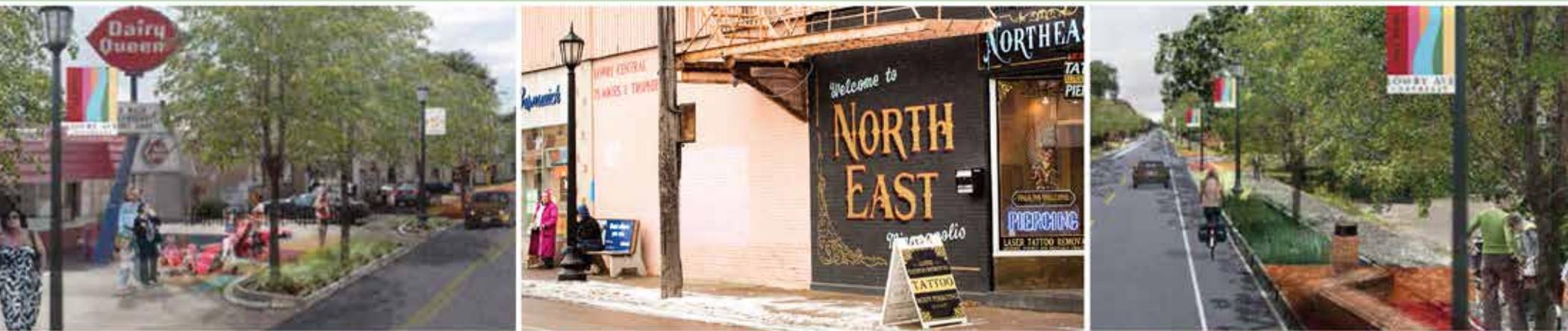


HENNEPIN COUNTY

LOWRY AVENUE
COMMUNITY WORKS



LOWRY AVENUE NORTHEAST
CORRIDOR PLAN AND IMPLEMENTATION FRAMEWORK

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NORTHEAST



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EXECUTIVE SUMMARY

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EXECUTIVE SUMMARY

LOWRY AVENUE NE CORRIDOR PLAN

The creation of the Lowry Avenue NE corridor plan in 2014 was a collaboration between Hennepin County, the City of Minneapolis, the Minnesota Department of Transportation, the Minneapolis Parks and Recreation Board, Metro Transit and the five Lowry Avenue NE neighborhoods.

The corridor plan includes analyses of land use, building conditions, market conditions, potential for environmental contamination, parking, sidewalk width, traffic, bicycle and pedestrian circulation.

Outlined in this summary are key findings that were based on significant input from the project's steering, technical advisory, community advisory teams and the community:

- Redevelopment scenarios for each of the six study intersections.
- The need to create a pedestrian-friendly environment.
- The need to consider facilities that serve bicyclists.

REDEVELOPMENT RECOMMENDATIONS FOR THE SIX STUDY INTERSECTIONS

Marshall Street NE and Lowry Avenue NE

Development Potential Retail: High Office: Medium Housing: High

Because of assets such as access to the Mississippi River, river views and strong traffic counts, this intersection presents opportunities for new housing, restaurants and businesses. Betty Danger's Country Club, a restaurant featuring a dine-on Ferris wheel at the intersection's northeast corner, should generate additional energy in the area when combined with the existing and planned park space along the Mississippi River. Development in the southeast quadrant of the intersection is likely. Within the Lowry Avenue NE corridor, this intersection has the greatest potential to support new development without public assistance.

The corridor plan proposes narrowing Lowry Avenue NE east of Marshall Street NE from four travel lanes to two, plus a continuous left-hand turn lane. Shifting the curbs inward allows space for a treed boulevard and wider sidewalks. These road improvements do not require building removal.

2nd Street NE and Lowry Avenue NE

Development Potential Retail: Medium Office: Low Housing: Medium

With large parcels under single ownership, this intersection has considerable potential for redevelopment. All four quadrants offer opportunities for redevelopment or reuse as a mix of uses or commercial. Reuse of the Little Jack's site could create momentum and quickly catalyze other projects.

The intersection experiences infrequent flooding. Stormwater ponds incorporated into redevelopment sites in intersection's northeast and southeast quadrants, as well as a larger underground stormwater pipe, will alleviate the flooding situation.

The corridor plan proposes narrowing Lowry Avenue NE on either side of 2nd Street NE from four travel lanes to two travel lanes and a continuous left-hand turn lane. Reducing the right-of-way space dedicated to vehicle travel lanes allows for the creation of a treed boulevard and wider sidewalks in the vicinity.

University Avenue NE and Lowry Avenue NE

Development Potential Retail: Medium Office: Low Housing: Medium

This intersection could evolve into a mixed-use urban village with new housing choices, restaurants and businesses to serve the neighborhoods. This transformation depends on the ability to acquire property and to combine smaller parcels into larger development parcels through this acquisition.

This intersection is a nexus for semi-truck traffic. Lowry Avenue NE and Central Avenue are city designated freight routes and Lowry Avenue NE is a federal freight route between University Avenue NE and Marshall Street NE. Current turning radii at this intersection make it extremely difficult for semis to move efficiently through the intersection.

The corridor plan proposes to shift the roadway south through the intersection to gain additional right-of-way in order to improve the intersection for all modes of traffic and to accommodate the conversion of the existing four-lane roadway to three lanes. This roadway shift requires the acquisition of parcels on the south side of the intersection.

The recently rehabilitated restaurant in the northwest quadrant of the intersection is proposed to remain. Businesses in the southern quadrants of the intersection are proposed to be relocated and the portion of these sites not needed for roadway, redeveloped into mixed-use buildings.



Intersection of Lowry Avenue NE and University Avenue NE: Redevelopment Plan

Washington Street NE and Lowry Avenue NE

Development Potential Retail: Low Office: Low Housing: Low

This intersection area is unlikely to be a significant node of activity. The short-term redevelopment strategy is to replace the single-family homes in the northwest and southeast quadrants with rowhomes.

Monroe Street NE and Lowry Avenue NE

Development Potential Retail: Medium Office: Low Housing: Medium

The short-term redevelopment strategy is to replace blighted buildings with townhomes, thereby preserving the area's residential character. The gas station and Dairy Queen are proposed to remain. Driveways should be consolidated and parking lot buffers installed to reinforce the public realm.

The corridor plan proposes a new transit shelter and plaza at the northwest corner to serve transit users, especially Edison High School students.



Intersection of Lowry Avenue NE and Monroe Street NE: Redevelopment Plan

Central Avenue and Lowry Avenue NE

Development Potential Retail: High Office: Medium Housing: Medium

The corridor plan proposes a transformation at this intersection, with improvements that necessitate the roadway shifting into the northwest quadrant of the intersection west of Central Avenue and into the southeast quadrant east of Central. These shifts require the acquisition of land in both quadrants. Residual land from these properties not needed for the roadway will be available for development.

Residual land in the northwest quadrant can be used for a new commercial and office mixed-use building, or the adjacent commercial building could expand into this vacated space.

In the southeast quadrant, vacant land is currently available as a result of a fire and tax forfeitures, providing a unique opportunity for a mixed-use development with housing, businesses and parking shared with Central Avenue businesses. This development will maximize currently underdeveloped parcels, remove blighted parcels and take advantage of the current reinvestment synergy along Central Avenue.



Intersection of Lowry Avenue NE and Central Avenue: Redevelopment Plan

PEDESTRIAN AND BICYCLE IMPROVEMENTS

Currently the roadway and narrow sidewalks almost entirely occupy Lowry Avenue NE's public right-of-way. This limits options for bicycle facilities, comfortable sidewalk widths or planted boulevards. The project team studied current use of the avenue by vehicles, pedestrians and bicyclists and forecasted future vehicle use.

In addition, a parking analysis completed in April 2014 showed parking was not heavily used on Lowry Avenue NE except for at the Central Avenue NE intersection during Friday afternoon worship service and in the vicinity of the Fillmore Street NE intersection during Sunday morning worship service. This limited use of parking allowed for the removal of on-street parking in the recommended roadway sections.

Because of differing transportation functions, the recommendations for the segments west of Central and east of Central are different.

Central Avenue west to Marshall Street NE: wider sidewalks

The corridor plan proposes reducing vehicle travel lanes from four lanes to three: a westbound travel lane, an eastbound travel lane and a center left-turn lane. Dropping a travel lane provides up to twelve feet in the right-of-way for pedestrian improvements, including wider sidewalks and treed boulevards.

Wider sidewalks allow two people to walk comfortably side-by-side and provide sufficient clearance for people with disabilities. A boulevard allows space for utilities, vegetation, and snow storage. This scenario does not include a dedicated bicycle facility on Lowry Avenue, relying instead on parallel bicycle boulevards about a quarter-mile to the north and south to accommodate through bicycle traffic.

Central Avenue NE east to Stinson Boulevard: wider sidewalks and bicycle facilities

The corridor plan proposes a two vehicle travel lanes and two on-street bicycle lanes (one 11-foot travel lane and one 6-foot bicycle lane in each direction), and optional parking at selected locations. It proposes removing parking for most of this segment and reallocates this space for the bicycle lanes and wider sidewalks



*Central Avenue NE to Marshall Street NE:
Proposed view at 2nd Street NE and Lowry Avenue NE*



*Central Avenue NE to Stinson Boulevard:
Proposed view near Polk Street NE and Lowry Avenue NE*

and boulevards. On-street parking will be included at critical areas, including the commercial area at Stinson Boulevard, Windom Park and near Central Avenue.

IMPLEMENTATION

The rate at which this plan's recommendations are implemented depends on political will and funding availability. Phasing recommendations for the upcoming five to ten years are as follows:

1. Focus on the Lowry Avenue NE and Central Avenue NE intersection.
 - Redevelopment here, particularly in the intersection's southeast quadrant, can be a catalytic project, sparking or accelerating transformation in the corridor.
 - Reconstruction of the right-of-way in the vicinity of Central Avenue NE.
2. Focus on the Lowry Avenue NE and University Avenue NE intersection.
 - Redevelopment.
 - Reconstruction of the right-of-way in the vicinity of University Avenue NE.
3. Reconstruction of the Lowry Avenue NE roadway between University Avenue NE and Central Avenue NE.
4. Reconstruction of the Lowry Avenue NE roadway segment between Marshall Street NE and University Avenue NE.
5. Reconstruction of the Lowry Avenue NE roadway segment between Central Avenue NE and Stinson Boulevard.

INTRODUCTION



INTRODUCTION

The Lowry Avenue NE Corridor plan is the culmination of efforts that date back some 15 years. In 1999, community leaders recognized the Lowry Avenue NE corridor as a prime opportunity for stabilization, change and growth. The corridor was designated as a community works program and the planning process launched in 2000. Through studies on the corridor's demographics, environmental contamination, history, market potential, and transportation, the community works team created a plan for Lowry Avenue from Theodore Wirth Parkway to Stinson Boulevard – a five-mile stretch of a key urban corridor for North and Northeast Minneapolis. The plan included recommendations for providing and improving bicycle and pedestrian facilities, making intersection safety improvements and transit stop enhancements, as well as redevelopment scenarios. The Minneapolis City Council approved the Lowry Avenue corridor plan in July 2002, with the condition that additional approvals be acquired as the project moved into its implementation phase.

This 2002 plan guided the complete reconstruction of Lowry Avenue west of the Mississippi River between 2006 and 2009. From I-94 to Theodore Wirth Parkway, the new Lowry Avenue North featured on-street bicycle lanes, a narrower roadway, wider sidewalks and landscaped boulevards with pedestrian-scale lighting.

The narrowing of the roadway to accommodate the bicycle and pedestrian improvements necessitated intersection improvements and property acquisition at Lowry's intersections with Penn and Lyndale avenues. These improvements are serving as a catalyst for housing and retail redevelopment along this section of Lowry Avenue North.

During reconstruction, the county was forced to close the Lowry Avenue Bridge over the Mississippi River due to structural issues. After an extensive planning and design process for its replacement, the old bridge was imploded in 2009; the new bridge opened in fall 2012. With the bridge's completion, the county was poised to improve Lowry Avenue NE, east of the Mississippi River. However, recommendations from the 2002 Lowry Avenue Plan were outdated and no longer reflected the community's desires. The planning process to update the 2002 Lowry Avenue corridor plan for Lowry Avenue NE began in early 2014. The resulting Lowry Avenue community works NE plan documents the process, its



Reconstructed Lowry Avenue NE

community engagement, and final recommendations.

LOWRY AVENUE NE PLANNING OBJECTIVES AND STUDY AREA

The objectives of the planning process were to focus on identifying opportunities at six key intersections along Lowry Avenue east of the Mississippi River: at Marshall Street NE, 2nd Street NE, University Avenue NE, Monroe Street NE, Washington Street NE, and Central Avenue NE. Those opportunities include:

- Improve the pedestrian and bicycle environment with wider sidewalks, bike facilities and boulevards along Lowry Avenue NE.
- Improve safety for all users of the six key intersections.
- Redevelop property at major intersections to support business growth and offer more housing choices.



Lowry Avenue NE Project Area

- Improve the natural environment through stormwater storage, retention and treatment.
- Enhance the street environment with artist-inspired streetscape elements, including lighting, bike racks, benches and banners.

In addition to focusing on those intersections, the project team was also charged with developing strategies to improve the bicycle and pedestrian environment within the existing right-of-way for the 2.5 mile segment of Lowry Avenue NE.

PROJECT STRUCTURE

The Lowry Avenue NE planning effort is a collaboration between Hennepin County, the City of Minneapolis, the Minnesota Department of Transportation, the Minneapolis Park and Recreation Board, Metro Transit and the five Lowry Avenue Northeast corridor neighborhoods. With project partners in mind, the county convened the following teams to advise project staff and manage the planning process.

1. Steering Committee: The Steering Committee made pivotal decisions and commented on major project deliverables. The Steering Committee comprised elected officials from Hennepin County, the City of Minneapolis, and the Minneapolis Park and Recreation Board.



Vacant buildings and undeveloped lots at the six key intersections contribute to the poor image and character along Lowry Avenue NE

2. Technical Advisory Team (TAT): The TAT provided technical advice and oversight to the planning process. It comprised public agency staff from Hennepin County (public works departments including Housing, Community works and Transit; Transportation; Strategic Planning and Resources; and Environmental Services), the City of Minneapolis (Public Works, Transportation, Community Planning and Economic Development), the Minneapolis Park and Recreation Board, Metro Transit, and the Minnesota Department of Transportation.

3. Community Advisory Team (CAT): The CAT enhanced communication between the county and the community provided and relayed the status of work in progress to the larger community. The CAT comprised representatives from neighborhood organizations (Marshall Terrace, Bottineau, Holland, Audubon Park and Windom Park), business associations, local institutions and property owners.

4. Management Team (MT): The MT coordinated day-to-day project activities and comprised Hennepin County and City of Minneapolis staff.

COMMUNITY ENGAGEMENT

In addition to regular meetings with the three committees, the management team engaged the community by:

- Hosting three public open houses (February 27, June 11 and September 25, 2014).
- Conducting a winter walking tour for community members and agency staff.
- Facilitating activities with Edison High School students.
- Convening corridor business owners for a focus group.
- Conducting surveys online and in person.
- Attending community meetings and events, including: neighborhood meetings for Marshall Terrace, Bottineau, Holland, Audubon Park, and Windom Park; Holland Neighborhood Hotdish Revolution, Windom Park Windyfest and Central Avenue NE Open Streets.



Central Avenue NE Open Streets

PLANNING PROCESS TIMELINE

The planning process began in January 2014 with the inventory and analysis of the corridor's assets and needs identified by the community. Between March and May the management team worked with the community to develop options for the public right-of-way that improved the bicycle and pedestrian environment and created designs for the six Lowry Avenue NE study intersections of Marshall Street NE, 2nd Street NE, University Avenue NE, Monroe Street NE, Washington Street NE, and Central Avenue NE. During June and July the community reviewed and commented on the roadway options and intersection designs. The preferred options were selected in July and August and cost estimates were created. The plan was drafted for review in late 2014. The final plan was released in 2015.

BACKGROUND



BACKGROUND

Before generating concepts and designs for Lowry Avenue NE, the project team reviewed past plans, conducted studies and talked with the community. This section of the plan summarizes what the project team learned about the six study intersections and the Lowry Avenue NE corridor through research and studies. It reviews existing plans and the environmental analysis completed in 2013. This section also explains the market assessment, the parking inventory, the traffic analysis, and the stormwater study that were conducted as part of the planning process.

PLANNING STUDIES RECOMMENDATIONS FOR LOWRY AVENUE NE

Over the years, Lowry Avenue NE has been a part of several planning studies conducted at the county, city and neighborhood levels. Below is a list of recommendations for the Lowry Avenue NE roadway and intersections from these studies. More information can be found in Appendix A.

- Coordinate transportation investments and land development to create an environment supportive of travel by modes other than the automobile, including travel by transit, walking and bicycling. (Metropolitan Council 2030 Transportation Plan, 2010)
- Establish parks as the engine for economic development along the River. (RiverFirst-Minneapolis Riverfront Development Initiative, 2012)
- Concentrate intense urban redevelopments at Lowry and Central Avenue NEs “Activity Center.” (Central Avenue NE Small Area Plan, 2008 and Audubon Park Neighborhood Small Area Plan, 2008)
- Create a signature public space at the Lowry and Central NE avenues intersection. (Central Avenue NE Small Area Plan, 2008)
- Retain the historic fabric of the commercial strip along Central Avenue NE either side of Lowry Avenue NE. (Central Avenue NE Small Area Plan, 2008)
- Install bike lanes on parallel routes to Lowry Avenue NE — on 22nd 27th, and 29th Avenues NE — but not on Lowry Avenue NE. (Central Avenue NE Small Area Plan, 2008)
- Support district parking strategies in activity centers, including shared parking facilities. (Central Avenue NE Small Area Plan, 2008)
- Narrow Lowry Avenue NE to two lanes (one lane in each direction) from Central Avenue NE to Stinson Boulevard, add bike lanes and widen sidewalks. (Audubon Park Neighborhood Small Area Plan, 2008)
- Increase retail/commercial and mixed-use development at the activity center of Central and Lowry avenues NE. (Audubon Park Neighborhood Small Area Plan, 2008)
- Discourage uses that diminish the transit- and pedestrian-oriented character of Community Corridors, such as automobile services and drive-through facilities. (Audubon Park Neighborhood Small Area Plan, 2008)
- Encourage a height of at least two stories for new buildings in activity centers. Activity centers are pedestrian-oriented areas that support a wide range of commercial, office-residential and residential uses with a busy street life and levels of activity throughout the day and into the evening. (Audubon Park Neighborhood Small Area Plan, 2008)
- Support increased residential density to sustain additional commercial/retail space through mixed use development. (Bottineau Neighborhood Small Area Plan). The Bottineau Neighborhood Small Area Plan, while complete, has not been adopted by the neighborhood association or the City of Minneapolis.
- Create a street that prioritizes transit service and the pedestrian environment by reducing to three lanes and providing a tree-lined edge, high-quality transit environment, and safe pedestrian crossings. (Holland Neighborhood Small Area Plan, 2015). The Holland Neighborhood encompasses both sides of Lowry Avenue between University Avenue NE and Central Avenue NE .)
- Establish a land use pattern that encourages small-scale mixed use development at major intersections and medium density housing between these intersections. (Holland Neighborhood Small Area Plan, 2014)
- Ensure development along Lowry Avenue NE transitions smoothly to the single family neighborhoods to the north and south. (Holland Neighborhood Small Area Plan, 2014)
- Establish affordable arts production and studio space with relatively stable rents, available for at least 10 years, for artists’ use only. (NE Arts Action Plan,

2002)

- Support a mix of uses, commercial services and the continued presence of existing and the development of new small-scale retail sales along Community Corridor's. Lowry Avenue NE is a Community Corridor, defined as a corridor that is primarily residential with intermittent commercial uses, serving the surrounding area, clustered at intersections in nodes. (Minneapolis Plan for Sustainable Growth, 2009)
- Discourage uses that diminish the transit and pedestrian oriented character of Community Corridors, such as automobile services and drive through facilities. (Minneapolis Plan for Sustainable Growth, 2009)
- Encourage the development of low- to medium-density housing on Community Corridors to serve as a transition to surrounding low-density residential areas. More intensive residential development should occur at primary intersections where it is compatible with the existing character. (Minneapolis Plan for Sustainable Growth, 2009)
- Follow these desired widths when designing the publicly owned right-of-way:
 1. Travel lane: 11 feet.
 2. Left turn lane: 10 feet.
 3. Bicycle lane: 5-6 feet.
 4. Typical curb and gutter: 2 feet.
 5. Parking lane: 8 feet.

(Access Minneapolis – Action Plan, 2009)

Six Study Intersections

This study focused on six key study intersections — Marshall Street NE, 2nd Street NE, University Avenue NE, Washington Street NE, Monroe Street NE, and Central Avenue NE — and studied the right-of-way for opportunities to make it more pedestrian and bicycle friendly.

The six study nodes along Lowry Avenue NE are between Central Avenue NE and Marshall Street NE. With the exception of the University Avenue NE intersection,



Central Avenue NE is one of the six key study intersections

all intersections are characterized as a traditional development pattern that includes more closely spaced buildings on streets and a regular street grid pattern. At the University Avenue intersection, parking lots abut the street, creating an auto-oriented development pattern.

The condition of buildings at the six study intersections, based on a visual appraisal from the street, are in good to fair condition physically and aesthetically. There are a few homes and businesses needing attention between Marshall and Quincy Streets and on both sides of the block near Monroe Street NE. A vast majority of buildings abutting Lowry Avenue NE are one and two stories tall for all residential, commercial, and industrial uses. The exceptions are some taller churches, a few three-story apartment buildings, and some three-story commercial buildings at Central Avenue NE.

The city's Land Use Policy designates a majority of the corridor as low density residential, with some limited areas of mid and high density. A majority of the commercial land use designations occur at the primary and secondary intersections along the Corridor, with the most significant retail concentration at Central Avenue NE. The Central Avenue NE intersection is designated an activity center. Activity centers are pedestrian-oriented areas that supports a wide range of commercial, office-residential and residential uses with a busy street life and levels of activity throughout the day and into the evening. Some areas west of Central Avenue NE

are designated industrial / utility / railroad uses.

MARKET ANALYSIS

Market research evaluated development opportunities at the six key intersections along the Lowry Avenue NE corridor. The research included an evaluation of property information near each intersection, site characteristics of each intersection, and numerous market and demographic trends for the entire corridor. The following is a summary of market conditions for each real estate sector analyzed and an assessment of development opportunities at each of the six intersections. The full research report with supporting data and graphics can be found in Appendix B.

HOUSING MARKET

For-Sale Housing

There are strong indicators that the for-sale market is beginning to rebound following its low in 2008. However, pricing still remains well below its peak in 2006 (Figure 1) for most neighborhoods in NE Minneapolis and is still too low to justify a new condominium or townhome development along the Lowry Avenue NE Corridor in the short term unless there is significant public subsidy. Beyond the short term, the prospect for new condominium or townhome development in the Lowry Avenue NE Corridor is much more promising as new household growth and rising neighborhood incomes will fuel demand for all types of housing.

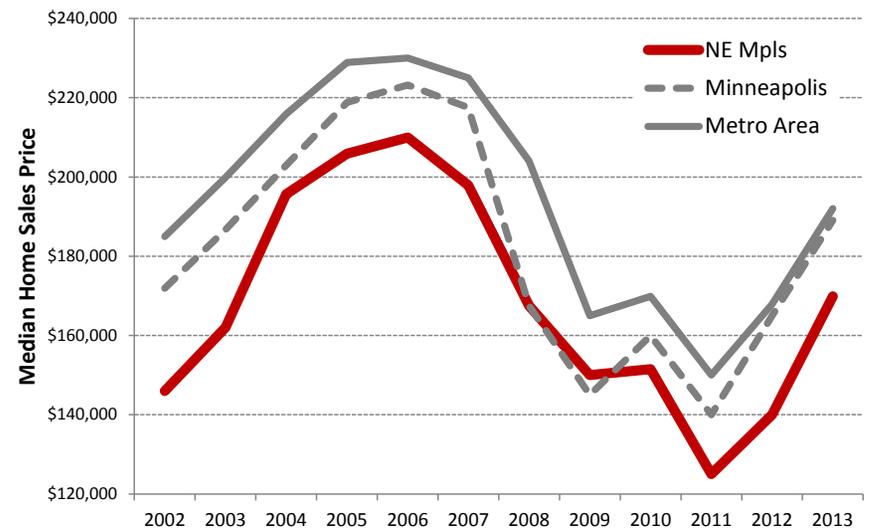
Demand for single-family housing will likely also increase. However, the costs associated with acquiring enough land to accommodate any sizable number of single-family lots are likely too high, as it would require significant displacement of existing businesses and/or homes and large scale building demolition. However, individual lots acquired by the City of Minneapolis through tax forfeiture or other means have been recently reselling rapidly and often at above-market prices. This is a strong indication of the strengthening of the housing market in NE Minneapolis. Furthermore, the attractiveness of the buildable lots is fueled by the fact that the existing housing stock is older, and smaller and lacks many of the amenities found in newer homes.

If the market for for-sale housing fully rebounds, the primary challenge for developing new condominiums or townhomes in the corridor will be identifying

key sites that are close to neighborhood amenities (e.g., river views, open space, retail, restaurants, etc.). In other words, owned multifamily housing, more so than detached single-family housing, is highly sensitive to the quality of a given site and the surrounding neighborhood.

For this reason the condominium/townhome market likely will gravitate toward either the Mississippi River, where views and/or river access become the key feature, or toward Central Avenue NE, where the shops, restaurants, and transit will drive demand. If the availability of developable land is sufficiently constrained in these areas, only then will sites farther from the river or Central Avenue NE be strongly considered for owned multifamily housing unless developers are subsidized.

Another key consideration for development of condominiums in particular will be



Source: Minneapolis Area Association of Realtors

Figure 1: Housing Price Trends 2002 to 2013

finding sites large enough to accommodate structured parking. Although trends indicate that rental housing near good transit options can support fewer parking spaces per unit, ownership housing outside the downtown cores will still be heavily influenced by the availability of safe, secure, and highly convenient parking.

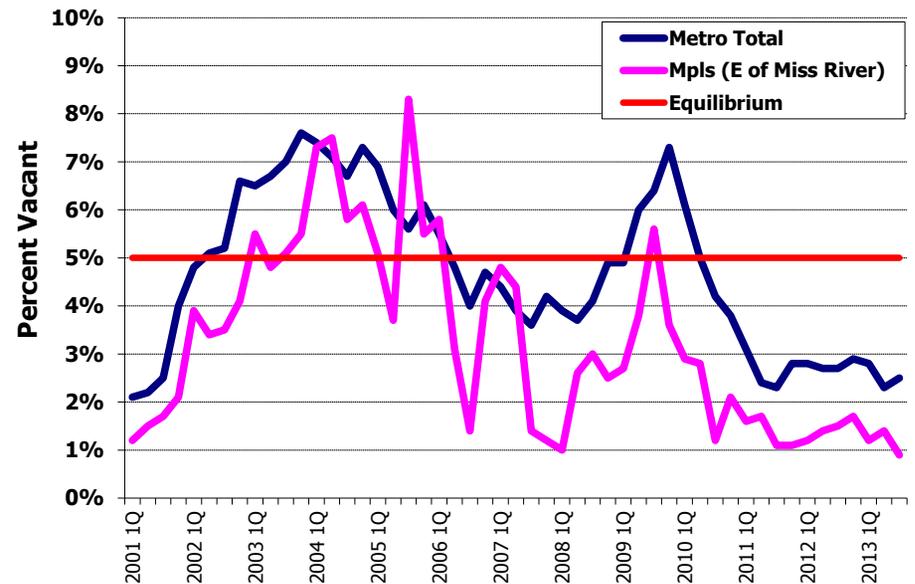
Rental Housing

The apartment market currently is very strong. The overall vacancy rate in Minneapolis east of the Mississippi River dropped from a peak of 5.6% in third quarter 2009 to under 1.0% as of third quarter 2013 (Figure 2), which is driving up rents and contributing to strong pent-up demand. Demand for rental housing is being driven by strong growth in the number of households younger than 35 and those 65 to 74, both of which have higher than average rental rates. More importantly, evidence is growing that long-term demand for rental housing may have deeper roots that go beyond demographic cycles, because younger age groups are not participating in homeownership the way previous generations did. If this trend persists, the demand for rental housing will remain strong for years to come.

Despite strong long-term demand, there is a substantial amount of pending apartment development throughout the Twin Cities metro area, which could lead to short-term market saturation if many units are built in a short period. Such market dynamics are localized and, given the current level of pending rental development in Northeast Minneapolis - especially north of Broadway Street NE - there remains significant unmet demand for rental housing along or near the Lowry Avenue NE Corridor. Nonetheless, pending development throughout the Twin Cities should be closely monitored as market saturation, even in other submarkets, will have implications for Lowry, especially with respect to access of non-local financing.

Calculations of the demand for affordable rental housing in NE Minneapolis and the Lowry Avenue NE Corridor, reveal a very deep level of pent-up demand. Although affordable rental housing is commonly in high demand, the Metropolitan Council has identified portions of this corridor as a Racially Concentrated Area of Poverty (RCAP). City goals discourage investing in new affordable housing in the RCAP areas to prevent further concentration of poverty.

Provided sufficient land is available for new development, NE Minneapolis is expected to add about 2,200 new households through 2030 (i.e., 110 per year on average). Given recent construction trends, demographic changes, and consumer preferences, at least 80% of these new households (1,800 households) will opt for some type of multi-family housing product (e.g., condominiums, townhomes, apartments, senior housing, etc.). The Lowry Avenue NE Corridor will be able to capture only a small percentage of that total, as NE Minneapolis covers many square miles. Nevertheless, the overall growth pressures affecting Northeast Minneapolis will translate into demand pressure in the Lowry Avenue NE Corridor as well, especially if the corridor is able to evolve into a new amenity-rich area with increased availability to transit, shops, restaurants, and recreation opportunities.



Source: Marquette Advisors, Apartment Trends

Figure 2: Apartment vacancy trends 2001-2013

RETAIL MARKET

Future retail demand in NE Minneapolis and the Lowry corridor in particular will be driven by two key factors: 1) growth in the local household base; and 2) the level of amenity and “placemaking” that will help draw in visitors from beyond the immediate neighborhoods. Because the Lowry Avenue NE corridor does not have the traffic volumes, access to major highways, and space to accommodate large-scale retail centers, it is unlikely that it will see new large-scale retail space. However, there is opportunity to capture some retail demand due to the corridor’s potential for locational amenities and a growing market base within NE Minneapolis.

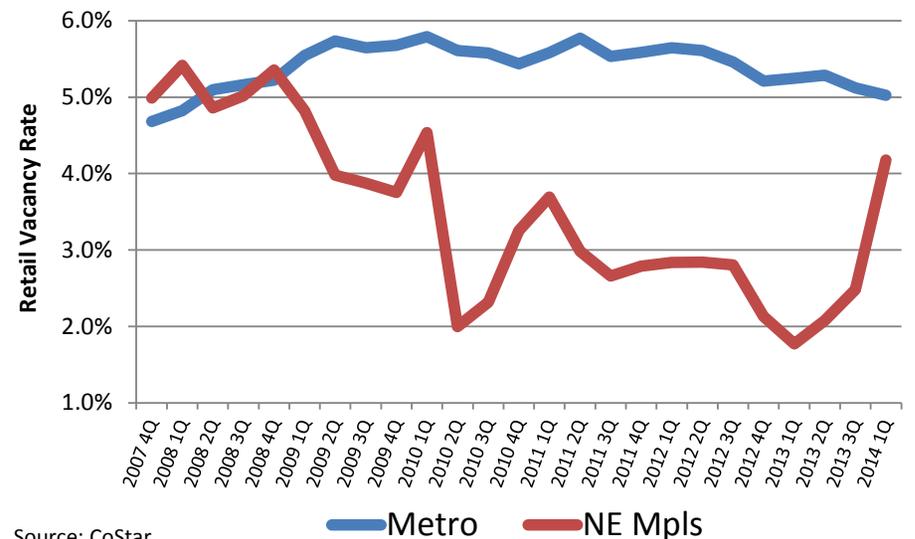
As NE Minneapolis gains residents and workers, there will be additional demand among these “localized” markets for more convenient retail. Therefore, as the Lowry Avenue NE Corridor transforms into an improved thoroughfare, key locations where traffic and visibility will be highest may be preserved for retail development. The amount of demand from this group, however, will be commensurate with the amount of growth in the market. A rule of thumb is that a typical household will support about 50 square feet of retail at urban densities. Recognizing that some of the money NE Minneapolis households spend go to retailers in shopping centers and malls not found in the immediate area, the measure of 50 square feet per household could likely be scaled down closer to 35 square feet per household.

Applying the rule of thumb from above to the forecasted household growth for NE Minneapolis yields a potential demand for about 4,000 square feet of additional retail space per year over the next 20 years, which is consistent with what has been occurring over the past 10 years. Of course, not all of this potential NE Minneapolis retail demand will be captured along the Lowry Avenue NE Corridor. However, it indicates how growth in the local household base will continue to translate to demand for additional retail space in the area.

There also is a potential non-localized market for retail options as well, particularly restaurants and specialty retailers that thrive on discretionary spending motivated by an experience (e.g., art galleries, brewpubs, themed dining experiences, gifts, etc.). This is clearly an important component to the NE Minneapolis market and will continue to be. This market is predicated on having a place people want to experience that is connected to unique features that can’t be found everywhere, such as waterfronts, historic structures, attractive public spaces, or built attractions. Such retail areas need to be distinct from other competitive retail

districts so they can pull people from throughout the region.

The amount of non-localized retail demand is more challenging to quantify as it is strongly attached to quality of the experience. Nevertheless, it is important to be aware of how important this component is to the local market and how it likely will continue to greatly influence the potential for new development throughout NE Minneapolis and particularly along the Lowry Avenue NE corridor. Expanding the experiential retail opportunities requires an attention to detail and placemaking that enable NE Minneapolis to compete with other parts of the metropolitan area. With the Mississippi River and historic neighborhoods, the Lowry Avenue NE corridor has unique traits that can be built upon.



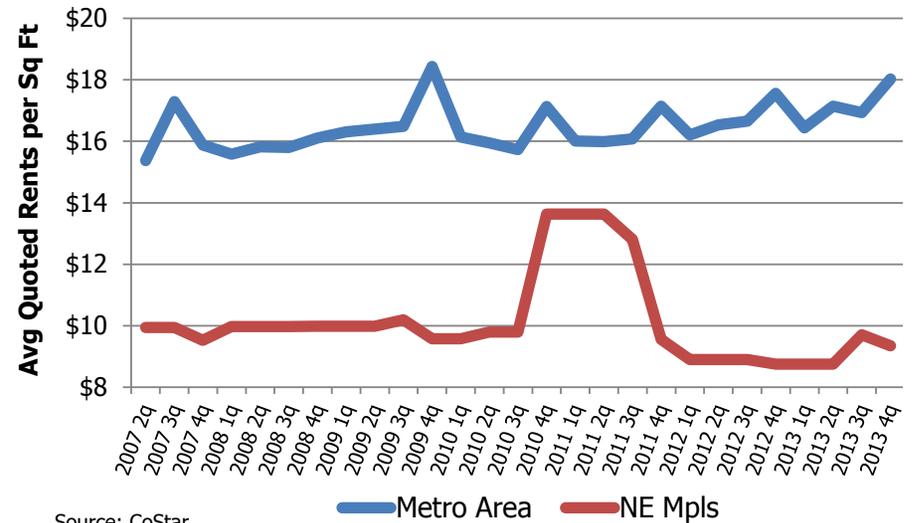
Source: CoStar

Figure 3: Retail vacancy trends 2007-2014

OFFICE MARKET

As the household base in NE Minneapolis grows, there will be a commensurate growth in the demand for office space filled by professional service firms serving these populations. However, the total amount of additional space needed will be nominal. Professional service office users often locate in marginal retail areas because they have attractive visibility with lower rents than traditional retail. Therefore, some of the intersections along Lowry Avenue NE with lower traffic volumes could be candidates for small-scale office. The demand will not be for new office space as it would be too expensive for this market. Demand will be for existing commercial space that could be rehabilitated. This type of rehabilitation often starts the revitalization process in many commercial areas, in part because these businesses are typically locally owned and rooted in the community. Residential properties fronting Lowry Avenue NE could also undergo conversion to small-scale office.

Large-scale office users in this market will gravitate toward the area around the Grain Belt Brewery or the former school district headquarters before considering the Lowry corridor. These areas have better transportation access, additional available space, and are closer to downtown. If larger office users are drawn to the Lowry Avenue NE Corridor, the area with the most potential is near the Marshall Street NE intersection, given its access to the Mississippi River and larger industrial properties that could be redeveloped. If experiential retail concepts can be supported in the Lowry Avenue NE corridor, there may be an opportunity to incubate high-tech and creative industries (e.g., architects, graphic artists, etc.). A few successful experience-oriented retails could establish the corridor as a destination, further encouraging similar businesses to locate in the Lowry Avenue NE corridor.

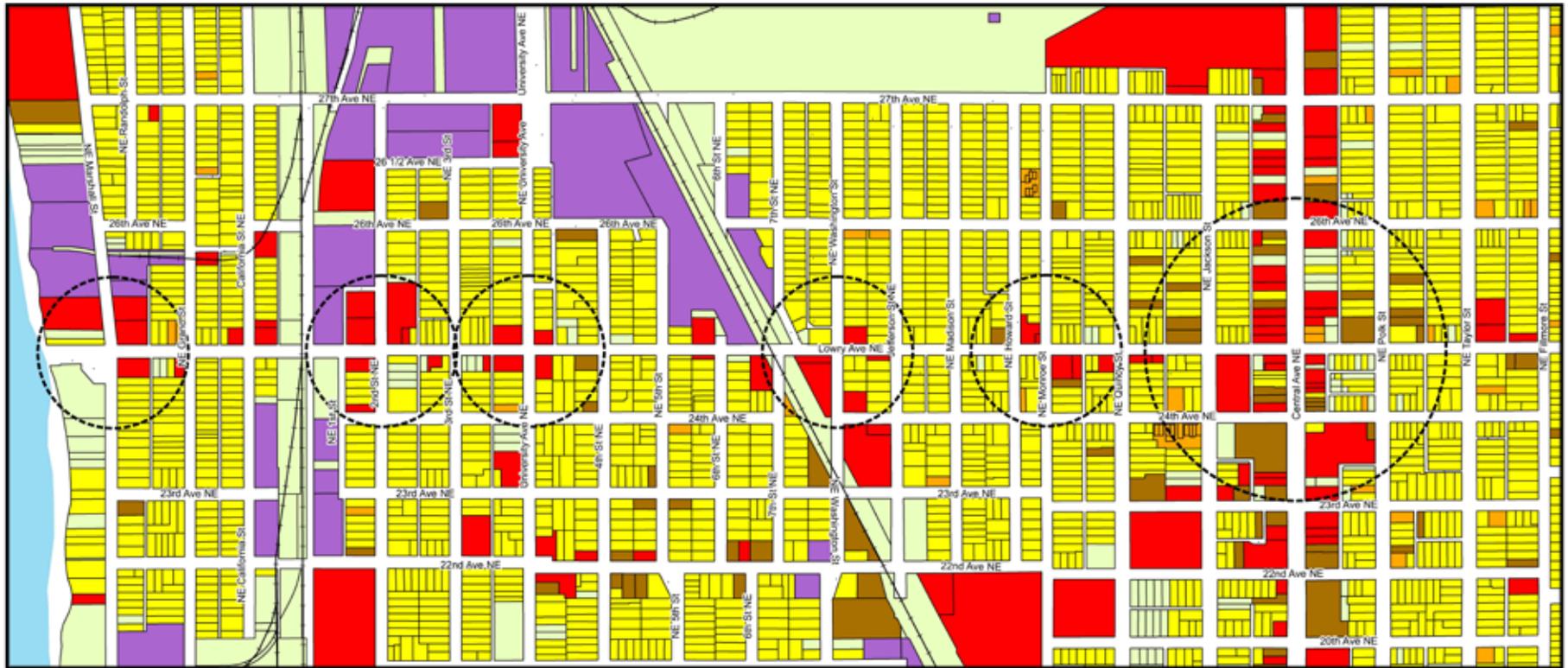


Source: CoStar

Figure 4: Average quoted office lease rates 2007-2013

DEVELOPMENT ASSESSMENT

Building on the market analysis, six nodes along Lowry Avenue NE Corridor were evaluated to determine opportunities and constraints associated with absorbing current and future market demand. To identify redevelopment opportunities, a multi-step process was used to screen properties using geographic information systems (GIS), stakeholder interviews and field surveys. The GIS components of this screening process included analysis of building ages and conditions, ownership patterns (noting publicly owned parcels), existing land use, zoning, and property valuation. Properties identified as redevelopment opportunities are not considered for immediate purchase by a public entity.

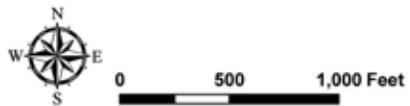


Lowry Avenue NE corridor 2013 existing land use





Lowry Avenue NE corridor property valuation

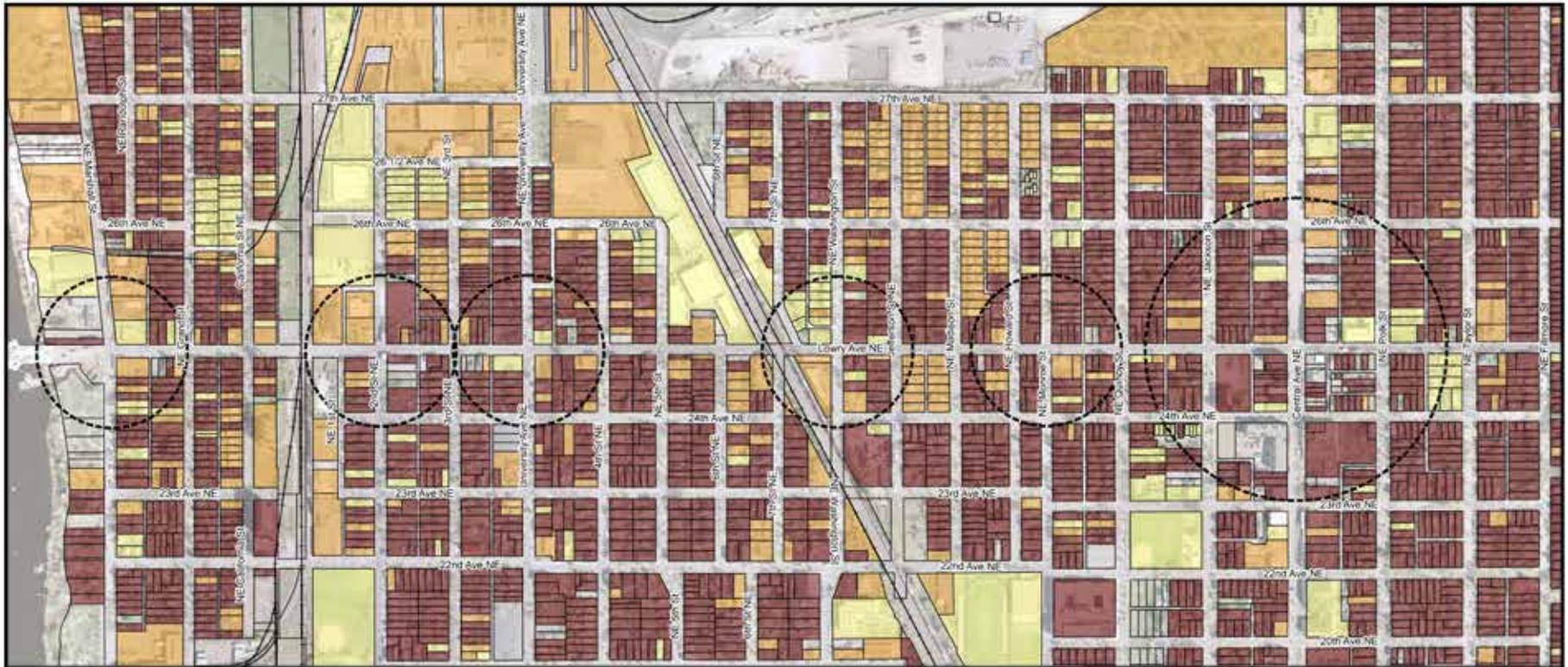


-  Key Intersection Areas
-  Estimated Total Property Market Value per Squarefoot up to \$15
-  Estimated Total Property Market Value per Squarefoot \$15 to \$30
-  Estimated Total Property Market Value per Squarefoot \$30 to \$45
-  Estimated Total Property Market Value per Squarefoot \$45 to \$60
-  Estimated Total Property Market Value per Squarefoot more than \$60



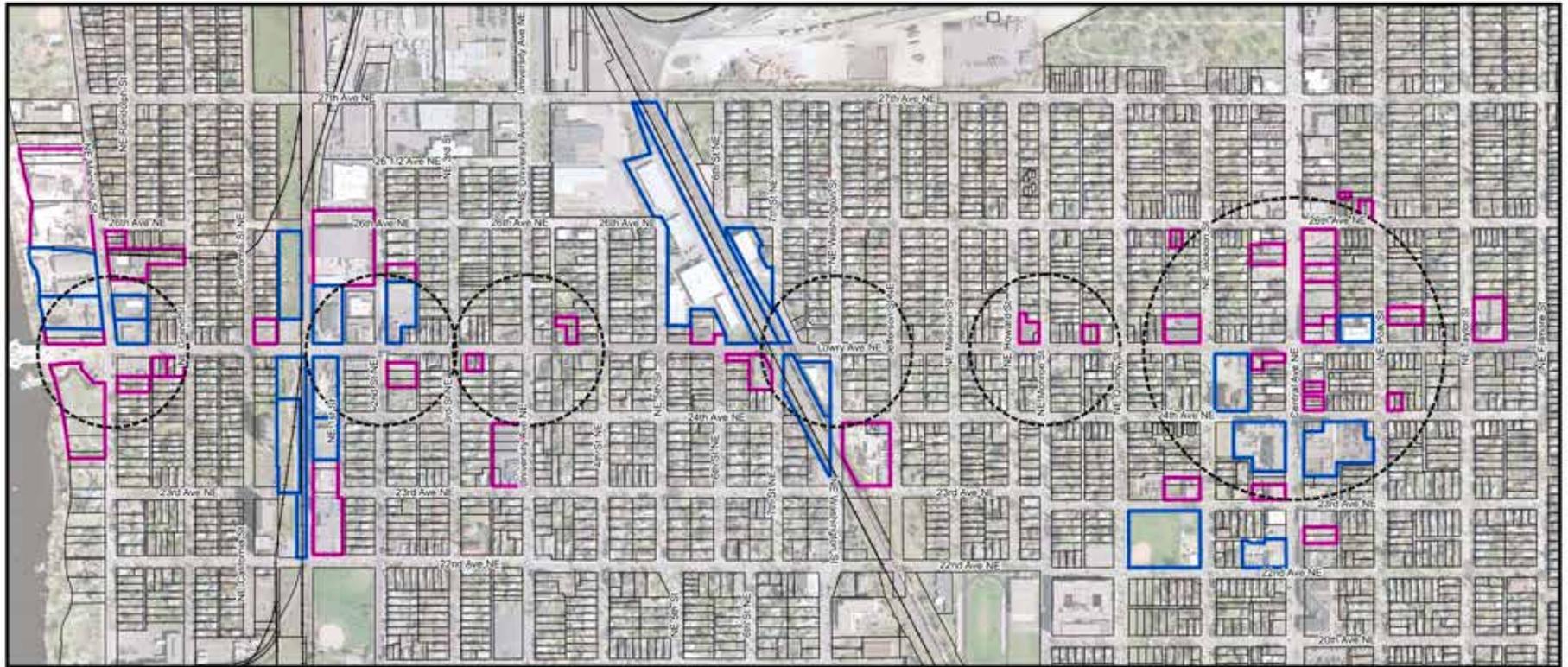
Lowry Avenue NE corridor zoning districts





Lowry Avenue NE corridor building age





Lowry Avenue NE corridor ownership and parcel size

-  Key Intersection Areas
-  Parcels 0.5 Acres and Larger
-  Multiple Parcels by Same Owner

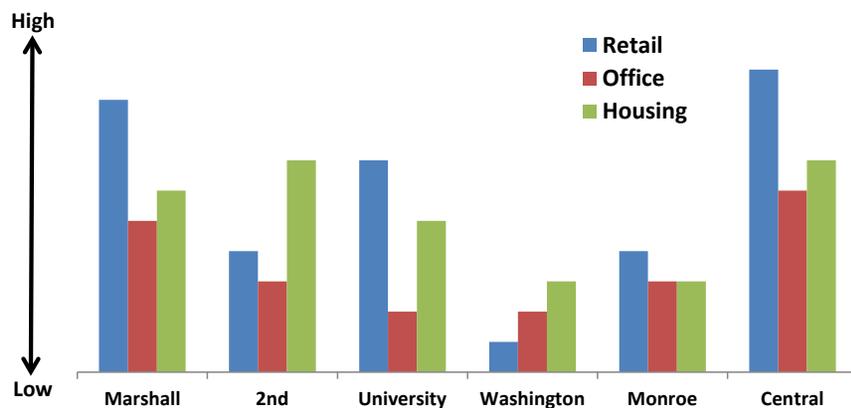


Lowry Avenue NE corridor property conditions



Not every parcel is a likely redevelopment site. Many parcels along the corridor are of a size or level of intensity that makes them too expensive to acquire and redevelop in a profitable manner. Others may have attributes that make them unattractive for certain types of development. For example, retail uses can be difficult to site due to their demanding locational needs. Retail is highly competitive and seeks locations that have high pedestrian/vehicular traffic, exceptional visibility, convenient access and adequate parking. Moreover, most commercial development requires lot depths of 150 to 200 feet. Given predominant lot depths in the corridor, acquisition of multiple properties would be common in order to support development. Other uses such as multifamily housing, offices or structured parking have much more flexible site requirements and can be successful on a wide range of sites throughout the corridor.

This assessment does not address the policy issue of whether it is more desirable to maintain existing uses or redevelop sites into new uses. The goal of the assessment is to identify sites where there appears to be conditions that might make developers view the redevelopment potential as positive and therefore result in redevelopment pressure. Knowing where development pressures are likely to occur help policy makers nurture opportunities for desirable redevelopment. It can also help policy makers put in place the necessary regulations needed to limit redevelopment when existing conditions are to be preserved.



Development potential of specific land uses at each of the six key intersections

Marshall Street NE and Lowry Avenue NE

The intersection of Marshall Street NE and Lowry Avenue NE has a lot of advantages to prospective developers and any remaining parcels that have not been recently developed will likely attract developer interest in the short-term and especially over the long-term. The new Betty Danger’s Country Club restaurant, featuring a dine-on Ferris wheel, in the NE corner of the intersection should generate significant energy for the area when combined with the emerging park space along the Mississippi River. This new energy could make the area a significant destination for not only NE Minneapolis residents, but also for visitors. This new traffic would then likely attract businesses looking to capture some of that recreational spending.

Residential and office uses would be drawn to the area because of views and access to the Mississippi River. Retail will be drawn to the area because of strong traffic counts and visibility as well as the activity generated by the park space along the river. Within the corridor, this intersection has the greatest potential to support new development without public assistance.

2nd Street NE and Lowry Avenue NE

The 2nd Street NE intersection has the potential to be somewhat of a clean slate in terms of potential future development as many of the parcels are sizable, under similar ownership, and have little existing potential to be rehabilitated. For developers with vision, this may generate a lot of interest because no other intersection along the corridor will have such large-scale potential. Nevertheless, the impact of the nearby rail line will cause uncertainty for many developers due to potential sound and contamination issues. Therefore, as plans for the Little Jack’s site unfold, close attention should be paid to the intersection as it could quickly catalyze other projects among developers who want to take advantage of the momentum created.

University Avenue NE and Lowry Avenue NE

Although traffic volumes are very attractive for development, the opportunities for new development at the University Avenue NE and Lowry Avenue NE intersection will be related to site acquisition. Recent investment has pushed up property values among the existing commercial properties, but surrounding, lower-priced properties could be combined to create an attractively priced parcel.

The potential to capture investment in the form of significant rehabilitation and repurposing of properties is limited. The one property that has the character and size to warrant rehabilitation has been rehabilitated. The remaining commercial properties have been repurposed in recent years as well, yet their age and style would likely not warrant significant rehabilitation.

Washington Street NE and Lowry Avenue NE

Other than the southwest corner, there is limited development opportunity at this intersection. Two of the four corners are dominated by single-family residences with little potential to acquire lots and clear them for redevelopment. Residential valuations are elevated but would not necessarily preclude redevelopment. However, coupled with the low traffic counts, this area is unlikely to be a significant node of activity. The NE corner could be rehabilitated into a slightly higher commercial use.

However, traffic volumes at the intersection are such that the types of commercial uses are limited to retailers not dependent on traffic or locally-based professional service firms (e.g., legal, tax preparation, chiropractic, etc.). At the southwest corner, there is a size and valuation situation that might cause some developers to dig a little deeper into a multifamily concept. However, issues related to the adjacent rail line (i.e., potential contamination and noise) would create some uncertainty and consider other less risky sites first.

Monroe Street NE and Lowry Avenue NE

Redevelopment opportunities at Monroe Street NE and Lowry Avenue NE are primarily restricted to the northwest and southeast corners of the intersection. However, in both cases the sites would need to be combined with adjacent parcels and they have unique constraints that would have to be overcome. The site at the northwest corner is situated between two closely aligned streets, leaving little room for a feasible structure. The site at the southeast corner will require potentially costly environmental clean-up.

The remaining areas at the intersection are dominated by small, individually owned parcels that would be difficult to acquire, combine and rezone in a site large enough to accommodate new development. In terms of renovation or rehabilitation of existing properties, the northwest corner has some potential, especially if portions of the site could be cleared to accommodate on-site motor vehicle parking. Another possibility is to follow the example of the commercial space on the southwest corner of the intersection, which is located in the ground level of a former single-family residence. If demand for commercial space significantly outstrips supply on Central Avenue NE (the main commercial corridor of NE Minneapolis three blocks to the east) there may be demand to convert other single-family properties at the intersection into commercial space. The challenge is that the market pressure likely will exert itself closer to Central Avenue NE before it reaches Monroe Street NE. Furthermore, converted single-family properties almost always depend on on-street parking to meet their needs, and given the existing challenges of the Lowry Avenue NE roadway, this may be undesirable.



Central Avenue NE and Lowry Avenue NE Intersection

Central Avenue NE and Lowry Avenue NE

The intersection of Central Avenue NE and Lowry Avenue NE has a lot of positive momentum that will attract developer interest. The area has a strong mix of new and longstanding businesses. Vacancies are low and rents are rising. There is both new development and significant reinvestment. Transit access is strong and will likely get stronger if plans for a streetcar line come to fruition. Therefore, sites currently undervalued due to condition or obsolescence will be closely monitored for redevelopment potential. This paints a picture in which the area could change rapidly if rents rise high enough and newcomers bring with them higher incomes.

Keeping such a rapid transformation in check is the difficulty of assembling sites large enough to support new development. It will become even more difficult as rents rise for all types of properties, limiting the financial feasibility of acquiring them, tearing them down, and building new. This is confounded by national chains' difficulty locating on Central Avenue NE because of the need to combine

parcels to accommodate their standard format store and parking, limited parking and lower household incomes in NE Minneapolis compared with other parts of the city.

Further confounding the situation is a parking issue in which off-street parking does not appear to be maximized. If parking can be consolidated into shared or public structures, intensification could occur on sites currently used for surface parking. As developer pressure grows, it will also be important to identify key sections of Central and Lowry NE avenues with architectural features and character that contribute to the area's success and may be protected through design standards or other measures.

TRANSPORTATION: EVALUATION FOR BICYCLE AND PEDESTRIAN IMPROVEMENTS

The project team was charged with evaluating how Lowry Avenue NE could become more bicycle and pedestrian friendly. Currently the roadway and narrow sidewalks occupy almost the entire public right-of-way, limiting options for bicycle facilities, comfortable sidewalk widths or planted boulevards. The project team studied how the avenue is being used by each mode and forecasted how it might be used in the future. This chapter outlines what was learned through the analysis. For the full transportation report, please see Appendix C.

Existing Conditions

Before the 1960s, Lowry Avenue NE was a tree-lined neighborhood street with two motor vehicle travel lanes, arching elm trees, and small storefronts. In the 1960s the street was widened to two lanes in each direction, and in some places to one lane in each direction with parking, by removing the boulevard and street trees. These changes contributed to a street that is not conducive to walking. People walk on narrow sidewalks obstructed by street signs and power poles adjacent a busy road with significant truck traffic. Snow often is plowed onto the sidewalks, making them impassible.

Typical building setbacks vary along the corridor. Generally, single-family homes are 10 feet to 30 feet from the right-of-way, and most apartment and commercial buildings are on or within a few feet of the right-of-way. At the six nodes defined as part of this study, the buildings generally anchor the corners.

There are no dedicated bicycle facilities along the entire length of the Lowry Avenue NE corridor. People currently bike on the outside lanes along Lowry Avenue NE. Lowry Avenue North and the Mississippi River bridge both have dedicated bike lanes and east of Central Avenue NE. Lowry Avenue NE has a little-used parking lane that intermittently accommodates bicycling. The Marshall Street NE to Central Avenue NE segment of Lowry Avenue NE currently is a significant gap in NE Minneapolis biking network.

Cars, buses and trucks use Lowry Avenue NE as a connecting route to other parts of the NE and northwest metropolitan area. Traffic counts along Lowry Avenue NE vary between 9,000 and 14,000 vehicles per day. Bus route 32 runs east and west on Lowry Avenue NE and a number of other bus routes intersect with

Lowry Avenue NE to serve its residents and businesses. Lowry Avenue NE is also a national truck route between the Mississippi River and University Avenue NE with many semi-trucks using this route to access the Shoreham Yards intermodal facility north of Lowry Avenue NE.

PEDESTRIAN ISSUES

This document uses the Pedestrian Zone Design from The ACCESS Minneapolis Design Guidelines for Streets and Sidewalks to categorize the types of activity that occur within sidewalks. Pedestrian Zone Design includes four zones — Frontage, Walk, Planting/Furnishing, and Curb — that vary in width and character depending on adjacent land use, right-of-way, and intended function. The pedestrian zone system also provides an approach to support pedestrian activity and to balance the space needed for functions and objects while maintaining an Americans with Disabilities Act-compliant pedestrian access route. The zone system should be applied to the sidewalk space. Where adequate space is not available, careful consideration needs to be given to the design and programming of the space, with a priority on meeting accessibility and safety needs.

The sidewalk zone system is shown on the following graphic and each zone is described in detail below.

Commercial Pedestrian Zone

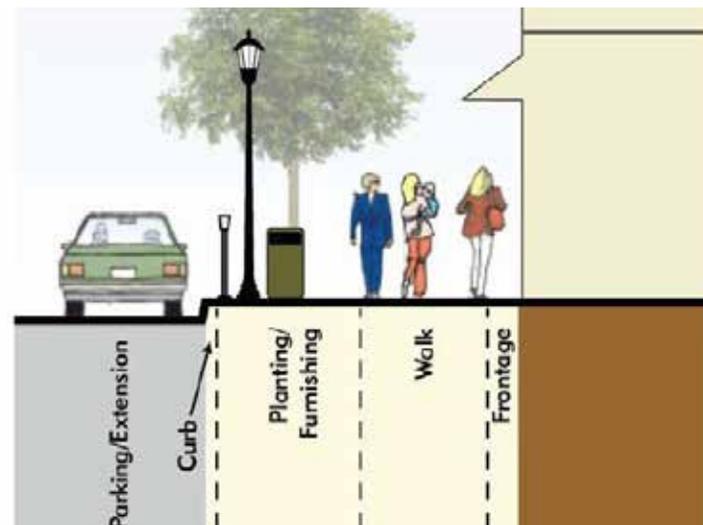


Figure 5. Commercial pedestrian zones from ACCESS Minneapolis Design Guidelines for Streets

Residential Pedestrian Zone

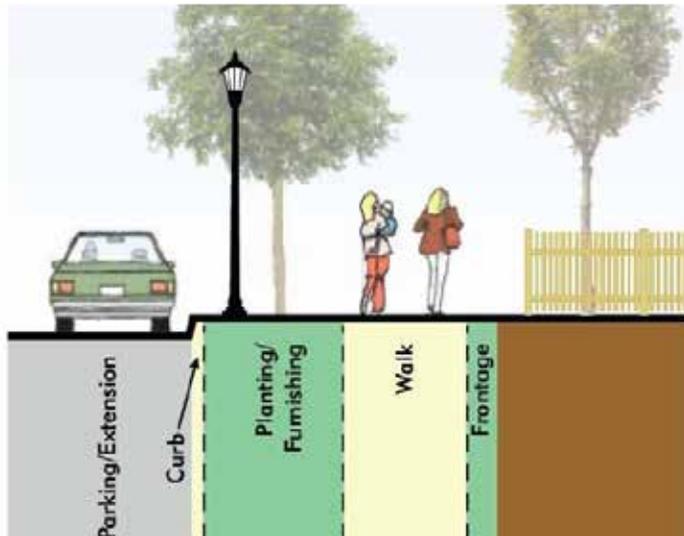


Figure 6. Residential pedestrian zone from ACCESS Minneapolis Design Guidelines for Streets

Curb Zone — This zone separates the pedestrian from the vehicular traffic. The curb provides a physical barrier and also provides space for getting in and out of a parked car (where on-street parking exists). The minimum recommended width is 0.5 feet.

The Boulevard/Planting and Furnishing Zone — This zone provides space for trees, benches, newspaper boxes, utility poles, hydrants, trash receptacles, signs, street lights, and snow storage. The recommended width is 5.5 feet or more, depending on street type.

Sidewalk/Walk Zone/Pedestrian Access Route — This zone needs to be well defined and meet Americans with Disabilities Act standards, and maintained at all times. The recommended minimum width defined in ACCESS Minneapolis is 6.0 feet, but 5.0 feet can be acceptable. A minimum of four feet currently is required for Americans with Disabilities Act compliance; however, the recommended best practice minimum width is five feet. Five feet provides sufficient space for two pedestrians to travel side by side without passing other pedestrians, or for two people going in the opposite directions to pass one another.

Frontage Zone — This zone is at the edge of the walk zone adjacent the property line to provide a safe and comfortable buffer from opening doors, walls, fences, and doorways. The minimum recommended width is 1.5 feet.

Accessibility

Lowry Avenue NE should be accessible to as many people as possible. Accessibility is guided by the Americans with Disabilities Act (ADA). The age and condition of infrastructure as well as the space available for facilities throughout the corridor create challenges for accessibility. Many of the sidewalks are in poor condition with cracks and gaps that impeded travel and contribute to difficult conditions. Many curb ramps have deteriorated and many driveways carry through the walk zone, creating cross-slope that is difficult to navigate and/or appear to be ADA noncompliant. Many of the issues outlined below also detract from the corridor's accessibility. Challenges related to accessibility are described in the following pages.



Narrow sidewalks, non compliant cross-slopes and impediments in the public R.O.W. all contribute to poor accessibility along the Lowry NE corridor.

Existing pedestrian and bicycle facilities

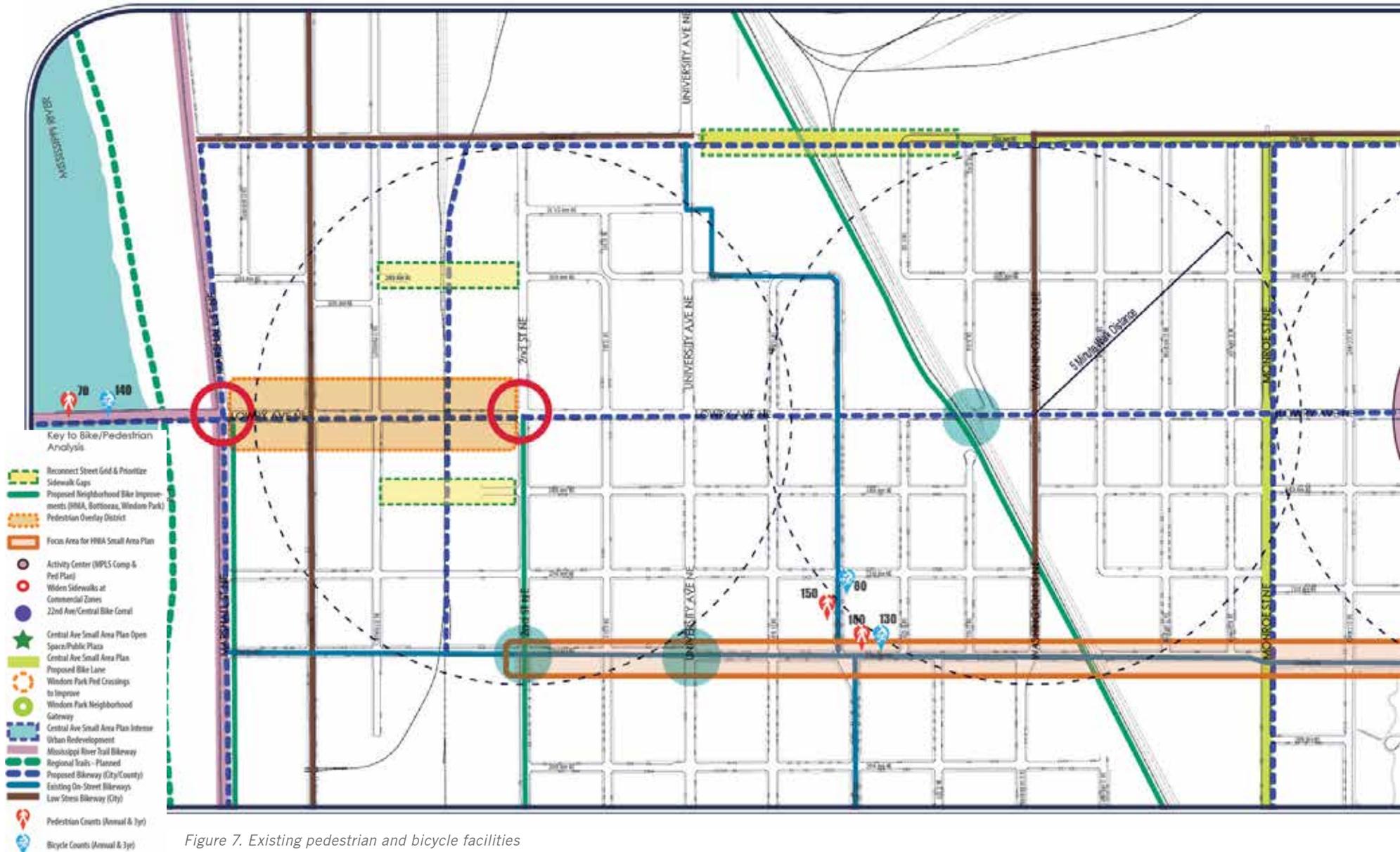




Figure X. Existing Pedestrian and Bicycle Facilities

Space constraints and inconsistent sidewalk zone

Throughout most of the Lowry Avenue NE corridor, space allotted for pedestrian use is constrained within five feet to eight feet. In a few areas with larger setbacks, the usable pedestrian space is up to 13 feet, but some of this space is on private land. Repeatedly, the five-foot sidewalk area is being encroached upon by residential yards and landscaping that has not been maintained and obstructed by power and sign poles. As a result, the sidewalk effectively becomes narrower than the required four-foot pedestrian access route and in places narrower than three feet.

As a result of this constrained environment, sidewalk treatments along Lowry Avenue NE are inconsistent in application of the zone system and vary block by block. Only three blocks along Lowry Avenue NE (between Grand Street and 2nd Street NE) have sidewalk segments that include a grass boulevard wider than two feet between the sidewalk and the roadway.

The portion of Lowry Avenue NE east of Central Avenue NE includes striped parking lanes that provide some buffer between pedestrians and travel lanes (i.e., the parked cars next to the curb zone provide a barrier, and when not occupied the space provides a buffer).



Constrained sidewalk width with pedestrian facilities on private property

Inconsistent development setbacks

Residential fences in the corridor typically are at the edge of the sidewalk within the public right-of-way. The lack of a frontage zone minimizes the usable portion of the sidewalk. However, on commercial land uses, buildings may be set back one or two feet to provide additional room. The images below illustrate the inconsistent development setbacks that occur along Lowry Avenue NE. The first image illustrates a residential fence that creates a narrow feel of the sidewalk area, and the second image represents a new development that increased the sidewalk width in addition to providing a frontage zone by setting the building back from the edge of the sidewalk. Challenges related to accessibility follow and include sidewalk obstructions, snow, grades, and personal safety concerns.



Residential fence narrows sidewalk zone



Inconsistent building setbacks along Lowry Avenue NE

Sidewalk obstructions

Sidewalk obstructions such as sign posts, vegetation, utility poles, garbage cans and temporary signs are prevalent along Lowry Avenue NE and narrow the walk zone. Above ground utilities, furniture, and vegetation would otherwise be placed in the planting/furnishing zone if it were available.



Typical sidewalk obstructions along Lowry Avenue NE

Driveway apron grades

The slopes of driveway aprons compromise the accessibility of the sidewalk. Where driveways occur on Lowry Avenue NE there is not adequate space to provide for the transition from roadway to driveway without interrupting the sidewalk. In many cases this results in sections of sidewalk where cross slope exceeds the two percent needed for Americans with Disabilities Act compliance (see image below). Additionally, when driveways are poorly defined or maintained, potential conflicts increase between drivers and pedestrians where it is not clear where the driveways and sidewalks begin or end.



Accessibility issues created by poorly maintained private driveway

Snow removal

The walking tour conducted in February confirmed that the sidewalks were impassable in locations due to the lack of snow removal. Maintaining sidewalks during the winter is difficult because snow storage space is nonexistent or limited. Snow from the roadway is plowed directly onto the sidewalks, making it difficult for adjacent property owners to adequately maintain the sidewalks.



Snow removal issues and lack of snow storage space along Lowry Avenue NE

Curb condition

Curb conditions vary block by block. In many sections the deteriorated curbs provide little to no vertical separation from the roadway, minimizing the barrier a curb provides between vehicles and pedestrians, and facilitating encroachment on the sidewalk for maneuvering or parking automobiles, delivery trucks and buses.



Deteriorated curbs along Lowry Avenue NE

Streetscape

The boulevard lacks trees, furniture, pedestrian-scale lighting, art, and wayfinding. Where furnishings are provided, they frequently interrupt the walkway and reduce the accessibility of the pedestrian access route. Non-fixed objects such as waste receptacles and newspaper boxes can be particularly challenging as they are moved from their intended space. The railroad viaduct provides a narrow pedestrian travel way that is not well lit and poses personal security concerns.



Narrow sidewalk with no streetscape amenities along Lowry Avenue NE

Truck movements

Lowry Avenue NE is a truck route. A significant number of trucks use the Lowry Avenue intersection with University Avenue intersection and there is visual evidence that large vehicles encroach on the pedestrian zone when turning. This is an issue that has also been raised by project stakeholders.



Semi-truck turning at the intersection of Lowry Avenue NE and University Avenue NE

BICYCLE ISSUES

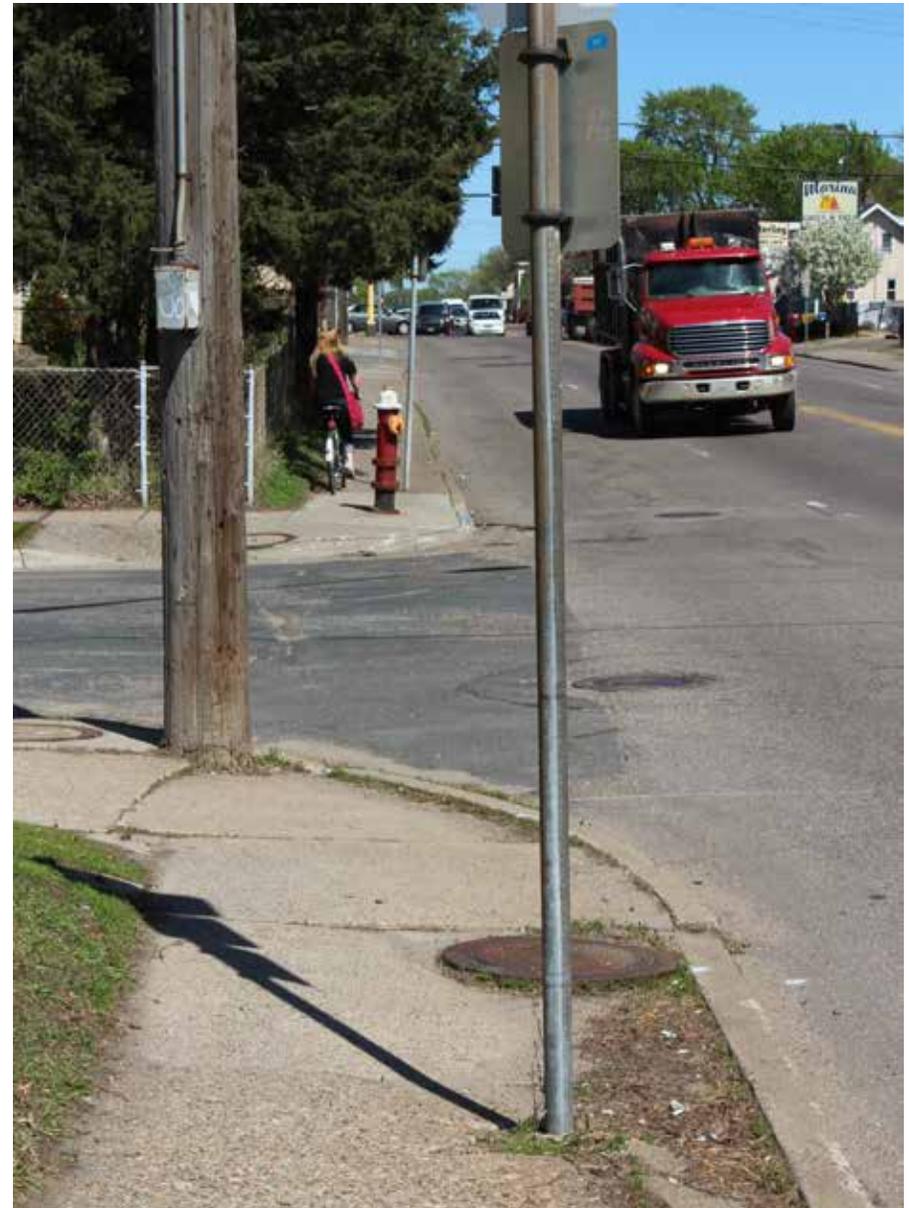
No dedicated or marked bicycle facilities exist on Lowry Avenue NE. Bicyclists use the travel lanes with motor vehicle traffic. Bicycle count data shows that Lowry Avenue NE has a higher rate of sidewalk riding than other count locations, which indicates this stretch of Lowry Avenue NE is not meeting the needs of people who bicycle.

There is an existing east-west bikeway about a quarter mile south of Lowry Avenue NE. Currently, 22nd Avenue NE is a bicycle boulevard from Marshall Street NE to Arthur Street NE. A bicycle boulevard is a bikeway shared with motorized traffic suited for low-speed and low-volume local streets. A bicycle boulevard improves bicycle mobility by turning stops signs to prioritize movement along the bikeway to give bicycle boulevard traffic the right-of-way, using traffic calming features, providing signage related to biking, and other means. They are intended to improve safety and comfort and sometimes can provide an alternative to higher speed roadways such as Lowry Avenue NE that may be more hazardous and more intimidating for people with less experience or confidence biking. The existing 22nd Avenue NE bicycle boulevard lacks safety improvements for bicycle travel through the intersections with University Avenue NE (TH 47) and Johnson Street NE.

A quarter mile north of Lowry Avenue NE, 27th Avenue NE from Marshall Street NE to Central Avenue NE is in the early project scoping phase for a planned bikeway. That bikeway would provide another alternative to biking on Lowry Avenue NE. Dedicated bicycle facilities also are planned for Marshall Street NE, which will provide a connection from the Lowry Avenue Bridge to the bikeways on 22nd and 27th avenues NE.

Bicycle crash rates

The Minneapolis Crash Report identifies the Lowry Avenue NE corridor as having a higher than average crash rate for people biking than other corridors in the city. Hennepin County identified the intersection of Lowry Avenue NE and Central Avenue NE (TH 65) as having among the most bicycle crashes in the county.



Bicyclist riding on a narrow sidewalk rather than in the road

Bicycle Plans

The five neighborhoods of Lowry Avenue NE, the City of Minneapolis and Hennepin County all have bicycle plans. Neighborhood plans propose that bikeways in the vicinity be located along the existing 22nd Avenue NE bicycle boulevard and the planned 27th Avenue NE bikeway. In accordance with the 2002 Lowry Avenue Corridor Plan, the adopted Hennepin County Bicycle Transportation Plan and Minneapolis Bicycle Master Plan propose bicycle lanes on Lowry Avenue NE, assuming additional right-of-way would be obtained to provide dedicated bicycle facilities. In 2014, both Hennepin County and the City of Minneapolis revisited their bicycle plans and are now proposing the bicycle facility recommendations found in the Recommendations Section of this document. This includes on-street bicycle lanes east of Central Avenue NE with clear signs directing bicyclists to alternate routes between Central Avenue NE and Marshall Street NE.

MOTOR VEHICLES ISSUES

The six key intersections and the overall Lowry Avenue NE corridor were analyzed to better understand how the Lowry Avenue NE roadway might better serve people walking and biking and allow for redevelopment. This analysis looks at how the roadway is used (automobiles, pedestrians, bikes, transit, freight), how many motor vehicles the roadway can accommodate (capacity), who is using the roadway, how safe the roadway is (crashes), and how much it might be used in the future (forecast motor vehicle traffic volumes).

Publicly Owned Right-of-Way and Roadway Width

The publicly owned right-of-way width of Lowry Avenue NE between Marshall Street NE and Stinson Boulevard varies. Between Marshall Street NE and Central Avenue NE (west of Central) the right-of-way is 58 feet to 62 feet, currently accommodating four travel lanes within 44 feet. East of Central Avenue NE, Lowry Avenue NE is composed of two lanes with on-street parking with a roadway width of approximately 46 feet within a right-of-way of approximately 60 feet to 66 feet.

Transit: Bus facilities and Routes

Lowry Avenue NE is serviced by 10 Metro Transit bus routes with 638 bus runs on a typical weekday. Bus frequency and lack of service during the evening and

weekends limits the mobility of people who depend on transit in the corridor. Expansion of the current Metro Transit service on the corridor is not planned.

Some bus stops lack benches, shelters, concrete pads and snow removal in the winter. Passenger shelters are provided at the intersections of Marshall Street NE, 2nd Street NE, Central Avenue NE (serves northbound and southbound passengers on Central Avenue NE), University Avenue NE and Johnson Street NE (serves southbound passengers on Johnson Street NE). Where benches do exist, they frequently obstruct the walkway. In the image below, the retaining wall for the private business serves as a de facto transit waiting area. The consolidation of select bus stops and the addition of shelters is a possibility in the future.



Transit riders use the retaining wall as a de facto transit waiting area.

Transit analysis

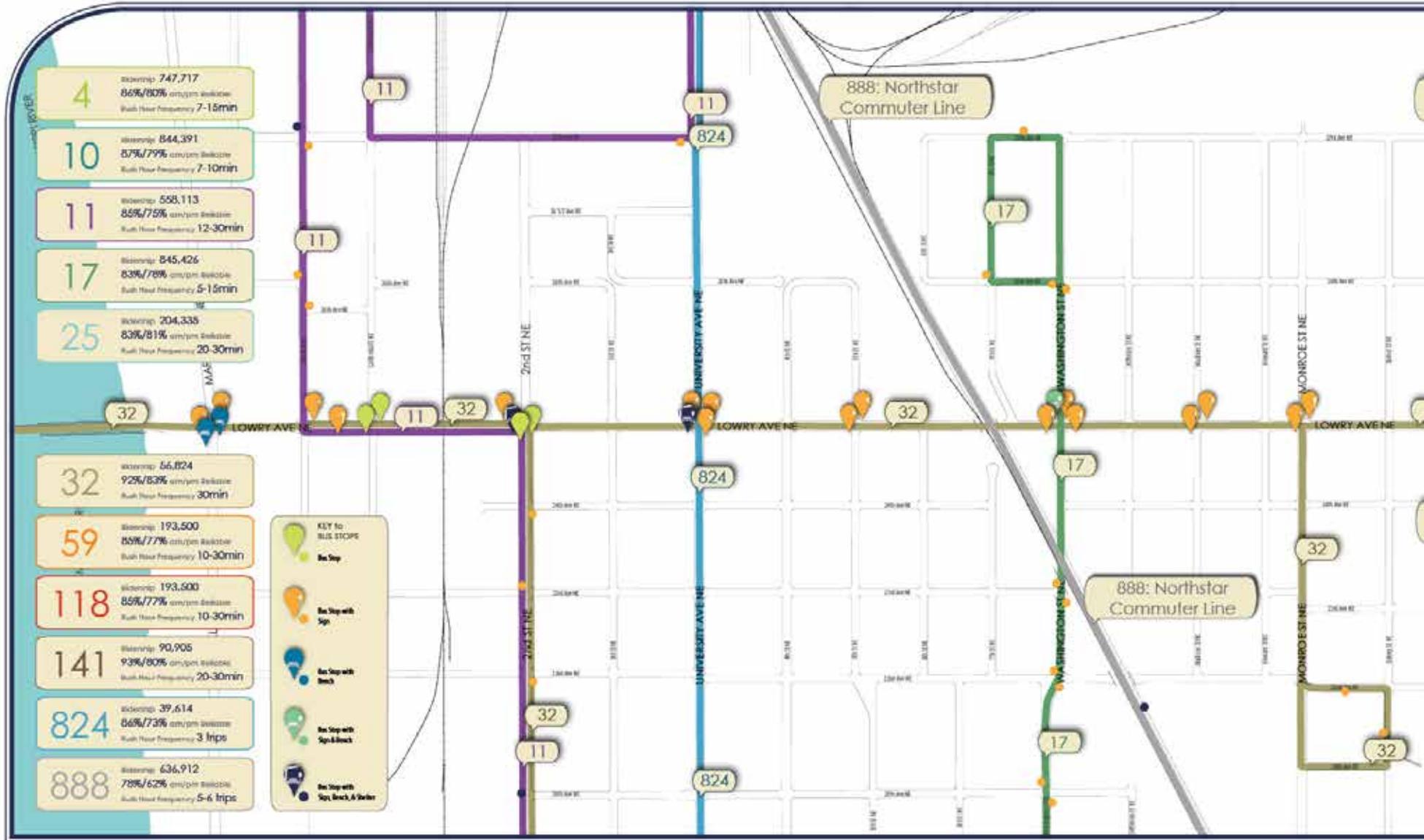


Figure 8. Transit Analysis



The entire Lowry Avenue NE corridor from Marshall Street NE to Stinson Boulevard NE is designated as a City of Minneapolis truck route. The following cross streets along the Lowry Avenue NE corridor are also designated as truck routes by the City of Minneapolis:

- Marshall Street NE.
- University Avenue NE.
- Central Avenue NE .
- Johnson Street (south of Lowry Avenue NE).

In addition to these designated City of Minneapolis truck routes, Lowry Avenue NE also carries the Federal Highway Administration's National Highway System Intermodal Freight Connector Route designation from University Avenue NE through the western limits of the study corridor (Marshall Street NE) to 2nd Street North (west of the Mississippi River). Lowry Avenue NE is part of the route that links the Canadian Pacific CP/Shoreham Intermodal Rail Yard and Port of Minneapolis to Interstate 94. The route uses 30th Avenue NE, 4th Street NE, 32nd Avenue NE, University Avenue (TH 47), Lowry Avenue (CSAH 153), 2nd Street North and Dowling Avenue. This service to the CP/Shoreham Intermodal Yard is part of the Regional Commercial Freight System of the Metropolitan Council's 2030 Transportation Policy Plan and recognized in the Metropolitan Council 2030 Framework and the 2030 Transportation Policy Plan.

Last, all Hennepin County state aid highways, of which Lowry Avenue NE is one, cannot prohibit trucks, so they essentially are truck routes at the county level as well.

Automobile

Early in the planning process it became evident that improving the biking and pedestrian environments would require taking space from existing vehicle travel lanes. To gain an understanding of whether this would be possible, a planning-level review of the entire Lowry Avenue NE corridor was necessary. This analysis looked at existing and 2035 forecasted traffic counts, intersection level of service, and crash history. Following are highlights of the current findings. For additional information see Appendix D.

Lowry Avenue NE: Average Daily Traffic Counts (ADT)

For this analysis the year 2007 traffic volumes from MnDOT were used as an existing year base traffic volume. While more current (year 2011) traffic volumes were available for the study corridor, 2011 traffic counts were taken while the Lowry Avenue bridge over the Mississippi River was under construction, and were therefore not considered representative of the current traffic volumes along Lowry Avenue NE. The forecast year 2035 traffic volumes were developed by adding a growth rate in traffic volumes of 0.5 percent per year along the corridor.

Existing and forecast average daily traffic volumes along the corridor are shown below.

Segment	Average Daily Traffic Volumes	
	Existing Year 2007	Forecast Year 2035
West of Marshall Street NE	15,800	18,200
Marshall Street NE to Central Avenue NE	13,800	15,900
Central Avenue NE to Johnson Street NE	10,400	12,000
Johnson Street NE to Stinson Boulevard	8,400	9,700

Table 1. Existing (2007) and forecast year 2035 no-build ADT volumes and roadway design capacity

Key Study Intersections

A traffic operations analysis was completed at the six key intersections along the corridor to determine how the existing traffic control and lane configuration are able to accommodate forecast traffic volumes.

Year 2013 turning movement counts were collected by the City of Minneapolis at the following Lowry Avenue NE key intersections:

- Marshall Street NE
- 2nd Street NE
- University Avenue NE
- Washington Street NE
- Monroe Street NE
- Central Avenue NE

The existing and forecast no-build traffic volumes and lane configuration analyzed at the key study intersections are shown in Appendix D.

With the exception of the Lowry Avenue NE intersection with Central Avenue NE, each of the key intersections currently operates at an acceptable overall intersection level of service (LOS) D or better during the morning and afternoon peak travel times assuming existing traffic control and lane configuration. The LOS system rates the intersection using the letters A through F, with A being the least congested and F being the most congested. At LOS C, roads remain safely below, but efficiently close to capacity, and posted speed is maintained. LOS D is a common design goal for urban streets during peak hours. While the Lowry Avenue NE intersection with Central Avenue NE currently operates acceptably during the morning peak period, drivers will experience delays during the afternoon peak period. If the existing traffic signal timing were optimized, traffic operations at the Lowry Avenue NE intersection with Central Avenue NE will likely improve back to acceptable level during the afternoon peak. Table 5 also shows that if the traffic signal timing is optimized, the existing traffic control and lane configuration at the key study intersections will be able to accommodate the forecast 2035 traffic volumes with no change to the intersection. Detailed LOS results are shown in the attached Appendix D.

Crash Analysis

A crash analysis was completed along the corridor from 2010 to 2012 using data provided by Hennepin County. The analysis was conducted using widely accepted crash analysis methodologies. This analysis reviewed and identified crash patterns, trends, types of crashes, and critical condition circumstances and factors. Crash analysis typically looks at intersections and roadway segment crash rates. The crash analysis included a detailed review of crashes at the six key intersections along Lowry Avenue NE (Marshall Street NE, 2nd Street NE, University Avenue NE, Washington Street NE, Monroe Street NE, Central Avenue NE, and Johnson Street NE) and the following four segments of the corridor:

- Marshall Street NE to University Avenue NE
- University Avenue NE to Central Avenue NE
- Central Avenue NE to Johnson Street NE
- Johnson Street NE to Stinson Boulevard

Based on intersection crash analysis, the intersections with Marshall Street NE, University Avenue NE, Central Avenue NE, and Johnson Street NE were found to have crash rates higher than the City of Minneapolis average for similar intersection types. However, upon further investigation, only the Central Avenue NE intersection had a crash rate higher than the critical crash rate for similar facility types, and therefore is the only one considered in need of safety improvements.

A review of the four segment crash rates revealed that only the segment between Central Avenue NE and Johnson Street NE was found to have a crash rate higher than the City of Minneapolis average crash rates for similar roadway types. Although the number of crashes between Central Avenue NE and Johnson Street NE was higher than the city's average for similar roadways, the crash rate in this segment was below the critical crash rate for similar facility types, and thus it is not anticipated that improvements to Lowry Avenue NE will significantly reduce crashes that have been reported in this roadway segment. A detailed technical memorandum documenting the analysis is included in Appendix D.

Parking

Parking in the Lowry Avenue NE corridor is provided mainly by on-street parallel parking and private parking lots, which are usually dedicated for one particular building. West of Central Avenue NE, the on-street parking is restricted during morning and afternoon peak travel times. Table 2 shows the total number of existing on-street parking spaces currently provided along the Lowry Avenue NE corridor.

Many of the private parking lots were established before the current zoning regulations. These older lots lack landscaping, screening and setbacks required by the current code. The multitude of private parking lots, each with its own driveway on Lowry Avenue NE, negatively impacts traffic and pedestrian activity. Many of the small lots are inconvenient for the users, as their turning movements are tight and there is no overflow capability during busy times.

Parking Demand

A parking demand study was completed in April 2014 during weekdays from 10 a.m. to 1 p.m. in commercial areas, weekdays between 6 and 9 p.m. in residential areas, on a Sunday morning between 9 a.m. and noon near churches and on a Friday between 11 a.m. and 2 p.m. near a mosque at the Central Avenue NE node. Detailed parking data is included in the attached Appendix D.

The following conclusions can be drawn from the parking demand study:

- Marshall Street NE to University Avenue NE: Little to no on-street parking demand, except for commercial parking demand near the University Avenue NE intersection.
- University Avenue to Central Avenue NE: Little to no on-street parking demand, except for commercial parking demand near the University Avenue NE and Central Avenue NE intersections.
- Central Avenue NE to Johnson Street NE: Parking demand is limited to commercial parking near the Central Avenue NE intersection and church parking demand on the south side of Lowry Avenue NE between Taylor and Fillmore streets.
- Johnson Street NE to Stinson Boulevard: Parking demand is limited to retail parking on the south side of Lowry Avenue near the Stinson Boulevard and

park-related parking near Windom Park.

Where there is limited demand for Lowry Avenue NE on-street parking, ample unrestricted parking is available on side streets.

Segment	Existing Number of On-Street Parking Spaces on Lowry Avenue NE
Marshall Street NE to University Avenue NE	51 – North Side 50 – South Side
University Avenue NE to Central Avenue NE	87 – North Side 71 – South Side
Central Avenue NE to Johnson Street NE	55 – North Side 51 – South Side
Johnson Street NE to Stinson Boulevard	73 – North Side 69 – South Side
Totals	507 Parking Spaces (266 north side and 241 south side)

Table 2: Existing on-street parking supply along Lowry Avenue NE corridor

Future parking strategies should seek to provide a convenient and adequate parking supply without allowing it to dominate the streetscape. Creative solutions should be explored to meet parking requirements, such as consolidating parking into efficient shared underground or structured parking facilities, reducing parking requirements for new buildings where employees are provided transit passes, and encouraging property owners to combine surface parking lots in the rear of their buildings. Connect parking lots to side streets to limit access points on Lowry Avenue NE.

Additional information and background data on the transportation and traffic analysis can be found in Appendix D.

ENVIRONMENTAL CONSIDERATIONS

Environmental Contamination Site Assessment

Hennepin County conducted a Limited Phase 1 Environmental Site Assessment (ESA) of the Lowry Avenue NE corridor east of the Mississippi River in 2013. The ESA provides information regarding present and past land use and evaluated the potential for contamination of properties that abut Lowry Avenue NE or are located in the six intersection study areas.

The Limited Phase 1 ESA used publicly available data to identify known or suspected contamination from hazardous substances or petroleum use at properties within the corridor. Commercial properties are primarily near intersections with industrial properties concentrated near the Mississippi River and railroads. These properties were rated as having high, medium, or low potential for contamination. Factors considered in the rating include current site conditions, historical property use, and regulatory information.

The following ranking system was used to assign a risk to each individual parcel:

- Low potential for contamination: Smaller hazardous waste generators relating to businesses that are not related to vehicle repair activities and possibly some residences where small businesses also operated. There were 81 parcels with low potential for contamination identified in the corridor.
- Medium potential for contamination: All closed leaking underground storage

tank (LUST) parcels, all parcels with underground storage tanks (USTs) or above-ground storage tanks (ASTs), and all parcels with historic vehicle repair activities. There were 42 parcels with medium potential for contamination identified in the corridor.

- High potential for contamination: Parcels with known contamination including active and inactive voluntary investigation and cleanup (VIC) involvement, state Superfund sites, dump sites, active LUST sites, and historic or existing gasoline stations and industrial sites with likely large-scale chemical use on the premises. There were 20 parcels with high potential for contamination identified in the corridor.

Each property with potential for contamination was assigned an identification number and an informational sheet was created with a description of the current and historical use of the property and the type of potential contamination. It should be noted that the potential for contamination designations do not necessarily indicate the presence of contamination, only the potential.

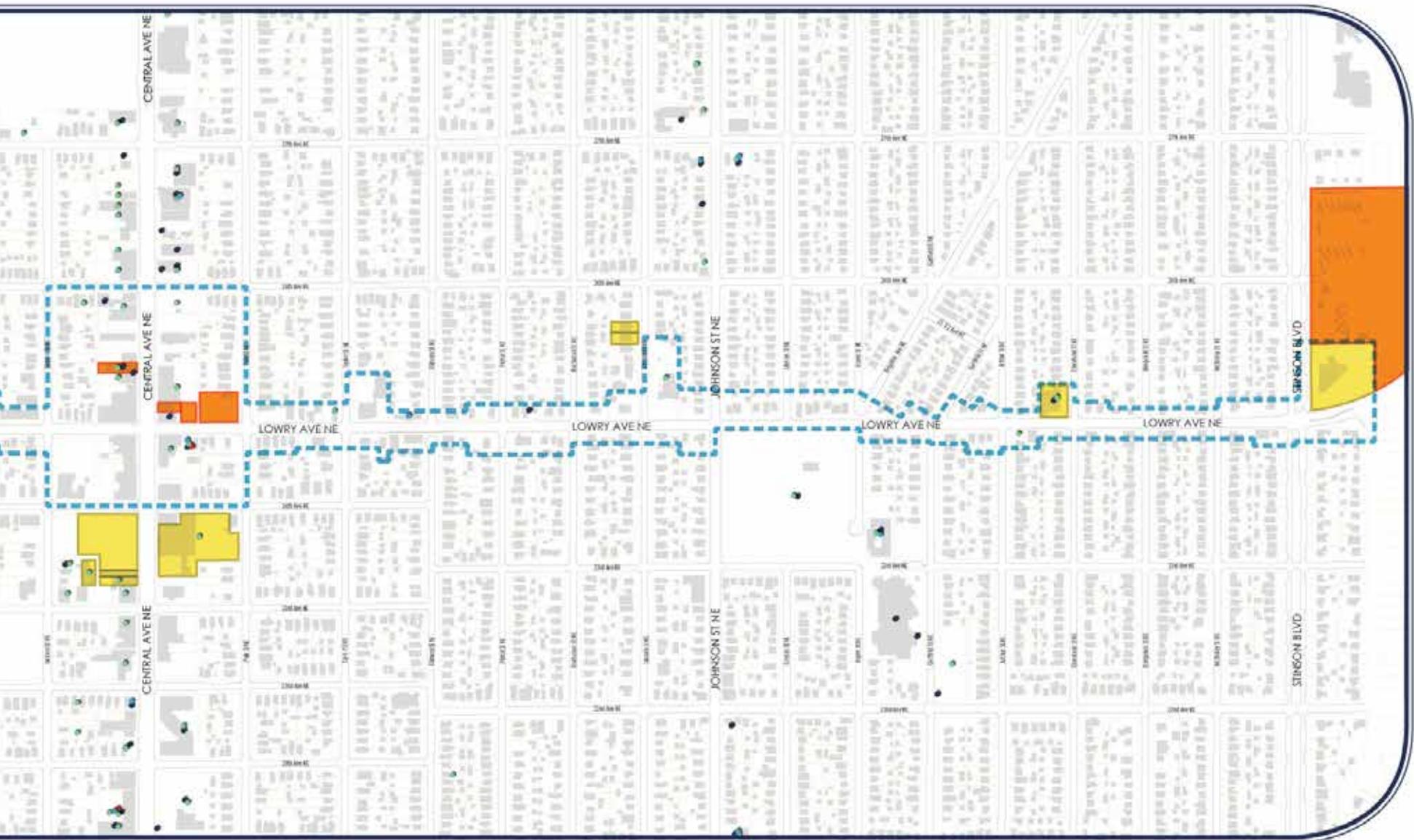
A majority of the properties in the study area are residential. Residential properties and vacant properties with no previous industrial or commercial development were not individually reviewed and in the absence of additional information are not expected to present a significant contamination risk to the corridor. Parcel summary sheets were not prepared for these parcels and not discussed in the report.

The Executive Summary of the Limited Phase I ESA with a map of potentially contaminated properties is in Appendix E.

Environmental analysis



Figure 9. Environmental analysis



STORMWATER MANAGEMENT

Lowry Avenue NE collects stormwater runoff from the surrounding areas in its storm sewer system. The drainage area from which it collects is identified on the Stormwater Analysis figure on the following page. Surface flows are captured in the north-south intersecting streets and conveyed within storm sewers into the Lowry Avenue NE sewer system. Once in the Lowry system the water is discharged to various locations along the Mississippi River. The area west of Washington Street drains to the Lowry Avenue NE storm sewer that drains west of the Mississippi River. The area between Washington Street NE and Central Avenue NE drains south to the 22nd Avenue NE storm sewer and then west to the river. The drainage system at Central Avenue NE and to the east drains to the 10th Avenue and 35W tunnels that drain south to the river.

The design of the Lowry Avenue NE storm sewers varies but does not appear to meet a 10-year design capacity. Excess flows above the storm sewer capacity are conveyed in the streets. If the street is unable to accommodate the excess flows, the water floods adjacent properties.

Currently, there are ponds, rain gardens, and a filtration system at the Marshall intersection that help to provide rate control and improve water quality. There are a limited number of privately and publicly owned ponds within the greater Lowry Avenue NE area that provide rate control. The Edison High School and Mississippi Watershed Management Organization ponds are examples. In addition to the ponds, a large underground sand filter at the intersection of Lowry and Marshall Avenues captures and treats Lowry Avenue runoff from this intersection to Washington Avenue.

There are several challenges to implementing best management practices (BMPs) in the Lowry Avenue NE corridor. First, the area is fully developed, and there are minimal or no boulevards along the street. Thus, there is limited space for BMPs within the right of way. Second, there is limited surface drainage to the street that could be captured in surface BMPs. The majority of the runoff is captured within storm sewers by the time it reaches Lowry Avenue NE. The figure on the following page shows the direct (surface) drainage area to Lowry Avenue NE. It also shows the total (surface plus storm sewer) drainage area to Lowry Avenue NE. It should be noted that the total drainage area extends beyond the map in the northeastern portion. In this area, the drainage area extends north along Taylor Street NE to

the midpoint between 28th and 29th Avenue NE, then east to Hayes Street NE, then north to immediately north of 30th Avenue NE, then east to Stinson Parkway, then south along the east side of Stinson Parkway.

Despite the challenges, a number of opportunities for implementation of stormwater BMPs have been identified within the corridor. These are identified on the figure on the following page as “Rainwater Management Opportunity Areas.” Potential BMP locations were identified based on proximity to Lowry Avenue, ability to capture surface runoff, space availability, and retrofitting potential. Potential locations were identified along the street itself, in some of the boulevards or other green space along the street, in existing vacant lots adjacent to or near the street, and in parking lots adjacent to or near the street. Potential BMPs could include planters, rain gardens, tree trenches, swales, and permeable pavers. Additional analysis is needed to firm up the best locations of future stormwater features. Investigate soil suitability for infiltration and potential contamination and determine the most suitable BMP for each location.

Periodic flooding has been identified at various locations in the drainage area; three areas that were specifically identified during the study are at the intersection of 2nd Street and Lowry Avenue NE, under the railroad bridge west of Washington Street, and in the alley between California Street NE and the railroad tracks north of Lowry Avenue NE.

A flood analysis indicated that additional storm sewer capacity may reduce flooding at the intersection of Lowry Avenue NE and Second Street. Further analysis is needed to develop plans to reduce flooding at this location and other flood locations within the corridor.

Stormwater Analysis

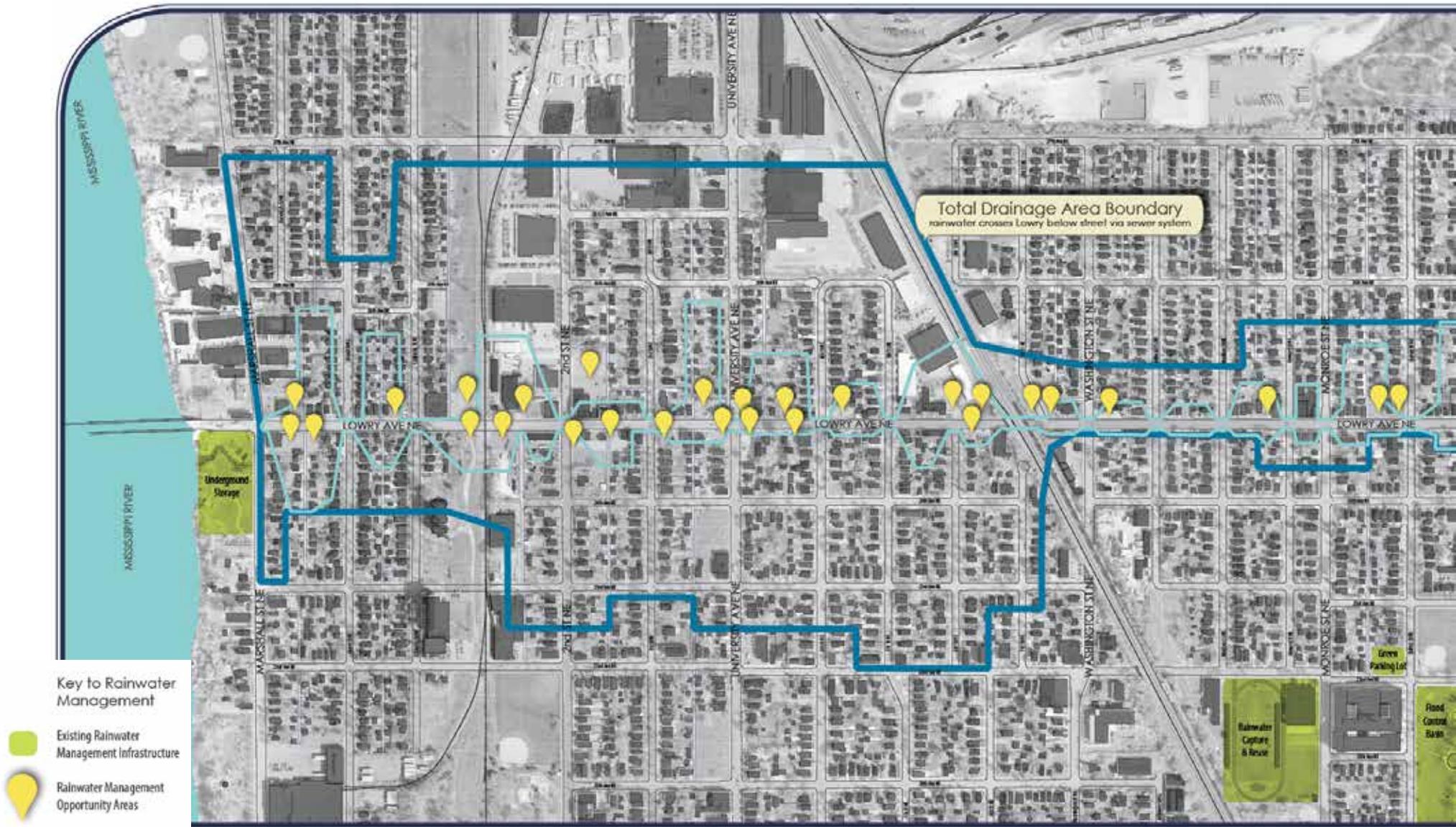


Figure 10. Stormwater Analysis



COMMUNITY ENGAGEMENT



COMMUNITY ENGAGEMENT

Hennepin County engaged the community to update the 2002 Lowry Avenue NE Corridor Plan for the portion of the Lowry Avenue NE corridor east of the Mississippi River in Northeast Minneapolis. The community was engaged by:

- Creating two advisory committees and a steering committee.
- Hosting three public workshops (Feb. 27, June 11 and Sept. 25, 2014).
- Conducting winter walking tour for community members and agency staff.
- Facilitating activities with Edison High School students.
- Engaging participants of the Central Avenue NE Open Streets event.
- Conducting an online survey.
- Assembling business owners for a focus group.
- Attending community meetings and events, including: Marshall Terrace, Bottineau, Holland, Audubon Park, and Windom Park neighborhood meetings; Holland Neighborhood Hot Dish Revolution; Central Avenue NE Open Streets; and Windom Park Windy Fest



Photo of Community Open House #1

Results and recommendations from these outreach efforts are summarized within this Chapter.

1. COMMITTEES

The county convened and engaged three committees throughout the planning process:

Community Advisory Team (CAT)

The CAT enhanced communication between the county and the community, both to provide input to the project team and to relay the status of work in progress to the larger community. The CAT was composed of representatives of neighborhood organizations (Marshall Terrace, Bottineau, Holland, Audubon Park, and Windom Park), business associations, local institutions and property owners.

Technical Advisory Team (TAT)

The TAT provided technical advice and oversight to the planning process. The TAT was composed of public agency staff from Hennepin County (Housing, Community Works and Transit; Transportation; Strategic Planning and Resources; Environmental Services), the City of Minneapolis (Public Works Transportation; Community Planning and Economic Development), the Minneapolis Park Board, Metro Transit, Minnesota Department of Transportation, and the Metropolitan Council/Metro Transit.

Steering Committee

The Steering Committee made pivotal decisions and comments on major project deliverables. The Steering Committee was composed of elected officials from Hennepin County, the City of Minneapolis, and the Minneapolis Park and Recreation Board.

2. FIRST PUBLIC WORKSHOP: OPEN HOUSE OVERVIEW

The CAT, TAT and Steering Committee participated in three facilitated strengths, weaknesses, opportunities and threats (SWOT) exercises for Lowry Avenue NE, as did 60 other participants at a public workshop on February 27, 2014. Individual comments were recorded and posted for other participants to view and comment. Then participants worked in small groups to organize their responses into themes. The small groups developed those themes and then ranked them by importance or relevance. A summary of the strengths, weaknesses, opportunities and threats developed in the three workshops follows:

Strengths

- Community — strong sense of community, great neighborhoods, diverse cultures.
- Access — main east-west connector, job access, river crossing, transit route.
- Mississippi River — new iconic Lowry Avenue Bridge, access to the Mississippi River, riverside parks and open space.
- Ripe for Change — northeast hot spot, business investment, redevelopment plans.

Weaknesses

- Competing Right-of-way (ROW) Uses — narrow sidewalks with no buffer, railroad viaduct, high car traffic, too many lanes, no bicycle facilities, need space for turns, need green space/buffer, parking (too much/little).
- Buildings/Development — lack of investment, vacant/underused properties, lack of housing diversity, limited businesses.
- Streetscape/Green Space — no beauty, no green space, no buffer between travel lanes and sidewalks, ugly, no shade, poorly lit.
- Stormwater Management — flooding streets.
- Transit — poor service, bus stops and bus routes.

Opportunities

- Roadway Safety with Beauty — walkable/wider sidewalks, improve traffic flow, safe bikeways, railroad viaduct lighting, marked crosswalks, turn lanes.
- Green Space — trees, pocket parks, rain gardens, river access/connections, aesthetics.
- Transit — Central Avenue streetcar, new bikeways, improved bus service and shelters.
- Redevelopment — public improvements spur redevelopment, development potential, sense of place/destination, housing diversity, nodal commercial development.

Threats

- Money — lack of funding causes piecemeal implementation.
- Traffic — designated truck route, high traffic levels, lane reduction congestion.
- Safety — not safe for walking/biking, speeding, not enough space for users, railroad viaduct creates space that feels unsafe.
- Lack of Agreement — too many agencies involved, lack of neighborhood consensus, community opposition to height/density.
- Flooding — repeated water main breaks, lack of stormwater management.

The strengths should be preserved and built on as the identified opportunities are harnessed. The weaknesses should be overcome through public improvements and private investment. The opportunities should be pursued to accentuate the corridors strengths and counteract its weaknesses. The threats will need to be overcome to fully realize the opportunities.

The No. 1 opportunity identified by participants at the public open house was “roadway safety with beauty,” which requires pedestrian and bicycle safety improvements, greening, and better access to the Mississippi River. TAT members suggested public improvements in the right-of-way would need to occur first to facilitate transformation through significant redevelopment and private investment.



Lowry Avenue NE Walking Tour

3. WINTER WALKING TOUR

Residents, business owners, and agency staff gathered on a subzero day in February to take a walking tour of the corridor. Participants shared their observations and the following themes emerged:

- Snow removal from sidewalks is an issue.
- Sidewalks and pedestrian space are even smaller in winter and not accessible.
- Boulevards could provide a better buffer between the sidewalk and roadway while also providing snow storage.
- Transit stops need facilities to make them humane in winter.
- Excessive noise and air pollution from vehicles.
- Streets should be narrowed to create space for sidewalks and snow storage.

4. EDISON HIGH SCHOOL STUDENTS SHARE THEIR VISION

As part of the Lowry Avenue NE Project Community Engagement, the Project Team worked with Edison High School students to add their perspectives to the planning of the Lowry Avenue NE Corridor. There was a strong belief that teens should have a voice in the long-term planning process and that their opinions on Lowry Avenue NE should be documented.

The project team worked with Level 2 English Language Learners taught by Katie Murphy-Olsen for two hours on March 20, 2014, and one hour on March 21, 2014. Students ranged from 9th to 12th grade. There were six first languages represented, and time living in Minneapolis ranged from more than a decade to less than one week.

The class participated in three activities:

A. Map of love and hate was a drawing project.

Students mapped their world — their home, hangouts, school, places they go, how they get there, and what they like/dislike about the experiences. Questions asked of the class include: Where do you walk? Why? Where are the places you feel comfortable going? Why do you take a certain route? What along that route do you love and what do you hate?

B. Mapping your world:

A Personal illustrated map offered insights into how students oriented themselves in their physical world and what they valued about their surroundings.

C. Your words/their words.

The project consultants asked students the following questions:

- How do you get to school?
- I use the _____ bus stop. I like it because _____. I hate it because _____.
- I like getting to school by _____ because _____.
- I wish I could get to school by _____ because _____.
- I wish there was more _____ in my neighborhood.
- I wish there was less _____ in my neighborhood.

D. Interviews with friends or family.

Students asked friends and families the following questions:

- Do you like driving on Lowry Avenue NE? Why?
- Where do you feel safe in the neighborhood? Why?
- Where do you not like to go in the neighborhood? Why?

The students, their families and friends had the following to say about Lowry Avenue NE:

- The traffic on Lowry Avenue NE is too heavy and fast and the travel lanes are narrow.
- A majority of students in the class commute to school by Metro Transit. Students use the 32 (Lowry Avenue NE), 10 (Central Avenue NE), 17, and 11 buses and the Blue Line to get to school. The students are unhappy with the infrequency of transit, transfer layovers, and the lack of adequate shelter at bus

stops.

- Students are uncomfortable waiting for buses because of exposure to weather and the proximity to the street. Most said that when they can, they wait inside a local business but when they cannot, they worry about being too cold or not having a place to sit (especially at the northeast corner of Monroe Street NE and the northeast corner of Central Avenue NE near Subway).
- Students like the green spaces along the corridor (typically a park) or places where they feel comfortable (a Halal restaurant, the Somali Mall, the Mall of America, their home); the public realm of Lowry Avenue NE offers neither of these.



Community engagement activities at second public workshop

5. SECOND PUBLIC WORKSHOP

After the project team created conceptual land use and transportation scenarios for six study nodes, the community's opinions on the scenarios was received through a variety of engagement activities, including the second public workshop.

The second public workshop was held June 11, 2014, at the Mississippi

Watershed Management Organization building. During this workshop the project team presented ideas on reconfiguring the roadway to include pedestrian and bicycle improvements, intersection improvements for all travel modes, and redevelopment scenarios that could improve the six study nodes. The open house was designed to share corridor information and gather ideas from residents, business owners, and others who use the corridor. Forty participants signed in at the open house.

Key Themes

Across all activities, worksheet comments, and conversations at the open house, some themes for what should be accomplished on Lowry emerged:

- Safely accommodate all modes, especially pedestrians, along the corridor and especially at busy intersections. Open house participants are aware that the corridor is currently not accommodating all modes safely and improvements are necessary. Providing safe and adequate space for the most vulnerable user — the pedestrian — will also enhance the overall public realm. Participants indicated a strong preference for concepts with wider sidewalks.
- Address the effects of motor vehicle traffic, including traffic calming. Many participants commented on the impact of motor vehicles along the corridor. The motorized traffic is not going away, but there are opportunities to accommodate motorized traffic, yet make the corridor a more pleasant and safe experience for all who frequent the area.
- Respect the history and sense of community along and adjacent Lowry Avenue NE. Open house participants shared their personal stories of living in the area and their experiences along the Lowry Avenue NE corridor. Future redevelopment and roadway designs need to respect the historic resources along the corridor and accommodate the needs of the present and future community.

6. CENTRAL AVENUE NE OPEN STREETS

The Central Avenue NE Open Streets event was held July 27, 2014. The Lowry Avenue NE Corridor Plan team was on hand to discuss the potential pedestrian and bicycle safety improvements (e.g., wider sidewalks, bike lanes, or all-day parking.). The engagement station was positioned where Lowry Avenue NE

changes from four to two travel lanes, which helped attendees see the current context for both sides of Central.

Map on THE REALLY BIG TABLE

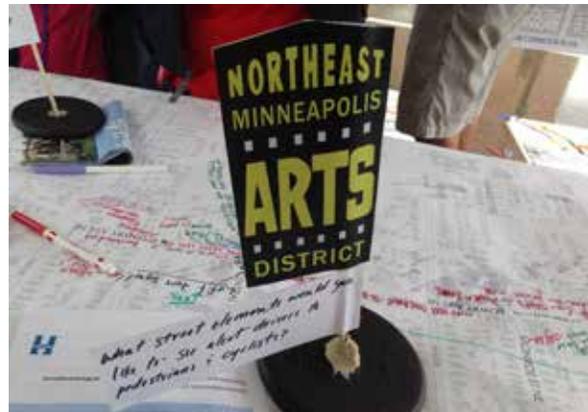
The station featured THE REALLY BIG TABLE, a table custom made by local engineers and artists for community engagement. The 25-foot-long table was delivered by bike and displayed a 10-foot by 3-foot map of the corridor. Participants responded to provocative questions posted on small signs spread across the corridor map. Participants also recorded ideas for specific improvements along the corridor. Most of the comments focused on intersection improvements.

Roadway Concepts Activity

Participants had the opportunity to record their preferred Lowry Avenue NE roadway concept for the portion of the roadway east and west of Central Avenue NE. Each portion of the roadway had four concepts that were all displayed on a large poster board. Participants recorded their favorite concept by placing a dot underneath their preferred roadway cross-section graphic. The boards were presented at a low level so that people with disabilities in wheelchairs and children were still able to view the concepts. Approximately 250 people voted for their preferred roadway concepts at the event. Attendees preferred either bike lanes instead of wider sidewalks or all-day parking along Lowry Avenue NE both east and west of Central Avenue NE.

Youth Activities

There were also activities to entertain children while their parents or guardians engaged with staff or in other activities. Kids were provided with larger photographs of Lowry Avenue NE intersections accompanied with crayons, craft materials, and other tactile materials so they could redesign the street. Kids added people and bicycles, decorated light posts, and created public art along the roadway.



Central Avenue Open Streets

7. PUBLIC ONLINE SURVEY

From July 9 to 31, 2014, an online survey was available for the public to provide feedback on the Lowry Avenue NE Corridor Plan roadway concepts and intersection options. 470 people initiated the survey. Approximately 72 percent of survey respondents live, work, own a business, or serve as building managers on or near the corridor (see Figure 11 Common themes from comments by respondents who selected Concept C: Wider Sidewalks)

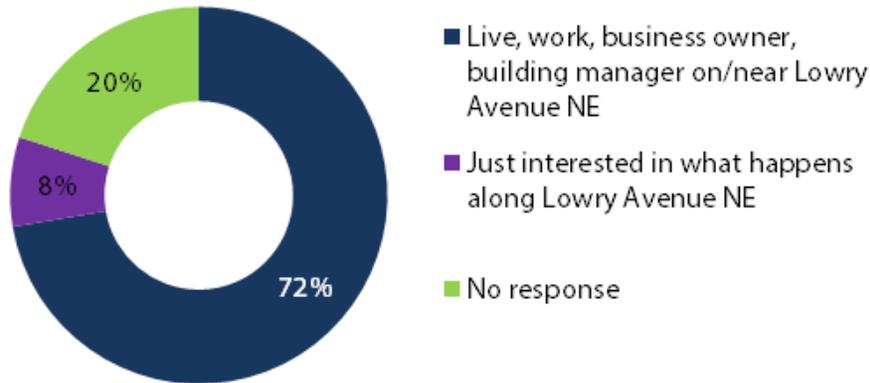


Figure 11: Respondents reasons for interest in corridor

Figure 12 provides additional detail on survey respondents' interest in the corridor. Nearly two-thirds of survey respondents reported that they live on or near Lowry Avenue NE.

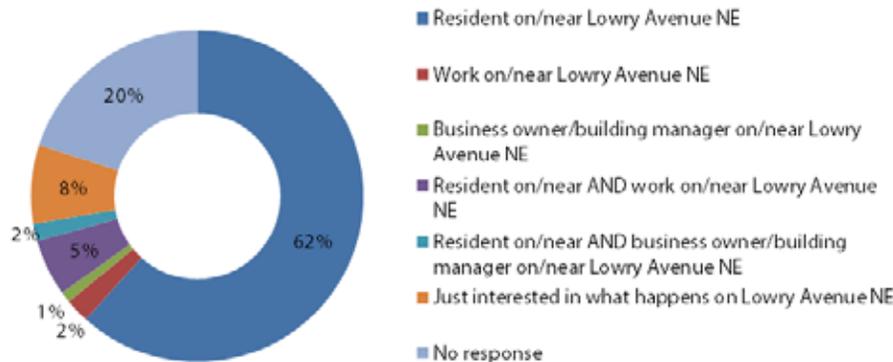


Figure 12: Respondents reasons for interest in corridor

Figure 13 illustrates the distribution of survey respondents by neighborhood. Most survey respondents live or work in Northeast Minneapolis. Of those who provided their neighborhood location, 240 (or 51 percent) live in Audubon Park, Windom Park, Holland, Bottineau or Marshall Terrace neighborhoods, which are in the Lowry Avenue NE corridor. Respondents categorized as “other/adjacent” live or work in communities adjacent Northeast Minneapolis (e.g., Marcy-Holmes, Columbia Heights, Nicollet Island, and North Minneapolis).

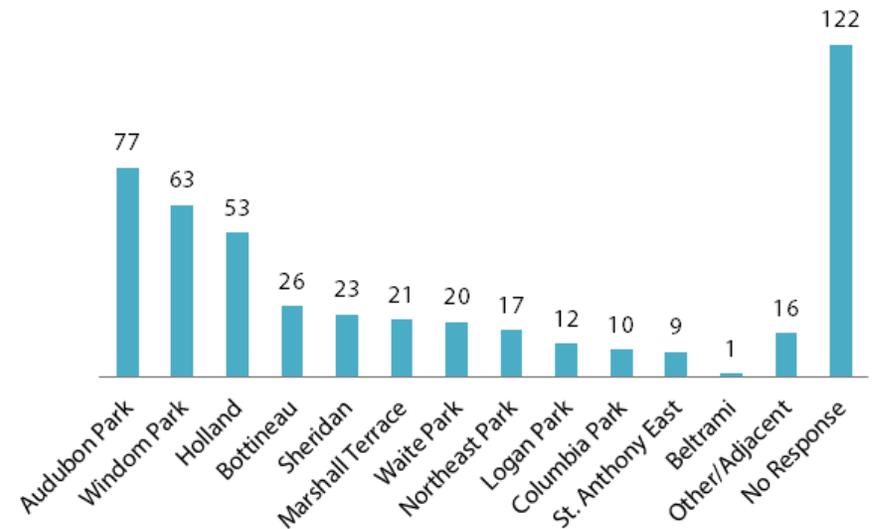


Figure 13: Respondents neighborhood (live or work)

Respondents were invited to provide their first and second preference for roadway concepts. Participants were not required to respond to each question. Tables 1 and 2 summarize preferences for Lowry Avenue NE west of Central Avenue, Tables 3 and 4 summarize preferences for Lowry Avenue NE east of Central Avenue NE. Respondents could also provide comments about their preferred roadway concept preference, and general comments about the west and east sections of the corridor. Comments are summarized by concept selection.

LOWRY AVENUE NE: ROADWAY CONCEPT WEST OF CENTRAL AVENUE NE

Common themes from comments by respondents who selected Concept A: All Day Parking

- Bicycling is possible on other east-west streets.
- Parking on Lowry Avenue is important for businesses.
- Addition of turn lane would be helpful for traffic flow.

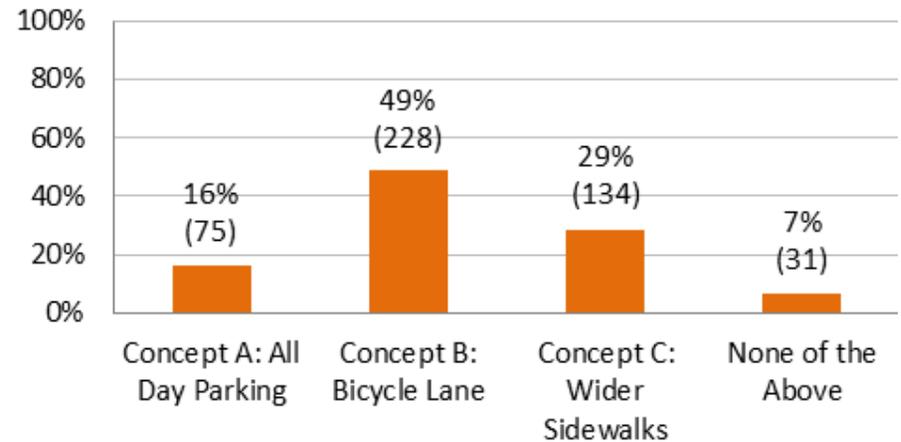
Common themes from comments by respondents who selected Concept B: Bicycle Lane

Most who indicated the bicycle lane concept as their preference bike in the area and would like to do so to connect to various destinations.

- Currently, Lowry Avenue west of Central Avenue is not safe for people biking.
- Bicycling in this area is increasing.
- Automobile parking is not necessary; cross street parking is available.

Common themes from comments by respondents who selected Concept C: Wider Sidewalks

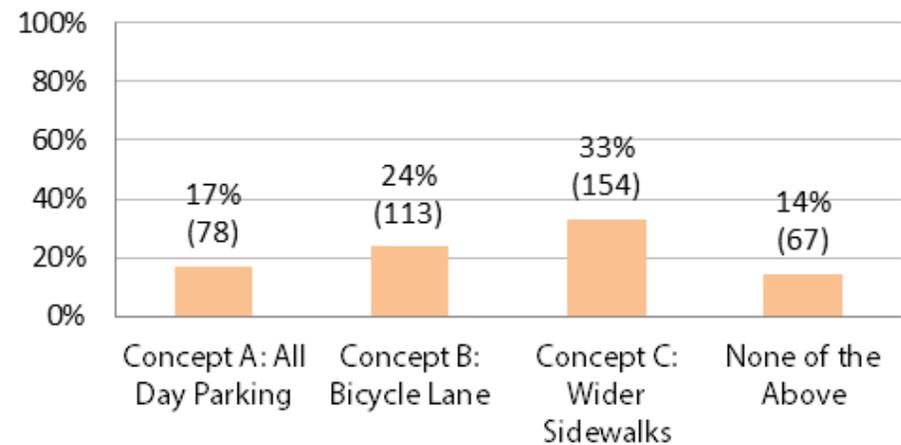
- It is difficult to walk along the corridor because of obstructions, especially for those with disabilities.
- Parking can be accommodated on intersecting side streets.
- Bicycling is possible on parallel streets.
- Wider sidewalks would enhance the street experience.



Highlights from additional comments on the Lowry Avenue NE west of Central Avenue NE road concept preference

- Respondents believe there is a need to improve the overall safety and experience.
- Sidewalks and roadways become narrow during winter because of inadequate seasonal maintenance.

The flow of traffic is a concern, a number of comments focused on signalization (protected turn signals/phasing), addition of turn lanes, and safe intersections.



Lowry Avenue NE west of Central Avenue NE road concept second choice

LOWRY AVENUE NE: ROADWAY CONCEPT EAST OF CENTRAL AVENUE NE

Common themes from comments by respondents who selected Concept A: Maintain Existing Conditions

- The roadway works as it is; there is no need to change it.
- Addition of protected left turn signal phases at busiest intersections (especially on Johnson) would be helpful.
- Bicycling is possible on other east-west streets.

Common themes from comments by respondents who selected Concept B: Bicycle Lane

- Bike lanes are important, and an unbuffered bike lane is preferable to a buffered bike lane to leave space for other uses.
- This option is good for people biking and it still allows parking lanes at residences and businesses, which is important for this corridor.

Common themes from comments by respondents who selected Concept C: Wider Sidewalks

- Sidewalks are very narrow on Lowry Avenue NE and make travel difficult for pedestrians.
- People biking can use nearby bike facilities, and more effort should be spent on pedestrian improvements.
- Trees alongside the street make it more attractive for pedestrians.
- Wider sidewalks also create more space for snow storage in winter.

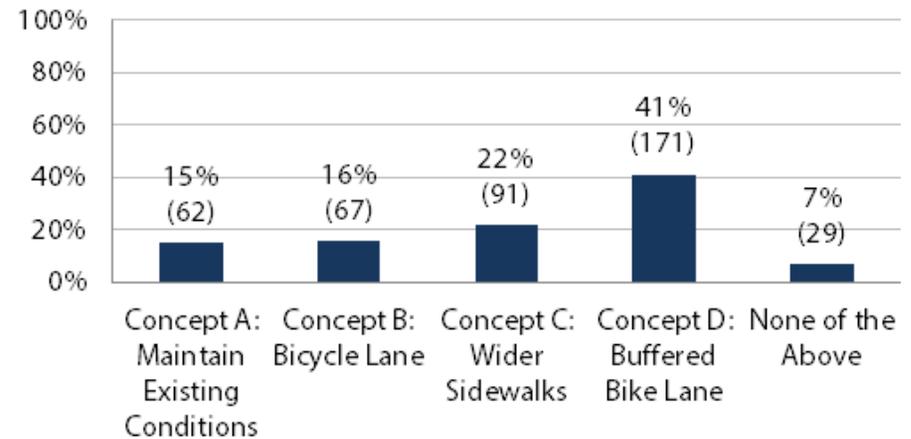
Common themes from comments by respondents who selected Concept D: Buffered Bike Lane

- It's the safest option for people biking; buffer provides more space, snow storage, and reduces the chance of getting "doored" by someone exiting a parked car.

- Buffered bike lanes are more likely to encourage "regular people" (also described as "interested but concerned" about biking) to bike for transportation.

Common themes from comments by respondents who selected "None of the Above"

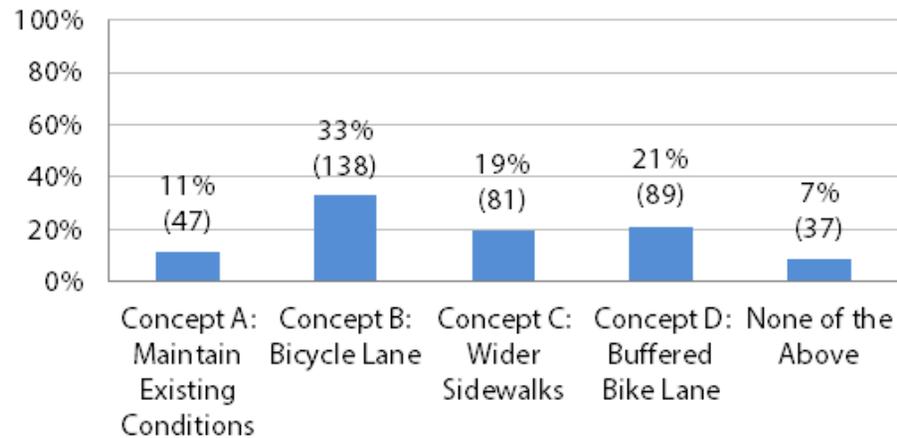
- Center turn lanes would accommodate the motor vehicle movements in a safer way.
- Dedicated parking affects traffic and is unnecessary on Lowry Avenue NE east of Central Avenue NE.



Lowry Avenue NE east of Central Avenue NE road concept preference

Highlights from Additional Comments on the East of Central Avenue NE road concepts

- Left turn lanes are the most needed missing element along Lowry.
- Lowry and Johnson intersection needs to be addressed; protected left turn signals in all four directions.
- The new median or "bike island" at Central Avenue NE and Lowry Avenue NE is dangerous and ineffective.



Lowry Avenue NE east of Central Avenue Road Concept Second Choice

Intersection Feedback

Survey respondents provided feedback about six key nodes along the corridor. The following sections provide some highlights from the comments received for each node.

Lowry Avenue NE and Marshall Street NE

- 197 comments.
- Left turn lanes and left turn arrow at this intersection.
- Improved signage for turn lanes and general wayfinding.
- Streetscape improvements to improve experience.
- Enhance the connection to the river.

Lowry Avenue NE and 2nd Street NE

- 164 comments.
- Dedicated turn lanes.
- Redevelopment will improve the experience.
- Improve the building façades and general streetscape.

Lowry Avenue NE and University Avenue NE

- 227 comments.
- Dedicated left turn lanes or center turn lanes and signals in all directions.
- Intersection is not safe as it is; turn lanes are needed.
- Improve the visibility and experience with signage and streetscaping.

Lowry Avenue Ne and Washington Avenue NE

- 150 comments.
- Left turn lanes are needed.
- Of the six intersections, this one had the most comments indicating the intersection works well as it is.
- Wider sidewalks, streetscape improvements, redevelopment are needed.
- Some respondents suggested a four-way stop.

Lowry Avenue NE and Monroe Street NE

- 156 comments.
- Left turn lanes and signals are needed.
- Redevelopment and streetscape improvements would help the experience at intersection.

Lowry Avenue NE and Central Avenue NE

- 244 comments.
- Dedicated turn lanes and turn signals are needed.
- Current configuration is a challenge and safety is a concern for all modes.
- Redevelopment or new business would help the node.

8. SUMMARY OF ROADWAY AND INTERSECTION PREFERENCES

The Community Advisory Team (CAT) members provided their initial preferences for the roadway and intersection concepts and continued to discuss roadway and intersection concepts as they were refined throughout the planning process. Most CAT members preferred widened sidewalks and noted that a wider area could provide space for pedestrian travel, trees, and stormwater management. Some CAT members suggested people could bike on the existing or planned bikeways on 22nd Avenue NE or 27th Avenue NE, while others preferred bicycle lanes on Lowry Avenue NE. Some CAT members continue to voice their concern with having no dedicated bicycle facilities or shared lane markings on Lowry Avenue NE between Marshall Street NE and Central Avenue NE.

The CAT members discussed intersection options for Marshall Street NE, University Avenue NE, and Central Avenue NE. Most CAT members preferred to keep the Marshall Street NE intersection in its current configuration rather than to widen the intersection to make truck turning movements easier, which could compromise pedestrian safety by increasing roadway crossing distances and making turning radii wider. The CAT concluded that the University Avenue NE intersection needs to be widened to provide for truck turning movements, as trucks have a difficult time turning from University Avenue to Lowry Avenue and vice versa. Due to the existing placement of buildings, most CAT members preferred shifting the intersection to the south. The Central Avenue NE intersection presents opportunities for transit integrated redevelopment and the CAT members preferred that the intersection shift to the north west of Central Avenue NE and to the south west of Central Avenue NE. This would provide the opportunity for a transit-integrated development in the southeast quadrant of the intersection.

An overwhelming majority of comments from the public open house, CAT, and TAT were for widened sidewalks both west and east of Central Avenue NE. The runner-up preference was adding bicycle lanes, or a hybrid option with widened sidewalks. However, participants clearly expressed higher priority for wider sidewalks over biking facilities. Very few participants advocated for all-day parking or maintaining existing conditions, while many voiced concern over speeding traffic on Lowry Avenue and unsatisfactory existing pedestrian conditions. On the contrary, most survey respondents and Open Streets participants preferred dedicated bicycle facilities both west and east of Central Avenue NE. After the survey and Open

Street results were presented to the CAT, some CAT members requested that shared lane markings be placed in the travel lanes between Marshall Street and Central Avenue NE. Overall, the CAT and TAT agreed that wayfinding and other improvements to and from bikeways that can serve as alternate routes should be provided.

Although many comments suggested widening Marshall Street NE to provide additional turn lanes, the consensus was to keep the intersection in its existing configuration to minimize impacts on pedestrians and to provide wayfinding to alternate bikeways. The University Avenue NE intersection should be widened to provide for truck turning movements, and the intersection should shift to the north or the south. The consensus was to shift the intersection to the south because of the placement and character of existing buildings. The Central Avenue NE intersection provides an opportunity for transit integrated development and the consensus was to target redevelopment at the southeast quadrant.

9. THIRD PUBLIC WORKSHOP: OPEN HOUSE OVERVIEW

The third public workshop for the Lowry Avenue NE Corridor Plan was held Sept. 25, 2014, from 6 to 8 p.m. at Eastside Neighborhood Services. The open house included four stations that displayed information on roadway concepts, streetscape options, intersection redevelopment concepts, and a “what we heard” slide show to share public feedback to date. The open house was designed to share recommendations for improving the safety of the corridor for pedestrians, bicyclists and motorists, improving the streetscape with landscaping, lighting and public art, and growing the tax base through redevelopment at key intersections. The open house was also designed to gather feedback from residents, business owners, and others who use the corridor. Twenty-six participants signed in at the open house.



Public Open House #3

Key Themes

During the public open house, the following themes emerged from participants:

1. Pedestrian Safety Improvements

Participants were generally pleased with the proposed changes that would improve the pedestrian realm, including narrowing the roadway, widening sidewalks and increasing the buffer between pedestrians and motor vehicles.

2. Bicycle Safety Improvements

Many open house participants emphasized the importance of bicycle improvements in the entire corridor, including a bicycle and pedestrian bridge over the railroad tracks on 27th Avenue NE and bike lanes or shared lane markings on Lowry Avenue NE west of Central Avenue NE. In addition, participants mentioned the importance of wayfinding to adjacent bikeways, especially since dedicated

bike facilities are not recommended on Lowry Avenue NE between Marshall Street NE and Central Avenue NE.

3. Transit Improvements

Multiple participants expressed support for proposed transit improvements, including bus “bump outs” and adding bus shelters. Participants also emphasized the importance of transit improvements for students in the area.

4. Streetscape and Utility Improvements

Open house participants expressed satisfaction with the proposed streetscape enhancements, including more trees and greenery, cultural influences from the area, and the railway underpass proposal. Participants also expressed the need for utility improvements, including lighting under the railroad bridge and better stormwater management in the area.

Activity Summary

Four stations were available with information and recommendations regarding the following topics:

Roadway Concepts

Two preferred roadway concepts were presented: one for Lowry Avenue NE east of Central Avenue NE and one for Lowry Avenue NE west of Central Avenue NE. Graphics displayed recommended roadway cross-sections, proposed views, and existing wayfinding.

Streetscape Options

Illustrations of seven locations along the corridor were presented with various graphics displaying the recommended roadway cross-sections and streetscape improvements with four aesthetic options. Participants were provided stickers to place on the streetscape aesthetic they preferred and the results are shown below:

- Urban Eclectic Aesthetic – 9 stickers.
- Traditional Historic Aesthetic – 7 stickers.
- Industrial Aesthetic – 5 stickers.
- Contemporary Aesthetic – 4 stickers.

Redevelopment Concepts

Redevelopment concepts were displayed for six different intersections along the Lowry Avenue NE corridor. The graphics displayed recommended intersection designs, redevelopment plans and streetscape enhancements.

Public Feedback — “What we Heard”

A rolling slide show displayed feedback and comments gathered to date, including from open houses, the online survey and the Central Avenue NE Open Streets event.

10. INCORPORATION OF PUBLIC INPUT INTO THE CORRIDOR PLAN

The Project Management Team continually altered the process and corridor planning to address input received from all the sources listed above. The recommended sidewalk expansion, on-street bicycle lanes, streetscape theme, intersection layouts, and redevelopment scenarios all were significantly shaped by public and stakeholder input. The recommendations in this report were generally accepted by those engaged as the best options within the project's constraints. Where participant desires could not be accommodated, the Project Management Team made its best effort to identify next-best options or mitigating measures.

CORRIDOR PLAN RECOMMENDATIONS

Citywide
NORTHEAST





Intersection of Lowry Avenue NE and 2nd Street NE

CORRIDOR PLAN RECOMMENDATIONS

The Project Team was charged with creating a plan for redevelopment of the Lowry Avenue NE six study intersections; making recommendations for improving the pedestrian and biking environments; improving the streetscape with such items as pedestrian lighting; and improving the natural environment by providing storm-water treatment, storage, and retention in the corridor. This section explains the plans and designs that were created during the planning process.

PEDESTRIAN AND BICYCLE IMPROVEMENTS

Walking and biking are critical transportation modes in corridors such as Lowry Avenue NE and a major component of a livable community. Currently, sidewalks on Lowry Avenue NE are substandard: they are narrow, adjacent to the roadway, and obstructed by utility poles and street signs. Dedicated bicycle facilities do not currently exist, and the four-lane segment of Lowry Avenue NE is not a bikeable street for most people. Following are recommendations to promote safe

and inviting pedestrian and bicycle experiences by creating or strengthening connections to nearby bicycle facilities, neighboring points of interests, shopping, the Mississippi River, trails and open spaces.

Pedestrian Recommendations

Provide a minimum of 6-foot-wide sidewalks (8 feet is preferred) throughout the corridor where feasible.

- Create boulevards to serve as a buffer from traffic, a planting space for trees, and a space to store snow.
- Improve intersections to provide safe and accessible areas for pedestrian and bicycle crossings. Improvements could include enhanced crosswalks, improved signalization, signage and design techniques that encourage drivers to operate at an appropriate speed.
- Sidewalk bump outs are also recommended on adjacent side streets where

possible to decrease crosswalk distances, moderate vehicular speeds, provide more sidewalk space, and to define on-street parking bays.

- Incorporate streetscape elements such as monuments, public art, kiosks and benches to create a more inviting and comfortable sidewalk environment and promote sidewalk activity.

Bicycle Recommendations

- Install on-street bicycle lanes on Lowry Avenue NE east of Central Avenue NE.
- Use signs to direct Lowry Avenue NE bicycle traffic between Marshall Street NE and Central Avenue NE to and from parallel bicycle routes along 22nd Street NE, 18th Street NE and the proposed future 27th Street NE connections.
- Stripe bicycle lanes to the left of on-street parking provided near Central Avenue NE, Windom Park and Stinson Boulevard.
- Create safe and visible connections between Lowry Avenue NE and alternative bicycle routes.
- Provide centralized, easy to access bicycle parking (such as on-street bicycle corrals) at convenient locations for bicyclists to park their bikes and walk to places along Lowry Avenue NE.
- Expand the city's wayfinding system to Lowry Avenue NE and highlight access to the parallel and perpendicular bicycle routes

ROADWAY SECTIONS

It was necessary to look holistically at the Lowry Avenue NE public right-of-way and to study the motorized traffic to see if it was feasible to convert space currently used for travel lanes and parking to pedestrian and bicycle facilities. The Project Team developed a number of scenarios, called sections, that demonstrated how the right-of-way could be dedicated to pedestrian, bicycle and motor vehicle uses.

Currently, Lowry Avenue NE is a four-lane roadway west of Central Avenue

NE and two-lane roadway east of Central Avenue NE. Because of the traffic volumes, current number of lanes and different right-of-way widths between the segment east of Central Avenue NE and west of Central, the Project Team made recommendations specific to these varied roadway segments. The Team developed Sections A-C for the segment West of Central Avenue NE and Sections A-F for the segment east of Central Avenue NE. These conceptual sections can be found in Appendix F.

It was determined early during the analysis phase that it was possible to convert the four-lane roadway west of Central Avenue NE to a three-lane segment with one eastbound lane, one westbound lane, and a continuous left-turn lane. This dropping of a travel lane provided extra space for bicycle and pedestrian improvements. As a result, all sections studied west of Central Avenue NE included the conversion of a four-lane roadway to a three-lane roadway.

Some of the sections incorporated on-street parking and others removed it. The parking analysis completed in April 2014 showed parking was not heavily used on Lowry Avenue NE except for at the Central Avenue NE intersection during Friday afternoon prayer service and in the vicinity of the Fillmore intersection during Sunday morning worship service. This limited use of parking allowed for the removal of on-street parking in most sections of Lowry Avenue NE, freeing up space for bicycle and pedestrian improvements.

In addition to studying parking use, the Project Team forecasted traffic needs until 2035 and the associated intersection level of service with the selected roadway and intersection improvements. The findings were that all of the key intersections will continue to operate at an acceptable overall intersection level of service (LOS) D or better during the morning and afternoon peak travel hours, assuming proposed intersection and roadway section improvements. LOS is a measure of the effectiveness of an intersection. The LOS system rates the intersection using the letters A through F, with A being the least congested and F being the most

congested. At LOS C, roads remain safely below, but efficiently close to capacity, and posted speed is maintained. LOS D is a common design goal for urban streets during peak hours. The proposed intersection and roadway sections will be able to accommodate the forecast year 2035 Build traffic volumes. This detailed analysis is available in Appendix D.

Based on stakeholder and Community and Technical Advisory Team input, the Steering Committee selected the following preferred roadway sections from the nine options that were considered.

- West of Central Avenue NE: Wider Sidewalks (Concept C) — This recommended roadway section consists of a three-lane roadway (one 11-foot lane in each direction separated by a 12-foot center two-way left-turn lane) between Marshall Street NE and Central Avenue NE. By narrowing the existing roadway section from four lanes to the recommended three-lane section, the sidewalk and boulevard areas on each side of the roadway can be expanded to approximately 11 feet to provide a better pedestrian realm along Lowry Avenue NE to the west of Central Avenue NE. This option does not include a dedicated bicycle facility on Lowry Avenue NE and relies on parallel bicycle boulevards about a quarter mile to the north and south to accommodate through bicycle traffic. The Project Team through the community outreach effort determined that improving the pedestrian function of Lowry Avenue NE was more critical than creating dedicated bicycle facilities. Even without dedicated space, the four-to-three-lane conversion will improve the biking environment, and more people will be comfortable biking the corridor. See Figure 1 for this section.
- East of Central Avenue NE: Wider Sidewalks and Bicycle Facilities (Concept E). This recommended roadway section consists of a two-lane roadway with bicycle lanes (one 11-foot travel lane and one 6-foot bicycle lane in each direction), and optional parking at selected locations. This section removes parking for most of this segment of the corridor and reallocates this space to on-street bicycle lanes and wider sidewalks and boulevards. On-street parking will be included at critical areas, including the commercial area at Stinson Boulevard, Windom Park and near Central Avenue NE. See Figure 2 for this section.



Figure 14: Recommended roadway section west of Central Avenue NE



Existing and proposed view at 3rd Street NE and Lowry Avenue NE



Existing and proposed view at Monroe Street NE and Lowry Avenue NE



Existing and proposed view at 2nd Street NE and Lowry Avenue NE



Figure 15: Recommended roadway section east of Central Avenue NE



Existing and proposed view near Polk Street NE and Lowry Avenue NE



Existing and proposed view near Cleveland Street NE and Lowry Avenue NE

To convert the roadway from a four-lane section to a three-lane section, to make pedestrian safety improvements, and to accommodate truck turns, two of the six study intersections are recommended for improvements. These intersections are:

- Lowry Avenue NE at University Avenue NE.
- Lowry Avenue NE at Central Avenue NE.

The reconstruction of these intersections provides an opportunity to design the intersections with bicycle and pedestrian improvements and stormwater management. Where possible, include wayfinding, pedestrian lighting, bump-outs, pedestrian countdown timers, bicycle parking, and public art in the intersection designs.

The following intersection designs are in concept form only, and detailed geometrics and intersection analysis will need to be performed later.

Lowry Avenue NE at Marshall Street NE

Figure 16 shows the recommended intersection improvements at the Lowry Avenue NE intersection with Marshall Street NE. As shown in Figure 16, the east leg of the Lowry Avenue intersection with Marshall Street NE would be reconfigured to provide one lane of traffic in each direction on Lowry Avenue NE as well as a westbound left-turn lane. The sidewalk and boulevard on both sides of Lowry Avenue NE (east of Marshall Street) would be widened to approximately 11 feet. The radius in the northeast corner of the intersection would be increased to facilitate westbound to northbound truck movements from Lowry Avenue NE to Marshall Street NE. The proposed lane configuration on the Marshall Street NE approaches to the Lowry Avenue NE intersection would remain unchanged. Following these changes to the intersection, it would function at a level of service B during the morning peak travel time and C during the afternoon peak travel time.

A description of the recommended improvements to these intersections follows.



Figure 16: Recommended Improvements – Lowry Avenue NE at Marshall Street NE

Lowry Avenue NE at University Avenue NE

Figure 17 shows the recommended intersection improvements at the Lowry Avenue NE intersection with University Avenue NE. The alignment of Lowry Avenue NE would be shifted to the south to facilitate the trucks making the southbound to westbound right turns. The Lowry Avenue NE approaches to the intersection would be revised to provide one lane of traffic in each direction as well as westbound and eastbound left-turn lanes. The sidewalk and boulevard on both sides of Lowry Avenue NE would be widened and parking bays or bus stops will be provided in all four quadrants of the intersection with near-side bus pull-outs on the Lowry Avenue NE approaches to the intersection. The corner radii, particularly in the northwest quadrant, also will be increased to facilitate truck

turning movements. The proposed lane configuration on the University Avenue NE approaches to the Lowry Avenue NE intersection are recommended to remain unchanged.

This intersection redesign would require the full acquisition of some parcels and partial acquisition of other parcels to provide additional roadway right-of-way. The traffic forecast to 2035 found that this intersection would function at a level of service C during both the morning and afternoon peak travel times.

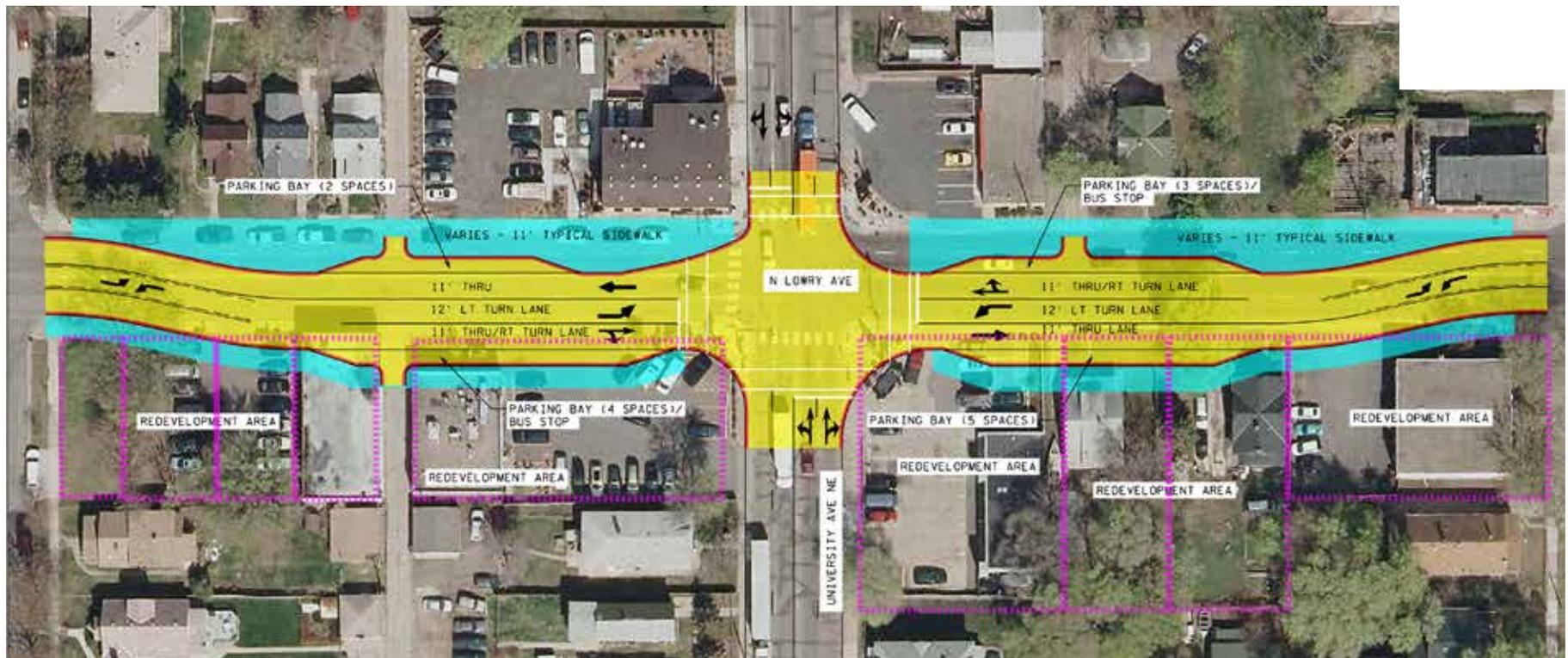


Figure 17: Recommended Improvements – Lowry Avenue NE at University Avenue NE

Lowry Avenue NE at Central Avenue NE

Figure 18 shows the recommended intersection improvements at the Lowry Avenue NE intersection with Central Avenue NE. As shown, the alignment of Lowry Avenue NE would be shifted slightly to the north on the west side of Central Avenue NE and slightly to the south on the east side. The Lowry Avenue NE approaches to the intersection would be revised to provide one lane of traffic in each direction as well as left-turn lanes at the Central Avenue NE intersection. The sidewalk and boulevard area on both sides of Lowry Avenue NE would be widened, a parking bay would be provided in the southeast quadrant, and far side bus pull-outs would be provided on Lowry Avenue NE. The corner radii in three of

the four quadrants, would also be increased to facilitate truck turning movements. The proposed lane configuration on the Central Avenue NE approaches to the Lowry Avenue NE intersection would remain unchanged. The traffic forecast to 2035 finds that this intersection would function at a level of service C during the morning and afternoon peak travel times following reconstruction.

Safety will be improved at the Lowry Avenue NE intersection with Central Avenue NE with the addition of left-turn lanes on the west- and eastbound Lowry Avenue NE approaches to the intersection. The proposed left-turn lanes on Lowry Avenue NE will remove left-turning vehicles from through traffic, thus reducing conflicts. The proposed center left-turn lanes on Lowry Avenue NE will also improve safety by improving sight distance for left-turn turning vehicles.

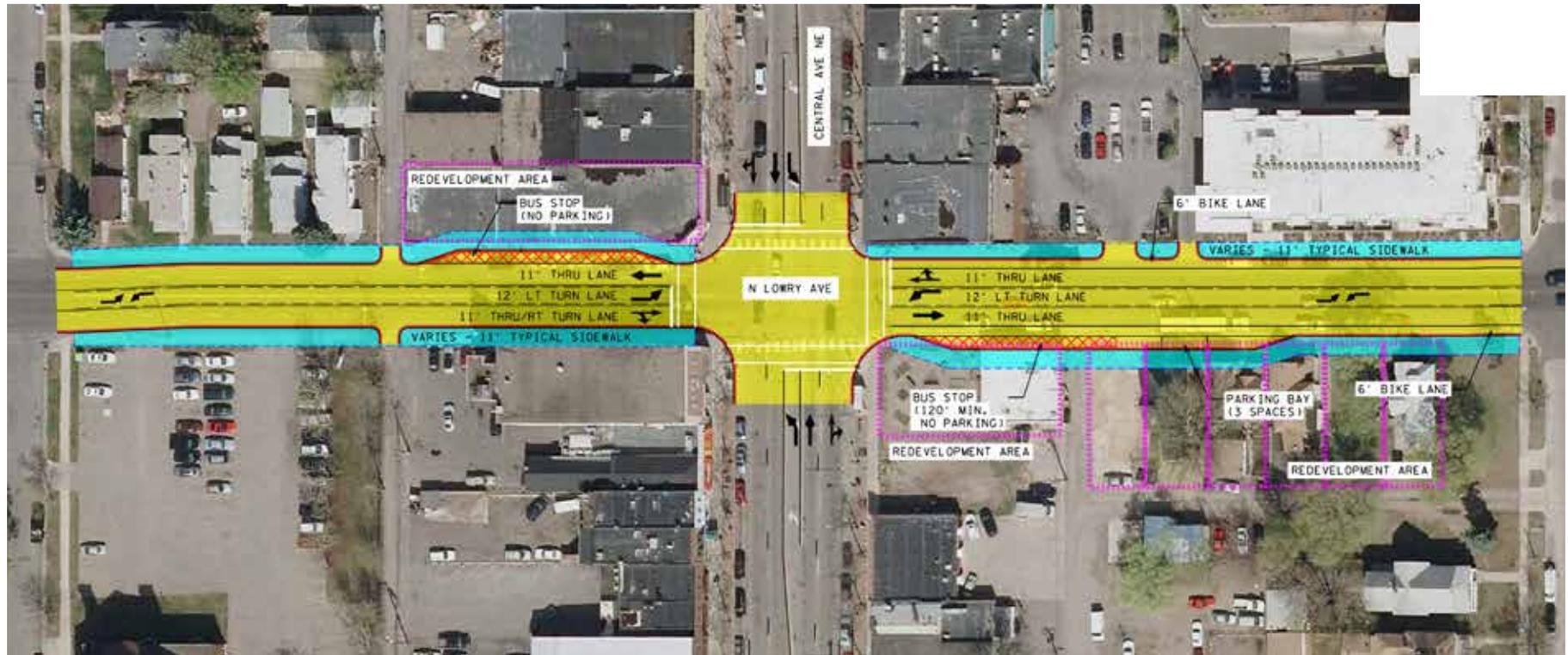


Figure 18: Recommended Improvements – Lowry Avenue NE at Central Avenue NE

INTERSECTION DEVELOPMENT SCENARIOS

Six nodes on Lowry Avenue NE were identified for this planning study — intersections with Marshall Street NE, 2nd Street NE, University Avenue NE, Washington Street NE, Monroe Street NE and Central Avenue NE. These intersections were analyzed for redevelopment opportunities, bicycle and pedestrian safety improvements and enhancements to traffic flow. The transportation improvements to these intersections were previously presented in earlier segments of this plan. This section describes the redevelopment scenarios identified for each of the six study intersections. All scenarios are thought to be long term — taking up to 20 years to see the recommended changes. Whether the scenarios are pursued is dependent on the ability to purchase land from willing sellers.

A recommendation of the 2002 Lowry Avenue Corridor Plan was the consolidation of existing services, retail and office space around transit-served intersections to create intensified mixed-use, transit-friendly developments at primary intersections. It also envisioned that the obsolete commercial uses interspersed among residential areas of the corridor would eventually relocate to the transit-friendly new developments. These recommendations remain applicable to Lowry Avenue NE today and play out in the scenarios presented within this section of the plan.

The market study completed as a part of this planning process evaluated the six study intersections for their potential to support new development. The market assessment found the following strengths and challenges to creating new housing, retail, and offices along Lowry Avenue NE.

Corridor-wide Development Strengths

- Strong forecasted growth.
- Strengthening of favorable demographics.
- Proximity to Mississippi River.
- Transit access.
- Proximity to downtown.
- Development momentum.
- Eclectic stock of buildings.
- Relatively low property valuation.

Corridor-wide Development Challenges

- Predominance of small, shallow lots.
- Site assembly.
- Incompatible uses.
- Incompatible zoning.
- Limited parking opportunities.
- Traffic volumes at certain intersections.
- Narrow sidewalks.
- Lack of space to accommodate people biking

The matrix on the following page lists the probable developer interest for each study node for the three feasible land uses of retail, office, and housing.

PROBABLE DEVELOPER INTEREST

Cross street	Retail	Office	Housing
Marshall	High	Medium	High
Central	High	Medium	Medium
University	Medium	Low	Medium
2 nd	Medium	Low	Medium
Monroe	Medium	Low	Medium
Washington	Low	Low	Low

Private investment in the corridor can be spurred by an attractive destination with a strong sense of place, human scale, architectural cohesion and vibrant neighborhoods. Scale, character, massing and ethos of the corridor’s buildings contribute significantly to these elements. A project initiative is to promote sustainable design excellence in new development so that new buildings architecturally fit into the surroundings, are energy and water efficient, and respond to neighborhood transitions with building massing. Specific recommendations for development follow.

Redevelopment recommendations:

- Create mixed-use, multi-story buildings with first floor uses that activate the street.
- Positively relate new construction to the street with building elements yet not infringe on the streetscape. Appropriate building setbacks will depend on building use.
- Consider a building setback from the sidewalk to provide a broader area for pedestrian activities. Where existing sidewalks are less than 10 feet wide, set buildings back a minimum of four feet (within the frontage zone) to create wider sidewalks for outdoor seating and streetscape elements.

- Plan new construction in relation to the surrounding buildings. Using common elements from the façade and architecture of neighboring buildings will create a harmonious feel to the streetscape. Building size, height and materials all factor into a coherent sense of place.
- Encourage the reuse of buildings where possible rather than new construction.
- Incorporate existing historical or character enhancing elements into redevelopment.
- Design the first level to have a human scale with attention to items including the building entries, first floor storefronts, lighting, signage and windows.
- Highlight major building entries.
- Create a sense of security by having building windows look onto the street.
- Create and adhere to guidelines and standards for site design, building massing, façade treatments, building materials, signs and sustainable design practices.
- Reserve space for stormwater retention or detention needs, and bicycle circulation.
- Treat one-inch rainfall events on site by, for example, infiltrating rainwater in ponds, swales and rain gardens or storing it for reuse in cisterns.
- Use permeable pavers to infiltrate water in parking lots.
- Screen at-grade parking lots with vegetation such as hedges and trees. Consider these parking lot screens as potential zones for stormwater treatment and infiltration.
- Use LED or other energy-efficient lighting.
- Consider solar-powered LED lighting to light exterior spaces.
- Provide space for organics composting and, for residential uses, on-site or nearby gardening.
- Incorporate bicycle parking and facilities into the first floor.
- Encourage constructing and renovating buildings to meet Leadership in Energy & Environmental Design (LEED) certification standards of silver or better.

REDEVELOPMENT CONCEPTS

LOWRY AVENUE NE AND MARSHALL STREET NE

This node presents a great opportunity to create a mixed-use node by providing additional housing choices, restaurants and businesses that serve surrounding residential neighborhoods.

The roadway intersection improvements are minimal at this location and do not require building removal. As a result, any redevelopment at this location will be driven by the private sector and some development is underway. As of 2014, Betty Danger's Country Club restaurant and bar is being built in the northeast quadrant of this intersection.

The owner of the southeast quadrant of the intersection is considering redevelopment of the property owned at this location, which includes most properties between Marshall Street NE and Grand Street NE and three single-family properties along Marshall Street NE. The single family homes are zoned R2B with the remaining parcels zoned C2. Rezoning of the entire site would be required to accommodate the proposed development.

This plan recommends a four-story mixed-use building (labeled A) with 12,000 square feet of commercial space on the first floor, approximately 34 to 38 units on three upper floors, one level of underground parking with 32 stalls and approximately 70 surface parking stalls behind the building. Parking could be shared with adjacent commercial uses off peak.

The current building at the intersection of Lowry Avenue NE and Grand Street NE is proposed to remain. Note: Drawing does not illustrate this. To the west of this existing building is proposed a new two-story commercial building (labeled B) with 2,300 square feet commercial /restaurant space on the first floor and a second floor with office or residential uses. Parking for the building would be behind the building in a surface parking lot of with about 28 stalls.

It is recommended that a minimum of 12 feet is dedicated to sidewalks and boulevard space along the south side of Lowry Avenue NE adjacent to the proposed redevelopment.



Proposed Redevelopment at Lowry Avenue NE and Marshall Street NE Intersection



Existing View

Bird's-eye View of proposed redevelopment at Lowry Avenue NE and Marshall Street NE intersection

LOWRY AVENUE NE AND UNIVERSITY AVENUE NE

This node has the greatest opportunity to evolve into a mixed-use urban village providing more housing choices, restaurants and businesses that serve the neighborhoods. The roadway is proposed to shift south to gain additional right-of-way needed to make the intersection improvements, including on-street parking and bus pull-offs. While detailed roadway design is not complete, initial conceptual design shows that additional right-of-way may be needed from approximately 9 parcels. Preliminary analysis identified the need to relocate the restaurant occupants in the southwest quadrant of the intersection and the smoke shop in the southeast quadrant of the intersection.

The southeast corner of the intersection is currently an automotive use zoned C2. It is recommended this area redevelop as a mix of commercial and office in a two-story building (labeled C). Approximately 60 parking stalls could be installed behind the building. This parking should be buffered from the adjacent residential properties with at least a 10-foot buffer planting strip that could also manage stormwater.

This block could also support a new residential building (labeled D). This site is currently zoned R-4 and could accommodate approximately 24 units in a three-story building. Parking could be underground with 22 stalls and in a surface lot that is shared with the adjacent commercial uses.

The southwest corner of the intersection is currently a restaurant zoned C1. This site is recommended to be redeveloped with four-story mixed-use buildings (labeled D) with first-floor commercial occupying 9,800 square feet. The existing restaurant should consider relocating into this first-floor space. Approximately 32 residential units could be located on the three upper floors. Parking would be provided with one level of underground parking with 30 stalls and approximately 60 surface parking stalls behind the building that could be shared with adjacent commercial uses.

The northwest corner of the intersection is currently a “smoke shop” zoned C2. Consider redeveloping this site with a two-story commercial/office mixed-use building with approximately 10,000 square feet per floor and a 44-stall surface parking lot behind the building. A 10-foot wide planting strip would buffer the parking lot from adjacent residential properties and facilitate stormwater management.

It is recommended that a minimum of 12 feet is dedicated to sidewalks and boulevard space along the south side of Lowry Avenue NE adjacent to the proposed redevelopment sites.

Buses will use a dedicated pull-off space at this intersection in parking bays. On-street parking at this location will be limited to six stalls as a result.



Proposed redevelopment at Lowry and University Avenue intersection



Bird's-eye View of proposed redevelopment at Lowry and University Avenue intersection

LOWRY AVENUE NE AND CENTRAL AVENUE NE

Lowry Avenue NE and Central Avenue NE intersection also will undergo a transformation. The new recommended roadway section shifts the road into the northwest quadrant of the intersection west of Central Avenue NE and into the southeast quadrant of the intersection east of Central Avenue NE. These shifts will require the acquisition of land in both quadrants.

The southeast corner of the intersection, commonly referred to as the “fire site,” provides a unique opportunity to create a significant mixed use development providing more housing choices, restaurants, businesses and shared parking that will serve Central Avenue NE and adjacent neighborhoods. This potential development will maximize the currently underdeveloped parcels, remove blighted parcels, and increase the tax base while preserving the residential character. The current zoning is C1 near Central Avenue NE and R5 near Polk Street NE.

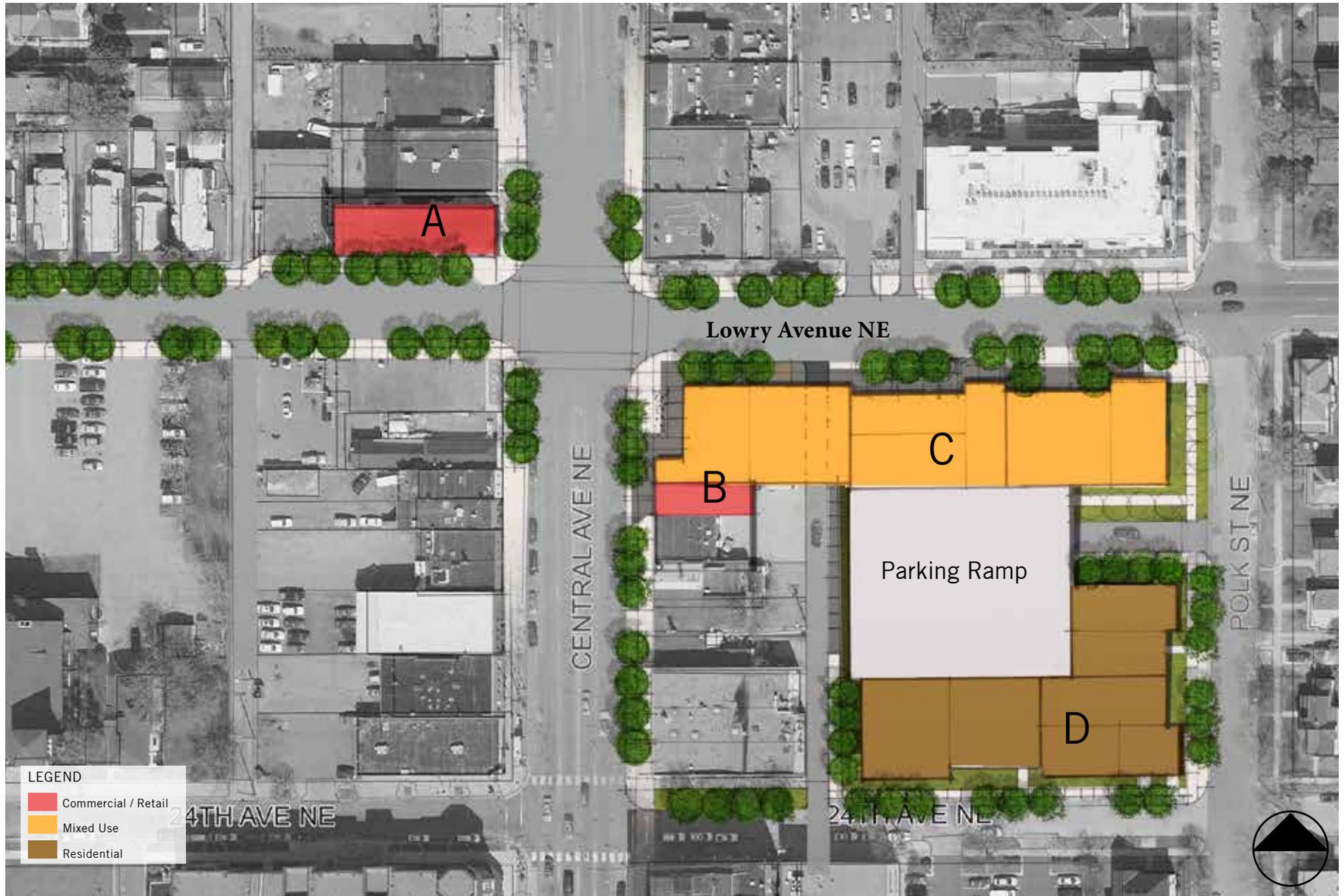
Three buildings are proposed within this block:

- Two-story, 3,000-square-foot commercial building along Central Avenue (labeled B).
- Four-story mixed-use building (labeled C) with first-floor commercial/office space occupying 26,000 square feet and approximately 72 units on three upper floors. One level of underground parking could accommodate 65 stalls. Four-story residential building (labeled D) with approximately 80 units and one level of underground parking with 70 stalls.
- Proposed four-story residential building (labeled D) with approximately 80 units and one level of underground parking with 70 stalls.
- Parking for the above buildings and the larger commercial area is proposed to be provided in a two-story structured parking deck with approximately 160 parking stalls in the middle of the mixed-use development.

The proposed roadway improvements will require the purchase of a parcel currently occupied by a linen store in the northwest quadrant of the intersection. A portion of this acquired property will remain following the reconstruction of the intersection, offering an opportunity to develop the site. This parcel should be redeveloped with a 9,000 square foot commercial and office mixed use building

(labeled A) or the adjacent commercial building to the north should expand onto this parcel. The current zoning is C1. New surface parking with six stalls can be provided behind the buildings. A minimum 10-foot-wide buffer planting strip should be installed between the parking lot and adjacent residential properties. This buffer strip could also facilitate stormwater management.

It is recommended that a minimum of 12 feet is dedicated to sidewalks and boulevard space along the southeast and northwest quadrants of the intersection adjacent to the proposed redevelopment sites. Bus pull-off spaces will be provided along Lowry Avenue NE west of Central Avenue NE.



Proposed redevelopment at Lowry Avenue NE and Central Avenue NE intersection



Bird's-eye View of proposed redevelopment at Lowry Avenue NE and Central Avenue NE intersection

LOWRY AVENUE NE AND WASHINGTON STREET NE

The short-term redevelopment strategy for the Lowry Avenue NE and Washington Street NE intersection is to replace buildings in poor condition in the northwest (zoned R-1A) and southeast (zoned R1-A and C1) quadrants of the intersection. The single family homes should be replaced with 12 rowhomes that reinforce the character and image of the corridor. Existing, well-maintained businesses could remain. Long-term redevelopment strategies for this intersection can be found in Appendix G.



Proposed redevelopment at Lowry Avenue NE and Washington Street NE intersection

LOWRY AVENUE NE AND MONROE STREET NE

The short-term redevelopment strategy for the Lowry Avenue NE and Monroe Street NE intersection is to remove outdated buildings to increase the tax base while preserving the residential character to the north. The northwest corner of the intersection is zoned C-1 and the northeast corner of the intersection is zoned R2B.

The northwest corner of the intersection is proposed to be redeveloped with a commercial building. A new transit shelter and plaza to serve transit riders, particularly the Edison High School students, should be a part of this development. The northeast corner shows seven new townhomes.

In the southeast corner, the gas station and Dairy Queen remain in this concept. A new location for the gas station building is being shown farther south on the current site. Driveways for all three of these businesses could be consolidated and parking could be shared between the businesses.



Proposed redevelopment at Lowry Avenue NE and Monroe Street NE intersection

LOWRY Avenue NE AND 2ND STREET NE INTERSECTION

Buildings currently occupy all four corners of the intersection. The buildings vary in condition and use. The northwest corner is zoned I-2, the northeast corner is zoned C-2, the southeast corner is zoned C-1 and R-3 and the southwest corner is zoned C-2. The proposed short-term redevelopment consists of three new buildings.

In the northwest quadrant of the intersection is a four-story mixed-use building (labeled A) with 26,000 square feet of commercial or office space on the first floor, 40 units of housing on the upper floors, 46 stalls of parking in one level of underground parking and approximately 58 stalls of surface parking behind the building. The surface parking could be shared with surrounding commercial uses.

A three-story mixed-use building (labeled B) with 9,200 square foot of first floor commercial/office space is proposed for the southwest quadrant of the intersection. It would include 18 units of housing on the upper floors and 40 surface parking stalls to the rear.

A two story building with 9,000 square feet commercial/office space (labeled C) is proposed for the southeast quadrant of the intersection, with 32 stalls of surface parking behind the building.



GREEN STREETScape



GREEN STREETSCAPE

Streetscape refers to the area outside of the travel lanes that contributes to the appearance of the street, serves the street users and improves the environment. Streetscaping lends a great deal to the character of a roadway and can make the difference between a road that feels like a highway or a road that feels like a pedestrian main street. It includes the street furniture, trees, rainwater gardens, signs, boulevard plantings, special paving, art, wayfinding, pedestrian lighting, trash and recycling receptacles. Good design of these elements creates a comfortable, inviting, memorable space and celebrates the diversity and history of the area.

Streetscape Theme

A streetscape designed around a theme has an aesthetic with identifiable characteristics, style, form, colors, textures and patterns. Customizing the streetscape with a theme can honor the corridor's history, uniqueness and its people.

During community meetings, stakeholders stated a preference for a consistent visual identity or style throughout the corridor with opportunity for the insertion of unique elements. When given the choice of four streetscape aesthetics (Industrial, Traditional Historic, Urban Eclectic, Contemporary), stakeholders preferred the Urban Eclectic appearance with Traditional Historic as a second choice. The Traditional Historic has a historical feel similar to a typical Midwestern main street



Downtown St. Louis, MO

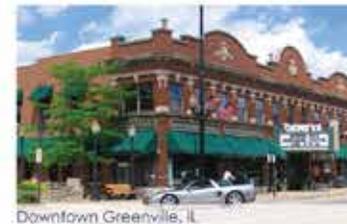
Traditional - Historic Aesthetic



Downtown Ann Arbor, MI



Old Town Orange, CA



Downtown Greenville, IL



Gaslamp Quarter in San Diego, CA



Pearl St. in Boulder, CO



Historic Greenville, OH



Chicago, IL



Wynwood Arts District in Miami, FL



The Meatpacking District in New York, NY



Delray Beach, FL



Arts District in Asheville, NC



Wynwood Arts District in Miami, FL



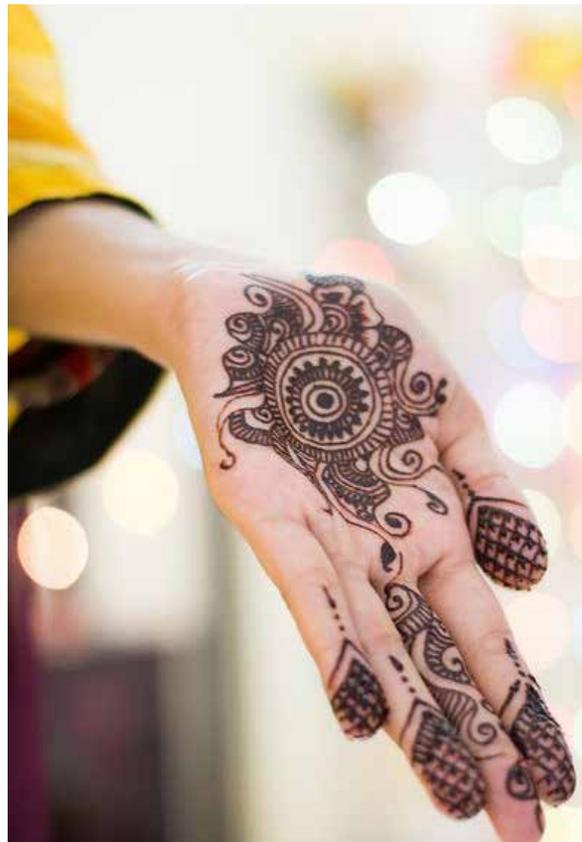
East Austin Arts District in Austin, TX

Urban Eclectic Aesthetic

where small shops line the street. Materials used in building and streetscape construction include brick, limestone and wrought iron. Colors are neutral. Brick paving patterns at intersections are traditional running bond, herringbone, and basketweave. Street planters and a tree canopy green the street.

The Urban Eclectic aesthetic embraces the industrial history and diversity of Northeast Minneapolis with industrial materials, a bright color palette, and bold paving patterns. Industrial materials — wood, brick, metal, and concrete — are used for planters, trash cans, streetlights, fencing, seating, wayfinding, and paving. Street furniture and signs are constructed of repurposed industrial containers and manufacturing materials. Paving patterns are non-linear abstract shapes that are painted with varying color schemes.

The design team studied the cultural history of the Lowry Avenue NE corridor to fine-tune the urban eclectic design identity. Lowry Avenue NE was settled initially by immigrants from Eastern Europe, Scandinavia, and Russia. These immigrants worked in Northeast industries, giving rise to Northeast's traditionally blue-collar character. More recently, Ecuadorian, Hmong, and Somali communities have made the area home. The patterns and colors from these past and current cultural communities can be incorporated into the detailing of the fences, wall-faces, sidewalks, street furniture, and storefronts.



Examples of patterns from Ecuadorian, Hmong, and Somali communities

ARTS

The arts have a strong presence throughout Northeast Minneapolis. Artistic expressions integrated into streetscape elements, as individual creations or incorporated into adjacent private property, can be designed around the streetscape theme to enrich the experience of the avenue and create a sense of place.

Public art should be at nodes, in public spaces with high volumes of pedestrian traffic and considered in the design of utilitarian streetscape elements such as benches, trash receptacles, bike racks, wayfinding, monuments, pavement patterns, intersection design, and lighting. The primary locations within the study area recommended for public art include:

1. The intersection of Marshall Street NE and Lowry Avenue NE.
2. The intersection of Second St. NE and Lowry Avenue NE.
3. The intersection of University Avenue NE and Lowry Avenue NE.
4. The railroad overpass on Lowry Avenue NE between 6th St NE and Washington St NE.
5. The intersection of Central Avenue NE and Lowry Avenue NE.

Maintenance Program

Before the installation of streetscape elements or art, develop and fund a maintenance plan to ensure the elements or art look as good on day 700 as on day one.



Public art can be integrated into building facades to help reinforce the desired image and character of the corridor



Existing and proposed view at BNSF railroad underpass and Lowry Avenue NE. The use of a bright color palette and bold paving patterns reinforces the desired character and streetscape theme along the corridor

INTERSECTION DESIGN ELEMENTS

Lowry Avenue NE's many intersections have the opportunity to blend safety, aesthetics, and stormwater treatment to create an improved corridor for its users and the environment. Following are recommendations for making these intersections safer and more accessible for people as they walk, bicycle and drive.

1. Paving and crossing treatments

A hierarchy of crossing treatments should be applied to intersections based on the location and the volume of pedestrians and bicyclists. Special intersection paving treatments can break the visual uniformity of streets, highlight pedestrian and bicycle crossings as an extension of the public realm, and announce key locations. For specific design guidelines related to textured or colored pavement crosswalks refer to ACCESS Minneapolis plan, Chapter 10 Pedestrian Facility Design.

The hierarchy and appropriate locations include the following applications:

- Standard Markings — All crossings should be identified with parallel lines;
- Enhanced Markings — Ladder striping should be added for crossings of streets in the edge and edge zone;
- Special intersection paving treatments include integrated colors, textures, and scoring patterns. A dark gray or other appropriate color may be applied to the paving in crosswalks.

2. Curb ramps

Curb ramps must be installed at all intersections along Lowry Avenue NE where pedestrian crossings exist. For specific design guidelines related to curb ramps refer to ACCESS Minneapolis plan, Chapter 10 Pedestrian Facility Design.

3. Sidewalk treatments

Several options exist for sidewalk paving materials, decorative concrete treatments, concrete pavers, exposed aggregate concrete, brick and stone and/or several combinations of these materials. The Lowry Avenue NE corridor should use a simple, economical pattern and material in the less traveled areas and a more



Examples of decorative sidewalk treatments

intense use of decorative materials and patterns in special gathering areas, entry points, and bus stops. The treatments must maintain accessibility throughout their expected service life.

4. Advanced stop bar markings

Stop bar markings extend across all approach lanes to indicate where vehicles must stop in compliance with a pedestrian crosswalk at an intersection. These markings reduce vehicle encroachment into the crosswalk and improve visibility of pedestrians.

Advance stop bars should be considered at all primary signal-controlled intersections with marked crosswalks. The opportunity to locate the stop bars a maximum of 10 feet from the crosswalk locations should be considered at the critical intersections with University and Central avenues.

Detailed guidelines for stop and yield lines can be found in the Minnesota Manual on Uniform Traffic Control Devices and ACCESS Minneapolis plan, Chapter 10 Pedestrian Facility Design.

5. Curb extensions / bump-outs

Curb extensions (also called bump-outs) should extend the sidewalk into the parking lane to narrow the roadway and provide additional pedestrian space at key intersections. Curb extensions can be used at street corners and midblock. Curb extensions often are no larger than the crosswalk width, but can be widened to increase pedestrian visibility or to create public spaces, landscaped areas, or transit waiting areas. When on-street parking is provided, curb extensions should be provided at intersections where they do not interfere with bus pull-offs.

6. Accessible and countdown pedestrian signals

Accessible pedestrian signals (APS) provide information in non-visual format (such as audible tones, verbal messages, and/or vibrating surfaces). It is standard practice on county and city roads that all new signals are APS.

Pedestrian countdown signals tell people the time remaining to clear the crosswalk before the signal change. Their installation at all new signalized intersections is mandated by the 2009 Minnesota Manual on Uniform Traffic Control Devices



Examples of accessible and countdown pedestrian signals

guidelines. For specific design guidelines related to countdown signals refer to ACCESS Minneapolis plan, Chapter 10 Pedestrian Facility Design.

7. Bus stops

Transit stops are among the most active pedestrian gathering spaces and can provide identifying elements within the streetscape. Stops should be designed to be more comfortable and dignified to attract more users and to better serve existing users. Bus stops along the Lowry Avenue NE corridor should be well connected to the sidewalk network and bicycle facilities to allow convenient connections to neighborhoods, commercial nodes, the Mississippi Riverfront and places of employment and shopping.

The stops can be enhanced with the use of new shelters, kiosks, monument signs, decorative paving, newspaper corrals, and public art. New transit stops (specifically at Monroe Street) should be located in active and visible places to maximize personal security. For specific design guidelines for bus and transit stops, refer to ACCESS Minneapolis plan, Chapter 10 Pedestrian Facility Design.



Example of bus stop and transit amenities

8. Bicycle parking

Bicycle parking is an important element of the streetscape, both as an aesthetic aspect of the streetscape and as a functional element for those who travel by bike. Parking should be provided near destinations such as schools, libraries, transit stops, employers, multifamily housing, shopping and anywhere else people bike. Short-term parking, usually racks, should be placed in the boulevard, adjacent to buildings or on curb extensions and be parallel to the curb so that bikes parked at them do not project into the sidewalk throughway or edge zone. The installation of bicycle racks should be planned for in the roadway design and with any new building construction within the corridor. Longer-term parking, including bike corrals and indoor parking, should be coordinated with property owners for placement typically outside the right-of-way.

For specific design specifications related to bicycle parking refer to ACCESS Minneapolis plan, Chapter 4 Bicycle Facility Design Guidelines, Chapter 5, Page 160-170, and Hennepin County's bike parking guidelines.

9. Nice Ride bike sharing

Currently, two Nice Ride kiosks are near the Lowry Avenue NE corridor. Space for Nice Ride kiosks should be designed into every intersection reconstruction.

10. Wayfinding signs

The designs of signs, directing people to key destinations and transit stops along the Lowry Avenue NE Corridor should be integrated into streetscape elements (light poles, transit shelters, monuments, signs) and reinforce the streetscape theme. For specific design guidelines related to Wayfinding, refer to ACCESS Minneapolis plan, Chapter 10 Pedestrian Facility Design, Section 10.7.

Since there are no dedicated bike facilities recommended on Lowry Avenue NE between Marshall Street NE and Central Avenue NE, wayfinding to alternate bikeways is particularly important. The City of Minneapolis has implemented a robust bikeway wayfinding system that can be enhanced to provide wayfinding to the existing bikeway on 22nd Avenue NE and to the planned 27th Avenue NE bikeway at three key locations along Lowry: at Marshall Street NE, Central Avenue NE and Polk Street NE.



Example of wayfinding signage and gateway monuments

11. Gateway monuments

Gateway monuments are typically larger structures that denote an entrance into a special area, neighborhood or district. These monuments should function as a major visual element that can be designed to reinforce a desired character or image of a district or neighborhood.

Gateway monuments should be located within the amenity area of the public realm. The primary locations recommended for gateway monuments include the intersections of Marshall Street NE, University Avenue NE, Central Avenue NE, and Stinson Boulevard intersections.

12. Underground utilities

To limit the number of utility poles that obstruct the pedestrian environment and to improve the aesthetics of the corridor, it is recommended that the overhead utilities be buried.

GREENING LOWRY AVENUE NE

A well-designed streetscape can be mutually beneficial to mobility and the environment. This section discusses “greening” opportunities — storing or treating rainwater, using cleaner sources of energy such as solar, and using vegetation to clean the air and intercept water.

Urban Forest

The urban forest includes all trees, shrubs, and other understory plantings within the public right-of-way and on private property. They contribute to the overall improvement of the urban environment by providing natural beauty, shading, and air purification.

1. Trees

Trees in the boulevards make the street more comfortable, reduce the urban heat island effect by shading infrastructure that stores heat, absorb carbon dioxide emissions from motor vehicles, and can intercept rainwater, thereby reducing runoff. For these reasons, street trees are strongly encouraged in boulevards six feet or wider.

Following are guidelines for the installation of trees to achieve maximum growth in a constrained urban environment like Lowry Avenue NE.

- Select the appropriate tree species for the location and design the planting areas to ensure the healthy growth and longevity of trees. Tree selection should consider form, mature size, color, and texture to reflect the urban design goals of the corridor.
- Space the street tree by the expected mature size of the tree. Generally, trees along Lowry Avenue NE should be planted at a spacing of 25 feet to 30 feet on-center. Plant trees in clusters of three to five trees to create a continuous tree canopy along the street. The recommended spacing should be considered a general target to allow for trees to adjust to local street conditions such as setbacks, utilities, driveways, bus stops, and building entrances.
- Provide street trees with adequate uncompacted soil (minimum of three feet of soil depth), water, and air.
- Use engineered soils such as “Swedish” soils to promote better tree health



Trees in urban areas should be planted to support tree growth

while protecting paved surfaces from root damage. The design of the planting areas should consider including improved stormwater detention and infiltration.

- Consider how a mature tree canopy will affect street lighting or views of signage and building fronts.
- Respect healthy existing trees when designing locations for new trees.

2. Plantings

Ground level and understory landscaping includes sidewalk planting strips, raised planters and landscaping in stormwater management areas. This simple and inexpensive addition of green space to the public realm area adds visual interest, habitat, stormwater management and ecological value to the right-of-way. Ground level/understory planting strips and sidewalk landscaping are suitable for Lowry Avenue NE. These ground level planting areas, sometimes called blooming boulevards, should be coordinated with the City to define cost sharing opportunities and agreements for future upkeep and maintenance.

Principles for ground-level plantings

1. When designing Loery Avenue NE or redeveloping sites, include plants and trees to clean runoff and manage stormwater at the site. Use bioswales, planters, rain gardens and street trees.
2. More formal ground level plantings are recommended for six study intersection areas.
3. Planting strips should be a minimum of 6 feet wide along a street where trees are to be planted. Planting strips less than 4 feet wide may be used for other types of plants (shrubs, ground cover, and grass).
4. The same planting strips used for plants should also be designed to detain, cleanse, and infiltrate stormwater where possible.
5. Native or drought-tolerant landscaping should be considered anywhere ground level/ understory landscaping projects are implemented.
6. Larger building setbacks will allow for planting strips on private property.
7. Where the adjacent land use is parking lot, shrub hedges, grasses or other tall



Examples of ground level plantings

should be used to screen these uses from sidewalk view.

8. Create urban gardens (large potted plants and hanging baskets) in the areas where public space restrictions occur.

STORMWATER MANAGEMENT

Impervious surfaces and compacted soils in the Lowry Avenue NE corridor prevent rainfall from absorbing into the ground. This phenomenon can increase flood risks and can impact the water quality of runoff. As stormwater runoff flows over surfaces, it can accumulate sediment, nutrients, oil, metals, bacteria, and other pollutants. This polluted runoff enters the storm sewer system and is ultimately discharged to the Mississippi River. During heavy rainfall, high quantities of runoff can also increase flood risks for businesses and homes. To mitigate the negative impacts of stormwater runoff, best management practices (BMPs) can be incorporated into the corridor.

Stormwater BMPs are flexible and could be integrated into a variety of different locations and types of spaces along and adjacent to the Lowry Avenue NE Corridor. Opportunity sites include the corner and mid-block curb extensions, on-street parking-lane, boulevards, sidewalk planter areas and strips, pocket parks/plazas, residential yards, privately owned parking lots, and building frontages. The designers of these facilities should look for opportunities to combine artistic elements, public art, landscaping, and educational opportunities with stormwater management.

When integrating a stormwater BMP, designers should consider the objectives of the installation. Is the system being designed for conveyance, rate control, volume control, or water quality improvement? Streetscape geometry, underground utility locations, topography, available space, and climate can be used determine BMP options. In some cases, it may be necessary to implement several BMPs in succession (treatment train approach).

The green infrastructure strategies presented in this section are some BMPs that



Example of green infrastructure BMP that could be possible along Lowry Avenue NE

can help mitigate the environmental problems associated with runoff by removing or delaying the runoff and treating runoff before it is discharged into the sewer system and, ultimately, the Mississippi River. BMPs to consider are planters, rain gardens or tree trenches, swales, and permeable pavers. The need and cost-effectiveness to construct and maintain these BMPs can be determined on a case-by-case basis.

Planters

Planters can be designed as “infiltration planters” if the underlying soils are conducive for fast percolation of stormwater. For poorly drained soils, “flow-through planters” or “biofiltration/filtration planters” are recommended. Planters are designed to combine stormwater runoff control and treatment with aesthetic landscaping and architectural detail. They provide on-site retention (delaying peak flow), infiltration, and can potentially recharge groundwater under specific geologic conditions.

Infiltration planters are landscaped reservoirs used to collect, filter, and infiltrate into the ground runoff from roofs, streets, and sidewalks. This is achieved by allowing pollutants to settle or filter out as the water percolates through the planter soil media and into the ground. In addition to providing pollution reduction, flow rates and volumes can also be managed with infiltration planters. Planters can be integrated into streetscape design. Numerous design variations of shape, wall treatment, and planting can be used to fit the character of a particular streetscape.

Flow-through planters are identical to infiltration planters, except that water is discharged through an outflow device instead of being infiltrated into the ground. Stormwater attenuation and water filtration are the main design functions and benefits of flow-through planters. They can also be placed in the boulevard to receive runoff from sidewalks and streets through curb breaks.



Examples of infiltration and flow-through planters

Swales are long, narrow, landscaped depressions primarily used to collect and convey stormwater and can also be used to improve water quality. They remove sediment and reduce nutrient concentrations within runoff through natural treatment before discharge into another stormwater management facility or the storm sewer network. In addition to providing pollution reduction, swales can also reduce runoff volumes and peak flow rates by detaining stormwater.

Swales add significant landscaping to street corridors and reduce impervious surface. Under some circumstances, rainwater infiltrates into the ground while being conveyed along the length of a swale.

Biofiltration swales (or bioretention swales) typically include a subsurface filtration trench and/or underdrain below engineered soils. Filtration benefits of swales can be substantially improved by planting deep-rooted grasses and forbs and by minimizing the slope. Appropriately selected vegetation can improve infiltration functions, protect the swale from rain and wind erosion, and enhance overall aesthetics.



Example of grass swale in a public boulevard

Rain Gardens and Tree Trenches



Examples of green infrastructure BMP that could be possible along Lowry Avenue NE



Example of vegetated swale in a public boulevard



Example of a tree trench that buffers parking lot from a public sidewalk

Rain gardens are landscaped, shallow depressions that retain or detain stormwater runoff. Rain gardens are similar to planters. Depending on the site and underlying soil conditions, they can be designed with or without an underdrain and an overflow structure. Rain gardens generally are larger than planters and can treat larger volumes of runoff. Similar to planters, rain gardens are mostly constructed with engineered soils. Engineered soils are a special blend of sand, topsoil, and mulch, prepared with different ratios depending on the site conditions. They are usually laid over a layer of sand/gravel.

Rain gardens improve water quality by capturing sediment, nutrients, and other pollutants that are typically found in runoff. Rain gardens also delay the rainwater runoff to the sewer system, thus reducing peak flow into the system and can reduce the possibility of flooding in some cases. Furthermore, they can increase infiltration potential of a site by retaining the water where it falls, thereby reducing the total runoff volume.

Rain gardens can be implemented in a variety of streetscape configurations including curb extensions, boulevards, and parking lane planters. Rain gardens can also exist on private property to capture runoff. Wherever they are located, well-maintained rain gardens contribute to the beauty of the neighborhood and provide habitat for wildlife.

Tree trenches are a variation on rain gardens. In this case, the surface plantings are trees that adaptable to varying water levels and are salt-tolerant. The subgrade typically consists of uniform gravel with a small amount of topsoil washed in. Tree roots have been found to primarily need air and water, with a small amount of nutrients; thus, the tree trench subgrade is ideal for tree growth. Benefits of tree trenches over traditional rain gardens include shade and other benefits associated with trees.

Wet and Dry Ponds

Two different kinds of ponds are often used for stormwater runoff management and treatment: wet ponds and dry ponds. Wet ponds have a permanent pool of water that fluctuates in response to precipitation and runoff from the contributing areas. In contrast, dry ponds are usually dry except during or after rain or snow melt. Both types of ponds are able to temporarily store runoff, thereby decreasing the rate of flow entering the drainage system and are also able to capture sediment and pollutants to varying degrees. Although ponds are widely used BMPs, their use within the narrow Lowry Avenue NE corridor may be difficult since they require a large footprint.

Permeable Pavement and Pavers

Permeable pavement is a type of hard surface with large spaces that allows stormwater runoff to infiltrate into drainage layers and the underlying soils below. This water either infiltrates or is removed by a subdrain placed in the drainage layer that connects to the drainage system.

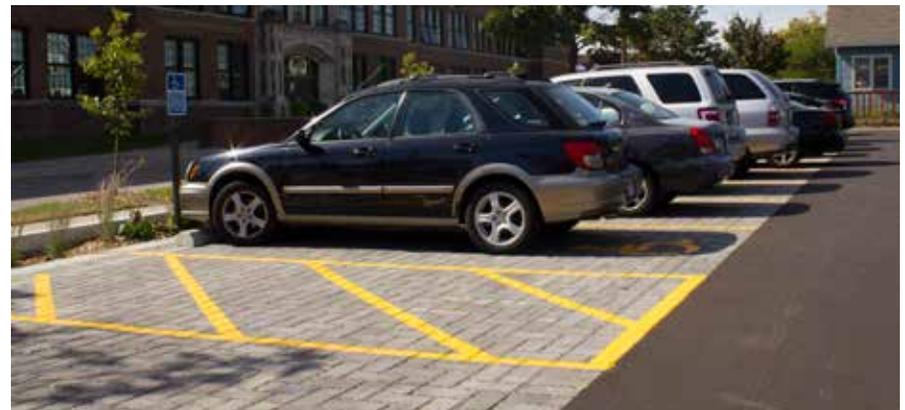
Permeable pavers are solid individual units typically made of precast concrete, brick, stone, or cobbles. The pavers are set with gaps between individual pavers, which allow water to flow between them and into the drainage soil below. Permeable pavers are typically laid over a uniform gravel subgrade of several feet in depth, which is used to store and treat the runoff as it moves through the subgrade.

Solar Powered Lights, Signs and Signals

Electricity to traffic signals and lights is a drain on public budgets. Two ways to lower these costs are the use of LED lighting and the use of solar as the power source. LED signals and lights consume 90 percent less energy than their incandescent counterparts and last several times longer. Solar powering signals and lighting is another reliable, cost-effective and eco-friendly option for the Lowry Avenue NE corridor.



Example of urban retention pond in Minneapolis



Permeable pavers at Edison High School in NE Minneapolis

IMPLEMENTATION



IMPLEMENTATION

The best plans are of little value if they are not implemented. Implementation of the corridor plan requires the proactive leadership and collaboration of public agencies at multiple jurisdictional levels, including Hennepin County, the City of Minneapolis, Metropolitan Council, MnDOT, Mississippi Watershed Management Organization, and the five corridor neighborhoods.

Implementation of the plan is also dependent on the full support and participation of landowners, residents, businesses and the development community. A concerted effort has been made throughout this project to involve a broad cross-section of the community. Business owners, neighborhood residents, and community leaders have provided input and guidance. Their participation has improved the study and their continued participation and support will be critical in sustaining the community's vision for the corridor over time.

The public improvements associated with the Lowry Avenue NE Corridor Plan will act as a catalyst for reinvestment and represent a positive step toward ensuring a vibrant long-term business climate and livability for northeast Minneapolis. This section includes actions that should be considered to integrate the improvements into an ongoing and community building strategy and to gain the most benefit from streetscape and other public improvements.

PUBLIC INFRASTRUCTURE AND REDEVELOPMENT SITES

This plan calls for reinvestment in the focus areas at the University and Central Avenue NE nodes, corridor-wide pedestrian improvements, and on-street bicycle facilities or alternate routing for people biking. The steering team would like to begin with a project with the greatest potential for the convergence of investment in infrastructure and buildings, both public and private. The Central Avenue NE intersection has the greatest potential for this convergence.

The phasing recommendations for the plan follow.

1. Focus initial activities on the intersections with Lowry and Central Avenues NE.

- Redevelop the Central Avenue NE intersection as a catalyst project. A catalyst project to provoke or accelerate significant change or action in the corridor. The Lowry Avenue NE and Central Avenue NE intersection



Reinvestment at key intersections and corridor-wide pedestrian improvements are primary recommendations of the planning process.

development, particularly in the southeast quadrant, is an important project in making transformative changes in the corridor.

- Reconstruction of the right-of-way in the vicinity of Central Avenue NE.

2. Focus second on the Lowry and University Avenues intersection.

- Redevelop the University Avenue NE intersection.
- Reconstruct the right-of-way in the vicinity of University Avenue NE.
-

3. Focus third on reconstructing the Lowry Avenue NE roadway segment between University Avenue NE and Central Avenue NE.

- Fourth, reconstruct the segment between Marshall Street NE and University Avenue NE.
- Last, reconstruct the segment between Central Avenue NE and Stinson Boulevard.

CORRIDOR-WIDE ONGOING ACTIVITIES

Simultaneously with the five phases identified above, the project team will undertake the following ongoing activities.

1. Coordinate objectives with all county and city departments

The planning and engineering departments from both the county and city should refer to this document when considering development proposals along the Lowry Avenue NE corridor. Developers should work with county and city staff and refer to the plan when generating design concepts to better understand how their property fits into the corridor plan and expectations for public/private facilities. Proposed developments should follow the design recommendations in this plan.

2. Develop a financial plan

A harsh reality of this report is that without viable financing many of the recommendations in this plan will not be implemented. Therefore, it is imperative that the City of Minneapolis and Hennepin County, along with the local business community, research and develop practical financing options to facilitate real change. Financing projects can be done by qualifying for grant money, borrowing, or bonding. The city and county should create a master schedule outlining when grant cycles start and are awarded and their relationship to agency capital budget cycles. The funding strategy should be flexible to take advantage of any unexpected opportunities.

Possible funding programs include:

A. Public capital improvement programs

- City of Minneapolis (Public Works, Minneapolis Park and Recreation Board, Community Planning and Economic Development, Public Art).
- Hennepin County (Housing, Community Works & Transit and Transportation).

B. Public-private partnership programs

- City special service districts.

C. Property tax programs

- Tax increment financing (TIF) districts.
- Tax abatement.
- Special assessments.

D. Grant programs

- Hennepin County Transit-Oriented Development (TOD) Program.
- Livable Communities Demonstration Account (LCDA).
- Statewide Health Improvement Program (SHIP).
- Transit for Livable Communities.



Future Lowry Avenue NE improvements should be coordinated with both city and county plans

- Minnesota Historical Society (Minnesota Legacy grants).
- Minneapolis Business District Support Grants (Great Streets Neighborhood Business District Program).
- Minneapolis Façade Improvement Matching Grants (Great Streets Neighborhood Business District Program).
- MnDOT Roadside Landscaping Partnership Program.
- Community Development Block Grants (CDBG).
- DOT/HUD Partnership for Sustainable Communities, Community Challenge Planning Grant.
- People for Parks Minneapolis.

E. Loan programs

- State Transit Improvement Area Account.
- Minneapolis Real Estate Development Gap Financing (Great Streets Neighborhood Business District Program).
- Minneapolis Two-Percent Loan Program.
- Minneapolis Two-Percent Commercial Corridor/Node Loan Program.
- Minneapolis Alternative Financing loan program.
- Minneapolis Capital Acquisition loan program (Community Reinvestment Fund).
- Minneapolis Working Capital Guaranty loan program.
- Minneapolis Business Development Fund loan program (applies to creation of jobs for Minneapolis residents).
- Community Reinvestment Fund.

F. Federal-Aid Highway programs

- National Highway Performance Program (NHPP).
- Surface Transportation Program (STP).
- Transportation Alternatives Program (TAP).
- Highway Safety Improvement Program (HSIP).
- Congestion Mitigation and Air Quality (CMAQ) improvement programs.

G. Federal Transit Program

- Urbanized Area Formula grants.
- Capital investment grants and loans.
- Transit Enhancement Activity program.

H. Housing programs

- Low-Income Housing Tax Credit.
- Minneapolis Advantage.
- Ownership Workforce Housing Fund.
- Rental Affordable Housing Trust Fund.

I. Neighborhood Revitalization Program

- Audubon Park Neighborhood Association.
- Bottineau Neighborhood Association.
- Holland Neighborhood Improvement Association.
- The Concerned Citizens of Marshall Terrace.
- Windom Park Citizens in Action.

J. Community Foundations

- The McKnight Foundation.
- Surdna Foundation.
- The Minneapolis Foundation.
- General Mills Foundation.
- Minneapolis Parks Foundation.
- Living Cities.
- Blue Cross and Blue Shield of Minnesota Foundation.

3. Assemble

Pursue the acquisition of tax forfeit, foreclosed, or for sale properties identified as necessary to pursue the roadway and redevelopment scenarios presented in this plan. The land could be acquired by Hennepin County or the City of Minneapolis. Either entity will be cognizant of the corridor plan and the additional right-of-way needs at these intersections.

4. Create a maintenance strategy for each project

Urban environments take a toll on our public realm and infrastructure improvements, including degradation by pollution, salt spray, and vandalism. Materials, furnishings, and plantings used in streetscaping should be selected for their durability as well as ease of maintenance, servicing, and replacement. But no matter how durable original materials are, or how well they are installed, they will not last without regular maintenance. This is especially true in the case of landscape plantings, which require regular and active maintenance to keep them thriving and attractive.

Before the construction of any improvements in the public right-of-way, develop a maintenance strategy for the improvement. The strategy should identify the level of maintenance needed and responsible party for each project component. Responsibilities may be delegated between county staff, city staff, property

owners, volunteers, or a private contractor. The maintenance strategy should also define a funding source, such as a maintenance special assessment district.

5. Help people bike through and to the corridor

Demand for bicycling is expected to increase in the corridor, especially as redevelopment occurs. While dedicated bikeways are not recommended on Lowry Avenue NE between Central and Marshall Avenues NE, the additional destinations and anticipated increase in bicycling will generate demand in the Lowry Avenue NE corridor. Several steps can help people bike through and to the corridor.

Create a wayfinding system for directing bicycle traffic to and from Lowry Avenue NE between Central and Marshall Avenues NE. While the wayfinding should direct people to facilities on parallel 22nd and 27th Avenues NE, it should also direct people from the alternative routes to destinations on Lowry Avenue NE.

Identify treatments connecting the 22nd and 27th Avenue NE alternative routes to Lowry Avenue NE, especially at the six nodes studied in this plan. Many of the people who would bike on Lowry Avenue NE are trying to reach destinations on Lowry. Creating safe connections to the corridor will mitigate the additional time, inconvenience and decreased safety of directing people off Lowry Avenue NE.

Ensure that as the corridor is improved adequate secure bicycle parking is provided at visible, safe and convenient locations.

6. Develop a private investment incentive fund

Create an incentive program that recognizes businesses making voluntary aesthetic improvements. Supplements such as painting and landscaping can visually enhance the appeal of an area and should be encouraged.

7. Study stormwater management and develop new programs

Determine by additional study the storm sewer pipe size that can be accommodated within the Lowry Avenue NE right-of-way to ameliorate the flooding at 2nd Avenue NE. Also further evaluate other strategies to accommodate stormwater in the corridor.

- Consider establishing a program in partnership with the Mississippi Watershed Management Organization that encourages the use of rain gardens and rain barrels on private property. Rain gardens absorb runoff from roofs, streets, and other impervious surfaces and slowly discharge the collected water into the ground. Rain gardens and barrels decrease the amount of runoff in storm sewers and drainage ditches, which helps reduce the risk of flooding and erosion, and may also reduce the amount of pollutants washing into surface waters.

8. Refine the streetscape theme

Work with the communities to further refine the streetscape theme “Urban Eclectic” selected during the final public open house by

- Developing the corridor’s brand or identity.
- Establishing interpretive themes that reflect the corridor’s heritage.
- Defining gateways and other areas of high visibility for signature elements.
- Developing façade recommendations for private development.
- Creating a color scheme.
- Developing a design vocabulary.
- Developing prototype designs for bicycle racks or identifying existing rack options.
- Identifying street furniture styles.
- Selecting light standards.

Much what gives the Lowry Avenue NE corridor its character and identity is found outside the right-of-way. These private property owners will be important to refining the streetscape them and ultimately to implementing complementary elements.

Many of the streetscape elements shown in the artistic renderings will require further discussions between the City of Minneapolis, Hennepin, County, and adjacent property owners to identify operations and maintenance funding. Special Service Districts have been successfully implemented throughout the

City in commercial areas, however current state statutes prevent special service districts in residential areas. Lowry Avenue Northeast is a pedestrian priority corridor. Current policy states that street lighting on pedestrian priority corridors will be funded as part of reconstruction project budget. Banners, street benches, colored pavement, pavers, plantings, and trash receptacles may be funded through special service districts or by encroachment permit. Adjacent property owners in residential areas or in commercial areas without special service districts may work with the city to secure encroachment permits or may enter into agreements with the city to operate and maintain a streetscape element. In addition, it is assumed that the existing power lines (including power and other utilities located on the pole) will be removed throughout the corridor to facilitate the new sidewalk and streetscape and that the project budget includes these costs. It is also assumed that encroachments within the public right-of-way will need to be moved to facilitate the desired cross-section.

