, represents a shift to the mass-customization of goods, involving distributed, small-scale, low-energy, and crowd-sourced forms of investment, manufacturing, and marketing, comprising networks of collaborators who both produce and consume, while creating value by sharing information and aggregating social capital. This new economy has specific physical requirements, reflected in these guidelines.

From Mass Production To Mass Customization

Technologies like small-scale laser cutters, domestic robotics, and 3D printers – all

technologies in which Twin Cities companies are among the world's leaders – have enabled companies and independent producers to mass customize products for local and global markets at a very low cost.

Mass customization requires technology hubs that enable start-up companies and small-scale producers to share equipment and it demands buildings that can easily accommodate residential, commercial, and light-industrial activities in the same structure and even in the same space. These guidelines indicate the possible locations and approximate dimensions of these hybrid buildings and the scale of the shared spaces within and around them. The location of design-oriented institutions like the Textile Center and the Goldstein Museum of Design, as well as possible maker spaces and a digital library, at the center of the district also enhance its ability to spawn creative enterprises.

From an Exchange Economy To a Sharing Economy

As the new economy moves away from a highly competitive, market economy toward one based on shared resources among networks of collaborators, the public realm and first floors of buildings become critically important in what Rifkin calls a “collaborative commons.” Streets, plazas, and public gathering spaces become not just utilitarian pathways or pleasant places to pause; they become essential to economic activity, enabling people to share spaces, resources, and ideas in ways that accelerate the innovation process.

This, in turn, requires pedestrian friendly streets, multi-modes of transportation, ample public space, and highly transparent ground-floor facades that enable people to interact, collaborate, and share in ways not possible in the old economy. These guidelines and the public realm framework for the district highlight those opportunities with an active, pedestrian-friendly Fourth Street, a signature public space in the heart of the district, and a series of mid-block connections and links to larger regional systems like the Grand Rounds and Bridal Veil Creek.

From Hierarchical Organizations To Networks of Collaborators

In the new economy, the greatest success goes to those who build the strongest networks and have the best collaborators as large hierarchical organizations give way to diverse webs of resilient relationships among peers. The same is true among the public, private, and non-profit sectors: the more they partner and share information and resources in collaborative communities, the more all will thrive.

The Minneapolis-St. Paul metropolitan area has a wealth of research-intensive companies and one of the largest research universities in the country; if they are physically closer and working together with greater frequency and transparency there will be synergies that result in economic multipliers for the area and increase the potential for improved profitability. This region has also grown many of its most successful companies from within, and it needs to provide incubator space that allows start-up companies to scale up without

having to leave the center of innovation. Recently, Surly opened its new brewery and restaurants and there are current plans for a corporate “skunk works”. Between these two projects these guidelines suggest possible sites for growing start-up companies and the housing and services they need in between.



PUBLIC REALM ENHANCES COMMUNICATION

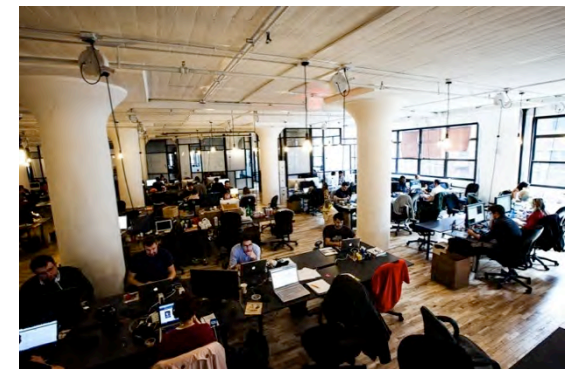
From a Carbon-based Economy To a Renewable, Restorative One

The third industrial revolution represents a shift away from a dependence upon fossil fuels and an economy based on waste and pollution toward the use of renewable resources and a restorative economy based on zero waste and ecosystem services. Much of the innovation in the new economy will arise from our need to live within the ecological footprint of the planet and to preserve finite resources for future generations.

Prospect North offers an opportunity to demonstrate what this means at a district scale, with a variety of energy, water, and waste

systems feeding each other to the point where the development improves the ecosystems it depends on. District services necessitate collaboration at a neighborhood scale and Prospect North could provide a national model for how this is done. These guidelines show how restorative infrastructure and district systems should get integrated into both private properties and the public realm.

The polluted cities of the first industrial revolution and the sprawling cities of the second industrial revolution no longer serve the needs of the third, with its dependence upon rapid innovation and collaborative activities. Those cities willing to create the dense, stimulating, flexible, and clean environments that this new economy demands will grow rapidly in the coming decades and the Twin Cities, with all the pieces in place to make it happen, remain perfectly poised to become a leader of this third industrial revolution, as London and Detroit were for the first and second. If that is to happen, we need to recognize what this entails and seize the opportunity that Prospect North provides.



COLLABORATIVE WORK ENVIRONMENTS

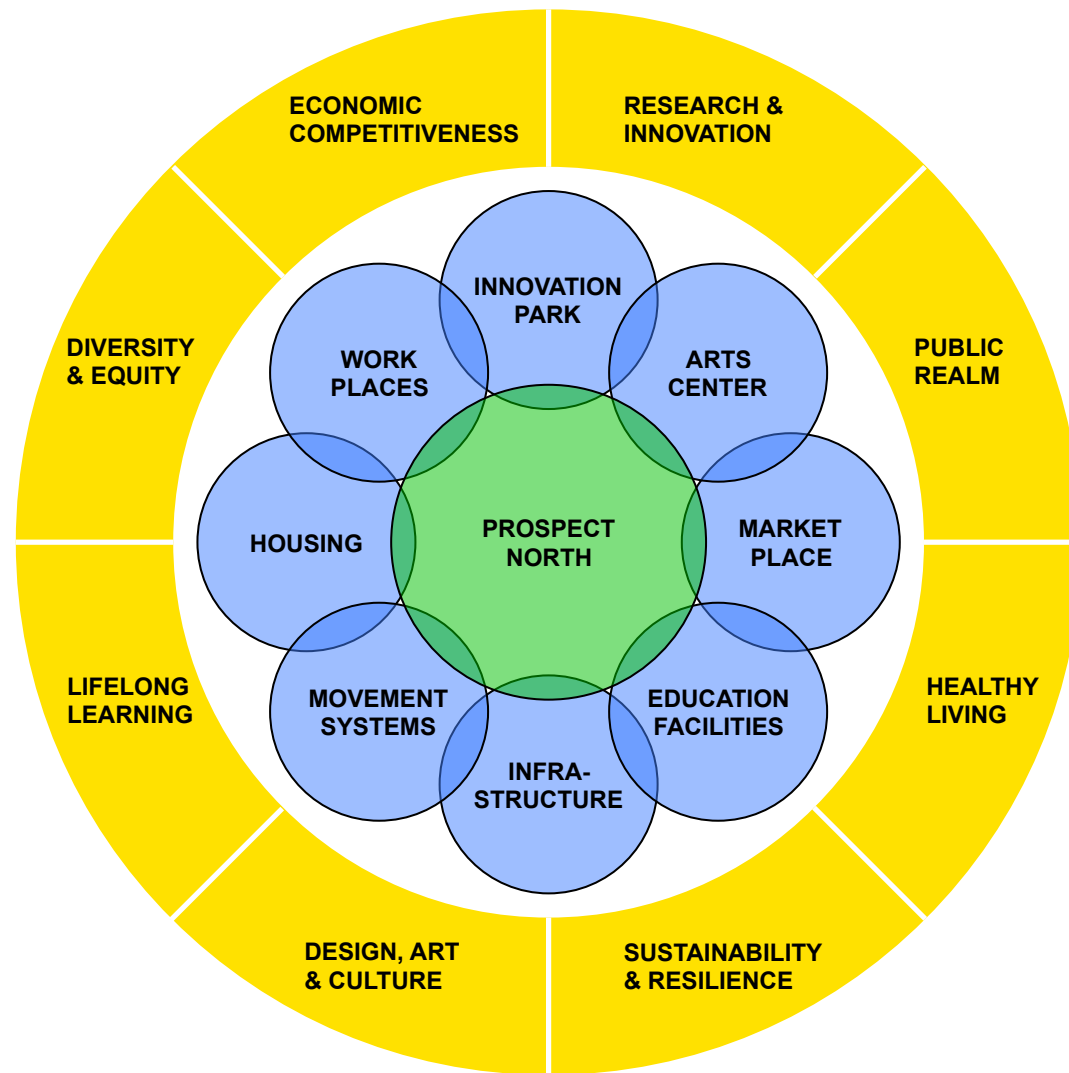
Elements of the Vision

Prospect North is envisioned as a dynamic engaging place that attracts, connects and inspires thinkers, doers and makers who power the region’s new economy.

The opportunity for an innovation district next to the University of Minnesota that drives economic growth is the overarching principle at the heart of the Prospect North vision. In addition, this 21st century urban innovation district aspires to a number of interrelated goals. The eight elements of the vision are:

- economic competitiveness
- research and innovation
- public realm
- sustainability and resilience
- healthy living
- diversity and equity
- lifelong learning
- design, arts and culture

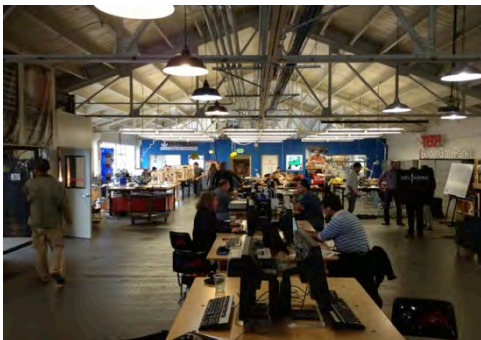
Any of these elements can be the driving force to shape a neighborhood and create a strong positive identity. The unique aspect of Prospect North is the intent to integrate all of these elements into one place. The remainder of this section identifies each of the eight key elements of the vision and their desired outcomes.



Economic Competitiveness

As stated in the previous section, Prospect North represents an unprecedented opportunity for the Greater MSP region to grow the new economy and to help to ensure the economic viability for this metropolitan region for generations to come.

Research and innovation encourage economic growth and job creation. Adjacent to Prospect North, the University of Minnesota has invested in a Bio-Discovery Zone and other research-oriented facilities such as the University Enterprise Laboratory are located within the Innovation District. For this research-related economic growth to happen, regional companies need to be in proximity to the University and other partners in the new economy. Incubator space must be provided that allow start-up companies to scale up without having to leave the center of innovation. Prospect North is ideally located for this to happen. The shared district systems planned within the area will provide benefits that improve economic competitiveness.



CO-WORKING OFFICE SPACE, SAN FRANCISCO

DESIRED OUTCOMES

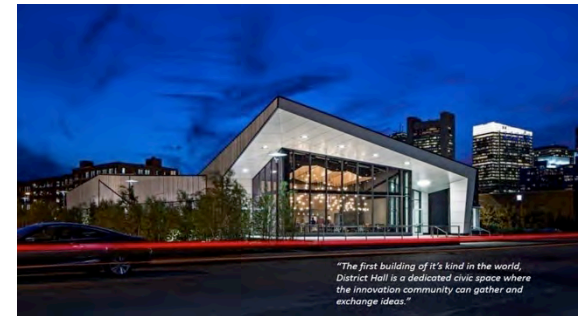
1. Prospect North is a driving economic force in the region resulting in new industries and jobs.
2. Business incubator spaces are created
3. Technology hubs are created that can easily accommodate residential, commercial, and light-industrial activities in the same structure

Research and Innovation

The concept of creating an *Innovation District* is at the heart of the Prospect North vision. According to a recent report from the Brookings Institution, these districts are defined as “geographic areas where leading-edge anchor institutions (such as Universities) and companies cluster and connect with start-ups, business incubators and accelerators.” (Katz and Wagner, *The Rise of Innovation Districts*.)

Innovation districts are emerging in many cities in the United States and around the world. For MSP to continue to compete for the best and brightest minds to fuel economic growth, such a district is essential. Increasingly they are drawn to cities with amenities and services that support collaborative work and an active urban lifestyle. To attract young creative scientists, entrepreneurs and design-oriented thinking, the new innovation districts are “physically compact, transit-accessible, and technically-wired and offer mixed-use housing, office, and retail.” (Katz and Wagner)

The district itself can be a living laboratory where the University and private companies test new ideas in urban living and sustainable infrastructure.



DISTRICT HALL INNOVATION CENTER, BOSTON

DESIRED OUTCOMES

1. An *Innovation District* is established that utilizes partnerships with higher education institutions, businesses and government to fuel job growth and redevelopment in targeted locations.
2. A density of services and amenities is created to attract young entrepreneurs.
3. The public realm and first floors of buildings become critically important in creating a “collaborative commons.”
4. Streets, plazas, and public gathering spaces become essential to economic activity, enabling people to share spaces, resources, and ideas in ways that accelerate the innovation process.
5. A district with flexible space that evolves with changing needs is created.

Public Realm – The Vision



PIONEER SQUARE, PORTLAND

Prospect North is a series of unique places to live, work, and play. Its public spaces including transit, streets, sidewalks, parks and plazas create a distinct and extraordinary identity for a district grounded in locally-driven planning and aspiration.

Prospect North is designed to put the pedestrian first, by creating a vibrant, safe and completely walkable environment. Active uses along the street reinforce its vitality, as do calmed traffic and accommodations for bicycles. A Community Commons is situated in the vicinity of the light rail platform, welcoming people into the neighborhood. Places to gather, socialize and exchange ideas are plentiful. Because people live, work and learn here, this is a 24-hour community.

The public realm in Prospect North reflects the historic heritage of the district, embracing the

uniqueness of the industrial landscape and the scale and character of its century-old building stock. Pedestrian pathways connect destinations and provide intimate alternatives to the street. The arts are evident throughout the district, in galleries, shops, in plazas and courtyards on the street.

Because the world is rapidly changing, the public realm is a working landscape as well as a beautiful one. Water is captured and used. There is the potential for energy in the form of sun and wind to be harvested and distributed beneath streets and pathways to people within the community. Plants are selected to help clean the air and sequester carbon, and urban agriculture is promoted in available open space.

Prospect North is a place for all seasons. We live in a winter city, but we also live in a summer city. Building orientation will consider wind patterns for natural cooling and protection against the cold. People will occupy the streets all year, as they do in the Warehouse Districts of Minneapolis and Saint Paul.



DESIRED OUTCOMES

1. A unified development with a gracious public realm attracts people and creates an identity for the district.
2. A walkable environment is created where pedestrians and bicycles are favored over cars.
3. Public spaces support events, activities and the arts creating a 24 hour city.
4. Neighborhood historic character is preserved and historic patterns are revealed.
5. Multiple transportation modes make the district well connected and accessible both within its boundaries and to the rest of the city.
6. Public spaces are designed for year -round activity.
7. Landscapes are beautiful and productive.

Sustainability and Resilience

Prospect North has been described as “*a living laboratory for the future of sustainable urban living*” and “*a model of how inner cities can be re-thought and re-tooled to meet the sustainability criteria the future demands.*”

In this document, the term *resilience* is used along with *sustainability* to address issues of adaptation to more severe climate events. In a broader sense, resiliency reflects the ability of the whole system to respond to and survive disruptions. In this sense, many sustainability strategies such as decentralized self-sufficient utility systems make the local community more resilient while also contributing to the resiliency of larger systems.

The vision for Prospect North is a sustainable, resilient community with efficient buildings, renewable energy production, and restorative infrastructure including closed loop systems for waste, water and materials. It prioritizes stewardship of water, soil, air, ecosystems and habitat.

Prospect North can show that innovative approaches and technologies can work in a real world setting and it can be a living laboratory that attracts funding support to sustain the research that can be developed around this community. Prospect North can provide a model for transforming an existing urban neighborhood into a truly sustainable one. It can also serve to measure outcomes and educate residents and the general public on sustainable development.

DESIRED OUTCOMES

1. **ENERGY AND CLIMATE CHANGE**
Significant reductions occur in energy use and greenhouse gas emissions in buildings and infrastructure.
2. **WATER AND WASTEWATER**
Significant reductions occur in potable water use and wastewater leaving the site.
3. **STORMWATER**
Surface and ground water pollution is minimized, negative impacts of development on the hydrological cycle are minimized, and natural erosion and sedimentation levels in streams and lakes are not exceeded.
4. **MATERIALS**
Significant reductions occur in embodied energy use, greenhouse gas emissions and other environmental impacts associated with materials used in buildings, infrastructure, and landscaping.
5. **SOLID WASTE**
Significant reductions occur in solid waste going to landfill during building construction and operation.
6. **ECOLOGICAL SYSTEMS**
Natural ecological systems including vegetation and wildlife habitat are protected and enhanced.
7. **SOIL**
Soil is protected and restored, water infiltration and filtration is optimized, soil loss is reduced, and impacted soil conditions on site are addressed.



ROOFTOP SOLAR COLLECTORS

8. **FOOD**
Healthy, local, foods are available that reduce environmental impacts of transportation, harvest and production.
9. **TRANSPORTATION ENERGY**
Significant reductions occur in energy use and greenhouse gas emissions for transportation.
10. **RESILIENCE**
The development is able to withstand disruption from extreme climate events and other related disturbances.

Healthy Living

Health is the state of complete physical, mental and social well being and not merely the absence of disease or infirmity. — World Health Organization

Healthy community design is planning and designing communities that make the healthy choice the easy choice. It makes healthy lifestyle choices easy and accessible for all community members.¹

A healthy community is built on policies, access to everything from healthcare facilities to parks to supermarkets, and infrastructure that welcomes community and activity.

By designing a healthy community, this project can provide a model for transforming an existing urban neighborhood into a model healthy community. By creating a healthy image for the neighborhood, forward thinking individuals, institutions, and companies will be attracted. In addition, the intention is to measure outcomes and educate residents and the general public on healthy community strategies.

(Note: Blue Cross and Blue Shield of Minnesota is assisting the Prospect North Partnership to define criteria, standards, and strategies for implementing a model health district. Material in this section is drawn from that work. See Appendix B for more information.)

¹ "Healthy Community Design Checklist Toolkit," Centers for Disease Control and Prevention, accessed June 12, 2014, <http://www.cdc.gov/healthyplaces/toolkit/default.htm>.

DESIRED OUTCOMES

1. ACTIVE LIVING: TRANSPORTATION AND EXERCISE

- Physical activity is increased through transit use, walking, biking and exercising.
- Active transportation is at least as easy and convenient as driving.

2. FOOD AND HEALTHY EATING

- Access to healthy food options is ensured.
- Food vendors carry healthy options.
- Awareness of healthy food options is increased.

3. TOBACCO USE

- A tobacco-free community is created, both indoors and in public spaces.

4. SAFETY

- Injury and death caused by cars are reduced.
- Physical and mental injury caused by crime is decreased resulting in increased biking and walking.
- Safety is increased by 24-hour activity on streets.

5. SOCIAL CONNECTEDNESS

- Community strength is created through interaction.
- Community members are not isolated for lack of resources.

6. HEALTH EQUITY

- Every person has equal opportunity to reach full health potential.



YOGA IN BRYANT SQUARE, NEW YORK

7. HEALTHY AIR

- Air pollution is reduced.

8. HEALTHY WATER

- Storm water is cleaned by natural systems and appropriate treatment for use in healthy eating urban agriculture developments.

9. ACCESS TO MEDICAL CARE

- Access to quality health care is maximized.

10. HEALTHY INDOOR ENVIRONMENT

- Healthy building materials and furnishings are used.
- Indoor environments are well-ventilated, and clean.
- Healthy cleaning products and maintenance practices are used.

11. CONNECTION TO NATURE

- Mental and physical health is improved with access and connection to nature.

Diversity and Equity

The economic value and environmental quality of Prospect North act as gateways allowing historically disadvantaged people and new Americans to become full participants in the region’s prosperity. Because Prospect North is based on economic growth and innovation, it can be a generator of living wage jobs for diverse population groups that live in the adjacent community as well as those who commute by transit.

Prospect North is envisioned as a community that is diverse in every way—age, gender, ethnicity, race, culture, income, housing, work and lifestyle. Multi-generational neighborhoods with diverse housing types provide the ability to age in place. Equity is also enhanced by providing opportunities for all to participate in governance and management of the community.

DESIRED OUTCOMES

1. A broad range of user groups are included—families, artists, students, researchers, private sector employees and seniors.
2. Diversity in housing mix (unit types and size, income and age range) is provided.
3. Affordable units are included in the district housing mix as a whole.
4. Equal access to the benefits of the district is provided for everyone.



Lifelong Learning

Leveraging its proximity to the University, Prospect North fosters a culture of ongoing learning. Education and lifelong learning are defined as “the continuous, in- and out-of-the classroom teaching and learning that enhances the psychological, physical, and social development of children, youth and adults across the lifespan in families, organizations and the community” (UMORE Park Report).

A 21st century community should support learning in three broad categories: (1) formal learning, through excellent schools and programs; (2) non-formal learning, through exciting and intentional opportunities in the community that meet the needs and interests of learners; and (3) informal learning, through experiences that can engage families and citizens of all ages.

Education and lifelong learning must be addressed in four age-related segments of the life continuum: (1) pre-natal care and early childhood learning and development, (2) preK-

12 education and community learning opportunities, (3) post-secondary, and (4) adult and continuing education.

DESIRED OUTCOMES

1. Education and lifelong learning in the new community are grounded in knowledge, knowledge creation and knowledge sharing.
2. The new community is a true *learning community*. From early childhood through the older adult years, the community offers its members an array of educational opportunities, all of which reflect the community’s commitment to educational excellence and equity for all.
3. A vibrant, diverse, multi-generational community is created that brings people together to share knowledge, experience, wisdom and talent throughout their lives.
4. Educational opportunities are designed around hands on experiential learning, with a special emphasis on outdoor activities.
5. People are brought together in indoor and outdoor settings to learn together and share interests, meals and creativity.

(Note: Material in this section was adapted from “Distinctiveness through Academic Mission: The Vision for a University-Founded Community at UMORE Park.”)

Design, Art and Culture



Prospect North communicates its authenticity and its value through its concentration of people producing art, cultural activity, and design of all kinds.

Prospect North is envisioned as a new intentional urban community infused with the arts and design. It is a place where you see people of all ages, backgrounds, and skill levels engaged in the arts through making, teaching, learning, and volunteering.

Residents and visitors view extraordinary art in restaurants, offices, and libraries or take in a performance. In addition, they can watch new ideas emerge in one of the community maker spaces, visit a gallery or museum, buy original art or design at a shop, and interact with public art.

Prospect North is a place where the buildings and public spaces are informed by the

participation of artists throughout the design process. Prospect North is a place where visual and performing arts are the heart of an active, creative community. A model of urban living, Prospect North is an exciting place to learn, create, play, and live.

DESIRED OUTCOMES

1. A community is built with the arts and design as its heartbeat, pulsing in every building, park, and sidewalk from concept to realization.
2. A community is created that recognizes the importance of the arts and design as a magnet for a creative, vibrant community.
3. Artists and designers are provided with stimulating and supporting places to live, learn, create, present, and sell their work.
4. The creativity of artists and designers is connected with scientists and researchers at the University of Minnesota, and existing arts establishments such as the Textile Center to foster an environment of collaboration and true innovation.
5. An international model is provided for infusing the arts, design, and craft into a dynamic city within a city.

(Note: Material in this section was contributed by Lyn Nelson Mayer and the Prospect Park arts working group)



Part 2: District Framework and Guidelines

Guidelines for the Prospect North development are in two categories—*district scale* and *project scale*. This section includes a district scale framework and guidelines that pertain to the district as a whole. Actions concerning these guidelines must generally be taken by the Partnership. Project scale guidelines appear in Part 3.

The guidelines are grouped around Infrastructure, Public Realm, and Development. There is an overview of the district scale guidelines on the next page followed by a more detailed explanation of each guideline. For each guideline, there is an objective and recommendation for best practice as well as how each guideline supports the various elements of the Prospect North vision. In the public realm section, a framework is presented for the district.

These guidelines are not comprehensive—they address a selected set of issues that are critical to supporting the Prospect Park vision for development. They are intended to provide an overlay that complements and expands existing city planning and guideline documents. Relevant City of Minneapolis planning documents are shown in Appendix B.

DISTRICT SYSTEMS

Prospect North envisions a district infrastructure that delivers efficient and

sustainable systems that support the vision for a dense and mixed-use, transit-oriented and pedestrian friendly environment. District systems include a Community Energy System, shared district parking, district stormwater management, and a vibrant network of public realm space programmed to meet the needs of the stakeholders in the area and support a live/work/play community. It acknowledges that larger land uses — now more focused on research and innovation — will continue to occupy a portion of the district as well as a diverse mix of housing, flexible live/work space, home for the arts, office and supporting retail. The remaining part of the site will be pedestrian-focused, with wide, tree-lined sidewalks, calmed and minimal traffic, multiple civic gathering places and safe routes to the LRT platform.

Moving forward with implementing the Prospect North vision requires confirming district boundaries, structuring the ownership and funding the district systems as well as designing and establishing the public realm. The following initial actions will be undertaken to begin to lay the foundation for the District Systems while allowing for continued innovation of the systems over time.



DISTRICT SYSTEMS

1. Establish the District Boundaries.
2. Complete concept planning for District Parking including identification of ownership structures, financing and mechanism for ongoing operations and maintenance.
3. Conduct feasibility and planning for first phase of the Community Energy System inclusive of ownership and financing.
4. Conduct feasibility and planning for district stormwater management and other district systems.
5. Identify premium improvements and ongoing maintenance and programming.

PUBLIC REALM

1. Plan and implement a Signature Public Space in the heart of the district.
2. Plan and implement Green Fourth Street including establishment of funding for structure ownership, obtain funding and ongoing maintenance, operations and programming.
3. Extend the street grid to unlock land value and to connect the public realm.
4. Plan the connections to regional systems such as the Grand Rounds, Bridal Veil Creek and the Granary corridor.

OTHER

1. Develop a marketing strategy and materials to attract investment to the area.

DISTRICT SCALE GUIDELINES SUMMARY

INFRASTRUCTURE

District Energy

Develop a district heating and cooling system that can expand over time. Design the system to work with multiple energy sources in the future such as solar thermal, biogas and waste heat.



District Stormwater

Develop a district storm water system with attention on management of the water budget resources. Utilize the public realm for shared storage and on-site treatment of stormwater.



District Parking

Provide district parking to reduce parking requirements for individual properties and create a more walkable environment.



Other District Systems

Develop advanced infrastructure that includes renewable energy generation, water and wastewater treatment, solid waste recycling and other integrated systems.



PUBLIC REALM

Public Spaces

Create an attractive, lively public realm including a signature public space near the LRT station and Green Fourth Street.



Streets and Mobility

Design a network of streets favoring pedestrians and bicycles over cars, with well-designed lighting, signage and other landscape elements.



Connections Beyond

Connect to regional transportation systems, the University of Minnesota, regional park systems and adjacent neighborhoods.

Natural Systems

Preserve and enhance natural systems including wetlands, Bridal Veil Creek, and the Granary Corridor area.



DEVELOPMENT

Mixed Use

Create a mixed-use district including housing, retail, education, recreation, entertainment, arts, civic functions, business and research.



Diversity of Housing Types

Ensure that there is a mixture of income levels, ages, unit types and sizes in housing including opportunities for live/work units.



District Identity

Establish district identity with signage and landscape design elements.



Sustainability Guidelines at District Scale

Establish sustainability guidelines for the district as a whole. Options include: LEED-ND, Living Community Challenge, and One Planet Living.



District Boundaries

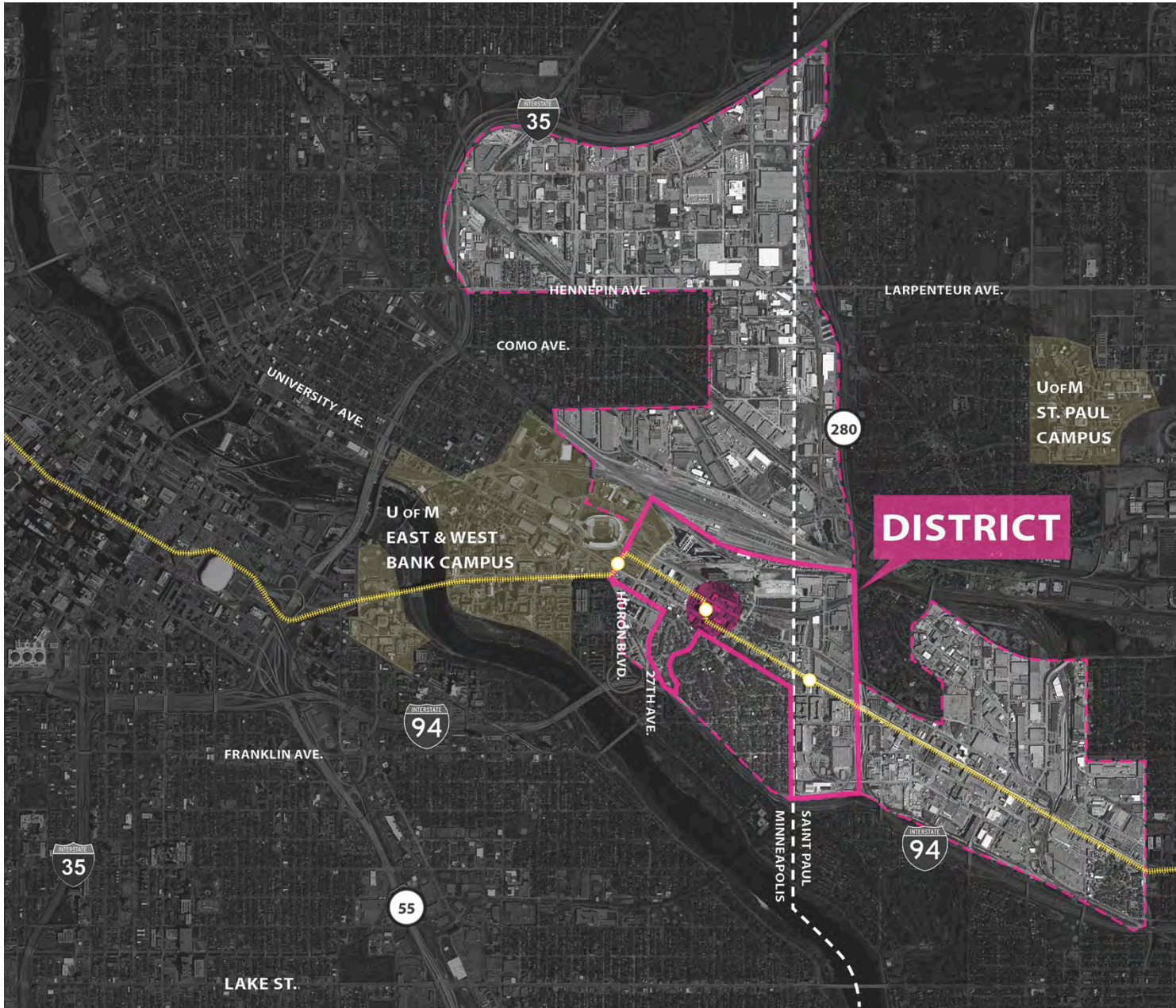
Prospect North occupies a unique piece of real estate crossing the boundary between Minneapolis and Saint Paul. The area has regional as well as local significance due to its strategic location along the recently opened Green Line, its proximity to the University of Minnesota, and its place in the broader urban landscape — close to the Mississippi River and perched within the pre-settlement alignment of Bridal Veil Creek, a major historic watershed.

The adjacent map shows the 370-acre Prospect North District as it is currently defined by Highway 280 to the east, the rail yards to the north, and the University of Minnesota to the west. The southern border runs one block south of University Avenue and extends further south in two places to include Glendale Housing and additional industrial property in St. Paul. It is anticipated that the Cities of Minneapolis and St. Paul will establish these boundaries as the Prospect North Innovation District.

The map on the opposite page shows three possible extensions of the district: (1) to the east comprising mostly industrial uses that straddle University Avenue to Prior Avenue in Saint Paul, (2) along I-35W to the north and west including a large area of industrial property, rail yards and the U of M campus (but excluding the Como neighborhood), and (3) south to the Mississippi River and I-94.



THE CURRENT PROSPECT NORTH DISTRICT BOUNDARIES



POSSIBLE EXTENSIONS TO PROSPECT NORTH DISTRICT BOUNDARIES

DISTRICT SCALE GUIDELINES

Infrastructure

District Energy

OBJECTIVE

The Prospect North Community Energy System will be a model for sustainability, resilience, partnership, innovation, and economic development in an urban core. The guiding principles are:

Sustainability

- Develop alternative energy solutions and a model of efficient energy that supports a healthy community and environment.
- Foster partnerships with government, industry, the neighborhood, and the local stakeholders.

Resilience

- Deliver reliable, cost-competitive, and equitable energy solutions to customers under a financially sustainable model.
- Implement adaptable infrastructure solutions that are flexible to market and technology changes can evolve with the changing needs of the area throughout redevelopment.



EVERGREEN DIAGRAM OF DISTRICT HEATING AND COOLING SYSTEM

Innovation

- Establish Prospect North as a national model and living laboratory for the development of innovative and integrated energy systems
- Differentiate Prospect North as a destination district that promotes a culture of environmental stewardship, economic growth, and community prosperity.

RECOMMENDATION

The Partnership must evaluate the feasibility of a district heating and cooling system considering flexibility in fuel source as an asset.

SUPPORT FOR VISION

This guideline supports *sustainability and resilience* by reducing energy use and carbon emissions in buildings and infrastructure. It also supports *research and innovation* by developing and demonstrating new technology.

DISTRICT SCALE GUIDELINES

Infrastructure

District Stormwater

OBJECTIVE

To ensure that storm water is effectively managed on site while natural systems are preserved and enhanced, develop a district stormwater system.

RECOMMENDATION

Assess the opportunities, costs and benefits of a district stormwater system and develop an implementation plan. Utilize the public realm for shared storage and incorporate the system into the landscape design.

SUPPORT FOR VISION

This guideline supports *sustainability and resilience* by ensuring surface and ground water pollution is minimized, negative impacts of development on the hydrological cycle are minimized, and natural erosion and sedimentation levels in streams and lakes are not exceeded. It supports the *public realm* by making landscapes that are beautiful and productive. *Healthy living* is supported when natural systems clean storm water while mental and physical health is improved with access and connection to nature. It also can support *research and innovation* by developing and demonstrating new technologies.



TANNER SPRINGS PARK, PORTLAND, OREGON
STORMWATER MANAGEMENT SYSTEM



HAMMERBY SJOSTAD, STOCKHOLM SWEDEN

DISTRICT SCALE GUIDELINES

Infrastructure

District Parking

OBJECTIVE

To create a more walkable pedestrian environment, provide district parking that will allow individual properties to reduce parking requirements and increase usable density.

RECOMMENDATION

Strategically position parking reservoirs to create walkable sectors in the district. Make the parking structures adaptable to multiple uses and capable of accommodating other non-parking uses (see *Adaptable Structures*). Solutions include placing parking structures underground or in the center of blocks to place more eyes in the street and increase safety (see *Eyes on the Street* and *Hidden Parking*). Alternatively, if parking ramps must be placed on the street, the first floor can be designated for active commercial uses whenever possible.

SUPPORT FOR VISION

This guideline supports the *public realm* by creating an active, walkable environment where pedestrians and bicycles are favored over cars. *Healthy living* is supported by increased physical activity through transit use, walking, biking and exercising. Public safety is enhanced by creating 24-hour activity on the streets and avoiding large blank walls from parking structures.



*DISTRICT PARKING ENTRANCE WITH STRUCTURE
HIDDEN IN CENTER OF BLOCK*



*DISTRICT PARKING PERMITS CAR FREE ZONE IN
RESIDENTIAL NEIGHBORHOODS IN GERMANY*

DISTRICT SCALE GUIDELINES

Infrastructure

Other District Systems

OBJECTIVE

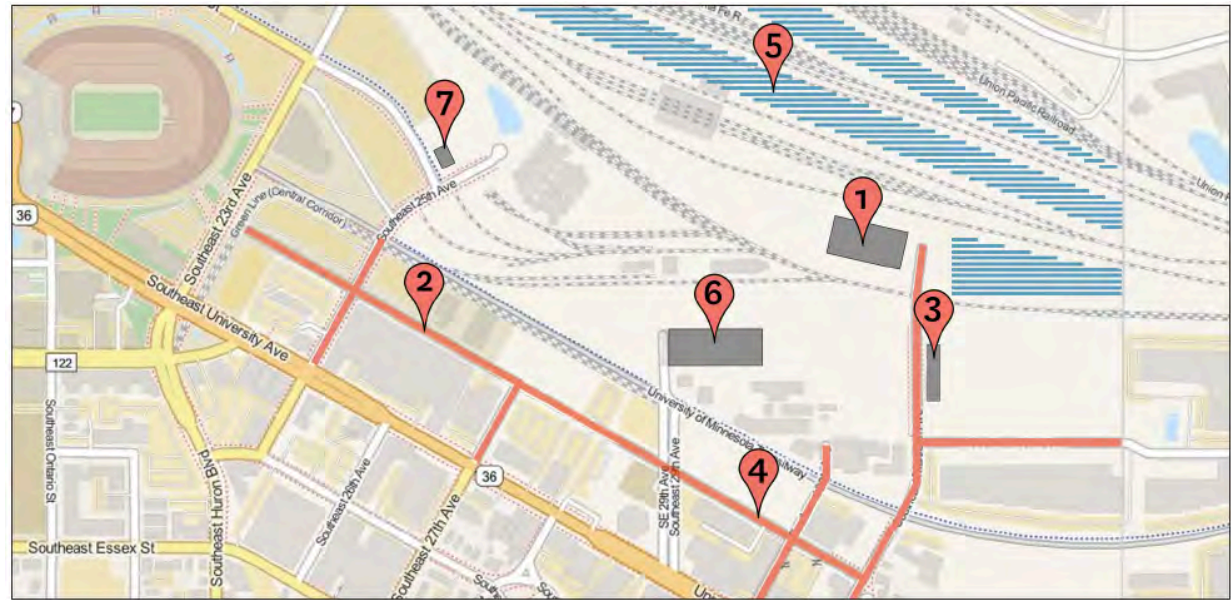
Whenever feasible, develop advanced infrastructure that includes on-site renewable energy generation, water and wastewater treatment, solid waste recycling and other integrated systems.

RECOMMENDATION

Assess the opportunities, costs and benefits of advanced integrated infrastructure systems and develop an implementation plan. In addition to exploring on-site renewable energy generation, water and wastewater treatment, and solid waste recycling, the integrated utility system can incorporate district heating and cooling and snow melting on sidewalks using waste heat (see previous guideline on *District Energy*).

SUPPORT FOR VISION

This guideline supports *sustainability and resilience* by reducing energy use and carbon emissions, reducing water and wastewater leaving the site, reducing and recycling solid waste, and restoring and enhancing natural ecological systems. It supports the *public realm* by making landscapes that are beautiful and productive. It also supports *research and innovation* by developing and demonstrating new technologies.



Integrated Hub	Underground Components			Supplemental Components		
1. Shared anaerobic digestion, water purification, clean energy, and aqua + hydroponic facility	2. Pneumatic waste transportation system (shared installation with DHC)	3. District heating and cooling (DHC) system with hot water storage in silos	4. Snowmelt system integrated with DHC	5. Solar farm integrated within district and adjacent railyard	6. Concentrated wind turbines fit within silos	7. H ₂ filling station

SOURCE: ECALA REPORT

DISTRICT SCALE GUIDELINES

Public Realm

Proposed Public Realm

The Public Realm is what gives the District its identity, and creates its sense of place. It will be formed by a connected series of places and spaces, on both public and private property, whose signature design of built and landscape features define the character and personality of Prospect North and whose dynamic atmosphere make it a place of memory and a must experience destination.

Prospect North currently lacks a meaningful public realm. Historically an industrial area bordered by a major rail yard, the district is characterized by a network of utilitarian streets that access land uses with large footprints, such as grain elevators and warehouse facilities. It has never been a place for walking or bicycling.

Prospect North presents a unique and exciting opportunity to demonstrate how the public realm — parks, plazas, courtyards, streets — can serve myriad functions in a beautiful and sustainable way.

In addition to the streets and sidewalks, there are several existing or proposed elements of the public realm within or near the district. These include Tower Hill Park, Surly Brewery Beer Garden, TCF Stadium Plaza (proposed), Granary Park (proposed), and Luxton Park.



PUBLIC REALM FRAMEWORK IN PROSPECT NORTH DISTRICT

The above map illustrates a conceptual framework plan identifying key public realm elements that provide signature spaces and link together existing and proposed public spaces. These elements include:

1. A signature public space in the vicinity of Green Fourth and the LRT Station.

2. Green Fourth Street running from TCF Stadium to Malcolm Street.
3. An extension of the pedestrian street grid to connect the signature public space with the Surly Beer Garden to the east. Extending the street grid will also provide access to parcels in the northern portion of the district.

4. An extension across University Avenue to connect Glendale Housing with the station area and the extensions of the public realm network.
5. Incorporation of regional connections into the public realm framework such as completing the Grand Rounds and restoring Bridal Veil Creek.

It is noted that the public realm framework shown here is intended to illustrate concepts; it is not a precise master plan. The exact location and configuration of key elements of the plan such as the signature public space and extension of the street grid are to be determined.



*USE OF THE PUBLIC REALM FOR PROGRAMMED
ACTIVITIES SUCH AS ART FAIRS
AND FARMERS MARKETS*

DISTRICT SCALE GUIDELINES

Public Realm

Signature Public Spaces

OBJECTIVE

Create an attractive, lively public realm by including signature public spaces in the form of parks and plazas.

RECOMMENDATION

A signature park in the heart of the district is recommended as well as smaller multi-purpose and flexible outdoor spaces including pocket parks and playgrounds. Design outdoor spaces for use in all seasons by providing human comfort through microclimate design. Design to accommodate movement (pedestrians first; bikes second) and provide space for informal gathering and programmed events. This civic plaza can also play a key role in management of storm water and harvesting energy (solar, wind).

SUPPORT FOR VISION

This guideline supports *research and innovation* by creating public gathering spaces that are essential to economic activity. It supports the *public realm* by creating an identity for the district that attracts people and accommodates activities. Public spaces support *diversity and equity* by providing equal access for everyone, and they support *healthy living* by enhancing social connectedness and physical activity. Enhancing *design, art and culture* as well as *lifelong learning* in the district are supported by public spaces.



MAP ILLUSTRATING POSSIBLE LOCATION FOR A SIGNATURE PUBLIC SPACE IN THE HEART OF THE DISTRICT (Exact location and size to be determined)



DISTRICT SCALE GUIDELINES

Public Realm

Streets and Mobility

OBJECTIVE

Create walkable neighborhood consisting of a network of streets favoring pedestrians and bicycles over cars, with well-designed lighting, signage and other landscape elements. At the same time, extend the street grid to unlock land value and to connect the public realm

RECOMMENDATION

Create a pedestrian and bicycle network of streets and paths that connects to transit. Do not exceed 275-foot block length or 1000-foot block perimeter. Create public pedestrian pathways on private property to complete the pedestrian network and increase walkability. Provide a single row of trees in all sidewalks with these dimensions:

- East-west streets: 20-foot minimum width on north sidewalk, 15-foot minimum width on south sidewalk
- North-south streets: 15-foot minimum width on all sidewalks
- Pedestrian-only streets: 40-foot minimum width

Note: The exact configuration of streets and sidewalks are to be determined.

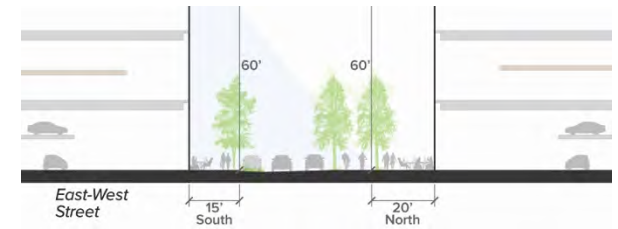
Two projects in Prospect north represent excellent opportunities to apply these principles: (1) Green Fourth Street and (2) the extension of the street grid to unlock land value and to connect the public realm.



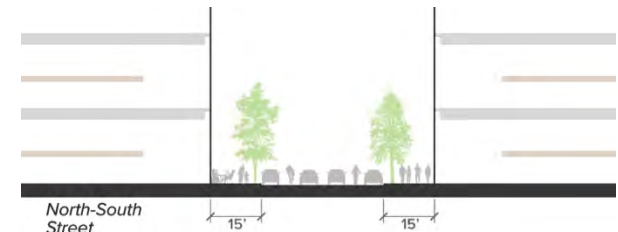
WALKABLE STREET IN MINNEAPOLIS NORTH LOOP

SUPPORT FOR VISION

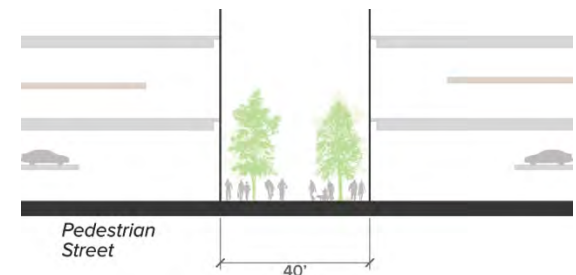
This guideline supports *research and innovation* by creating public gathering spaces that are essential to economic activity. It supports the *public realm* by contributing to a walkable well-connected environment. Well-designed streets support *diversity and equity* by providing equal access to public transit and facilities, and they support *healthy living* by enhancing safety, social connectedness and physical activity. Streets favoring pedestrians and bicycles over cars contribute to *sustainability and resilience* by reducing energy use and greenhouse gas emissions for transportation.



RECOMMENDED SIDEWALK WIDTHS ON EAST-WEST STREETS



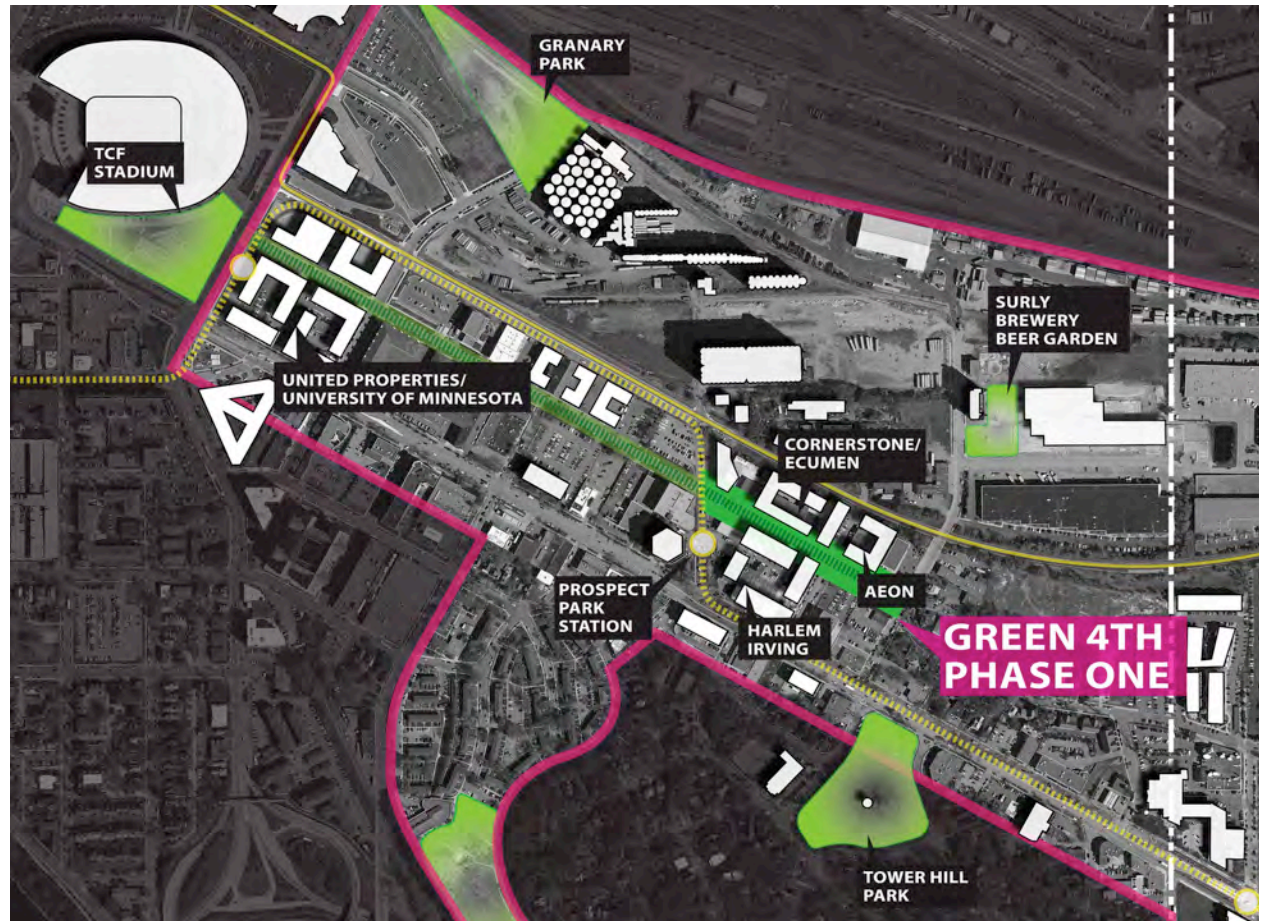
RECOMMENDED SIDEWALK WIDTHS ON NORTH-SOUTH STREETS



RECOMMENDED PEDESTRIAN-ONLY STREET WIDTH

GREEN FOURTH

As previously noted, Prospect North will be designed to put pedestrians first. Cars will be carefully managed to allow free and safe movement for pedestrians and bicycles throughout the district. All streets should reflect this principle — perhaps none more so than Fourth Street, a 6-block internal street that runs from Malcolm Ave. on the east to the Stadium Village station of the LRT on the west. Green Fourth, as it is now known, is an ideal chance to redefine how a street looks and how it functions.



MAP ILLUSTRATING FIRST PHASE OF GREEN FOURTH DEVELOPMENT

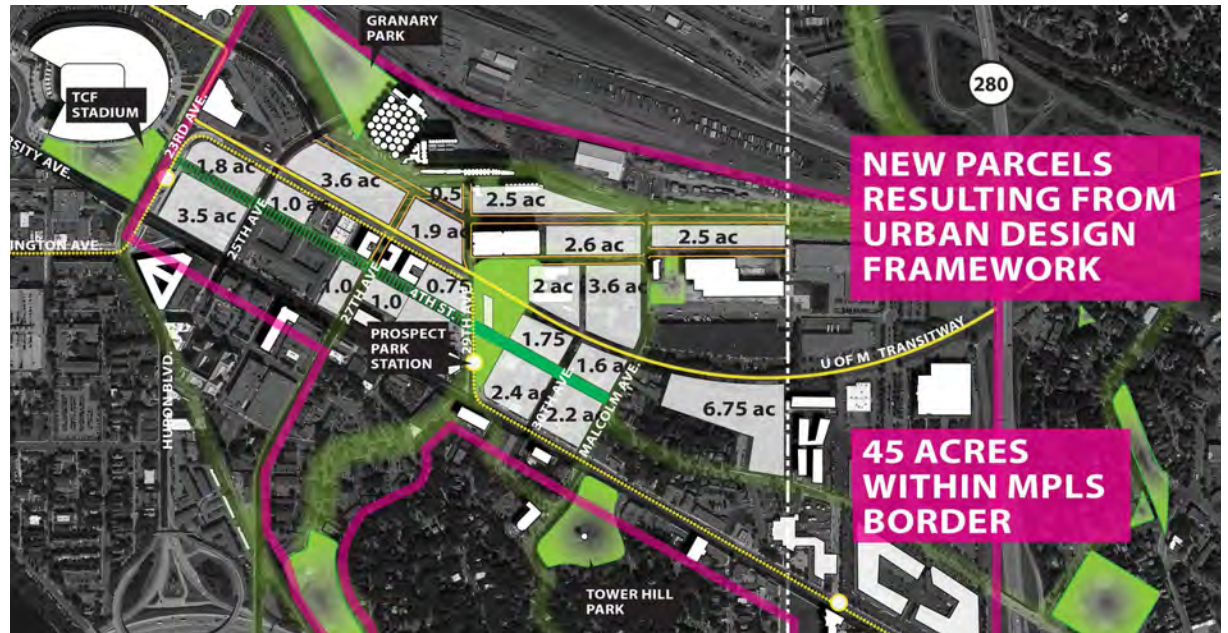
EXTENSION OF THE STREET GRID

Safe and inviting pedestrian movement is crucial to the success of the innovation district envisioned at Prospect North. Streets will have wide, gracious sidewalks flanked by active uses in buildings and courtyards, and spilling out onto the sidewalks themselves.

Extending the street grid in the northern half of the district is important for unlocking land value increasing economic benefits as well as linking together key elements of the public realm. The exact location and configuration of this extended street grid is to be determined. One important goal is providing an east-west link from the Surly Brewery Beer Garden to the signature park in the heart of the development (location and configuration to be determined). Another goal is to locate and complete a major east-west road (Granary Road) on the north edge of the district connecting the University Biomedical district, and proposed Granary Park.

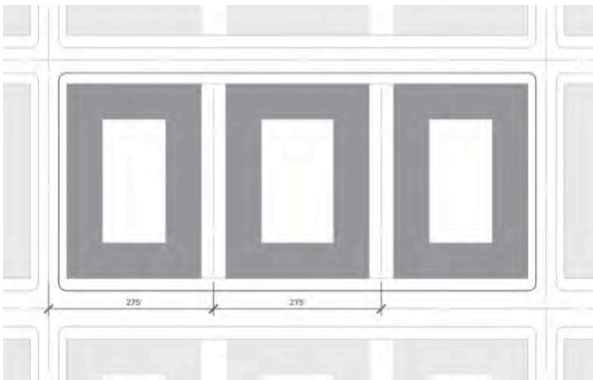
Perhaps the most important outcome of district planning for Prospect North is economic: the framework presented here demonstrates the impact that investment in new infrastructure — streets and blocks, district heating and cooling, waste and water management — can have on the livability and prosperity of this new community.

The accompanying map shows one possible street grid extension and the potential acreage that could be unlocked for redevelopment. Within Minneapolis alone, there are 45 acres of land, all with desirable frontages.



A previous economic analysis prepared by the Prospect Park 2020 group estimated that full development of the approximately 80 acres in the Minneapolis part of the Prospect North district alone would result in the creation of over 7,000 jobs, while the current assessed value of the property would rise from \$43 million to nearly \$900 million. This results in current real estate taxes in the district of under \$2 million rising to over \$25 million (Prospect Park 2020).

MAP ILLUSTRATING ONE POSSIBLE STREET CONFIGURATION FOR THE DISTRICT AND THE POTENTIAL ACREAGE OF PARCELS.



ABOVE: ILLUSTRATION OF A NETWORK OF PEDESTRIAN PATHS IN PROSPECT NORTH NEIGHBORHOOD BASED ON RECOMMENDED 275-FOOT MAXIMUM BLOCK LENGTH

LEFT: RECOMMENDED 275-FOOT MAXIMUM BLOCK LENGTH (measured to centerline of streets)

DISTRICT SCALE GUIDELINES

Public Realm

Connections Beyond

OBJECTIVE

Connect to regional transportation systems, the University of Minnesota, regional park systems and adjacent neighborhoods.

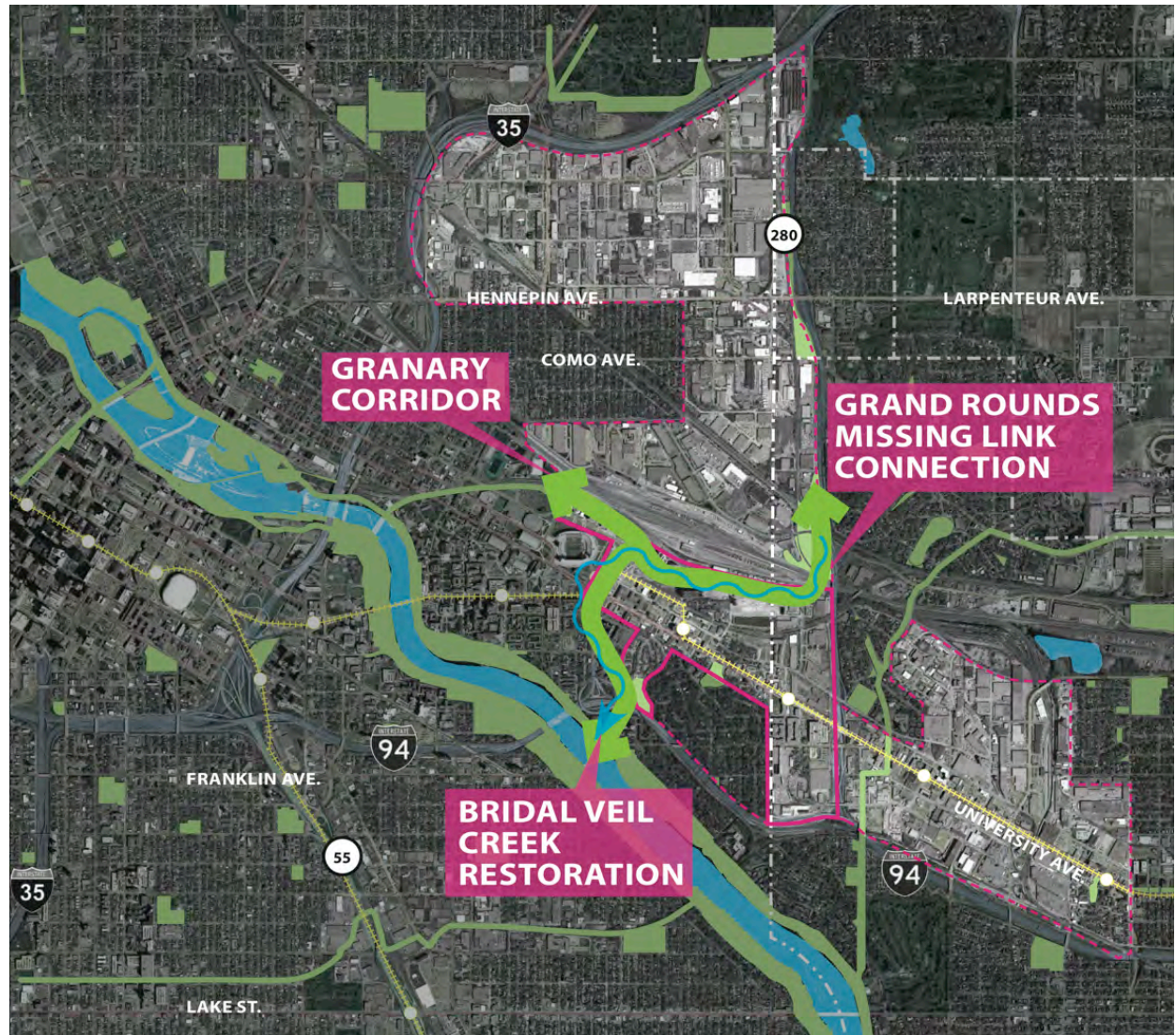
RECOMMENDATION

One station for the Green line of the LRT system is already at the center of the district. The site is also well served by buses. Green Fourth Street and University Avenue are corridors connecting to the University of Minnesota and the transitway between the Minneapolis and St. Paul campuses runs right through the site. A future transitway stop in the district will be essential.

The site can also connect to the regional park system and bicycle trails by completing the Grand Rounds. The district also lies along Granary Corridor, which is a key east-west connection between Saint Paul and Minneapolis that has been on planners' radar for decades, but has never been developed. Connections must also be made through effective urban design to the existing historic Prospect Park neighborhood and the Glendale Housing development.

SUPPORT FOR VISION

This guideline supports the *public realm* by ensuring that the district is well connected and accessible through multiple transportation



modes. Connections beyond the neighborhood support *diversity and equity* by providing access to a broad range of user groups.

ABOVE: ILLUSTRATION IDENTIFYING LOCATIONS AND SYSTEMS TO BE POTENTIALLY CONNECTED TO PROSPECT NORTH

GRAND ROUNDS MISSING LINK

In addition to its excellent location between the two cities, Prospect North offers the opportunity to realize a long-held Minneapolis Park and Recreation Board goal to create the “missing link” in the Grand Rounds, Minneapolis’ world-renowned park system.



MAP OF MINNEAPOLIS PARK SYSTEM GRAND ROUNDS SHOWING MISSING LINK ON THE EAST

DISTRICT SCALE GUIDELINES

Public Realm

Natural Systems

OBJECTIVE

Make the most of the District's context by preserving and celebrating its natural amenities including trees, topography, drainage patterns and wetlands. Natural features provide a mature sense of permanence and character, which contribute significantly to increased property values. Studies show that creative workers consistently list ready access to nature as a dominant factor in their choice of a place to live.

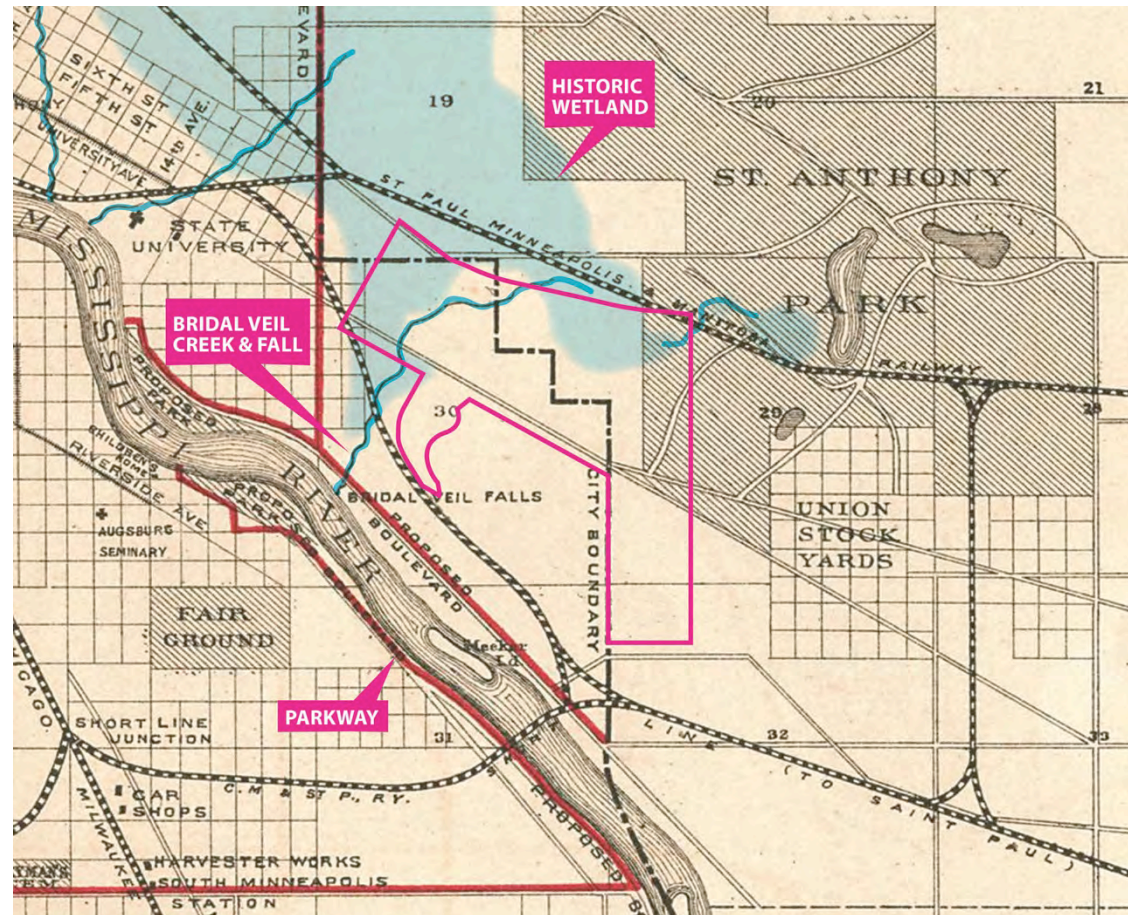
RECOMMENDATION

Preserve, enhance and restore natural systems including Bridal Veil Creek, and wetlands in the Granary Corridor area. This requires a more detailed assessment on a case-by-case basis to determine the implementation of this guideline.

Bridal Veil Creek once traversed the Prospect North site, draining a sizable watershed to the Mississippi River. One possibility under consideration is to “daylight” the creek, as has been done to portions of Bassett Creek and Shingle Creek in Minneapolis and Trout Brook and Phalen Creek in Saint Paul.

SUPPORT FOR VISION

This guideline supports the *public realm* by creating landscapes that are beautiful and



HISTORIC MAP OF THE AREA SHOWING NATURAL FEATURES

productive as well as revealing historic patterns. It also supports *sustainability and resilience* by restoring and enhancing natural ecological systems and soil. *Healthy living* is supported by access and connection to nature. Natural places also provide educational opportunities in support of *lifelong learning*.



DISTRICT SCALE GUIDELINES

Development

Mixed Use

OBJECTIVE

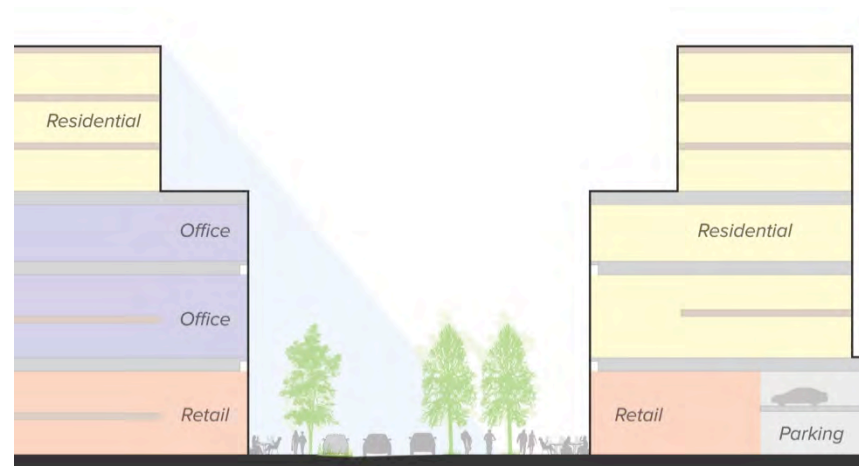
Create a mixed-use district including housing, retail, education, recreation, entertainment, civic functions, business and research. The result is that people can live, work and play in the same neighborhood.

RECOMMENDATION

All projects should contribute to the mixture of uses in the district as a whole even if the individual development has a single function. The mixture of uses within individual buildings and projects is encouraged when appropriate. Some areas of the district along University Avenue and Green Fourth clearly lend themselves to mixed-use buildings as shown in the adjacent images. Other properties north of the transitway may be more dedicated to research and office functions.

SUPPORT FOR VISION

This guideline supports the *public realm* by creating the activity and excitement of a 24-hour city (which also increases safety). It also supports *sustainability and resilience* by contributing to reductions in energy use and greenhouse gas emissions for transportation.. Mixed use development supports *equity and diversity* by including and involving a broad range of user groups in the district.



MIXED USE DEVELOPMENT WITH RETAIL ON FIRST LEVEL AND OFFICES AND HOUSING ABOVE

DISTRICT SCALE GUIDELINES

Development

Diversity of Housing Types

OBJECTIVE

Ensure that there is a mix of income levels, ages, unit types and sizes in housing including opportunities for live/work units.

RECOMMENDATION

All housing projects should contribute to the diversity of housing types in the district as a whole even if the individual development does not have a significant range of types. Diversity of types within individual buildings and projects is encouraged whenever possible.

SUPPORT FOR VISION

This guideline supports *equity and diversity* by including a broad range of user groups in the district—families, artists, seniors, students, and researchers, for example. Diversity of housing types supports *healthy living* because community strength is created through interaction and community members are not isolated for lack of resources. With a diverse community, *lifelong learning* is supported as people are brought together in indoor and outdoor settings to learn together, learn from each other and share interests, meals and creativity. Artists and designers are provided with stimulating and supporting places to live, learn, create, present, and sell their work.



A multifamily residential Passive House project in Germany.



DISTRICT SCALE GUIDELINES

Development

District Identity

OBJECTIVE

Provide consistent signage and landscape elements throughout the district to establish an identity.

RECOMMENDATION

Develop an identity, graphics and signage for the district. Develop a consistent vocabulary of design elements for the public realm including street furniture, lighting, materials and a planting plan.

SUPPORT FOR VISION

This guideline supports the *public realm* by contributing to a unified development with a gracious public realm that attracts people and creates an identity for the district.



DISTRICT SCALE GUIDELINES

Development

Sustainability Guidelines at District Scale

OBJECTIVE

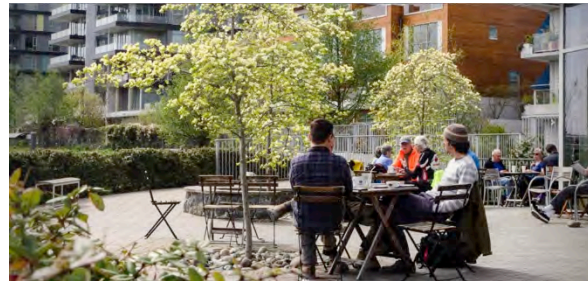
To meet sustainability goals and establish an identity as an innovative place, establish sustainability guidelines for the district as a whole.

RECOMMENDATION

The Partnership must evaluate the advantages and drawbacks of existing community-scale set of design guidelines and then adopt or create one. Options include: *LEED-ND*, *Living Community Challenge*, and *One Planet Living*. The Prospect North Partnership should also evaluate becoming an EcoDistrict. The concept of establishing EcoDistricts is an emerging trend in places like Seattle, San Francisco, Portland, Austin, Cleveland, Charleston, Denver and other cities.

SUPPORT FOR VISION

This guideline supports *sustainability and resilience* goals by providing specific requirements for energy use, carbon emissions, water use, wastewater, stormwater, material use, solid waste, ecological systems and soil. Sustainable design guidelines for the district also support *healthy living* by improving the indoor environment and increasing physical activity through transit use, walking, biking and exercising. It also contributes to creating a distinct identity for the district.



DOCKSIDE GREEN IN VICTORIA, CANADA IS A LEED-ND PROJECT



In Burnaby, British Columbia, a master plan was created with the Simon Fraser University Trust on the next phase of their development for UniverCity. This project evolved into the first project for the Living Community Challenge (Designer: Richard Graves).



Part 3: Project Scale Guidelines for Development

Guidelines for the Prospect North development are in two categories—*district scale* and *project scale*. This section includes project scale guidelines that pertain to individual development projects and buildings. These are established by the Partnership and projects will be evaluated based on their adherence to these guidelines. They are intended to apply to both new construction and renovation of existing buildings. District scale guidelines appear in Part 2.

The guidelines are grouped around Infrastructure, Public Realm, and Development. There is an overview of the project scale guidelines on the next page followed by a more detailed explanation of each guideline. For each guideline, there is an objective and recommendation for best practice as well as how each guideline supports the various elements of the Prospect North vision.

These guidelines are not comprehensive—they address a selected set of issues that are critical to supporting the Prospect Park vision for development. They are intended to provide an overlay that complements and expands existing city planning and guideline documents. Relevant City of Minneapolis planning documents are listed below. Relevant St. Paul documents will be added in a later version.

RELEVANT PLANNING DOCUMENTS

- Southeast Minneapolis Industrial (SEMI) / Bridal Veil Refined Master Plan
May 2001
- University Ave SE/29th Avenue SE Transit Corridor Development Objectives
April 2005
- University Ave SE/29th Avenue SE Transit Corridor Design Guidelines
April 2006
- The Minneapolis Plan for Sustainable Growth
October 2009
- Stadium Village / University Avenue Station Area Plan
August 2012
- Minneapolis Code of Ordinances
Title 20 Zoning Code
Includes Chapter 551: Overlay Districts
- Greening the Green Line:
Public and Private Strategies to Integrate
Parks and Open Space in Green Line
Development
August 2014

PROJECT SCALE GUIDELINES SUMMARY

INFRASTRUCTURE

District Systems Connections

Design for connection to district heating and cooling systems, district stormwater system, and other restorative infrastructure systems



PUBLIC REALM

Public Space Extension

Provide spaces and pathways on private property designed to complete and extend the public realm. Contribute to and reinforce the creation of signature public spaces, bicycle and pedestrian path networks.



DEVELOPMENT

Historic Structures

Whenever possible preserve historic structures in the district.



Adaptable Structures

Aspire to create flexible, adaptable spaces with high ceilings and long span structures for evolving uses. Design parking for adaptability to future use.



Eyes on the Street

Design for transparency and activity at street level with 75% glazing on lower levels.



Urban Design Elements

Design to complement the public realm with careful attention to building setbacks, building heights, and materials.



Hidden Parking

Hide parking structures and avoid blank walls by using underground garages and placing parking structures in the middle of blocks.



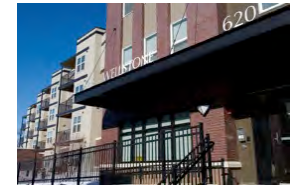
Flat Roofs

Provide flat roofs where possible to accommodate green roofs and solar panels. Use of rooftops for food production and waste treatment is encouraged



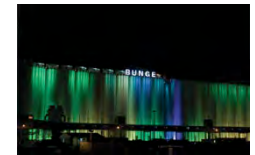
Affordable Housing

Include affordable units in housing projects where appropriate encouraging a diverse mix of housing across the district as a whole.



Public Art

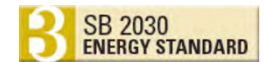
Integrate public art into all projects.



Sustainable Buildings

Each project must meet one of the following guidelines or rating systems.

- LEED-NC (Silver)
- Living Building Challenge
- Minnesota B3 Guidelines (SB2030)
- Green Communities (Affordable Housing)



In addition, every project must meet a specific set of performance targets related to energy, water, stormwater, materials, waste and other indicators (see Appendix A)..

PROJECT SCALE GUIDELINES

Infrastructure

District System Connections

OBJECTIVE

Previous guidelines for the district as a whole recommend the development of district energy, district storm water and integrated utility systems. This guideline recommends that all individual development projects must connect to these systems.

RECOMMENDATION

Design all buildings for connection to district heating and cooling systems, district stormwater system, and other advanced infrastructure systems. Connecting to district systems has advantages in terms of meeting environmental goals but also can benefit individual project developers with cost savings for heating and cooling plants, on-site stormwater management and other services.

SUPPORT FOR VISION

This guideline supports *sustainability and resilience* by reducing energy use and carbon emissions in buildings and infrastructure. Connection to district stormwater helps ensure that surface and ground water pollution is minimized, negative impacts of development on the hydrological cycle are minimized, and natural erosion and sedimentation levels in streams and lakes are not exceeded. Integrated utility systems can reduce water and wastewater leaving the site, reduce and recycle solid waste, and restore

and enhancing natural ecological systems. This guideline also supports *research and innovation* by developing and demonstrating new technologies.



DISTRICT HEATING AND COOLING DIAGRAM



*DISTRICT STORMWATER MANAGEMENT SYSTEM
STOCKHOLM, SWEDEN*

PROJECT SCALE GUIDELINES

Public Realm

Public Realm Extension

OBJECTIVE

Individual projects in the district should contribute to creating an attractive, lively public realm with parks, plazas and a network of pedestrian-oriented streets and walkways.

RECOMMENDATION

Whenever possible, individual projects in the district should provide open spaces and pathways on private property designed to complete and extend the public realm. Key strategies to create a walkable public realm include:

- Create signature public spaces.
- Create a pedestrian and bicycle network of streets and paths that connects to transit
- Provide multi-purpose and flexible outdoor spaces including pocket parks and playgrounds.
- Design outdoor spaces for use in all seasons by providing human comfort through microclimate design.
- Do not exceed recommended 275-foot block length or 1000-foot block perimeter whenever possible.

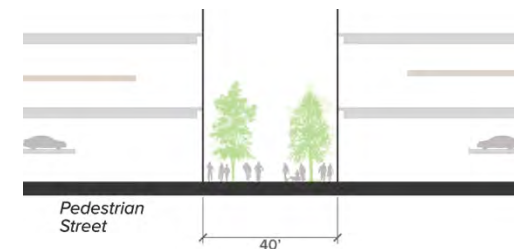
SUPPORT FOR VISION

This guideline supports *research and innovation* by creating public gathering spaces that are essential to economic activity. It supports the *public realm* by creating an identity for the district that attracts people and



ILLUSTRATION OF A POSSIBLE NETWORK OF PEDESTRIAN PATHS IN PROSPECT NORTH NEIGHBORHOOD BASED ON RECOMMENDED 275-FOOT MAXIMUM BLOCK LENGTH

accommodates activities. Public spaces support *diversity and equity* by providing equal access for everyone, and they support *healthy living* by enhancing social connectedness and physical activity. Enhancing *design, art and culture* as well as *lifelong learning* in the district are supported by public spaces.



RECOMMENDED PEDESTRIAN-ONLY MINIMUM STREET WIDTH IS 40 FEET

PROJECT SCALE GUIDELINES

Development

Historic Structures

OBJECTIVE

Whenever possible preserve historic structures in the district.

RECOMMENDATION

All existing buildings should be evaluated for reuse and preserved if possible. In Prospect North, these include grain elevators and older industrial structures. These buildings increase awareness of architectural heritage while adding character. Often, they provide lower cost flexible space that can be used for incubating new businesses or as live-work space for artists.

SUPPORT FOR VISION

This guideline can support *economic competitiveness* by creating business incubator spaces. It supports the *public realm* by preserving the historic character of the neighborhood and contributing to the district identity. *Sustainability and resilience* are supported because building material use is reduced with the reuse of existing structures. Preserving historic structures can also support *lifelong learning* and *design, art and culture* by providing artists and designers with stimulating places to live, learn, create, present, and sell their work.



ABOVE LEFT: BUILDINGS ON HARRIS PROPERTY

ABOVE RIGHT: TOWER HILL

LEFT: GRAIN ELEVATORS

PROJECT SCALE GUIDELINES

Development

Adaptable Structures

OBJECTIVE

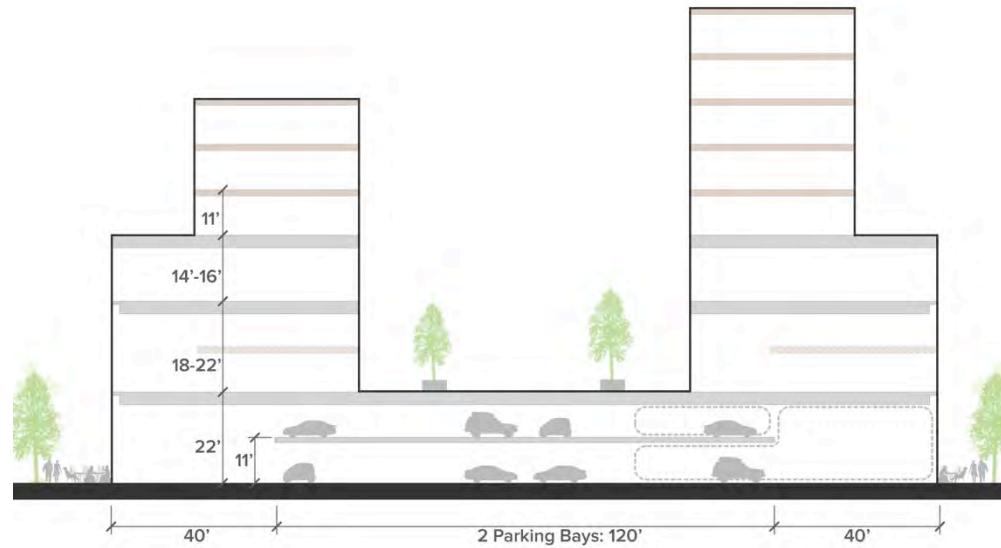
Create flexible, adaptable spaces with high ceilings and long span structures for evolving uses. Design parking for adaptability to future use with flat floors.

RECOMMENDATION

The recommended floor-to-floor height on the first two floors is 22 feet allowing for loft spaces. Design parking with flat floors and 11 feet minimum floor-to-floor height.

SUPPORT FOR VISION

This guideline supports *economic competitiveness* by creating potential business incubator spaces. It supports *research and innovation* by making the first floors of buildings available to create a “collaborative commons.” It also supports *design, arts and culture* by providing artists and designers with stimulating and supporting places to live, learn, create, present, and sell their work.



RECOMMENDED FLOOR-TO-FLOOR HEIGHTS FOR MAXIMUM ADAPATABILITY



FLEXIBLE LOFT SPACES WITH HIGH CEILINGS AND LONG SPANS SERVE AS HOUSING, STUDIOS AND WORKPLACES IN BERLIN, GERMANY



HIGH INTERIOR SPACES OFFER FLEXIBILITY FOR WORKING, LIVING AND COLLABORATING

PROJECT SCALE GUIDELINES

Development

Urban Design Elements

OBJECTIVE

To provide a unified development and public realm, establish standards for building heights, setbacks, floor-to-floor heights, and materials.

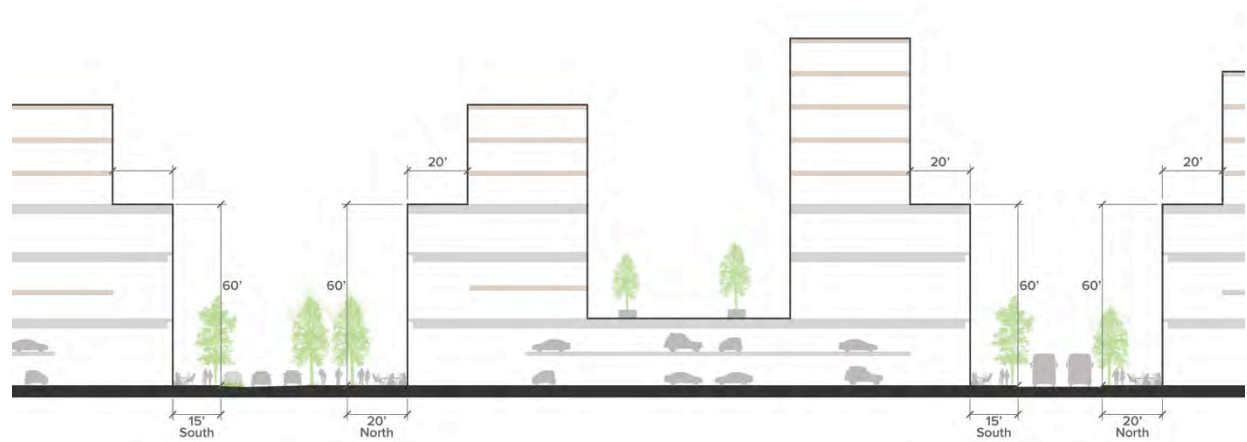
RECOMMENDATION

The following recommended standards will lead to a uniform enhanced public realm:

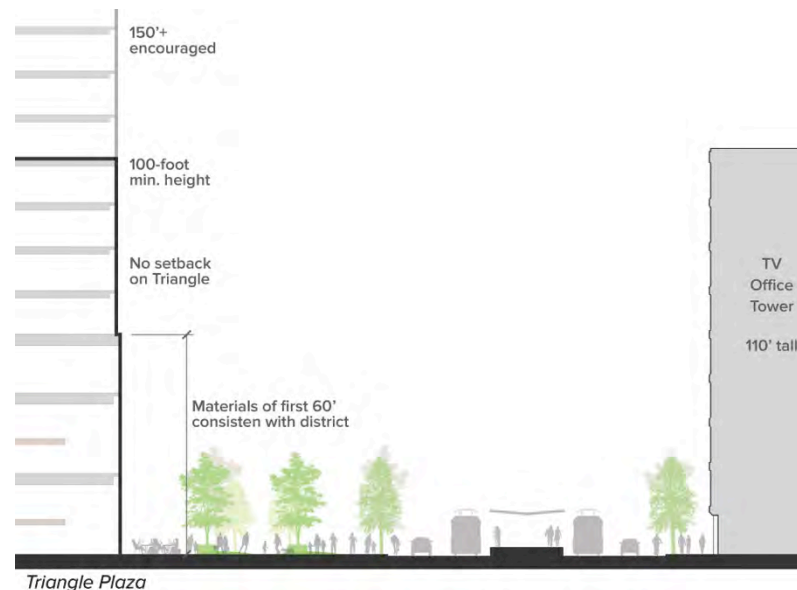
- No building height limits in the district.
- No setbacks for lower building levels on the street (up to 60 feet)
- Provide a 20-foot setback on upper building levels above 60 feet in height except in the signature public space where no setback is needed
- Make floor-to-floor heights 18-22 feet on the first two levels, and 11 feet on upper levels
- Use design and materials to promote quality and permanence (example: brick on lower levels).

SUPPORT FOR VISION

This guideline supports creating a unified development with a gracious *public realm* that attracts people and creates an identity for the district.



BUILDING HEIGHT AND SETBACKS FOR TYPICAL STREETS



BUILDING HEIGHT AND SETBACKS FOR SIGNATURE PUBLIC SPACE

PROJECT SCALE GUIDELINES

Development

Eyes on the Street

OBJECTIVE

To encourage a lively public realm, design for transparency and activity at street level.

RECOMMENDATION

Design street level spaces with a minimum of 75% glazing. Place shops and restaurants on the sidewalk to further increase pedestrian activity. Hide parking structures and avoid blank walls.

SUPPORT FOR VISION

This guideline supports *research and innovation* by making the public realm and first floors of buildings a “collaborative commons.” Streets, plazas, and public gathering spaces become essential to economic activity. It supports the *public realm* with events, activities and the arts creating a 24-hour city. *Healthy living* is also supported by a walkable, safe environment.



PROJECT SCALE GUIDELINES

Development

Hidden Parking

OBJECTIVE

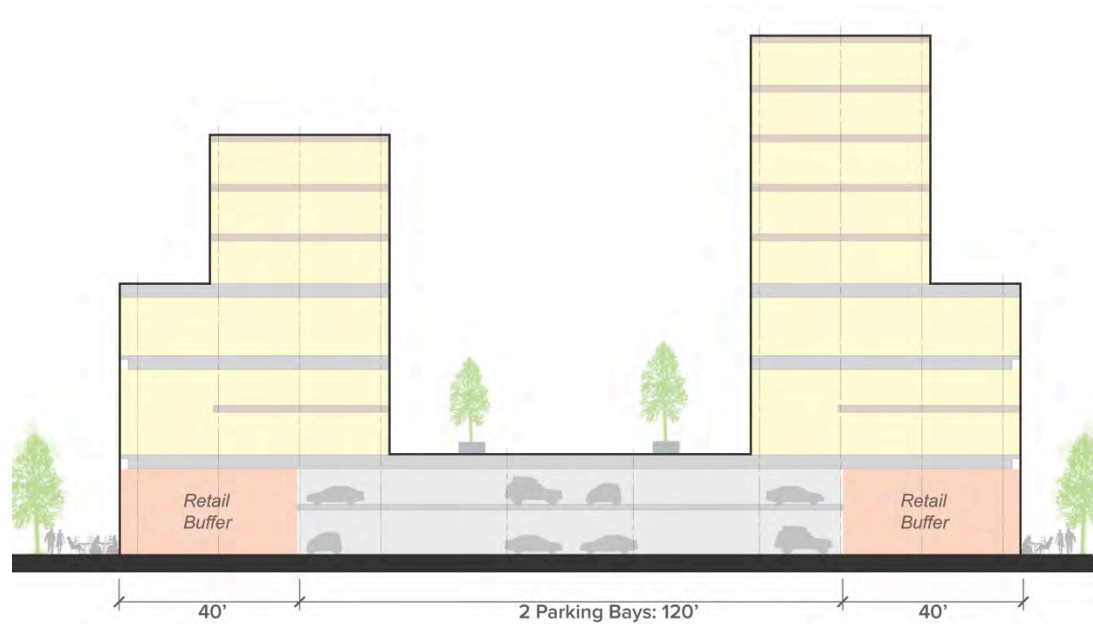
Above grade parking structures often result in large blank walls on the street that contribute to a negative pedestrian experience. Individual projects should avoid this situation as much as possible by taking large parking structures off the street.

RECOMMENDATION

Hide parking structures and avoid blank walls with underground garages and parking structures in the middle of blocks. Alternatively, if parking ramps must be placed on the street, the first floor should be designated for active commercial uses.

SUPPORT FOR VISION

This guideline supports the *public realm* by creating a walkable environment where pedestrians and bicycles are favored over cars. *Healthy living* is also supported by a walkable, safe environment.



PARKING STRUCTURE PLACED IN CENTER OF THE BLOCK



ENTRANCE TO PARKING STRUCTURE IN THE CENTER OF THE BLOCK



ENTRANCE TO UNDERGROUND PARKING

PROJECT SCALE GUIDELINES

Development

Flat Roofs

OBJECTIVE

In a relatively dense urban setting, rooftops have great value for multiple purposes such as capturing solar energy as well as providing space for green roofs, gardens and even innovative wastewater treatment systems. Individual projects should be designed with flat roofs to accommodate these potential uses.

RECOMMENDATION

Encourage flat roofs with sufficient structural support and access to accommodate solar panels, green roofs, urban agriculture and other uses.

SUPPORT FOR VISION

This guideline supports the *public realm* by making landscapes that are beautiful and productive. *Sustainability and resilience* are supported by solar energy that reduces carbon emissions, green roofs that help manage storm water on site and enhance natural ecological systems, and the growth of local, organic food that reduces transportation. Green roofs and urban agriculture also support *healthy living* by reducing air pollution and providing access to healthy foods.



PROJECT SCALE GUIDELINES

Development

Affordable Housing

OBJECTIVE

A previous guideline establishes that the district as a whole should include a mix of income levels, ages, unit types and sizes in housing (*Diversity of Housing Types*). This guideline encourages each individual development within the district to include this diversity as much as possible within the project.

RECOMMENDATION

If housing is included in a proposed development in the district, the opportunity to include diverse housing types should be encouraged whenever possible. This can be interpreted as including affordable units but also providing unit types and sizes for different ages and family types.

It should be noted that affordability is not only related to the direct cost of housing, but also the potential savings from reduced utility bills in energy efficient buildings and reduced transportation costs by having access to good public transit and a walkable mixed use neighborhood.

SUPPORT FOR VISION

This guideline supports *equity and diversity* by providing affordable units designed for different ages and family types. Equal access is provided for everyone to community facilities

and activities. It also supports *healthy living* because community strength is created through interaction and community members are not isolated for lack of resources.



PROJECT SCALE GUIDELINES

Development

Public Art

OBJECTIVE

Prospect North is envisioned as a new intentional urban community infused with the arts and design with a goal to integrate public art into all projects.

RECOMMENDATION

Public art must be integrated into each individual development project.

SUPPORT FOR VISION

This guideline supports *design, art and culture* by creating a community built with the arts and design as its heartbeat. The vision is to create a community that recognizes the importance of the arts and design as a magnet for a creative, vibrant community. By emphasizing the arts in the district, *research and innovation* are supported as well if the creativity of artists and designers collaborate with scientists and researchers at the University of Minnesota. The *public realm* is also enhanced by the arts and design.



PROJECT SCALE GUIDELINES

Development

Sustainable Building Guidelines

OBJECTIVE

To meet sustainability goals and establish an identity as an innovative place, establish sustainability performance requirements for all individual building projects in the district that set a higher bar than the standard building code.

RECOMMENDATION

There are three basic approaches to ensuring desired outcomes in sustainable development: (1) use an existing rating system or set of sustainable design guidelines, (2) develop a set of guidelines and standards customized to the needs and aspirations of a particular project, or (3) develop a hybrid that combines using a set of existing guidelines with certain performance outcomes. The third approach is recommended for Prospect North. This is consistent with the St. Paul Green Building Policy currently in effect.

MINIMUM REQUIREMENT

Each project must meet one of the following guidelines or rating systems.

- LEED-NC (Silver)
- Minnesota B3 Guidelines (with Architecture 2030 energy program)
- Living Building Challenge
- Green Communities (Affordable Housing)

Each of these systems include specific requirements for most environmental topic areas such as energy, water, materials, etc. In addition, every project must meet a specific set of performance targets. The sections that follow identify recommended performance thresholds and actions in seven areas—energy and climate change, water and wastewater, stormwater, materials, solid waste, ecological systems and soil. These specific requirements are shown in Appendix A.

SUPPORT FOR VISION

This guideline supports *sustainability and resilience* goals by providing specific requirements for energy use, carbon emissions, water use, wastewater, stormwater, material use, solid waste, ecological systems and soil. The development is resilient because it is able to withstand disruption from extreme climate events and other related disturbances. Sustainable design guidelines for buildings support *healthy living* by improving the indoor environment. It also contributes to creating a distinct identity for the district.



*BULLITT CENTER, SEATTLE, WASHINGTON
A LIVING BUILDING CHALLENGE PROJECT*

Part 4: Summary of Actions

Throughout the document, a number of actions are recommended to move the district forward in achieving the vision, establishing the public realm, and putting guidelines in place for development.

GENERAL ACTIONS

1. Establish initial district boundaries.
2. Work with the Cities of Minneapolis and St. Paul to confirm these boundaries and establish the designation as an *Innovation District*.

PUBLIC REALM FRAMEWORK ACTIONS

1. Endorse the Public Realm Framework.
2. Plan and implement Green Fourth.
3. Plan and implement a signature public space in the heart of the district.
4. Extend the pedestrian street grid to connect the public realm and improve and extend the street grid to unlock land value.
5. Plan the district to connect with and enhance regional systems such as the Grand Rounds, Bridal Veil Creek and the Granary Corridor.

6. Create a developer/business toolkit/playbook for prospective Prospect North investors.

DEVELOPMENT GUIDELINE ACTIONS

1. Endorse the District Framework and Guidelines for Development.
2. Utilizing Checklist B, create a project scorecard specifying whether guidelines are aspirational, encouraged through incentives, or required.
3. In cooperation with City establish processes for project review.
4. Incorporate relevant portions of the guidelines in appropriate City documents and requirements.
5. Use Checklist A to take action on each of the district scale guidelines.
6. Use Checklist B to evaluate designs based on project scale guidelines.

The next two pages include checklists related to the guidelines. Checklist A consists of a detailed list of actions related to the district scale guidelines for the Partnership to take. Checklist B is an evaluation sheet for project review to be used to determine to what extent individual projects are conforming to the guidelines.

DISTRICT SCALE GUIDELINES

Checklist A for Partnership Action

Infrastructure

- | | | |
|------------------------------|---|-------|
| 1. District Energy | Plan and implement district heating and cooling system. | _____ |
| 2. District Stormwater | Plan and implement district stormwater system. | _____ |
| 3. District Parking | Plan and implement district parking system. | _____ |
| 4. Integrated Utility System | Plan and implement other district systems. | _____ |

Public Realm

- | | | |
|-------------------------|--|----------------|
| 5. Public Spaces | Locate the major public spaces in district. | _____ |
| 6. Streets and Mobility | a. Plan and implement pedestrian network with specific design standards.
b. Plan and implement enhanced road grid to unlock land value. | _____
_____ |
| 7. Connections Beyond | Plan district with connections to adjacent land uses and transportation systems. | _____ |
| 8. Natural Systems | Plan district to enhance natural systems. | _____ |

Development

- | | | |
|--|--|-------|
| 9. Mixed Use | Establish plan for a mixture of uses. | _____ |
| 10. Diversity of Housing Types | Establish plan for a diversity of housing types. | _____ |
| 11. District Identity and Signage | Design and implement identity and signage. | _____ |
| 12. District Sustainability Guidelines | Establish district sustainability requirements. | _____ |

PROJECT SCALE GUIDELINES

Checklist B for Project Review

- | | | |
|--------------------------------|---|-------|
| 1. District System Connections | Describe how the project is served by or contributes to district energy, district stormwater, district parking, and any other district systems. | <hr/> |
| 2. Public Realm Extension | Describe how the project contributes to, connects to or extends the public realm. | <hr/> |
| 3. Historic Structures | Describe how the project preserves historic structures. | <hr/> |
| 4. Adaptable Structures | Describe how the project is designed for adaptability. | <hr/> |
| 5. Urban Design Elements | Describe how the project follows designated urban design standards. | <hr/> |
| 6. Eyes on the Street | Describe how the project is designed with 75% windows at street level. | <hr/> |
| 7. Hidden Parking | Describe how parking is hidden at street level? | <hr/> |
| 8. Flat Roofs | Describe how the project roofs are designed to accommodate solar and green roofs. | <hr/> |
| 9. Affordable Housing | Describe how the project contributes to the diversity and affordability of housing types in the district. | <hr/> |
| 10. Public Art | Describe how the project includes public art. | <hr/> |
| 11. Sustainable Buildings | Describe how the project follows designated sustainable building guidelines. | <hr/> |

Appendix A: Sustainable Building Design Guidelines and Metrics

This Appendix provides the recommended detailed performance requirements for sustainable buildings.

Guidelines and Rating Systems

There are three basic approaches to ensuring desired outcomes in sustainable development: (1) use an existing rating system or set of sustainable design guidelines, (2) develop a set of guidelines and standards customized to the needs and aspirations of a particular project, or (3) develop a hybrid that combines using a set of existing guidelines with certain performance outcomes. The third approach is recommended for Prospect North. This is consistent with the St. Paul Green Building Policy currently in effect.

MINIMUM REQUIREMENT

Each project must meet one of the following guidelines or rating systems.

- LEED-NC (Silver)
- Living Building Challenge
- Minnesota B3 Guidelines (with Architecture 2030 energy program)
- Green Communities (Affordable Housing)

Each of these systems include specific requirements for most environmental topic areas such as energy, water, materials, etc. These systems have procedures for calculation, certification and monitoring.

In addition, every project must meet a specific set of performance targets. The sections that follow identify recommended performance thresholds and actions in seven areas—energy and climate change, water and wastewater, stormwater, materials, solid waste, ecological systems and soil.

Energy Use and Climate Change

ASPIRATIONAL TARGET

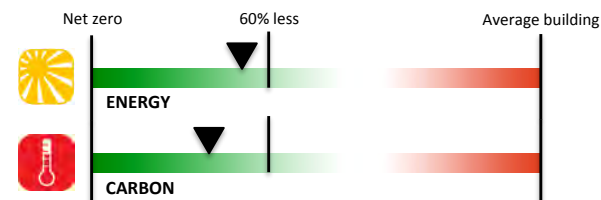
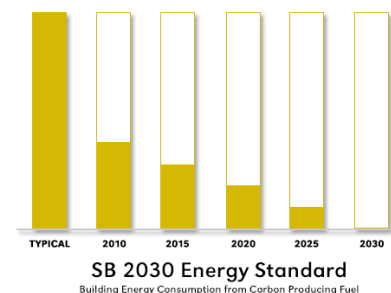
The ultimate condition we seek is a community that uses zero net energy and produces zero greenhouse gas emissions. Production of net positive energy (a surplus) is even better.

MINIMUM REQUIREMENT

At a minimum, buildings in the Prospect Park district should meet energy use and greenhouse gas (GHG) emission targets specified in the Minnesota 2030 program as part of the B3 Guidelines:

- 60% reduction by 2010
- 70% reduction by 2015
- 80% reduction by 2020
- 90% reduction by 2025
- 100% reduction by 2030

Targets for existing buildings are half those of new construction.



Energy use is measured in kBtu per square foot per year. GHG emissions are measured in pounds of CO2 equivalent per square foot per year.

Water and Wastewater

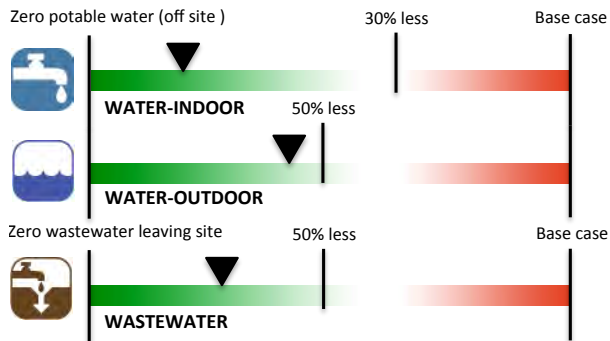
ASPIRATIONAL TARGET

The ultimate condition we seek is a community that uses no more than five percent (5%) of the total daily water requirement/person imported to the site, zero gray water leaving the site, and ten percent (10%) or less black water leaving the site long-term operations.

MINIMUM REQUIREMENT

At a minimum, buildings in the Prospect North district should meet the water and wastewater minimum requirements from the *Roadmap to Sustainability, St Paul Ford Site*:

- Predicted potable water use must be 30% below EPA Policy Act of 1992 (consistent with Saint Paul Green Building Policy).
- Predicted water use for landscaping must be at least 50% less than a traditionally irrigated site (consistent with Saint Paul Green Building Policy).
- Fifty percent (50%) less black and/or gray water leaving the site than a typical development, during design and long-term operations.



Potable water is measured in gallons per person per year (FTE equivalent). Wastewater is measured in gallons leaving the site for treatment.

Stormwater and Groundwater

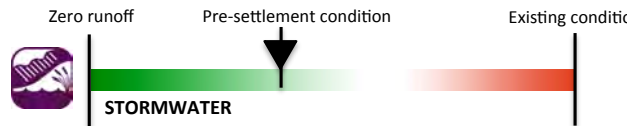
ASPIRATIONAL TARGET

The ultimate condition we seek is a community that has zero discharge of untreated stormwater from the site. Low flows on adjacent properties are redirected away from untreated storm sewers and onto the site for treatment in the site’s comprehensive stormwater management system.

MINIMUM REQUIREMENT

At a minimum, buildings in the Prospect Park district should meet the water and wastewater minimum requirements from the *Roadmap to Sustainability, St Paul Ford Site*:

- Comply with current local regulations for stormwater runoff volume and rate control (Minnesota Pollution Control Agency (MPCA), State of Minnesota B3 Guidelines)
- Reduce runoff volume by at least 90% on an annual basis by infiltration (50%) and evaporation or re-use (40%) or provide a corresponding water quality benefit.
- Reduce pollutants for which the water is impaired to 10% less than levels identified in Total Maximum Daily Load (TDML) study
- Maintain minimum cover (e.g. >3’) above bedrock and follow Minnesota Pollution Control Agency (MPCA) Guidelines on infiltrating.
- Produce and implement a Stormwater Pollution Protection Plan per MPCA guidelines for use pre, during and post construction.



Stormwater is measured in cubic feet/second during a specified storm event. The pre-settlement condition of untreated stormwater is calculated for each site.

Materials

ASPIRATIONAL TARGET

The ultimate condition we seek is a community that achieves life-cycle performance of all buildings at least 30% better than the average building.

MINIMUM REQUIREMENT

At a minimum, buildings in the Prospect Park district should meet the life cycle materials requirements from the *Roadmap to Sustainability, St Paul Ford Site*:

- Life-cycle performance of all buildings at least 10% better than the average building using Athena EcoCalculator in six of the eight output areas.
 - Primary energy use
 - Global warming potential
 - Ozone depletion
 - Acidification
 - Eutrophication
 - Photochemical smog
 - Particulate matter
 - Weighted raw resource use



Material impact is measured in tons of CO2e embodied from extraction, manufacture and transportation. Other Life cycle assessment indicators can be shown as well.

Solid Waste

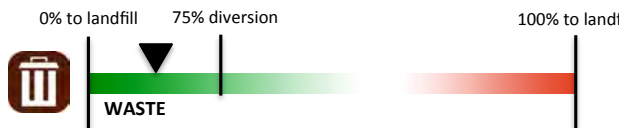
ASPIRATIONAL TARGET

The ultimate condition we seek is zero construction, residential, commercial and industry solid waste leaving the site.

MINIMUM REQUIREMENT

At a minimum to begin with, buildings in the Prospect Park district should meet the minimum waste requirements from the *Roadmap to Sustainability, St Paul Ford Site*:

- Seventy five percent (75%) of all construction waste must be recycled.
- Fifty percent (50%) less household, commercial and industrial solid waste leaving the site than an average or typical development.



Construction waste is measured as a percent of waste reused or recycled. An alternate measure is tons of waste sent to the landfill. Similar metrics can be established during building operation.

Ecological Systems

ASPIRATIONAL TARGET

The ultimate conditions we seek are:

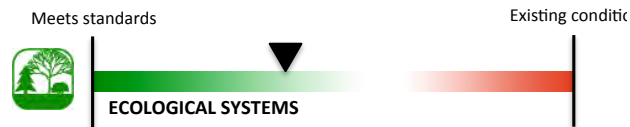
- 70% aerial tree cover over non-roof impervious surfaces, and 50% of buildings include vegetated roofs.
- 100% native tree, shrub, perennial and vine plantings compositions.

- A species-rich, resilient, urban forest with 50% of tree population exceeding 20 inch Diameter Breast Height (DBH) and 20% exceeding 30 inch DBH.
- Diverse ecosystem that supports at least the presence of key species as follows: Amphibians (3 species); interior forest birds (10 species); interior grassland birds (3 species); bats (2 species); reptile (2 species).

MINIMUM REQUIREMENT

Prospect Park district should use the minimum requirements from the *Roadmap to Sustainability, St Paul Ford Site*:

- Greater than fifty percent (50%) aerial tree cover over all impervious surfaces on site except roofs.
- Greater than thirty percent (30%) of buildings include vegetated roofs.
- Greater than twenty percent (20%) of site open space covered with vegetation.
- Greater than seventy five percent (75%) native species in new landscaping, including keystone species.
- Minimum plant species diversity greater than eighty percent (80%) species of native vascular flora – herbaceous perennials. No invasive species on the site.



Ecological systems are measured in terms of vegetation amount, size and diversity as well as number and types of wildlife species.

Soil

ASPIRATIONAL TARGET

The ultimate conditions we seek are:

- Meet Minnesota Pollution Control Agency (MPCA) soil cleanup criteria with no land use restrictions.
- Provide on-site composting location and provide composted material for on-site public and private gardening, landscaping and soil restoration.
- Hydric and mesic soils—profile > 20% of proposed open space.
- Organic horizon > 6 inches.
- Minimum 4 species of mycorrhizae in soil that are naturally found in Minnesota.

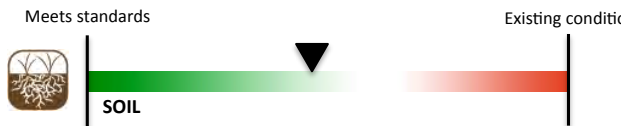
MINIMUM REQUIREMENT

At a minimum, buildings in the Prospect Park district should meet the soils requirements from the *Roadmap to Sustainability, St Paul Ford Site*:

- Meet MPCA soil cleanup criteria with land use restrictions.
- Meet B3 Guidelines for soil management.
 - Organic matter >1.5% by dry weight
 - Bulk density < than 1.5 mg/m³
 - Aeration porosity (% large pore volume) >2%
 - Infiltration rate > 0.25 in/hr site wide, >1 in/hr in stormwater treatment areas
 - Soil pH 6-8.5
 - Cation exchange capacity > 5 meg/100g
 - Potassium > than 124 lbs/acre
 - Phosphorus > than 44 lbs/acre
 - Mycorrhizae — Minimum 2 species in

soil that are naturally found in
Minnesota

- Soluble salt content < 600 ppm
- Stormwater Pollution Prevention Plan (SWPPP) - create and implement
- Hydric and mesic soils profile >10% of open space
- Organic horizon > 4 inches throughout



Soil is measured in terms of a number of specific criteria and practices.

Appendix B: Healthy Living Guidelines

This Appendix provides the detailed guidelines for healthy living developed by Blue Cross and Blue Shield of Minnesota.

INTRODUCTION

Health is the state of complete physical, mental and social well being and not merely the absence of disease or infirmity. — World Health Organization

*Healthy community design is planning and designing communities that make the healthy choice the easy choice. [I]t makes healthy lifestyle choices easy and accessible for all community members.*¹

A healthy community is built on policies, access to everything from healthcare facilities to parks to supermarkets, and infrastructure that welcomes community and activity.

By designing a healthy community, this project can provide a model for transforming an existing urban neighborhood into a model healthy community. By creating a healthy image for the neighborhood, forward thinking individuals, institutions, and companies will be attracted. In addition, the intention is to measure outcomes and educate residents and the general public on healthy community strategies.

To achieve this vision, it is important to establish a clear set of desired outcomes and actions with metrics for all projects in the District. Developments will be held accountable for meeting

these criteria and performance will be monitored over time.

Blue Cross and Blue Shield of Minnesota is assisting the Prospect North Partnership to define criteria, standards, and strategies for implementing a model health district. This report synthesizes information from relevant sources and examples. Sources are in the endnotes to this document.

The desired outcomes of healthy living are listed below. Each of these outcomes is discussed in the following pages in more detail with recommended performance thresholds and recommended actions to achieve them at both the district and individual project scale. As this document continues to develop, additional desired outcomes may be added and recommended performance thresholds and actions will honed.

DESIRED OUTCOMES

1. ACTIVE LIVING: TRANSPORTATION AND EXERCISE

- Physical activity is increased through transit use, walking, biking and exercising.
- Active transportation is at least as easy and convenient as driving.

2. FOOD AND HEALTHY EATING

- Access to healthy food options is ensured.
- Food vendors carry healthy options.
- Awareness of healthy food options is increased.

3. TOBACCO USE

- A tobacco-free community is created, both indoors and in public spaces.

4. SAFETY

- Injury and death caused by cars are reduced.
- Physical and mental injury caused by crime is decreased resulting in increased biking and walking.

5. SOCIAL CONNECTEDNESS

- Community strength is created through interaction.
- Community members are not isolated for lack of resources.

6. HEALTH EQUITY

- Every person has equal opportunity to reach full health potential.

7. HEALTHY AIR

- Air pollution is reduced.

8. HEALTHY WATER

- Stormwater is cleaned by natural systems and appropriate treatment for use in healthy eating urban agriculture developments.

9. ACCESS TO MEDICAL CARE

- Access to quality health care is maximized.
- Preventative care is maximized.

¹ "Healthy Community Design Checklist Toolkit," Centers for Disease Control and Prevention, accessed June 12, 2014, <http://www.cdc.gov/healthyplaces/toolkit/default.htm>.

Active Living: Transportation and Exercise

Major desired outcomes of the Prospect North development are:

- Physical activity is increased through transit use, walking, biking and exercising. The distinction between utilitarian active living and exercise is important since these two forms of activity require somewhat different policies and infrastructure.
- Active transportation is at least as easy and convenient as driving.

SIGNIFICANCE

Obesity has become an epidemic in America. This has been caused in part by diminishing activity levels since the 1960s. These diminishing activity levels are correlated with increased suburban-style development.

The shape of a community affects activity levels. “Over the past several decades, we have engineered much of the physical activity out of our daily lives. Now our task is to understand how opportunities to physical activity can be revived.”²

Prospect North can encourage utilitarian travel. Active transportation can add significant activity to an individual’s day.^{3,4,5} The Prospect North project

can encourage physical activity if it provides cycling and walking infrastructure combined with restrictions on car use and land-use policies that foster compact, mixed-use developments.⁶

PERFORMANCE THRESHOLDS

The ultimate condition we seek is to increase activity levels so that adults engage in 30 minutes or more of “moderate-intensity physical activity” on at least five days per week,⁷ or engage in 20 minutes or more of “vigorous-intensity activity” three or more days per week.⁸ We seek to increase activity levels for children to 60 minutes per day.

Proposed performance-based metrics:

- Number of people walking and biking on a regular basis or per week.
- Number of people riding transit.
- Amount of time people engage in physical activity per day.
- Percent of people who do not engage in physical activity.

Proposed prescriptive-based metrics define characteristics of an active living oriented community:

- Proximity to destinations (including schools).

- Existence of “Safe, convenient, and attractive infrastructure.”⁹
- Welcoming streets design features, including street lighting; greening; street furniture; interesting windowed storefronts; wide sidewalks with few driveway curb cuts; clear crossing rules with pedestrian priority and no “beg buttons;” no-turn-on-red policies for cars.
- Parking consolidated into only a few locations (instead of at every establishment or home).¹⁰
- Presence of bike lanes, protected bike lanes, bike parking facilities, bike boxes, bike share (Nice Ride) stations.
- Traffic enforcement rates.
- Access to Parks¹¹; to Playgrounds¹²; to trails; and other facilities.

DISTRICT-SCALE ACTIONS

- Design all thoroughfares to encourage multi-modal travel with dedicated space for bicycle and pedestrian movement – consistent with *Complete Streets* principals.
- Provide heated shelters at transit stations to provide protection from bad weather.
- Ensure that all transit stops and stations are well marked with route and schedule information, and that shelters feature full

² Reid Ewing et al., “Relationship Between Urban Sprawl and Physical Activity, Obesity, and Morbidity,” *American Journal of Health Promotion* 18 (2003): 56.

³ Children who walked to school added 16 minutes of moderate-intensity activity per day. David. R. Bassett et al., “Estimated Energy Expenditures for School-Based Policies and Active Living,” *American Journal of Preventative Medicine* 44 (2013): 108.

⁴ Adults who commute on foot add an average 22.5 minutes of moderate intensity activity to their daily routines. U.S. Census Bureau, *Commuting in the United States: 2009* (2011): 14.

⁵ Active commuting by bicycle can result in similar benefits. Fifty-nine percent of utilitarian cyclists in Portland, Oregon, recorded 150 minutes or more of utilitarian cycling per week. Jennifer Dill, “Bicycling for

Transportation and Health: The Role of Infrastructure,” *Journal of Public Health* 30 (2009): 101.

⁶ John Pucher et al., “Walking and Cycling to Health: A Comparative Analysis of City, State, and International Data,” *American Journal of Public Health* 100 (2010): 1990-91.

⁷ Russell R. Pate et al., “Physical Activity and Public Health – A Recommendation from the Centers for Disease Control and Prevention and the American College of Sports Medicine,” *The Journal of the American Medical Association* 273 (1995): 402; William L. Haskell et al., “Physical Activity and Public Health: Updated Recommendation for Adults from the American College of Sports Medicine and the American Heart Association,” *Circulation* 116 (2007) 1081.

⁸ William L. Haskell et al., “Physical Activity and Public Health: Updated Recommendation for Adults from the American College of Sports Medicine and the American Heart Association,” *Circulation* 116 (2007) 1081.

⁹ “[S]idewalks, crosswalks, bike paths and lanes, and intersection modifications that protect pedestrians and cyclists” increases active transportation. John Pucher et al., “Walking and Cycling to Health: A Comparative Analysis of City, State, and International Data,” *American Journal of Public Health* 100 (2010): 1990-91.

¹⁰ People will walk from the parking facility to their destination. They will walk past (and thus be exposed to) other businesses and will live up the street, thereby making the street safer and more enjoyable for all. In addition, communities should be careful not to over-build parking. If you build it, they will come. The Prospect Park development will be on top of a train station and should not require as many parking spots as would currently be required under Minneapolis law. The developments should seek an exception to the mandatory parking minimums.

¹¹ See e.g., Peter Harnik and Ben Welle, “From Fitness Zones to the Medical Mile: How Urban Park Systems Can Best Promote Health and Wellness,” *The Trust for Public Land* (2011).

¹² See e.g., “Healthy Parks and Playgrounds: Task Force Report,” City of Cambridge (2009).

transit system maps to maximize the network’s usability.

- Provide publically available car share so that locals do not need to own personal vehicles.
- Build an interesting streetscape so that walks and bicycle rides are interesting and comfortable experiences. Focus on art, street facilities, greening, and building frontage.
- Provide comprehensive street lighting so that pedestrians and bicyclists feel safe at night.
- Design narrow streets, and provide other traffic calming measures such as speed humps, to calm traffic and make streets safer for children, pedestrians, and cyclists.
- Construct mixed use buildings so that destinations are close together – connected destinations out of walking distance do not encourage walking.
- Do not install “beg buttons” or allow right turns on red.

Food and Healthy Eating

Major desired outcomes of the Prospect North development are:

- All community members have access to healthy food options.
- Food vendors carry healthy options.
- Community awareness of healthy food issues is increased.

SIGNIFICANCE

“[D]iseases – such as type II diabetes, obesity, heart disease, stroke, and certain cancers . . . are now generally attribute[ed] . . . to a network of biological dysfunction. And the **food we eat is an important factor in that dysfunction**, in part because our diets lack the necessary balance of nutrients.

“[T]he Standard American Diet (SAD) lacks nutrients. Moreover, some of our processed foods include chemically-altered fats and sugars that may

be giving our bodies the wrong signals. The United States ranks ninth in life expectancy among nations in the developed world; [w]e have a workforce plagued with absenteeism and reduced productivity because of chronic health problems, including depression; [and] 78 percent of healthcare expenditures are for the treatment of chronic disease.¹³

PERFORMANCE THRESHOLDS

The ultimate condition we seek is a community that eats healthy foods, avoids unhealthy foods, maintains a well-balanced diet, and, as a result, experiences low chronic disease rates.

Proposed metrics are:

- Fruit and vegetable consumption among adults and youth
- Breastfeeding rates
- Sugar-sweetened beverages consumption among youth
- Linear meter of store shelf space devoted to vegetables¹⁴

DISTRICT-SCALE ACTIONS

- Provide easy and convenient access to supermarkets, instead of grocery stores, so that Prospect Park does not become (or remain) a food desert.¹⁵

¹³ “How Does Food Impact Health?,” University of Minnesota, accessed June 12, 2014, <http://www.takingcharge.csh.umn.edu/explore-healing-practices/food-medicine/how-does-food-impact-health> (bullet points deleted).

¹⁴ Nicole Larson, Mary Story, and Melissa C. Nelson, “Bringing Healthy Foods Home: Examining Inequalities in Access to Food Stores,” *Healthy Eating Research* (2008): 2. “[E]ach additional linear meter of store shelf space devoted to vegetables linked to an additional daily intake of 0.35 servings of vegetables.”

¹⁵ “In general, research suggests that neighborhood residents who have better access to supermarkets and limited access to convenience stores tend to have healthier diets and lower levels of obesity.” Nicole I. Larson, Mary T. Story, and Melissa C. Nelson, “Neighborhood Environments: Disparities in Access to Healthy Foods in the U.S.,” *American Journal of Preventative Medicine* 36(1) (2009): 77.

- Ensure residents, workers, and visitors to Prospect North have fresh food access.
- “[E]ncourage restaurants to improve the availability of healthy menu options include: (1) requiring restaurants that do not meet nutritional standards to locate a minimum distance from youth-oriented facilities (e.g., schools, playgrounds); (2) limiting the total number per capita of restaurants that do not meet nutritional standards in a community; and (3) prohibiting restaurants that do not meet nutritional standards from offering drive-through service.”¹⁶
- “Promoting healthy foods at the point of purchase (e.g., provide signage at the order counter, recommend that wait-staff encourage patrons to try healthier foods).”¹⁷

Facilitate local farmers markets; facilitate healthy foods in neighborhood schools, perhaps through a farm to school program; facilitate “CSA” farm share programs; and create community gardens.

Tobacco Use

Major desired outcomes of the Prospect North development are¹⁸:

- A tobacco free community is created, both indoors and in public spaces. A tobacco free community encompasses smokable tobacco and smokeless tobacco, including e-cigarettes.

SIGNIFICANCE

“Smoking affects nearly every organ of the body, and the evidence in this report provides even more

¹⁶ Nicole Larson, Mary Story, and Melissa C. Nelson, “Restaurant Realities: Inequalities in Access to Healthy Restaurant Choices,” *Healthy Eating Research* (July 2008): 4. (reformatted).

¹⁷ Nicole Larson, Mary Story, and Melissa C. Nelson, “Restaurant Realities: Inequalities in Access to Healthy Restaurant Choices,” *Healthy Eating Research* (July 2008): 4. (reformatted).

¹⁸ Much of the material in this section from Christine Matter, Interview by Sam Rockwell (2014).

support for that finding.” Smoking causes or is associated with a laundry list of diseases: lung cancer, chronic bronchitis, “age-related macular degeneration, diabetes, colorectal cancer, liver cancer, adverse health outcomes in cancer patients and survivors, tuberculosis, erectile dysfunction, orofacial clefts in infants, ectopic pregnancy, rheumatoid arthritis, inflammation, and impaired immune function. In addition, exposure to secondhand smoke has now been causally associated with an increased risk for stroke. Smoking remains the leading preventable cause of premature disease and death in the United States.”¹⁹

PERFORMANCE THRESHOLDS

The ultimate condition we seek is a community that does not use or sell any tobacco products.

Proposed metrics are:

- Percent of people who use tobacco
- Second hand smoke exposure

DISTRICT-SCALE ACTIONS

- Implement policies for smoke free housing.
- Implement policies for smoke free plazas and playgrounds throughout the district.
- Institute policies for smoke free worksites, including both grounds and buildings.
- Create a community center that provides cessation services and classes, similar to healthy food cooking classes. Bring in community health workers to run the classes. This will have a greater impact if couched in a community center context, rather than a “wellness center.” Word choice matters. The community center can (and should) be a gathering place for all sorts of healthy activities: family activities (like a YMCA),

¹⁹ U.S. Department of Health and Human Services, *The Health Consequences of Smoking – 50 Years of Progress* (2014): iii.

library, pool, schools, as well as a community garden.

- Work to build community – community support networks are key for cessation efforts. For example, include senior housing and community public spaces that people can use during all four seasons.

PROJECT-SCALE ACTIONS

- Enforce policies for smoke free housing.
- Enforce policies for smoke free worksites, including both grounds and buildings.

Safety

Major desired outcomes of the Prospect North development are:

- Injury and death caused by cars are reduced.
- Physical and mental injury caused by crime is decreased resulting in increased biking and walking.

SIGNIFICANCE

Automobile traffic crashes result in injury and death.²⁰ Generally, the more vehicle miles traveled (“VMT”) in an area, the higher the crash rate.²¹ Additionally, risk of serious pedestrian injury and fatality changes dramatically depending on small variations in speed: the risk of severe injury reaches 10% at a 16 mph impact, “25% at 23 mph, 50% at 31 mph, 75% at 39 mph, and 90% at 46 mph.”²² Risk of death reaches 10% at 23 mph and reaches 90% at 58 mph.²³

²⁰ For pollution related issues, see Healthy Air, page 10, of this document.
²¹ Eric Dumbaugh and Robert Rae, “Safe Urban Form: Revisiting the Relationship Between Community Design and Traffic Safety,” *Journal of the American Planning Association* 75(3) (June 30, 2009): 318.
²² AAA Foundation for Traffic Safety, *Impact Speed and a Pedestrian’s Risk of Severe Injury or Death* (2011): 1.
²³ AAA Foundation for Traffic Safety, *Impact Speed and a Pedestrian’s Risk of Severe Injury or Death* (2011): 1.

As a result of cars’ potential for injury, nationally 30,000+ people die in car crashes annually, and over two million nonfatal injuries occur annually. This places vehicle crashes in the top ten leading causes of death in the United States.²⁴

Land use patterns also affect crash rates—there are more crashes adjacent to box stores on arterial thoroughfares than at pedestrian-scaled commercial districts and increased population density decreases crash incidence. In short, “people adapt their driving behavior to the design of the built environment. Higher-density, more traditionally-designed retail streets tell drivers that they should expect crossing vehicles and pedestrians, and they respond by reducing their speeds and being more attentive.”²⁵ In addition to traffic crash rates, neighborhood design and street activity also affects crime rates.

PERFORMANCE THRESHOLDS

The ultimate condition we seek is a community where people feel safe when they are out and about in their community.

Proposed metrics are:

- Crime rates.
- Crash rates, including injuries and fatalities.

DISTRICT-SCALE ACTIONS

- Reduce speed limits and use traffic calming measures – “people drive by ‘feel’ more than speed limits.”²⁶

²⁴ “Injury Prevention and Control: Motor Vehicle Safety,” Centers for Disease Control and Prevention, accessed June 17, 2014, <http://www.cdc.gov/Motorvehiclesafety/statecosts/mn.html>.
²⁵ Eric Dumbaugh and Robert Rae, “Safe Urban Form: Revisiting the Relationship Between Community Design and Traffic Safety,” *Journal of the American Planning Association* 75(3) (June 30, 2009): 320.
²⁶ “Crime Prevention Through Environmental Design (CPTED),” Seattle Police Department, accessed June 17, 2014, <http://www.seattle.gov/police/prevention/Neighborhood/CPTED.htm>.

- Reduce VMT by prioritizing bicycle, pedestrian and transit infrastructure over automobile infrastructure
- Provide good lighting that reflects hours of use and operation.
- Build a mixed use and diverse community so that people with different schedules share live and work spaces.
- Use landscaping and public beautification because it “sends a clear message that people in your neighborhood care and won’t tolerate crime in their area.”²⁷

PROJECT-SCALE ACTIONS

Design buildings with windows and doors facing onto the street.

Social Connectedness

SOCIAL CONNECTEDNESS

Major desired outcomes of the Prospect North development are:

- Community strength is created through interaction.
- Community members are not isolated for lack of resources.

SIGNIFICANCE

“Social connections have a lot to do with mental health. Social connections are created through things such as community improvement, social networking, civic engagement, personal recreation, and other activities that create social bonds between individuals and groups. Such activities and bonds can have a POSITIVE effect on mental and physical health.

²⁷ “Crime Prevention Through Environmental Design (CPTED),” Seattle Police Department, accessed June 17, 2014, <http://www.seattle.gov/police/prevention/Neighborhood/CPTED.htm>.

“Social connections can be increased when you have: (1) parks, green spaces and public places for leisure and social activities; and (2) communities that are mixed-use, which means a mix of housing, civic, and commercial spaces, including retail, restaurants, and offices. Mixed use allows for more spontaneous social interaction and helps people to get to know their neighbors. AND, when people don’t have to travel very far to work, school or shopping, they have more time for fun and social activities.”²⁸

“Extreme loneliness increases a person’s chances of premature death by 14%.”²⁹

PERFORMANCE THRESHOLDS

The ultimate condition we seek is a community where people do not feel isolated and human interaction fosters physical and mental wellbeing.

Proposed metrics are:

- “Residents know more than 50 percent of their neighbors within a one block area well enough to call on for help. . . .
- “70 percent of residents describe themselves as active participants in the community. . . .
- “At least 70 percent of the residents participate in neighborhood councils and/or other neighborhood associations.”³⁰

DISTRICT-SCALE ACTIONS

- Build a housing landscape that encourages social interaction and easy access to other community members.³¹

²⁸ “Healthy Community Design Checklist Toolkit,” Centers for Disease Control and Prevention, accessed June 12, 2014, <http://www.cdc.gov/healthyplaces/toolkit/default.htm>.

²⁹ Christopher Bergland, “Maintaining Healthy Social Connections Improves Well-Being,” *The Athlete’s Way: Psychology Today*, February 18, 2014, <http://www.psychologytoday.com/blog/the-athletes-way/201402/maintaining-healthy-social-connections-improves-well-being>.

³⁰ “The Sustainable Community at UMore Park,” UMore Development LLC, (2012): 107.

- Provide social gathering places, including parks and spiritual institutions.³²
- Provide easy access to public transportation so that community members have access to activities and facilities that are not within walking or bicycling distance. (see Transportation section of this report). Mobility is key to maintaining social connectedness.³³
- Provide opportunities to engage in cultural activities, participate in organizations, travel, physical activity in groups, and dancing.³⁴

Health Equity

Major desired outcomes of the Prospect North development are:

- “Every person has the opportunity to attain his or her full health potential.”³⁵
- “No one is disadvantaged from achieving this potential because of social position or other socially determined circumstances.”³⁶

SIGNIFICANCE

Disparities by racial/ethnic groups or by socioeconomic status permeate all aspects of the health field: infant mortality, cancer deaths, diabetes, HIV/AIDS, tooth decay, injury, access to care, insurance coverage, in addition to more

³¹ See “Distinctiveness through Academic Missions,” UMore Park Planning and Development, (2008): 53.

³² See “Distinctiveness through Academic Missions,” UMore Park Planning and Development, (2008): 53.

³³ Christopher Bergland, “Mobility is Key to Maintaining Social Networks as We Age,” *The Athlete’s Way: Psychology Today*, December 2, 2013, <http://www.psychologytoday.com/blog/the-athletes-way/201312/mobility-is-key-maintaining-social-networks-we-age>.

³⁴ Christopher Bergland, “Mobility is Key to Maintaining Social Networks as We Age,” *The Athlete’s Way: Psychology Today*, December 2, 2013, <http://www.psychologytoday.com/blog/the-athletes-way/201312/mobility-is-key-maintaining-social-networks-we-age>.

³⁵ “Health Equity,” Centers for Disease Control and Prevention, accessed June 17, 2014, <http://www.cdc.gov/chronicdisease/healthequity/>.

³⁶ “Health Equity,” Centers for Disease Control and Prevention, accessed June 17, 2014, <http://www.cdc.gov/chronicdisease/healthequity/>.

tangentially health related areas like access to resources, income, housing, and transportation.³⁷

PERFORMANCE THRESHOLDS

*The ultimate condition we seek is a community where people live long and healthy lives, where engaged residents create vibrant, healthy communities, and where diseases are prevented before they occur. When healthy choices are possible for all community members, our residents are more likely to achieve their full potential and serve as a model for others across the nation and world.*³⁸

Proposed metrics are:

- length of life
- quality of life
- rates of disease, disability, and death
- severity of disease
- access to treatment³⁹

DISTRICT-SCALE ACTIONS⁴⁰

- Ensure that community decision makers engage and respond to diverse populations when making development, policy, or infrastructure decisions and changes. These populations include, but are not limited to, seniors, families, and people from diverse races and income levels.
- Institute a process through which decision makers consider who is and is not impacted by each decision made.
- Health equity should be considered in all of the other health subjects covered in this report.

³⁷ Laura K. Brennan Ramirez, Elizabeth A. Baker, and Marilyn Metzler, "Promoting Health Equity: A Resource to Help Communities Address Social Determinants of Health," Centers for Disease Control and Prevention (2008): 7.

³⁸ Blue Cross and Blue Shield of Minnesota, "Health Equity Team 2014 Planning Meeting" (April 2014) (PowerPoint).

³⁹ "Health Equity," Centers for Disease Control and Prevention, accessed June 17, 2014, <http://www.cdc.gov/chronicdisease/healthequity/>.

⁴⁰ Initial suggestions from Gilbert Achay, Interview by Sam Rockwell (2014).

Healthy Air

Major desired outcomes of the Prospect North development are:

- Air pollution is reduced to the point where it does not create adverse health effects, and in particular so that it does not affect community members' ability to engage in active living.

SIGNIFICANCE

- **"Particulate Matter:** This term refers to a wide range of pollutants – dust, soot, fly ash, diesel exhaust particles, wood smoke and sulfate aerosols – which are suspended as tiny particles in the air. Some of these fine particles can become lodged in the lungs and could trigger asthma attacks. . . . [D]iesel vehicles are major sources of particulate pollution.
- **Ground Level Ozone:** [O]zone triggers asthma attacks and makes existing asthma worse. It may also lead to the development of asthma in children. Ozone is typically produced when pollution from cars and trucks . . . reacts with oxygen and sunlight. . . . In 2013, according to the American Lung Association, nearly four in 10 people in the United States (38 percent) lived in areas with unhealthful levels of ozone.
- **Nitrogen Oxides (NOx):** A gas emitted from tailpipes. . . , nitrogen oxide contributes to the formation of ground-level ozone and smog. It also reacts with other air pollutants to form small particles that can cause breathing difficulties, especially in people with asthma. Exposure to high levels of nitrogen dioxide early in life could increase risk of developing asthma."⁴¹
- **"Carbon Monoxide (CO):** Carbon monoxide is . . . a byproduct of motor vehicle exhaust, which contributes more than two-thirds of all

⁴¹ "Asthma and Air Pollution," Natural Resources Defense Council, accessed June 17, 2014, <http://www.nrdc.org/health/effects/fasthma.asp>.

CO emissions nationwide. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions. These emissions can result in high concentrations of CO, particularly in local areas with heavy traffic congestion. . . . Carbon monoxide enters the bloodstream and reduces oxygen delivery to the body's organs and tissues. The health threat from CO is most serious for those who suffer from cardiovascular disease. . . . Exposure to elevated CO levels is associated with visual impairment, reduced work capacity, reduced manual dexterity, poor learning ability, and difficulty in performing complex tasks."⁴²

PERFORMANCE THRESHOLDS

The ultimate condition we seek is a community where people can be outside and breathe without risk of cardiovascular disease. The following are considered dangerous pollutant levels ("primary standards") under the Clean Air Act's National Ambient Air Quality Standards⁴³:

- *Particulate Matter (PM 2.5): 12 µg/m³ annual average; 35 µg/m³ 24 hour average.*
- *Particulate Matter (PM 10): 150 µg/m³ 24 hour average.*
- *Ozone: 0.075 ppm 8 hour average.*
- *Nitrogen Dioxide: 100 ppb 1 hour average; 53 ppb annual average.*
- *Carbon Monoxide: 9 ppm 8 hour average; 35 ppm 1 hour average.*

CITY-SCALE ACTIONS

- Require clean bus systems, "which includes replacing or retrofitting old school buses with

⁴² "Health Effects of Air Pollution," Environmental Protection Agency, accessed June 17, 2014, <http://www.epa.gov/region7/air/quality/health.htm>.

⁴³ "National Ambient Air Quality Standards (NAAQS)," U.S. Environmental Protection Agency, accessed July 11, 2014, <http://www.epa.gov/air/criteria.html>.

filters and other equipment to reduce emissions.” In addition, reduce vehicle idling.⁴⁴

DISTRICT-SCALE ACTIONS

- Enable use of alternate emissions free fuels or systems for automobiles in the district.
- Create an environment where people can drive less, both by encouraging and enabling transportation modes like walking, biking, and transit, and by reducing circling for parking by implementing market rate on street parking and a district parking facility and plan.⁴⁵

Healthy Water

Major desired outcomes of the Prospect North development are:

- Stormwater is cleaned by natural systems and appropriate treatment for use in healthy eating urban agriculture developments.

SIGNIFICANCE

Clean water, whatever its source, is necessary for a healthy community. Pollutant free water can be used for urban agriculture projects undertaken to increase healthy eating in the district.

PERFORMANCE THRESHOLDS

The ultimate condition we seek is a community that has zero discharge of untreated stormwater from the site. Low flows on adjacent properties are redirected away from untreated storm sewers and onto the site for treatment in the site’s comprehensive stormwater management system.

⁴⁴ “State of the Air: What Needs to Be Done,” American Lung Association, accessed June 17, 2014, <http://www.stateoftheair.org/2013/key-findings/what-needs-to-be-done.html>.

⁴⁵ “State of the Air: What Needs to Be Done,” American Lung Association, accessed June 17, 2014, <http://www.stateoftheair.org/2013/key-findings/what-needs-to-be-done.html>. See also generally the work of Donald Shoup.

At a minimum, buildings in the Prospect Park district should meet the water and wastewater minimum requirements from the *Roadmap to Sustainability, St. Paul Ford Site*:

- Comply with current local regulations for stormwater runoff volume and rate control (Minnesota Pollution Control Agency (MPCA), State of Minnesota B3 guidelines)
- Reduce runoff volume by at least 90% on an annual basis by infiltration (50%) and evaporation or re-use (40%) or provide a corresponding water quality benefit.
- Reduce pollutants for which the water is impaired to 10% less than levels identified in Total Maximum Daily Load (TDML) study
- Maintain minimum cover (e.g. >3’) above bedrock and follow Minnesota Pollution Control Agency (MPCA) Guidelines on infiltrating.
- Produce and implement a Stormwater Pollution Protection Plan per MPCA guidelines for use pre, during and post construction. *Stormwater is measured in cubic feet/second during a specified storm event. The presettlement condition of untreated stormwater is.*

DISTRICT-SCALE ACTIONS

- Manage stormwater at a district scale.
- Divide site into small catchment areas.

PROJECT-SCALE ACTIONS

- Minimize impervious surface area for buildings and pavement using green roofs, pervious pavement, integrated tree and stormwater systems.
- Capture, infiltrate, re-use, evaporate and evapotranspire rain that falls on site using:
 - directed runoff to rain gardens, bioretention, filtration, and infiltration devices
 - rainwater capture in cisterns

- treatment wetlands

Project-Scale Requirements

- Stormwater performance standard: Meet the recommended performance thresholds and comply with any other sustainable building guidelines specified by the Partnership.

Access to Medical Care

Major desired outcomes of the Prospect North development are:

- Access to comprehensive, quality medical care services is maximized, including both primary care and inpatient care services.
- Access to preventative policies, systems, and environments is maximized.

SIGNIFICANCE

“Disparities in access to health services affect individuals and society. Limited access to health care impacts people’s ability to reach their full potential, negatively affecting their quality of life. Barriers to services include lack of availability, high cost, and lack of insurance coverage. These barriers to accessing health services lead to unmet health needs, delays in receiving appropriate care, inability to get preventive services, and hospitalizations that could have been prevented.”⁴⁶

Prospect North can, by providing access to medical care services and facilities, increase overall social, physical,, and mental health status. In addition, it can prevent disability and disease, detect and treat medical conditions, increase residents’ quality of

⁴⁶ “Access to Health Services,” US Department of Health and Human Services, accessed June 17, 2014, [http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topid=1_\(reformatted\)](http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topid=1_(reformatted)).

life, and increase the life expectancy of those in the district.⁴⁷

PERFORMANCE THRESHOLDS

The ultimate condition we seek is a community in which all people, regardless of income, car ownership, age, or ability, have convenient access to high quality health care and access to health promotion and preventative services.⁴⁸

Proposed metrics are:

- Amount of time it takes to get to medical care facilities.
- Quality of care at nearby facilities.
- Available prevention policies, infrastructure, and environments (see other sections of this report).
- Availability of convenient and comprehensive primary care.

DISTRICT-SCALE ACTIONS

- Use community engagement about health facilities and policies to heighten community awareness of available health options.
- Design the district such that people in all parts of Prospect North are within a 10-minute walk of public transit that takes them to health care facilities.
- Ensure access to convenient transportation, care coordinators, social workers, mental health teams, and health educators.⁴⁹

⁴⁷ "Access to Health Services," US Department of Health and Human Services, accessed June 17, 2014, <http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=1>.

⁴⁸ "Distinctiveness through Academic Missions," UMore Park Planning and Development (2008): 54.

⁴⁹ Peter Meyers, "We're All About to Feel the Pain of Primary Care Shortage," Minnpost (April 4, 2014), <http://www.minnpost.com/community-voices/2014/04/were-all-about-feel-pain-primary-care-shortage>.

References

GENERAL

- *B3 and SB2030 Program*
University of Minnesota
www.b3mn.org
- *Distinctiveness Through Academic Mission*
UMore Park Planning and Development
University of Minnesota
March 2008
- *Green 4th: District Systems and Green Fourth Concepts*—Cunningham Group
September 2014
- *Greening the Green Line: Public and Private Strategies to Integrate Parks and Open Space in Green Line Development*
August 2014
- *Infusing Sustainability into Planning and Development for UMore Park: Integration Plan*—JEA (Joachim Eble Architects)
University of Minnesota
March 2012
- *Living Futures Institute*
(home of *Living Building Challenge* and *Living Community Challenge*)
living-future.org
- *Prospect North Energy System Development*
Ever-Green Energy
June 2014

- *Prospect Park Station: Central Corridor Light Rail Line Minneapolis 2020 Development Framework*
Prospect Park 2020
- *Restorative District Development at Prospect North*—Ecala Group
- *Roadmap to Sustainability: St. Paul Ford Site*—City of St. Paul
December 2010
- *The Rise of Innovation Districts*
Bruce Katz and Julie Wagner
Brookings Institute
- *The Sustainability Summary: Aspirational Goals for a Sustainable Community at UMore Park*
University of Minnesota
March 2012
- *The Third Industrial Revolution: How Lateral Power Is Transforming Energy, the Economy, and the World*
Jeremy Rifkin
2013
- *University District Alliance Urban Design Framework Part II*
Metropolitan Design Center
- *US Green Building Council*
(home of *LEED* and *LEED-ND*)
www.usgbc.org

RELEVANT PLANNING DOCUMENTS

- *Southeast Minneapolis Industrial (SEMI) / Bridal Veil Refined Master Plan*
May 2001
- *University Ave SE/29th Avenue SE Transit Corridor Development Objectives*
April 2005
- *University Ave SE/29th Avenue SE Transit Corridor Design Guidelines*
April 2006
- *The Minneapolis Plan for Sustainable Growth*
October 2009
- *Stadium Village / University Avenue Station Area Plan*
August 2012
- *Minneapolis Code of Ordinances Title 20 Zoning Code*
Includes Chapter 551: Overlay Districts

