# 3. Transportation & Infrastructure

3.1 Historic Context
3.2 Existing Conditions
3.3 Corridor Improvements
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## 3.1 Historical Context

Lowry Avenue in North Minneapolis has been an important east-west transportation connector from the earliest days of the City. It connects to the northwestern suburb of Robbinsdale on the west. On the east it connects across the Mississippi River to northeast Minneapolis. It functions as a B minor arterial in the Metropolitan Council's classification system, which implies an important role in collecting and distributing traffic within communities and to the higher capacity regional roadways. It's classification In Minneapolis's Access Minneapolis schema is a "Community Connector", which is described as: "Medium capacity; connects neighborhoods together and with commercial corridors and other districts, districts with each other; serves as the main street of a neighborhood commercial node."

Lowry Avenue North spans both north and northeast Minneapolis to traverse the width of the City. In 2005 prior to its reconstruction, the traffic it carried was ten to fifteen thousand cars per day, with the highest volumes between Lyndale and Penn Avenues.

Access between Lowry and major regional roadways is limited; there is no access to or from I-94 on the east, and there is grade separated access from West Broadway on the west. The grade separation at West Broadway treats Lowry as secondary to West Broadway, and the need to exit based on reading signs rather than seeing the street underscores this. However, access between the neighborhoods, larger community, and Lowry

1936. American Lutheran Christ Church. Lowry & Oliver. Minneapolis Photo Collection, Hennepin County Library.

1957. Looking east on Lowry Avenue across Penn. MN Historical Society Digital Collections.

## 3.1 Historical Context

continued

Circa 1910. Bremer School, 1200 Lowry Avenue.
MN Historical Society Digital Collections.

Avenue is consistent because of the regular and predictable street grid pattern.

In the early 1950's, after the street car era, and with the introduction of freeways, travel patterns in the City changed significantly. Today, "arterial" streets function as the backbone of the city's transportation system and many corridors continue to provide important activity centers and commercial nodes that serve nearby neighborhoods. Lowry Avenue west of the river has functioned as one such arterial in the City. Over the years, many plans have attempted to redefine Lowry Avenue North. Theodore Wirth, in his 1920 Park Plan, described Lowry as: "… a Cross-town Boulevard connecting two important points of the grand rounds to be known as the Northeast and Northwest Gates". The most recent transformational plan was the 2002 Lowry Avenue Corridor Plan prepared by Hennepin County. This plan called for significant alteration of the 1950's street configuration and appearance. This is further discussed in section 6.3.

The street reconstruction and streetscape improvements west of I-94 were completed in 2009 as per the 2002 Plan. They have projected a positive ambience along the corridor. These improvements have created a community asset that projects durability and attractiveness. They support additional real estate and business investments that can transform Lowry back to its former vigor.

1941. Fire at the Rollerdrome, 2139 Lowry Avenue.
MN Historical Society Digital Collections

## 3.2 Existing Conditions

### Street

Lowry Avenue N traverses the standard street grid of Minneapolis, with the short side of the blocks abutting the Lowry corridor in most locations. The block spacing is typically 330 feet on center with the major exceptions in the three 440-foot blocks on the south side of Lowry between Lyndale Avenue and Dupont Avenue.

The 2010 cross section of Lowry Avenue varies in different sections of Lowry. Generally, it comprises of a two-lane roadway expanding to four lanes with turn lanes at the major nodes. The roadway width ranges from approximately 40 feet to 80 feet within a right-of-way width of 60 feet to 120 feet.

There are sidewalks on both sides of Lowry Avenue for the entire length of the corridor. Sidewalks vary in width from 5 feet in some residential areas to around 20 feet at the major nodes. In many areas of the corridor the sidewalks directly abut the curb. Utility poles have for the most part been undergrounded and new traffic signals, street signs and decorative lighting have been installed as part of the recent reconstruction effort.

New landscaped medians have been installed in several locations along Lowry Avenue N. Street trees have also been installed. In most of the residential areas and on some commercial properties, there are trees and landscaping in the private yards. Most of the side streets that intersect with Lowry Avenue N have full canopies of mature trees. In certain areas, there are narrow grass boulevards between the street curb and public sidewalk. Figures 6.2 and 6.3 show aerial images of the corridor after street reconstruction, and figure 6.4 shows the street during reconstruction.

Lowry & Lyndale. Source: Bing Maps 6/16/10.

Lowry & Fremont. Source: Bing Maps 6/16/10.

Lowry & Penn. Source: Bing Maps 6/16/10.

# 3.2 Existing Conditions

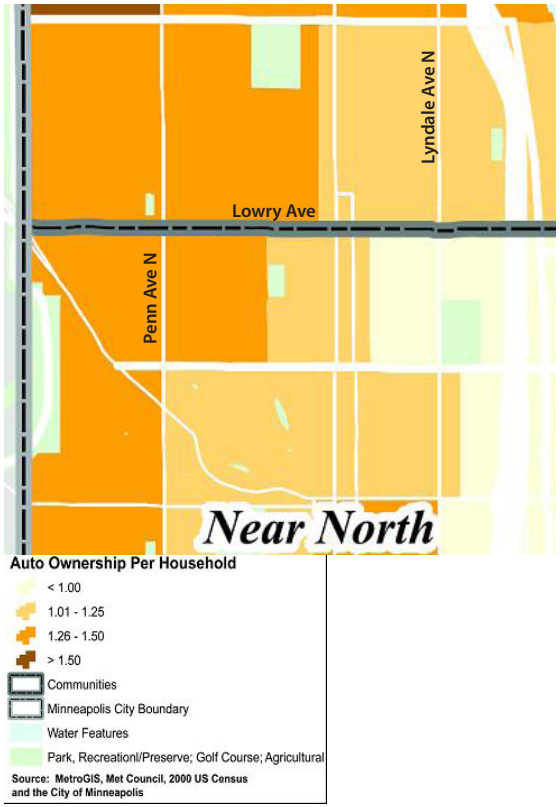
continued

## Traffic Counts and Auto Use

The table below illustrates the road capacities and traffic volumes for the major streets servicing the Lowry Avenue N corridor study area. The main inference from this table is that all the major connectors, namely, Lowry Avenue N, Lyndale Avenue N, Emerson-Freemont Avenues N, and Penn Avenue N have a ratio of volume to capacity of under 1.0. This means that the roadways currently have enough capacity to accommodate present day traffic as well as for projected conditions in 2030.

The roadway on Lowry Avenue N has been reduced to 2 lanes in most sections. However, at key intersections additional moving or turn lanes have been added, improving the performance of the roadway in terms of its ability to move traffic. Lowry Avenue can thus accommodate additional auto and transit trips without failing, as might occur with additional commercial or housing development.

Auto Ownership
(Source: ACCESS MINNEAPOLIS --
Ten Year Transportation Action Plan)




The map at left illustrates the average number of cars per household for census tracts in the Lowry area. It indicates below-average auto ownership in these neighborhoods, particularly in the southeast quadrant of the study area, such as in the Hawthorne Neighborhood. This makes the area a strong candidate for improved transit service. This is particularly true with the increased development density that is envisioned by this plan.

| Street Name | Segment (a) | | Street Type | Recommended Number of Lanes Per Street Type | Existing Number of Lanes | Capacity | ADT | | | V/C | | | Parking | Peak Hour Parking Restrictions | Transit | | Pedestrian | Bicycle | | | Freight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | 2005 | 2015 | 2030 | 2005 | 2015 | 2030 | | | Existing | PTN | Gap | Existing | Proposed | Gap | |
| Lowry Ave N | Victory Memorial Dr | Penn Ave N | Community Connector | 3 | 4 | 20500 | 9600 | 10100 | 10800 | 0.47 | 0.49 | 0.53 | | Yes | Yes | Recommended PTN | | | On-Street | | Truck Route |
| Lowry Ave N | Penn Ave N | Freemont Ave N | Community Connector | 3 | 4 | 20500 | 14200 | 14900 | 16000 | 0.69 | 0.73 | 0.78 | | Yes | Yes | Recommended PTN | | | On-Street | | Truck Route |
| Lowry Ave N | Freemont Ave N | Lyndale Ave N | Community Connector | 3 | 4 | 20500 | **15500** | 16300 | 17400 | 0.76 | 0.80 | 0.85 | | Yes | Yes | Recommended PTN | | | On-Street | | Truck Route |
| Lowry Ave N | Lyndale Ave N | Washington Ave N | Community Connector | 3 | 4 | 20500 | 10700 | 11200 | 12000 | 0.52 | 0.55 | 0.59 | | Yes | Yes | Recommended PTN | | | | On-Street | |
| Penn Ave N | West Broadway Ave | Lowry Ave N | Community Connector | 2T | 2 | 11250 | 10000 | 10500 | 11300 | 0.89 | 0.93 | 1.00 | | | Yes | Recommended PTN | | | | | Truck Route |
| Penn Ave N | Lowry Ave N | Dowling Ave N | Community Connector | 2T | 2 | 11250 | 8500 | 8900 | 9600 | 0.76 | 0.79 | 0.85 | | | Yes | Recommended PTN | | | | | Truck Route |
| Freemont Ave N | W Broadway Ave | 33rd Ave N | Neighborhood Connector | 2 | 2(1-Way) | 19000 | 4200 | 4400 | 4700 | 0.22 | 0.23 | 0.25 | | | Yes | Definite PTN | | | | On-Street | |
| Emerson Ave N | Plymouth Ave N | W Broadway Ave | Neighborhood Connector | 2 | 2(1-Way) | 19000 | 5000 | 5300 | 5600 | 0.26 | 0.28 | 0.29 | | | Yes | | | | | | |
| Lyndale Ave N | West Broadway Ave | Lowry Ave N | Neighborhood Connector | 2 | 2 | 11250 | 8800 | 9200 | 9900 | 0.78 | 0.82 | 0.88 | | | Yes | Candidate PTN | | | | | Truck Route |
| Lyndale Ave N | Lowry Ave N | Dowling Ave N | Neighborhood Connector | 2 | 2 | 11250 | 7100 | 7500 | 8000 | 0.63 | 0.67 | 0.71 | | | Yes | Candidate PTN | | | | | Truck Route |

Notes
Source - 2005 Average Annual Daily Traffic, City of Minneapolis
XXXX - 2005 Average Annual Daily Traffic
**XXXX** - 2003 Average Annual Daily Traffic
ADT Percent Growth Per Year = 0.5
MSA - Municipal State Aid Roadway
CSA - County State Aid Roadway
TH - Trunk Highway

Street Conditions, Volumes and Capacity
(Source: ACCESS MINNEAPOLIS --
Ten Year Transportation Action Plan)

# 3.2 Existing Conditions

continued

## Transit

High quality transit service improves the attractiveness of an area, and supports new development. Lowry Avenue has stong bus service on its intersecting corridors. However, east-west service along Lowry Avenue is infrequent.

As seen in Figure 6.6, Route 19 along Penn Avenue N, and Route 5 on Emerson-Fremont Avenue serve the area well, operating at a frequency between 6 and 15 minutes at midday. The map immediately below shows that they are accordingly part of the city's Primary Transit Network. Route 32 along Lowry Avenue and Route 22 on Lyndale Avenue operate at a lesser frequency of 16 to 30 minutes. Each of these bus routes are routed for longer distances and connect to major activity centers, namely Downtown, the University area, Chicago Avenue hospitals, Brookdale area, and the West Broadway commercial core. Note that the green line for Lowry Avenue in the figure at left signifies that it is a candidate to serve as part of the city's primary transit network at some point in the future, which would imply a commitment to high frequency service.

The Bottineau Transitway project has progressed since the 2008 adoption of Access Minneapolis. At the conclusion of the Alternatives Analysis in 2010, neither of the two alignment alternatives that are considered most promising for future LRT traverse the length of Lowry Avenue. One follows Hwy 81/West Broadway Avenue from the Terrace Mall to Penn Avenue, and from there follows Penn South to Olson Memorial Highway. This would put a North Memorial serving transit station a quarter of a mile northwest of the Lowry/Victory Memorial Drive intersection.

Primary Transit Network
(Source: ACCESS MINNEAPOLIS --
Ten Year Transportation Action Plan)

Existing Bus Service
(Source: ACCESS MINNEAPOLIS --
Ten Year Transportation Action Plan)

Transitway Alignment Alternatives
Bottineau Transitway Alternative Analysis Study,
Hennepin County

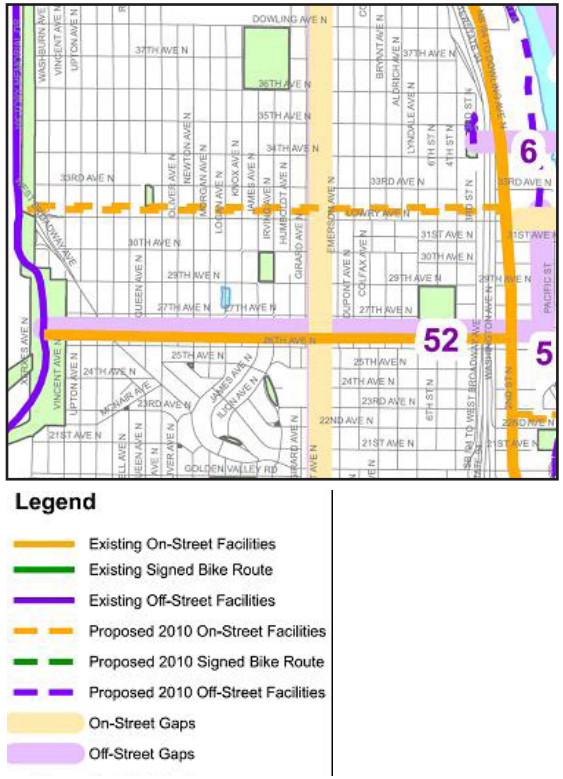
# 3.2 Existing Conditions

continued

## Bike Facilities

The maps on this page show existing and planned bike facilities in the vicinity of Lowry Avenue. Note the reference in the figure below to "Proposed 2010 On-Street Facilities" for Lowry Avenue. These facilities were completed with the reconstruction of Lowry. Bike lanes were constructed along the length of Lowry from 2nd Street on the east to Vincent Avenue on the west.

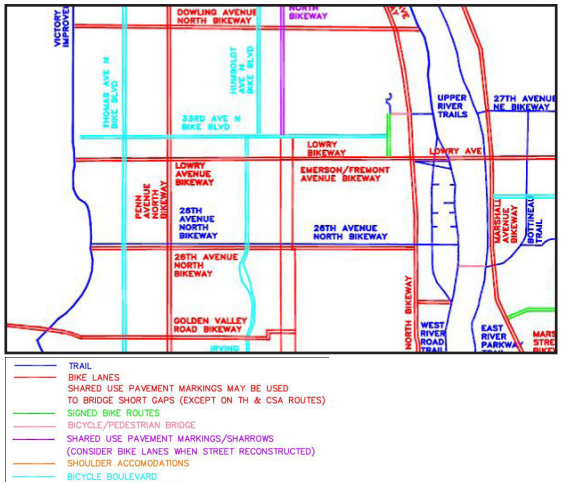
Existing and Imminent Bike Facilities Sources: Metro GIS Metropolitan Council, City of Minneapolis




Bicyclists on Lowry Avenue can connect with three existing north-south bike facilities. At the east end of Lowry Avenue, near the Mississippi River, there is a connection to north-south bike lanes on 2nd Street North. Lanes are being striped this year (2010) on northbound Emerson and southbound Fremont Avenues.

At the west end of Lowry Avenue, there is a connection with Theodore Wirth Parkway (to the south), and Victory Memorial Drive (to the north), with their associated off-street bicycle trails. These parkways are part of the city's renowned "Grand Rounds", which encircles the city. With Lowry bike lanes terminating at Vincent Avenue, there is a stretch of about 500 feet between this termination point and Victory Memorial Drive where bike facilities are absent, and bicyclists must share the road with automobile traffic.

2010 Draft Bikeway Master Plan
Source: ACCESS MINNEAPOLIS - Ten Year Transportation Action Plan




Proposed bikeways planned in the vicinity of the project area are shown in the accompanying illustration. They support and augment recommendations that came out of the Lowry Avenue Corridor Plan. The planned bicycle boulevards on 33rd Avenue N, Irving Avenue N, and Thomas Avenue N will significantly improve the bike amenities in the area, as will bike lanes on Penn Avenue These amenities can serve as important community assets, attracting better housing and related commercial development.

# 3.2 Existing Conditions

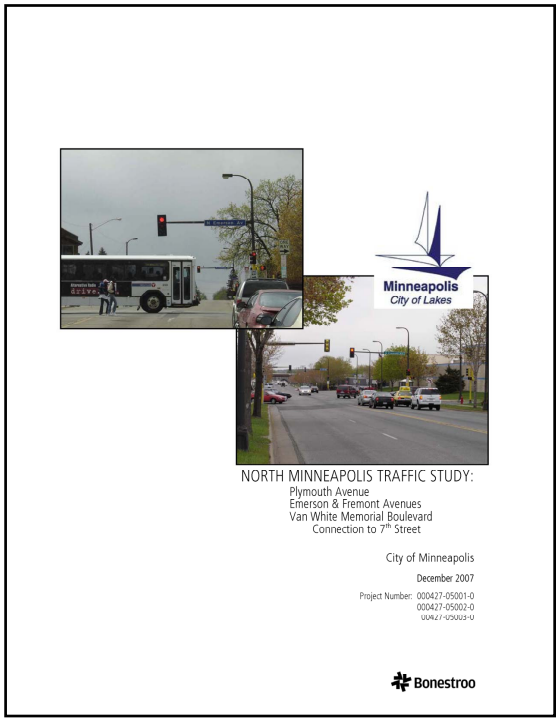
continued

## North-South Corridors

Penn Avenue N, Emerson-Fremont Avenues N and Lyndale Avenue N all provide critical connections to other area destinations, including the downtown, the region's most important activity center. They intersect with West Broadway Avenue, the destination retail center of north Minneapolis, where the City has invested heavily in revitalization programs and new development. And they connect to the stable residential neighborhoods further north. Most commercial enterprise on Lowry is concentrated at the intersections with these well-traveled north-south streets.

Washington Avenue is another north-south connecting street that is likely to have increased importance in the long-term. Future plans for the Upper River area call for an improved connection to the river between Interstate 94 and the Mississippi River, and redevelopment of this three block stretch along on both sides of Lowry Avenue. The intersection of Lowry and Washington is expected to serve as a North Minneapolis gateway.

Emerson and Fremont Avenues are paired one-way streets, converted from two-way operation in 1956. A study of their operation and safety was




completed in 2007. This study, entitled "North Minneapolis Traffic Study," found that conversion to two-way operation would contribute to calming traffic, while adequately accommodating existing traffic. However, with community concerns taken into consideration, the conclusion of this study is for these streets to remain one-way streets with the possible installation of other traffic calming measures.

# 3.3 Corridor Improvements

## Lowry Avenue Street Reconstruction

The Lowry Avenue N corridor seen today is the result of Hennepin County's design and reconstruction of the street from Interstate 94 to Theodore Wirth Parkway. The design process involved elected officials, neighborhood groups, public employees and consultants. Reconstruction occurred in three phases, beginning in 2005 and concluding in 2009. Goals for reconstruction were established in the Lowry Avenue Corridor Plan, and refined through the design process. The following were some key features and objectives for this project.

### Roadway Design Features

- Lowry Avenue maintained at four lanes from Lyndale to Interstate 94. Right-of-way acquired to allow for left hand turn lanes, on-street parking, pedestrian and landscape amenities.
- Lowry Avenue narrowed to two lanes from Xerxes to Lyndale Avenue with on-street bicycle lanes.
- Intersection improvements at Penn, Emerson-Fremont, and Lyndale.

### Pedestrian and Aesthetic Improvements

- Wide sidewalks, one-way on-street bicycle lanes, large treed boulevards, medians and pedestrian lighting.
- Decorative streetscape treatments at commercial nodes and gateways.
- Integrated storm water infiltration

The project was successful in achieving its street reconstruction goals.

## The New Lowry Avenue Bridge

The Lowry Avenue Bridge is an important transportation corridor and neighborhood connection in Minneapolis. Hennepin County initiated the bridge replacement in 2007 and the old bridge was demolished in June 2009 for known structural issues. A two-phased implementation approach was initiated. Phase I includes the replacement of the bridge over the Mississippi River which is now underway and scheduled for completion in 2011. Phase II involves construction of the roadway approaches to the new bridge over the Canadian Pacific Railroad.

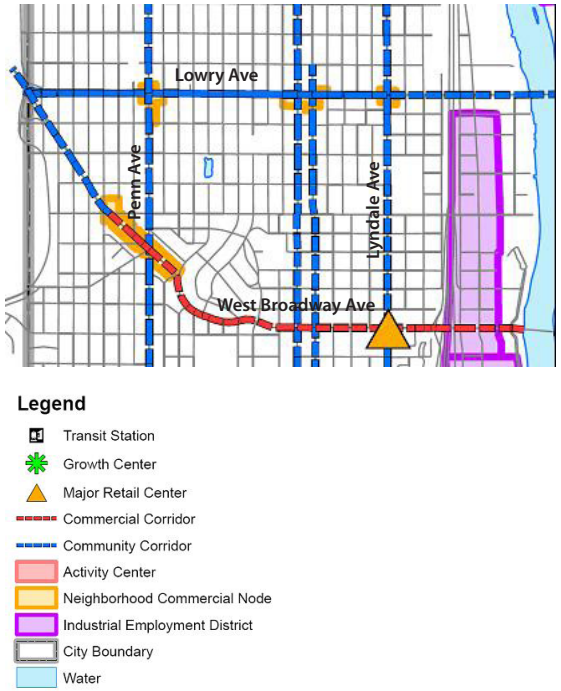
When completed, this bridge is expected to contribute greatly to the economic vitality of the Lowry Avenue N corridor by improving connections to northeast Minneapolis.

## 3.4 City Transportation Policy

In recent years, transportation planning in the City has been better integrated with land use planning. This is reflected in the synchronization between the objectives and corridor classifications in the City's comprehensive plan with the roadway classifications featured in Access Minneapolis, the City's Ten-Year Transportation Action Plan.

As discussed in the preceding chapter, Lowry Avenue N is a designated Community Corridor in the City's 2009 comprehensive plan, The Minneapolis Plan for Sustainable Growth.

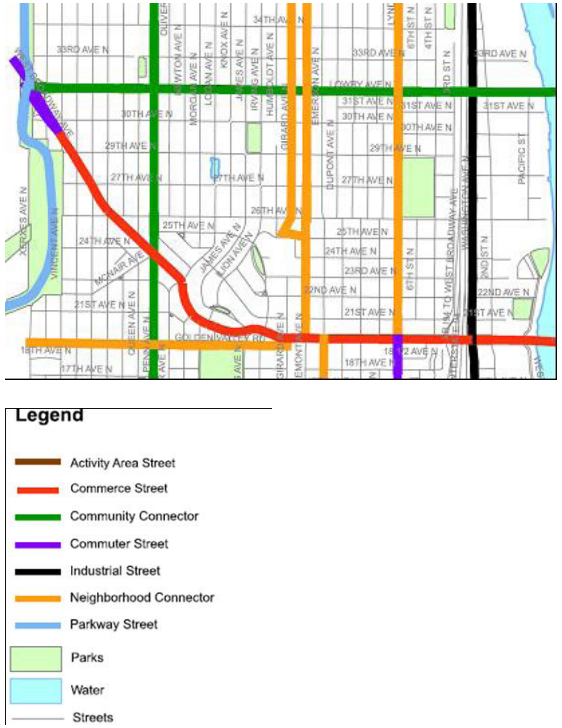
Corridor Designations
Source: The Minneapolis Plan for Sustainable Growth




In the Access Minneapolis plan, the following characteristics are identified with community corridors:

- Connect more than two neighborhoods.
- Moderate traffic volumes and may be principal travel routes.
- Primary Transit Network corridors with some exceptions.

Street Design Types
Source: ACCESS MINNEAPOLIS - Ten Year Transportation Action Plan




- Primarily residential with intermittent commercial uses clustered at intersections in nodes.
- Small scale retail sales and services serving immediate neighborhood.

The maps on this page from the City's Comprehensive Plan and the Access Minneapolis Action Plan respectively illustrate the synchronization of transportation classifications and planning objectives described above.

# 3.4 City Transportation Policy

continued

### Street Design Typologies and Characteristics

Access Minneapolis includes street design typologies. These are characteristics that are typical or desirable for the various street classifications in the plan. Table 6.2 shows the street design typologies that apply to Lowry Avenue N and surrounding arterials.

- **Community Connector Street.** A Community Connector street is a medium capacity street that connects neighborhoods with each other, neighborhoods with commercial corridors and other districts, districts with each other and serves as the main street of a neighborhood commercial node. Many are county-owned roads. Examples are Nicollet Avenue South and Lowry Avenue North.

- **Neighborhood Connector Street.** A Neighborhood Connector street is a low capacity street (usually under city jurisdiction) that connects neighborhoods with each other. Examples are Emerson Avenue North and Bloomington Avenue South.

- **Local Street.** A Local Street is a low capacity street that serves abutting property in residential neighborhoods or single use (industrial/ employment) districts.

- **Alley.** An alley is a shared local street used exclusively for property and parking access.

It is important to note that in the context of these street type classifications, both Lowry Avenue N and Penn Avenue N are Community Connectors, meaning they are intended to carry higher traffic volumes and accommodate higher commercial and residential density. Emerson-Fremont and Lyndale are neighborhood connectors, implying lower traffic volumes and less development intensity.

Street Design Types
Source: ACCESS MINNEAPOLIS - Ten Year Transportation Action Plan

| Proposed Street Types | Description | Equivalent Functional Class | Through Traffic Lanes | Target Operating Speed | Transit | Pedestrian Facilities | Bicycle Facilities[5] | Freight | Connection to Freeway System | Median | Turn Lanes | Curb Parking[6] | Curb Extensions | Driveway Access | Trees and landscaping |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Community Connector | Medium capacity; connects neighborhoods together and with commercial corridors and other districts, districts with each other; serves as the main street of a neighborhood commercial node. Some streets have a commuter function that require special frontage design | B Minor Arterials and Collectors | 2-3[2] | 30 mph | PTN and Local routes | Yes | Yes if in Master Plan | Local truck routes | Provisional | Optional | Optional | Yes | Yes | Allowable where side or rear not feasible | Yes |
| Neighborhood Connector | Low capacity; connects neighborhoods with each other. Some streets have a commuter function that require special frontage design | Collectors | 2 | 30 mph | PTN and Local routes | Yes | Yes if in Master Plan | Local deliveries | Provisional | Optional | Optional | Yes | Yes | Yes | |
| Parkway Street | Low-capacity thoroughfare designed to provide circulation adjacent to and through parkland | Locals | 1-2 | 25 mph | Provisional | Yes | Yes (on Parallel paths) | No | No | Optional | Optional | Recessed in bays | Yes | Optional | Yes |
| Local Street | Low capacity; serves abutting property in residential neighborhoods or single use (industrial/employment) districts | Locals | 1-2[3] | 30 mph | Local Routes | Yes | Yes if in Master Plan | Local deliveries | No | No | Optional | Yes | Yes | Yes | Yes |
| Alley | Property and parking access | Locals | 1-2 | 5 mph | No | No | No | Local deliveries | No | No | No | No | No | Yes | No |

## 3.5 Objectives and Strategies

There are many opportunities to make continued improvements to the public realm along Lowry Avenue. The transportation objectives and strategies for this plan are organized under the transportation objectives of the Access Minneapolis Action Plan. They reflect the inferences from the corridor data above, and incorporate community aspirations as expressed in the public process. They also take into consideration the land use strategies outlined in this Plan, that is to increase residential densities along the corridor and intensify development in the major nodes.

### Objective 1: Make transportation design decisions based on place type in addition to street function.

#### Short Term Strategy

- **Sidewalks and development.** Apply the City's recently adopted Street and Sidewalk Design Guidelines to all private and public partnered development projects to achieve public realm improvements where desirable.

### Objective 2: Ensure that all streets in the City are safe, convenient and comfortable for walking.

#### Short Term Strategies

- **Improve pedestrian connectivity.** Maintain and improve pedestrian network connectivity, building on the newly established streetscape and ensuring through the review process that the pedestrian network connects well to building entrances and principal facades which will now be oriented towards Lowry Avenue.

- **Signal timing.** Review signal timing at existing striped crosswalks to ensure that there is adequate time for pedestrians to cross the street.

- **Signal countdowns.** Retrofit pedestrian crosswalk mechanisms with accessible/audible signals with countdown timers where applicable.

#### Long Term Strategies

- **Crosswalk markings.** Improve crosswalk markings at the primary signalized nodes designated in the future land use map, including consideration of crosswalks utilizing decorative surfacing materials.

- **Green streets.** Pursue implementation of pedestrian-oriented green streets at 4th Street Humboldt Avenue, and 31st Avenue.

### Objective 3: Provide a well-connected grid of bike lanes.

#### Short Term Strategy

- **West end connection.** Design and construct a higher quality linkage between the western terminus of the Lowry Avenue bike lanes and the Victory Memorial Drive/Theodore Wirth Parkway off-street bike trails.

#### Long Term Strategy

- **Implement bike plan.** Partner with the City's Public Works Department to implement the additional bicycle facilities on 33rd, Penn, Irving and Upton Avenues identified in the City's Bicycle Master Plan.

## 3.5 Objectives and Strategies

continued

### Objective 4: Provide the best possible transit service on a Primary Transit Network.

#### Short Term Strategy

- **Bus stops and development.** Consider bus stop location and design improvements in conjunction with major new developments.

#### Long Term Strategies

- **Transit hub.** Explore with Metro Transit the construction of a high-quality transit hub at the Penn and/or Emerson-Fremont cross streets. This could include bike parking facilities, and improved transit information such as electronic schedule boards.

- **Bus frequency improvements.** As additional development progresses along Lowry, work with Metro Transit to study and improve speed and reliability of bus routes 22, 32, 5 and 19.

### Objective 5: Encourage people to walk, bike, take transit rather than drive.

#### Short Term Strategies

- **Employer incentives.** Encourage larger area institutions, local businesses, and housing providers to establish or improve the incentives they offer for walking, biking and transit use, such as offering free or subsidized transit passes to employees or tenants.

- **Employer assisted housing.** Establish and strengthen Employer Assisted Housing programs for large area institutions.

#### Long Term Strategy

- **Bike share.** Expand the Nice Ride bike share program to Lowry Avenue.

Transit Center at Chicago & Lake

### Objective 6: Manage and Operate Streets to Support All Modes of Transportation.

#### Long Term Strategy

- **Traffic calming on Emerson and Fremont Avenues.** Evaluate and pursue speed management strategies, and bike and pedestrian safety improvements to slow traffic, and facilitate pedestrian movement at the Emerson-Fremont business node.

### Objective 7: Make consistent decisions for curbside uses.

#### Short Term Strategy

- **Clear zones.** Provide enforcement and education to maintain minimum clear zones (on-street parking prohibited) from intersections and crosswalks in order to improve safety for both pedestrians and drivers.

#### Long Term Strategy

- **Area parking.** Explore the development of additional and shared off-street parking where needed at designated commercial areas along Lowry.