



# 2019 Minneapolis Mobility Hubs Pilot

### **Acknowledgements:**

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Project Team responsible for planning and execution of pilot includes The City of Minneapolis Public Works – Administration, Transportation Planning and Programming, and Traffic and Parking Services staff and The Musicant Group - Design and Planning staff

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# 2019 MINNEAPOLIS MOBILITY HUBS PILOT EXECUTIVE SUMMARY

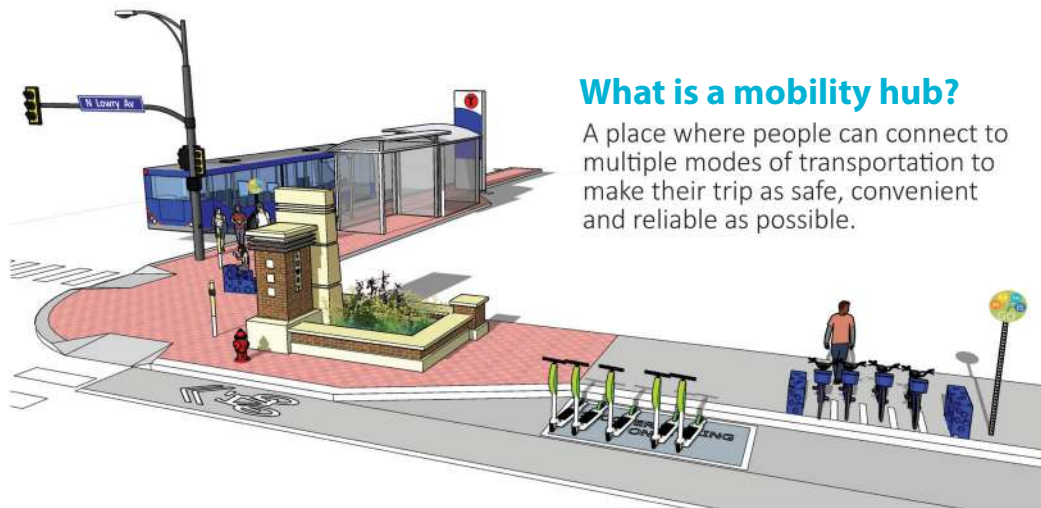
In 2019, the City of Minneapolis implemented a mobility hub pilot to increase access to convenient, low or no carbon transportation options, including transit, shared scooters and Nice Ride bicycles. This pilot was intended to introduce the concept of mobility hubs to the public, and help inform a long-term approach to implementing a larger mobility hub network in Minneapolis.

## PILOT APPROACH

Since mobility hubs are a relatively new concept in the region, the piloting process provided an opportunity to:

- » Test possible mobility hub interventions,
- » Conduct interactive engagement around the concept, and
- » Inform a long-term approach and larger strategic investments.

The mobility hub pilot was designed to create an interactive platform for community voice to shape the development and implementation of the basic mobility hub concept.



### What is a mobility hub?

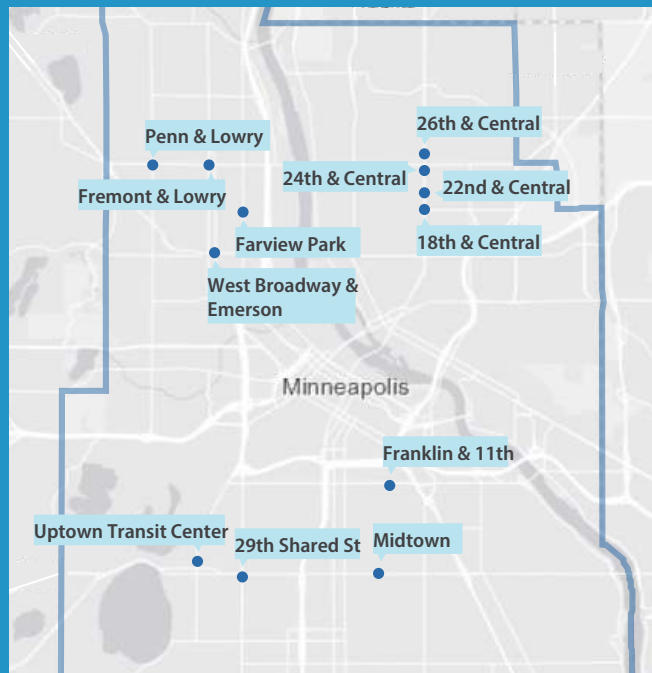
A place where people can connect to multiple modes of transportation to make their trip as safe, convenient and reliable as possible.

## PILOT LOCATIONS

This map outlines all 12 locations for the 2019 Mobility Hub Pilot.

The City of Minneapolis worked with Transportation for America and Arcadis to identify potential mobility hub sites by combining 32 different layers of data. The data demonstrated strong opportunities in neighborhoods in the North, Northeast and South sections of Minneapolis.

Neighborhood groups were instrumental in filtering the data-driven location selections through local expertise on their community transportation needs.



## IMPACT

Throughout the pilot, the project team conducted events where they conducted intercept surveys to gather feedback and evaluate the pilot.

64% of users reported that pilot improvements make them more likely to use the transportation options at the hub.

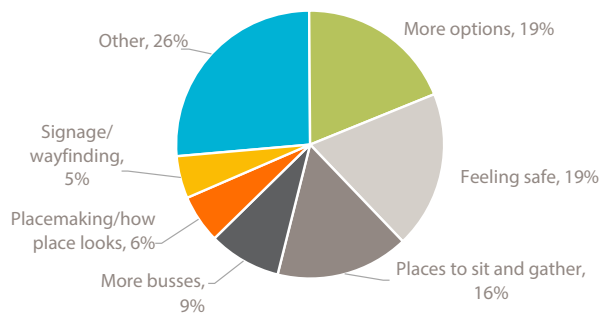
Three key themes emerged when users were asked what would be most important to improve their trip:

- » Access to more transportation options
- » Feeling safe
- » Places to sit and gather

Engagement events held at mobility hubs provided opportunity to distribute information on access and appropriate use of shared mobility, which included 285 helmets distributed, 60 test rides given, and over 200 flyers about low income programs distributed.



What was most important to making your trip better?





## LESSONS

The 2019 mobility hub pilot revealed key themes, lessons and recommendations to inform the further development of mobility hubs:

**Seating** is especially important to facilitate comfortable journeys for older adults, children, and people with heavy bags, physical mobility challenges or chronic pain.

- » **Recommendation:** Ensure more permanent accessible seating options at future mobility hubs.

**Safety** is a key driver of utilization of mobility hubs. The experience of safety is fostered through a variety of interconnected factors. Users shared how changes to the built environment, security presences, and proactive responses to negative behaviors would create a stronger sense of safety.

- » **Recommendation:** Future mobility hubs should incorporate intersection improvements and resources for creating safer environments, such as curb bumpouts, on-site ambassadors, and activation of spaces.

**Space** on the sidewalk is a major constraint to providing the full range of placemaking and transportation options in a convenient, accessible layout at mobility hubs.

- » **Recommendation:** Where available, utilizing on-street parking for mobility hubs could relieve pressure on sidewalk space and allow mobility hubs to have a more consistent layout.

**Other barriers** including vehicle accessibility and comfort are a barrier to using scooter- and bike-share. Financial and technological barriers also limit participation in app based systems that are primarily accessed via smartphone and with a credit/debit card.

- » **Recommendation:** Pursue localized solutions including additional vehicle types to mitigate these barriers and enable broader use.



**Maintenance** is key to creating effective year-round spaces in the right-of-way, especially with elements like signage systems, benches, planters, and bright-colored paints. Users said these elements contributed to their increased interest in using the transportation options at hubs.

- » **Recommendation:** Explore and develop new maintenance partnerships and assign maintenance responsibilities to less centralized entities.

Thank you to community, public sector, and mobility sector partners who collaborated on this pilot.

Powderhorn Park Neighborhood Association  
Picture Wagon - Ashley Satorius & Sally Nixon



## RECOMMENDED NEXT STEPS

Recommendation	Why?	How?
Expand locations of mobility hub pilot	<ul style="list-style-type: none"> <li>- Reach and engage more users in an interactive format</li> <li>- Users reported the features positively impacted their choice to use transportation options at the hubs, helping Minneapolis progress toward mode-share goals</li> </ul>	<ul style="list-style-type: none"> <li>- Replicate the location identification approach from 2019 pilot with modifications</li> <li>- Return and build momentum at 2019 sites and add other high-potential sites</li> <li>- Pursue grant funding and ongoing funding streams</li> </ul>
Prioritize seating, safety and choice of mode	<ul style="list-style-type: none"> <li>- Users surveyed identified these three features as most important to improving their trip at mobility hubs</li> </ul>	<ul style="list-style-type: none"> <li>- Test improved seating options in 2020 pilot</li> <li>- Test a hub ambassador approach to creating safe environment</li> <li>- Coordinate with Vision Zero efforts on safety and accessibility of sites</li> <li>- Expand on best practices in locating modes in tight configurations in public right-of-way</li> <li>- Incorporate Mobility as a Service Pilot to better facilitate access and payment among multiple modes</li> </ul>
Develop a kit-based design primarily for underutilized on-street parking and sidewalk space	<ul style="list-style-type: none"> <li>- On-street parking can provide cohesive base for replicating hub design</li> <li>- On-street space encourages riding bikes and scooters in on-street lanes. Relieves congestion on the sidewalk.</li> <li>- Kit encourages consistency in network</li> </ul>	<ul style="list-style-type: none"> <li>- Build on 2019 pilot layouts to create easily replicable packages that can still reflect community identity</li> </ul>
Continue to build partnerships with agency partners, community groups, mobility providers, and artists	<ul style="list-style-type: none"> <li>- Successful partnerships this season were built. Participation ensures better outcomes.</li> </ul>	<ul style="list-style-type: none"> <li>- Extend the micro-grant programming approach for 2020</li> </ul>
Continue to build partnerships with public right of way owners and operators like Metro Transit, Hennepin County, and MnDOT	<ul style="list-style-type: none"> <li>- Agency partnerships will be necessary for long-term placement of elements in right-of-way</li> </ul>	<ul style="list-style-type: none"> <li>- Work on provisional basis for placement of pilot elements in other right-of-way</li> <li>- Develop agreements for long-term mobility hub elements</li> </ul>
Pilot on-site ambassadors to fulfill maintenance and safety functions	<ul style="list-style-type: none"> <li>- Geographic distribution of mobility hubs presents logistical challenge for centralized maintenance</li> <li>- Enhanced maintenance and safety make the investment in a mobility hub more efficient at serving existing users and attracting drivers to non-car mode existing users and attracting drivers to non-car modes</li> </ul>	<ul style="list-style-type: none"> <li>- Approach neighborhood organizations and business coalitions to identify best fit for partnerships</li> <li>- Test community-based maintenance and safety approach through ambassadors at 2020 pilot sites</li> </ul>

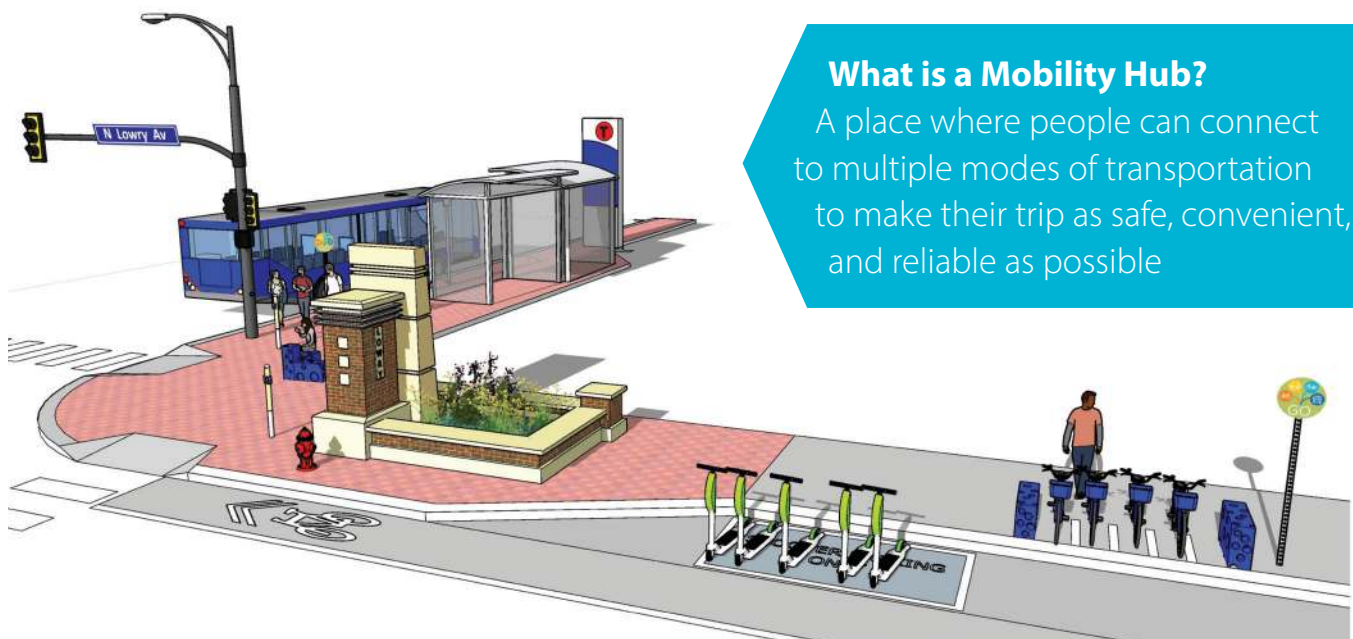
# OVERVIEW

In summer of 2019, the City of Minneapolis launched a mobility hub pilot program to increase access to convenient, low or no carbon transportation options, including transit, shared scooters and Nice Ride bicycles.

The basis of a mobility hubs pilot in Minneapolis emerged due to its selection to participate in the American Cities Climate Challenge, and based on feedback during engagement for the City's 10-year Transportation Action Plan. As part of the American Cities Climate Challenge, the city has pledged to take bold action to reduce emissions from its transportation and building sectors.

This mobility hub pilot program is an important part of the City of Minneapolis's response to the challenge. In the

Transportation Action Plan conversations, the City heard that Nice Ride bike share and electric scooter share were helping to reduce single occupancy vehicle trips and that the City should take an active role in shaping how those options are utilized. This pilot took a community-driven, iterative design approach to better understand how mobility hubs could be developed within the City of Minneapolis.





## What is a mobility hub and why does it matter?

Using the definition established by the Twin Cities Shared Mobility Collaborative, a mobility hub is a place where people can connect with multiple modes of transportation in a safe, comfortable, and accessible environment, facilitating *convenient and reliable* travel. This pilot tested elements included in the characteristics listed below, which are essential to the success of mobility hubs.

This pilot also aligns with goals outlined in the City of Minneapolis Transportation Action Plan:

- » **Climate** - Reshape the transportation system to address climate change, using technology, design, and mobility options to aggressively reduce greenhouse gas emissions caused by vehicles.
- » **Safety** – Reach Vision Zero by prioritizing safety for all people and eliminate traffic fatalities and severe injuries by 2027.
- » **Equity** - Build and operate a transportation system that contributes to equitable opportunities and outcomes for all people.
- » **Prosperity** - Provide mobility options that move people and goods through reliable connections; retain top talent and grow Minneapolis as the economic engine of the region.
- » **Mobility** - Embrace and enable innovation and advances in transportation to increase and improve mobility and access options for all.
- » **Active Partnerships** - Create and seize opportunities to achieve shared goals and responsibilities through partnering and leveraging funding opportunities with national and regional partners and others who invest in the city.

Mobility hubs are a tool for improving the convenience of non-automobile transportation and supporting first- and last-mile connections to transit. This pilot serves to test how mobility hubs can work in our community and serve specific needs of people in Minneapolis.

### Mobility Hub Characteristics:

1. Safe, accessible, and comfortable
2. Provide a welcoming and useful experience
3. Consistent design and clearly defined area
4. Seamless connections and reliable transportation options for all
5. Accurate and understandable trip/modal information

## Pilot Approach

Since mobility hubs are a relatively new concept in the region, the piloting process provided an opportunity to:

- » Test possible mobility hub interventions,
- » Conduct interactive engagement around the concept; and
- » Inform longer term approach and larger strategic investments.

The mobility hub pilot was designed to create an interactive platform for community voice to shape the development and implementation of the basic mobility hub concept. By piloting at existing transit stops, daily users have an opportunity to shape the implementation of the concept. Through programming opportunities for people to try transit, bikeshare and scooter share for the first time at pilot hubs, new multi-modal users are also engaged in co-creating this vision.

Piloting in this way serves as a targeted, interactive engagement method that can improve upon traditional forms of engagement. In many cases, it can be hard for individuals with limited time to go out of their way to attend an open house or community meeting. Meeting people where they are ensures that daily users' voices have a strong influence on the outcomes of the process.

## Best Practices of Piloting

One of the additional considerations of pilot planning, especially in underserved neighborhoods, is ensuring that value is not produced only to be taken away. Since mobility hubs have the potential to add value for non-automobile users, it was important to put the hubs in places where people are already using those modes. It was also important to ensure that at the end of the pilot, those benefits didn't all disappear or negatively impact vulnerable users' travel patterns.

Early feedback from the City of Minneapolis' **Green Zones Initiative** members resulted in extending the pilot timeframe from one month in each community to a longer duration that would extend through the whole scooter/bikeshare season once deployed.

Furthermore, the project intentionally included elements that would be valuable to the participants beyond the duration of the pilot. Community connections generated from involving multiple aligned stakeholders, local artists, and individuals benefit participants beyond the pilot. People who participate in engagement also receive access to discounts and information about the mobility options at each hub, and positive experiences with the artists who work in their community.



**A Green Zone** is a place-based policy initiative aimed at improving health and supporting economic development using environmentally conscious efforts in communities that face the cumulative effects of environmental pollution, as well as social, political and economic vulnerability. For more information visit [www.ci.minneapolis.mn.us/sustainability/policies/green-zones](http://www.ci.minneapolis.mn.us/sustainability/policies/green-zones).

## Goals

The goal of this pilot was to create a platform for demonstrating mobility hub concepts for users to interact and engage with, in order to inform a longer-term approach to mobility hubs. This approach would test components of a program that could support broader Minneapolis transportation goals and, if successful, build the foundations of a future long-term mobility hub network.

### **Goal 1: Pilot strategies for co-locating mobility options in the public right-of-way.**

- » Create a system for identifying optimal placement for mobility options in different contexts.
- » Test multiple ways of placing modes to determine best practices.
- » Work with mobility service providers to ensure their operational needs are understood and considered.
- » Identify roadblocks/constraints to inter-agency right-of-way coordination.
- » Activate underutilized right of way to enhance the experience of using active transportation.

### **Goal 2: Understand barriers to utilizing shared modes and other non-automobile transportation options.**

- » Create a platform for interactive community engagement.
- » Build capacity within communities to participate in conversations about a future mobility hub strategy. Build stakeholder relationships with neighborhood leaders and daily users.
- » Focus on the voices of people who are already using public transportation and seek out conversations with others who may not use these options now, but who could use mobility hubs in the future.
- » Understand existing mobility gaps and barriers for bicyclists, pedestrians and pilot solutions to overcome these obstacles.
- » Test active partnerships with mobility service providers to address known barriers like awareness of low-income user discount programs and safety while riding

### **Goal 3: Create a system of visual cues to identify hubs as cohesive, inclusive spaces and centers of mobility options.**

- » Pilot wayfinding methods that make multi-modal trips simple, easy and build awareness of community assets within an accessible distance from the hubs.
- » Test wayfinding strategies that are accessible to as many users as possible.
- » Highlight the neighborhood identity already present around the sites of hubs, destinations and along pathways through partnerships with local businesses, artists, and community members.

# PROCESS + TIMEFRAME

The pilot would take a community-driven, iterative design approach to implementing mobility hubs that are connected to and supported by community destinations.

## Plan Pilot | June 2018-June 2019

The City of Minneapolis worked with Transportation for America and Arcadis to identify potential mobility hub sites by combining 32 different layers of data. Layers were grouped into five different layer groups as shown in the table below.

This initial data framework identified opportunities to implement mobility hubs in three areas:

- » North Minneapolis (including the Folwell, McKinley, Jordan, and Hawthorne neighborhoods)
- » South Minneapolis (including the Lowry Hill East, East Isles, Whittier, Lyndale, Ventura Village, Midtown Philips, and Powderhorn Park neighborhoods)
- » Northeast Minneapolis (including Windom Park, Holland, Logan Park and Northeast Park neighborhoods)

**Table 1: Fill Text**

A. Physical	B. Economic	C. Demographic	D. Access	E. Behavior
<p><b>Transport Facilities:</b></p> <ul style="list-style-type: none"> <li>- Bus stations</li> <li>- Bus routes</li> <li>- Rail stations</li> <li>- Shared bike docks</li> <li>- Bike lanes</li> <li>- Major roads</li> <li>- EV chargers</li> <li>- Airport</li> </ul> <p><b>Major Public Facilities:</b></p> <ul style="list-style-type: none"> <li>- Public attractions</li> <li>- Schools</li> <li>- Hospitals</li> <li>- Shopping centers</li> <li>- Senior &amp; public housing</li> <li>- Disability services access</li> </ul> <p><b>Other:</b></p> <ul style="list-style-type: none"> <li>- Parking lots</li> <li>- Underutilized land</li> </ul>	<ul style="list-style-type: none"> <li>- Employment density</li> <li>- Economic development zones</li> </ul>	<ul style="list-style-type: none"> <li>- Population density</li> <li>- Household income</li> <li>- Education level</li> <li>- Non-English speaking</li> <li>- Race</li> <li>- Vehicles ownership</li> </ul>	<ul style="list-style-type: none"> <li>- Employment access</li> <li>- Recreational access</li> <li>- Current commute time</li> <li>- Healthy food access</li> </ul>	<ul style="list-style-type: none"> <li>- Current intermodal activities</li> <li>- Congestion friction</li> <li>- Parking friction</li> </ul>

## Identify Opportunities | May 2019-August 2019

The project team used regional guidance from the Twin Cities Shared Mobility Collaborative on mobility hubs to form the initial steps for a pilot. This included identifying sites within the selected neighborhoods, designing furniture and signage that could be deployed in multiple contexts, and reaching out to potential partners for the pilot. Sites were intentionally co-located in close proximity to human services, parks, libraries, community centers, commercial nodes and higher resident populations. This phase also included meeting with neighborhoods adjacent to proposed sites to invite their input on these developing plans.

Neighborhood groups were instrumental in filtering the data-driven location selections through local expertise on their community. For the North Minneapolis locations, the Jordan Area Community Council's feedback led to the shift of a planned hub location from a residential area to a higher-activity commercial location on West Broadway and Emerson Ave. Similarly, based on feedback from the Minneapolis Green Zones Task Force, a hub location shifted further east to better serve lower-income neighborhoods. Data was a useful lens to identify initial opportunities, but partner engagement ahead of implementation played a key role in the final site selections.

The early phase of the pilot also required building active partnerships with an array of interests in the project. Coordinating with other agencies allowed the project to activate underutilized right of way from multiple jurisdictions, such as Hennepin County right of way on Penn and Lowry. Mobility providers played an active role in shaping how the various mobility hub elements could be placed such that their operational requirements could be met. Community partners played a variety of roles, from participating in site layout to promotion and engagement.

### Partnerships

- » Agency Partners - Hennepin County Community Works, Hennepin County Libraries, Minneapolis Park and Recreation Board, MnDOT
- » Mobility Providers - Metro Transit, Nice Ride, HOURCAR, Lyft, Spin, Lime
- » Community Partners - neighborhood associations, corridor businesses, public health organizations/health service providers, youth organizations, local artists

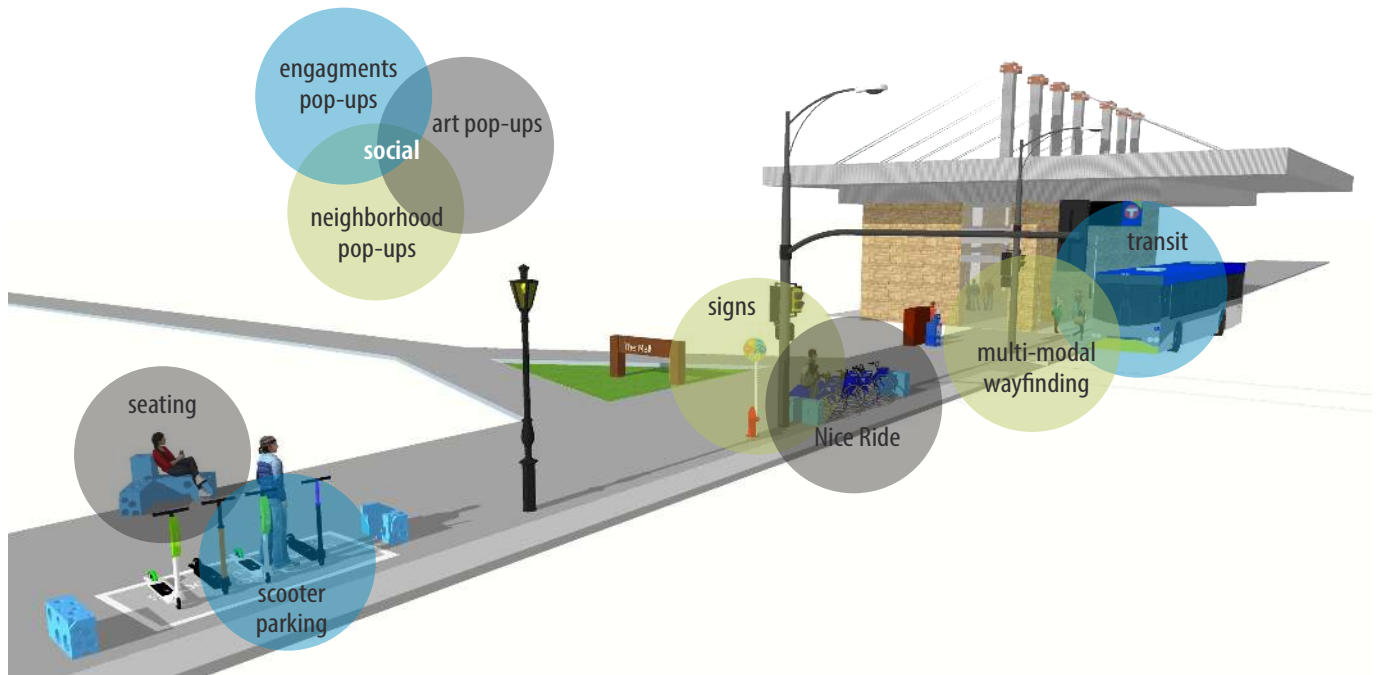
### A community-driven, iterative design approach:





## Build Out Pilot Hubs | September 2019–December 2019

After vetting with project partners, sites were then built out with unique layouts of mobility hub elements, including:



### Furniture

- » Modular
- » Designed to be reused at multiple locations
- » Durable for short term use
- » Colorful
- » Multiple purposes: Seating, gathering area, to frame bike/scooter parking, or buffer from car traffic



## Signage

- » Wayfinding system to local destinations accessible via walk, bike and transit routes
- » Beacon signs to denote hub location
- » Landing signs to denote Nice Ride Hub, Scooter parking, Bike Parking, Seating + Info
- » Multi-lingual and Icon based – languages selected in collaboration with outreach specialists at Neighborhood and Community Relations Department of City of Minneapolis
  - Somali
  - Spanish
  - Hmong



## Enhancements

- » Planters
- » Solar phone charger
- » Magnetic poetry
- » Information Box





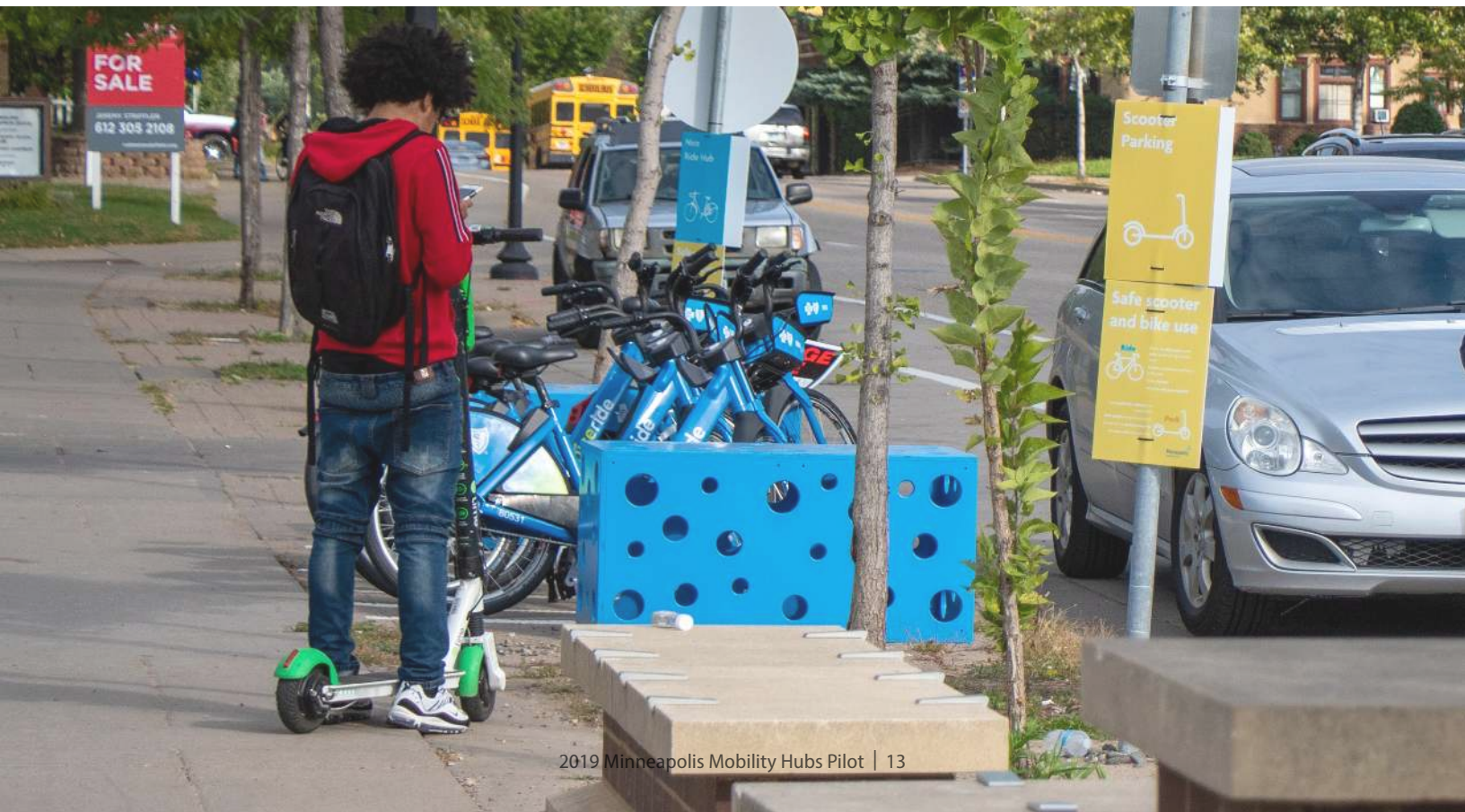
## Activate and Iterate | September 2019 - December 2019

Based on user experience and feedback received through engagement at initial sites, changes were made to layout and design of hubs yet to be implemented. Mini-grants were also established for local artists to add elements of community expression and interest at key mobility hub sites. The implementation process also required the creation of an ongoing maintenance process executed by the project team.

## Evaluate | December 2019-January 2020

In order to monitor the impact of the pilots, the project team used a number of strategies to gather data. This not only informed the iterative improvement of this pilot but provides valuable information to inform future mobility hub planning. Our evaluation strategies included:

- » Online survey responses
- » Intercept surveys at key mobility hub sites
- » Partner participation and feedback
- » Ask partners about their perception of mobility hubs and community impact
- » Mode use data (via Metro Transit, Nice Ride and City of Minneapolis)
- » Nice Ride trips with origins and destinations
- » Scooter trips with origins and destinations
- » Metro Transit boardings



## Contribute and Expand | January 2020-present

During implementation, the project team regularly documented observations, and looked for ways to improve and adjust the pilot as it unfolded. The project team then worked to compile all of those on-the-ground learnings to make recommendations for a mobility hub strategy going forward. This report reflects those lessons from implementation and is a snapshot of our understanding in this complex landscape of evolving mobility options.





# SITE ANALYSIS

Every street is a unique place. Factors such as current transportation conditions, neighborhood context, and demographics help inform the scale, purpose and design of the mobility hubs that were implemented.

Table 2: Site Characteristics	Existing Conditions			Neighborhood Context		
	Pilot Sites	Transit <sup>1</sup>	Bike + Ped <sup>2</sup>	Right of Way <sup>3</sup>	Public Institutions	Commercial
Penn & Lowry Ave	BRT: C Line	●●○○○○	●●●●●●		✓	Low-mid density
Fremont & Lowry Ave	HFB: Rt 5	●●●●○○	●●●●○○	Library		Low-mid density
Farview Park	Rt 22	●●●●○○	●○○○○○	Park		Low-mid density
West Broadway & Emerson Ave	HFB: Rt 5; Rt 14, 22	●●○○○○	●●●●○○		✓	Mid-high density
Uptown Transit Center	Bus-Only Lane Pilot; HFB: Rt 6; Rt 12, 17, 21, 23, 53, 114, 612	●○○○○○	●●●○○○	Library	✓	Mid-high density
Midtown Global Market	Bus-Only Lane Pilot; HFB: Rt 5, 21	●●○○○○	●●●●○○		✓	Mid-high density
Lyndale & 29th Share Street		●●●●○○	●●●●○○		✓	Mid-high density
Franklin & 11th St		●●○○○○	●●●●○○		✓	Low-mid density
24th St & Central Ave	HFB: Rt 10	●●●●○○	●●●●○○		✓	Low-mid density
22nd St & Central Ave	HFB: Rt 10	●●●●○○	●●●●○○	Library	✓	Low-mid density
18th St & Central Ave	HFB: Rt 10	●●●●○○	●●○○○○	Senior Housing	✓	Low-mid density

<sup>1</sup> BRT= Bus Rapid Transit; HFB= High Frequency Bus service; Rt = Route

<sup>2</sup> 1=less safe, 5=most safe Considerations include pedestrian crossing safety, north/south bike connections, and east/west bike connections.

<sup>3</sup> 1=less Right-of-Way, 5=most Right-of-Way



## North Pilot Sites Overview

### Map + Demographics

In the North Minneapolis neighborhoods, the demographic data shows a higher population of residents of color than Minneapolis overall and a lower median household income. A greater proportion of people are primarily driving to work, but a high proportion of households also do not have access to a vehicle. In this pilot, that meant that access to economic opportunity was a theme to shape the understanding of existing transportation needs. Demographics also show a younger population and higher rates of residents with disabilities than in Minneapolis overall.

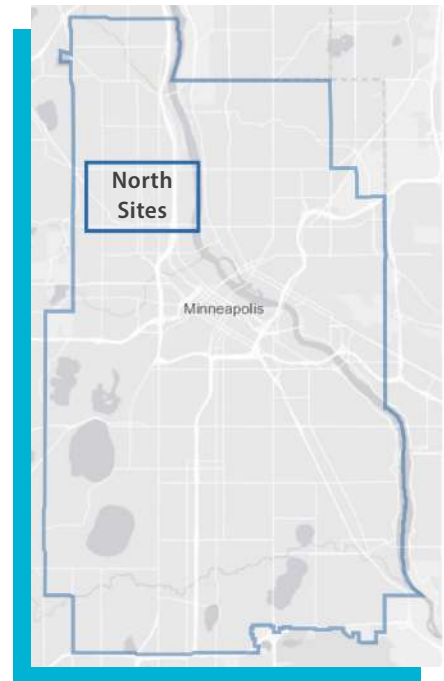
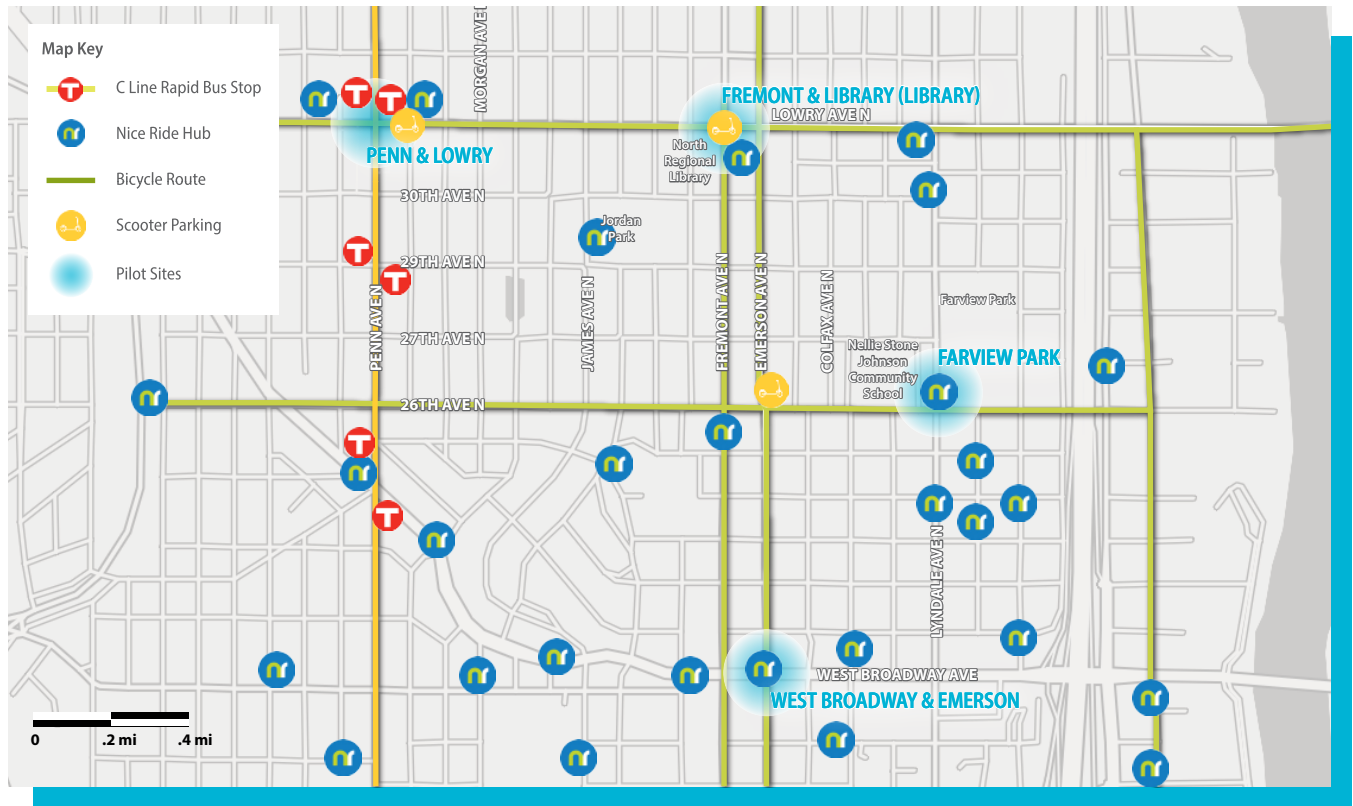


Table 3: North Pilot Area Demographics	North Pilot Neighborhoods	Minneapolis Overall
<b>Race</b>		
White	22.8%	59.9%
Of Color	77.2%	40.1%
<b>Economics</b>		
Median Household Income	\$40,005	\$55,720
<b>Transportation to Work</b>		
Car, Van or Truck	76.3%	68.8%
Public Transit	15.6%	13.4%
Walk, Bike, Work at Home, Other	8.0%	17.7%
<b>Access to Vehicles</b>		
No vehicle	21.1%	17.7%
1 Vehicle	39.5%	41.8%
2+ Vehicles	39.4%	40.6%
<b>Age</b>		
17 and younger	22.9%	19.9%
18-64	60.3%	70.9%
65+	5.9%	9.2%
<b>Disability</b>	14.5%	11.2%

Map 1: North Pilot Sites



## Penn Ave & Lowry Ave

**Strengths of the site:** Strong transit investment in C Line station, recently redesigned Penn Avenue, high activity levels throughout the day, passengers transferring from the C Line/19 to the 32, flexible space to place mobility hub elements and corner elements, social capital that regulates some activity.

**Challenges at the site:** Intoxication, unpredictable aggressive behavior, litter, crossing the street can be dangerous, vacant lots have been underutilized, some reports of incidents of violence



## Fremont & Lowry Ave (North Regional Library)

**Strengths of the site:** consistent activity at the bus stop and library patrons, potential for future partnerships at the library, sidewalk space is large enough to facilitate scooter parking and furniture, possible use of Library parking space(s)

**Challenges at the site:** Library closed for renovation, past reports of negative behavior, walking conditions due to sidewalk conditions, less on-street space available



## Farview Park

**Strengths of the site:** Connection to the Minneapolis Park system, connection to off-street bike path east-west

**Challenges at the site:** North-south bike connection is unpleasant and unsafe, minimal sidewalk width and on-street space created challenges for placing mobility hub features, pathway to community center needs to be enhanced, distance from pilot location to higher activity area of the park



## West Broadway & Emerson Ave

**Strengths of the site:** Local business strength of West Broadway and high transit use makes this site a high foot-traffic area. Connection to Emerson Ave protected bike lane (on-street), Juxtaposition Arts future partnership potential.

**Challenges at the site:** Limited sidewalk width or on-street space for placement of elements, spread out transportation options, West Broadway is not safe for biking/ scootering, crossing the street as a pedestrian also can be dangerous.

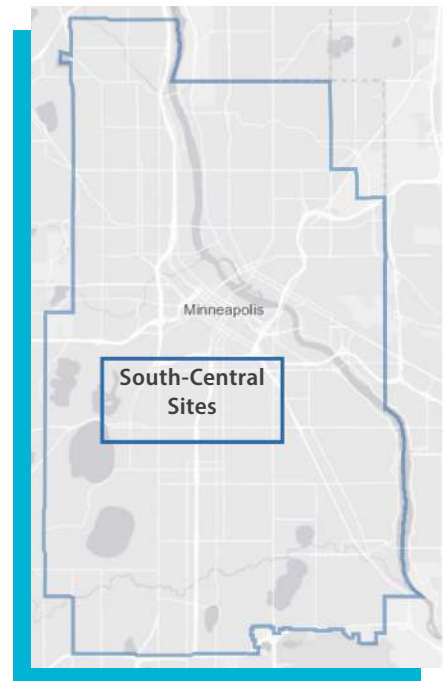


Sidewalk art and parklet installed by nearby organization Juxtaposition Arts, not in association with the mobility hub pilot. See [juxtapositionarts.org](http://juxtapositionarts.org).

## South-Central Pilot Sites Overview

### Map + Demographics

The demographics of neighborhoods adjacent to South-Central Minneapolis mobility hub pilot locations show a notably higher proportion of residents of color and more households with one vehicle. Since the demographic comparison in many categories were similar to the city overall, they did not play a significant role in shaping the approach to these mobility hub sites.

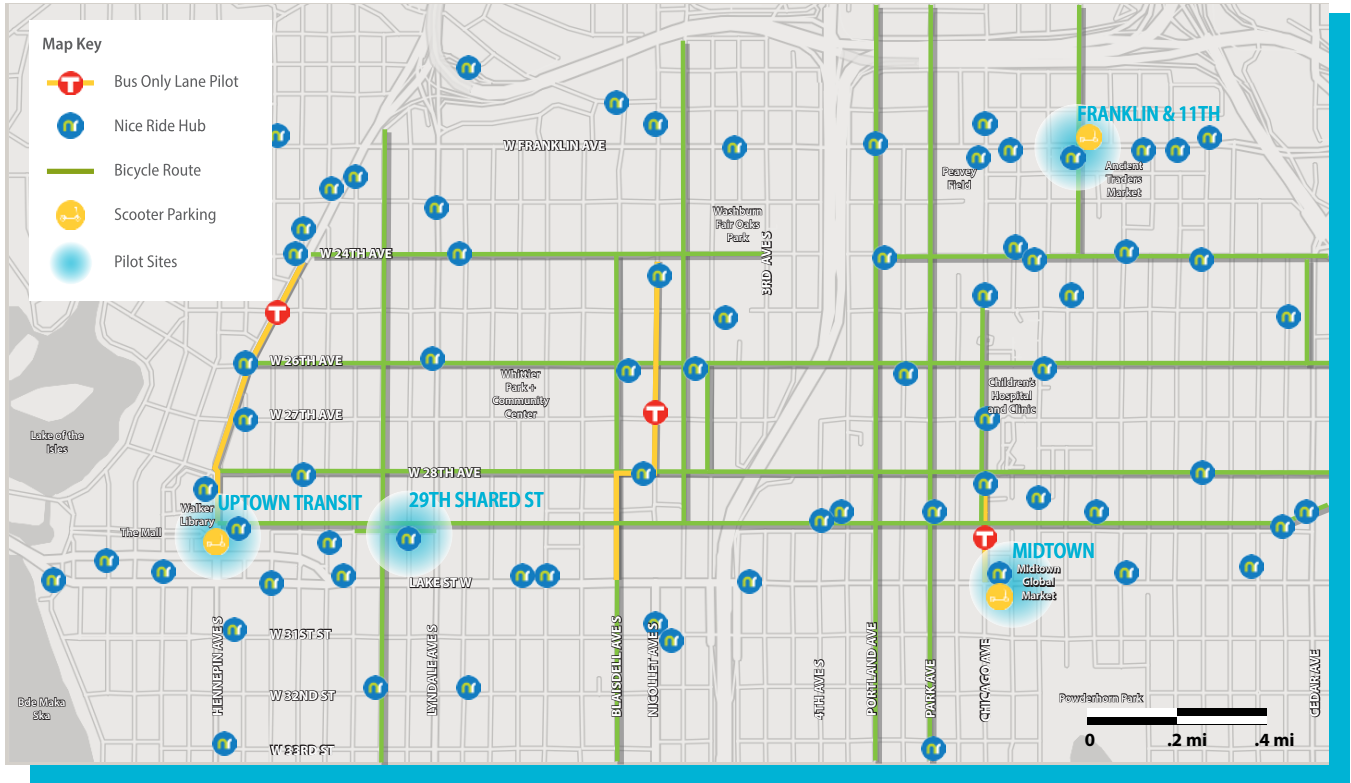


**Table 4: South-Central Pilot Area Demographics**

	South-Central Pilot Neighborhoods	Minneapolis Overall
<b>Race</b>		
White	47.9%	59.9%
Of Color	52.1%	40.1%
<b>Economics</b>		
Median Household Income	\$57,893	\$55,720
<b>Transportation to Work</b>		
Car, Van or Truck	66.2%	68.8%
Public Transit	14.5%	13.4%
Walk, Bike, Work at Home, Other	19.3%	17.7%
<b>Access to Vehicles</b>		
No vehicle	17.2%	17.7%
1 Vehicle	45.6%	41.8%
2+ Vehicles	37.2%	40.6%
<b>Age</b>		
17 and younger	21.7%	19.9%
18-64	70.9%	70.9%
65+	7.4%	9.2%
<b>Disability</b>	10.4%	11.2%



Map 2: South-Central Pilot Sites



## Uptown Transit Center

**Strengths of the site:** Established transit hub in center of Uptown district, high activity level due to bus transfers, connectivity between transit center and Walker Library, proximity to greenway and “The Mall”.

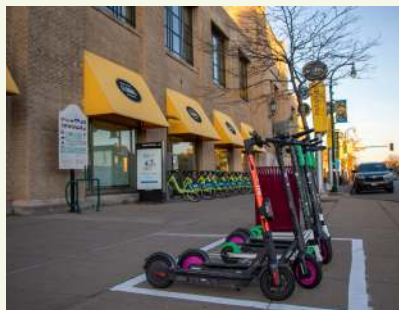
**Challenges at the site:** Hennepin Ave is not pedestrian, bike or scooter friendly, connectivity to the Greenway is not apparent or easily accessible, limited sidewalk space to place additional modes without congesting pedestrian flows or being on park property.



## Midtown Global Market

**Strengths of the site:** Multi-cultural connections and active neighborhood advocates, Market is already a hub of small business and community activities, adjacency to Midtown Greenway and future CEPRO Park site, flexible space to place hub elements

**Challenges at the site:** Less transit rider activity because most transfers happen at Chicago and Lake Transit Center, building buy-in with property owner, some challenging activities/behaviors in and around the site



## 29th Shared St

**Strengths of the site:** prioritization of non-car modes, existing art and traffic calming features, opportunities to expand/enhance the original design concept

**Challenges at the site:** Nearest transit stop is almost a block away, speed of cars still exceeds goal, barriers to accessing Hennepin from 29th as an alternative route to Lake St, compromises between visibility of being on Lyndale and enhanced environment of Shared St.



## Franklin and 11th

**Strengths of the site:** Connectivity to 11th as north-south bike route, proximity to popular library and Aldi grocery, dense cultural assets in Native community, access and adjacency to downtown and HCMC.

**Challenges at the site:** Franklin Ave is not bike/scooter and pedestrian friendly, busses don't stop at this corner, few trips start or end at this location, on-street scooter parking feels exposed without further safety features



## Northeast Pilot Sites Overview

### Map + Demographics

The mobility hub sites in Northeast along the Central Avenue corridor are in a context of lower median household income, higher public transit commute share and lower walk/bike/other commute share. A greater proportion of households in these adjacent neighborhoods also have one or no vehicles, as compared to Minneapolis overall. For this pilot, that meant that these sites were approached with additional consideration of low-income individuals who rely on public transit year-round.

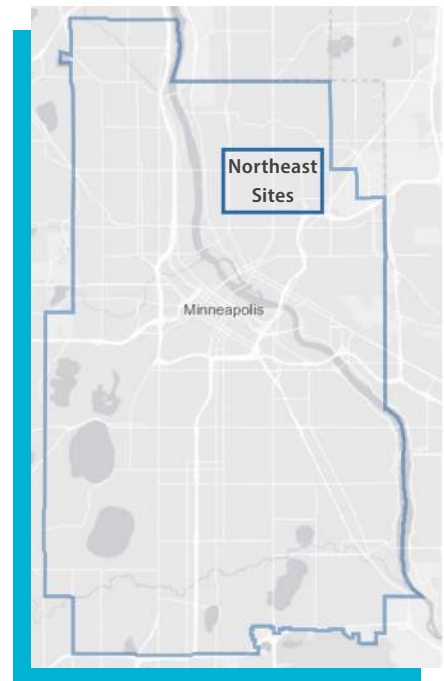
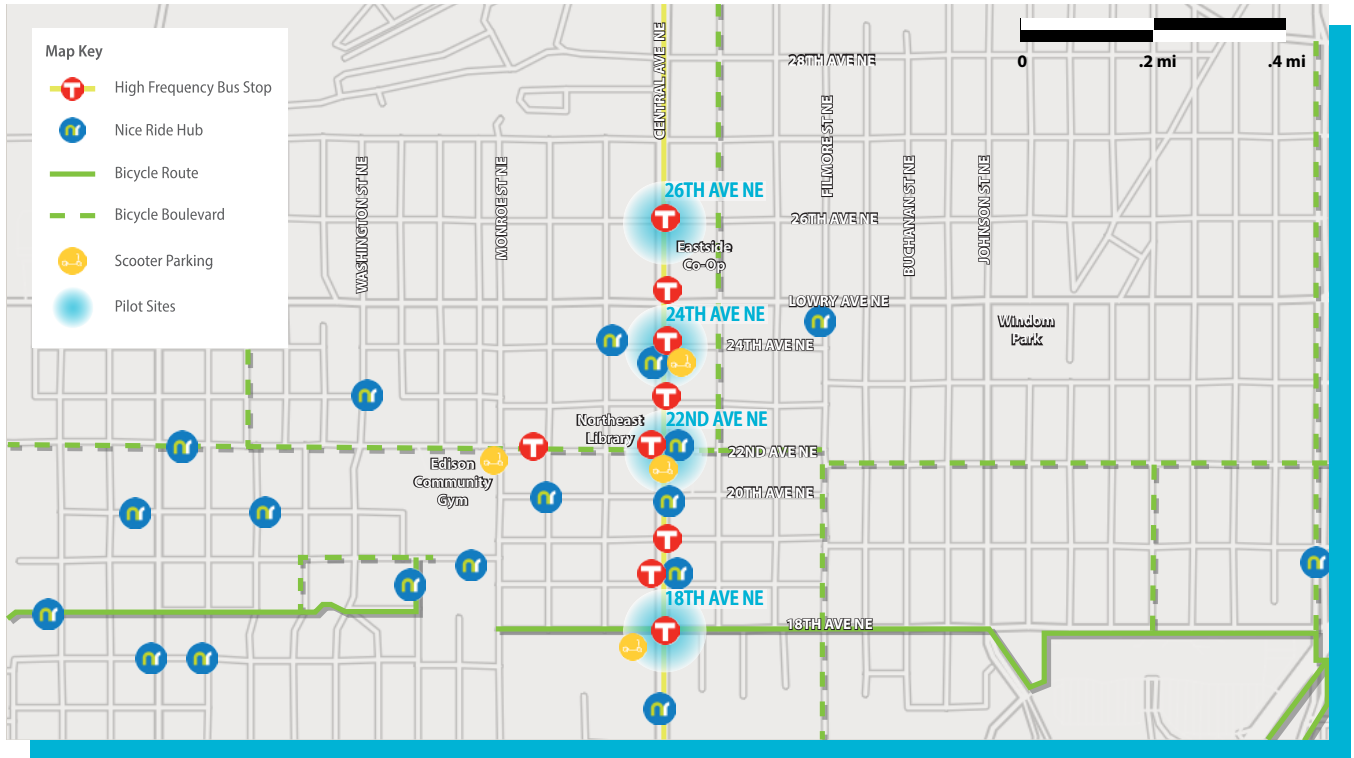


Table 5: Northeast Pilot Area Demographics	Northeast Pilot Neighborhoods	Minneapolis Overall
<b>Race</b>		
White	61.7%	59.9%
Of Color	38.3%	40.1%
<b>Economics</b>		
Median Household Income	\$52,322	\$55,720
<b>Transportation to Work</b>		
Car, Van or Truck	70.7%	68.8%
Public Transit	16.5%	13.4%
Walk, Bike, Work at Home, Other	12.8%	17.7%
<b>Access to Vehicles</b>		
No vehicle	20.1%	17.7%
1 Vehicle	37.7%	41.8%
2+ Vehicles	42.3%	40.6%
<b>Age</b>		
17 and younger	19.1%	19.9%
18-64	71.7%	70.9%
65+	9.2%	9.2%
<b>Disability</b>	11.9%	11.2%

Map 3: Northeast Pilot Sites





## 24th and Central

**Strengths of the site:** Availability of flexible sidewalk and on-street space for elements, active bus stop, multicultural small-business hub

**Challenges at the site:** placing modes in a cohesive manner in tight boulevard, low foot traffic or space to support programming



## 22nd and Central (Library)

**Strengths of the site:** Proximity to Library and Edison High School, availability of on-street space to place hub elements

**Challenges at the site:** Minimal sidewalk space to place additional elements, low foot traffic level and space to have programming, Central Avenue is 4 lanes in most places with parking on both sides, but minimal bike infrastructure.





## 18th and Central

**Strengths of the site:** Connectivity to the 18th St Bikeway for east-west bike/scooter travel, availability of flexible space to place hub elements

**Challenges at the site:** Minimal sidewalk space to place additional elements, low foot traffic level and space to have programming, Central Avenue is 4 lanes in most places with parking on both sides, but minimal bike infrastructure. Senior public housing residents' needs may differ from the currently available modes, the location isn't within HOURCAR's range





**Penn and Lowry Ave**  
0.6 miles

	13 minutes
	2 minutes
	4 minutes

**26th Ave Bike Route**  
0.5 miles

	10 minutes
	3 minutes

**Farview Park**  
0.8 miles

	16 minutes
	12 minutes
	5 minutes

**Patrick Henry High School**  
1.9 miles

	38 minutes
	12 minutes
	10 minutes

# TRIP DATA + ANALYSIS

Collecting trip data before and after the start of the mobility hub pilot is another tool for evaluating the pilot. Conclusions drawn from data will become more robust as additional data is collected.

Collecting trip data before and after the start of the mobility hub pilot is another tool for evaluating the pilot. Many variables impact transit ridership, for example weather, on-time arrival and time of year. Nice Ride and scooter data is also limited by the years both have been in service. This was only the second year that scooters were present in the city. Those factors make it very difficult at this phase to tie changes in the before and after data directly to the mobility hub pilot. However, the trips made at each of the pilot sites can be another indicator of how many people saw and/or interacted with the individual mobility hub locations. This data will serve as the start of a year-over-year comparison to establish more clear trends, should mobility hubs be continued to be located at these sites. This data methodology will also continue to evolve and guide future pilot data analysis for the City.

By this measure, over 800,000 trips were made at these sites, showing a large number of people have interacted with the mobility hub pilot elements.

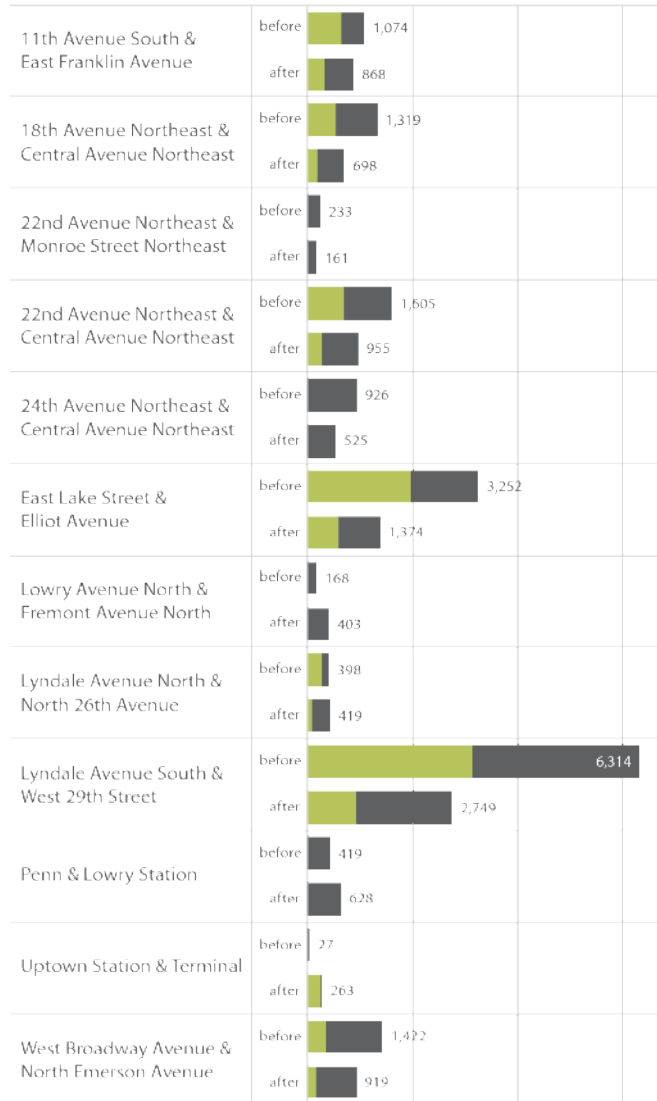
For bike and scooter trips, there were some locations that clearly saw increases in use following the placement of new Nice Ride hubs and scooter parking. This uptick in scooter trips can be seen at sites like Penn Ave & Lowry Ave N, Lowry Ave & Fremont Ave N, and Franklin Ave & 11th St S. There are also a number that actually went down after pilot implementation, which was likely due to seasonality and reduced availability. This trend can be seen at sites like 18th St & Central Ave NE and Lake St & Elliot Ave S (Midtown Global Market).

High transit ridership sites seem to have high use of bikes/scooter use. This points to how closely related the success of a mobility hub is to transit ridership. It is also important to note that adding Nice Ride and scooters close to bus stops did not make ridership plummet, which suggests that people are not substituting their whole trip for bike/scooter, but rather that they work together. An exception to that potential connection is where transit use is high, but bike/scooter riding infrastructure is limited. For example, Uptown Transit Center is a major transfer hub for busses, but Hennepin Ave and Lake Street offer limited bike/scooter connections. Future mobility hubs may test placement of elements closer to good riding streets, even if that means being less directly connected to the transit stop.

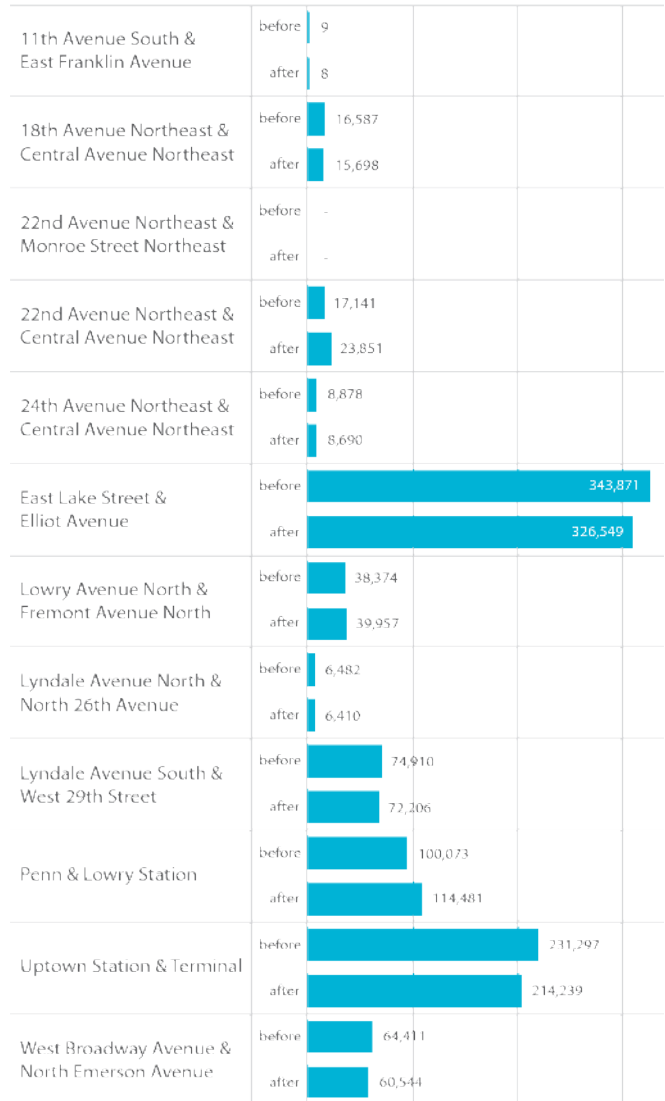


**Table 6: Mobility Hub Before and After Trip Comparison**

**Nice Ride and Scooter:**



**Metro Transit Ridership:**





# ENGAGEMENT DATA + ANALYSIS

CONVERSATIONS on streets with everyday bus riders, bike riders, scooter riders and walkers. Data based conclusions driving iterations in design. The engagement approach combined both in-person and digital/paper surveying to integrate perspectives from a broad range of people into the project.

## Survey

The survey addressed key elements of how users in each neighborhood interact with current transportation options and what barriers they experience. To manage survey length and keep language approachable to many audiences, the survey did not educate about what mobility hubs are or explain the design of the pilot at length. Future surveys can follow up to track the impact of the pilot and other City efforts on transportation users.

A note on survey data: Fifty-eight responses is a small data set to represent the complexity of people in Minneapolis and their transportation choices. Demographics collected also show that the survey respondents are not statistically representative of the neighborhoods we are piloting in - respondents skewed whiter, older, and income demographics were not collected. However, this is a common trend with online, longer surveys, which is why collecting in-person intercept data at the project sites was prioritized. With those limitations in mind, survey data can still provide a snapshot of the current attitudes and experiences of some Minneapolis residents regarding key mobility hub themes.

## Work Trips

33 of the 52 respondents who work outside the home commute with multiple modes. This may mean people are taking multi-modal trips or take different modes on different days. While the sample size of this survey is small, it is clear many residents within the neighborhoods surveyed do rely on the non-car modes to get to work. Only 15% of the respondents said they drove alone as their only way of getting to work. Most of the respondents who said they drive said they also use other modes. If some drivers are already choosing non-car modes, there may be improvements that would help them shift more of those trips away from driving. This indicates that improving access to multi-modal options could help shift more of trips away from single-occupancy vehicle use.

Improving access to multi-modal options could shift more trips away from single-occupancy vehicle use.

## Short Trips

Walking and biking were the most popular modes for short trips. Again, the most common denominator was that people are using many mode options to fit their different trip needs. While 50% of respondents said they drive themselves on some short trips, only 9% will only drive on short trips. Potential for mode shift is shown for short trips as well.

## Trips to Bus Stop

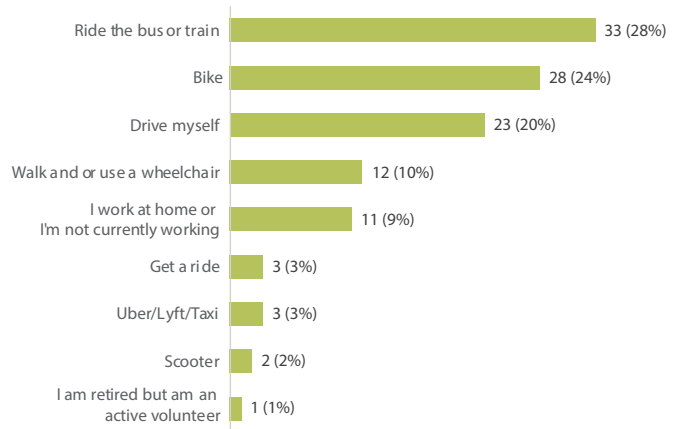
When accessing bus stops, this survey shows that the majority of respondents were walking and/or using a wheelchair to start and end their ride. This reinforces the premise that for mobility hubs to increase access to transit, they must incorporate walking connections. Ten percent or less of responses included use of Nice Ride or scooters to get to transit. This lower figure may point to lack of reliably available Nice Rides and scooters at bus stops or in places that would be conducive to serve for frequent first- and last-mile trips. Future phases of the Mobility Hub program should ask this question again to track impact over time, after piloting coordination of Nice Ride and scooter parking at transit hubs.

For mobility hubs to increase access to transit, they must incorporate walking connections.

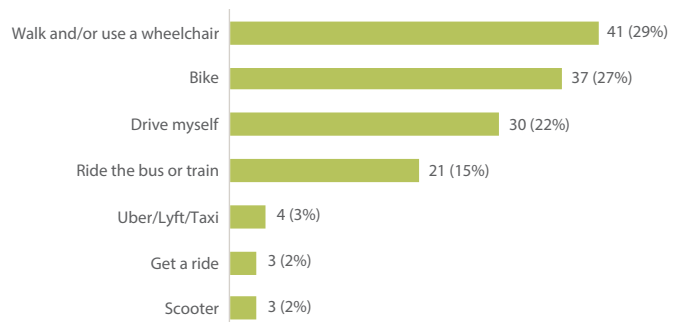
The survey asked people about their use of certain modes to attempt to identify specific barriers to different transportation modes. Among options of bus, Nice Ride, and electric scooter, respondents were most familiar with riding the bus. These findings underscore the importance of a strong transit network as the basis for any strong multi-modal ecosystem. 67% of respondents had not used an electric scooter and 44% had not used a Nice Ride bike before. This will be another point to track as these options become more established and convenient to use.

These findings underscore the importance of a strong transit network as the basis for any strong multi-modal ecosystem.

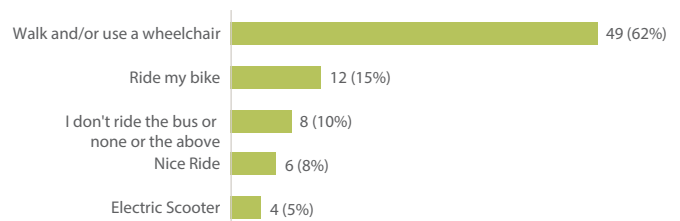
### Survey Results: How do you get to work?



### Survey Results: For short trips, how do you travel to the location? (A short trip could be to grocery, shops, library, or any common place less than 3 miles away)



### Survey Results: Do you use any of these transportation types to get to or from a bus stop?



## Transit Riding

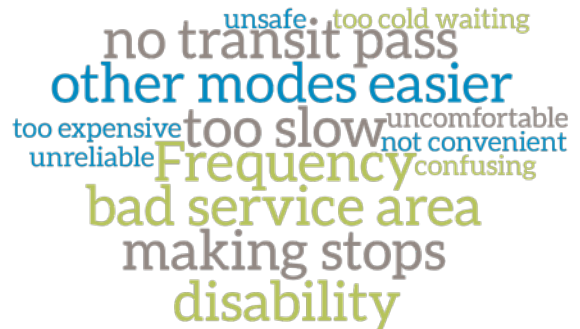
When describing why respondents chose to use the bus, one common theme was bus service was convenient and inexpensive in comparison to owning a vehicle. Others who chose not to use the bus voiced that busses are too slow and too infrequent.

A barrier identified by a respondent who didn't use the bus was "I can get most of the regular places I need to go on a bike or by walking, and otherwise I'm running errands that are easier with a car. Taking the bus for a short trip where I don't have to pay for parking also feels more expensive than taking my car because I don't get a monthly transit pass." Paying per use on the bus felt to this person more expensive when compared to the distributed costs of using their car. Another user said a barrier to using transit more was that "transportation from my home to work is MUCH faster via car. Using the bus once at work would be alright, but since I don't use the bus on a regular basis, I don't have a metro card. I also find the bus routes confusing (as compared to other cities)." These comments express some of the perceived advantages of driving and the time/convenience costs involved with transit use for people who are used to driving their own car.



I ride the bus because its convenient, relatively fast and inexpensive.

### Survey Results: Why Respondent Don't Take Transit



### Survey Results: Why Respondents Do Take Transit



## Nice Ride Use

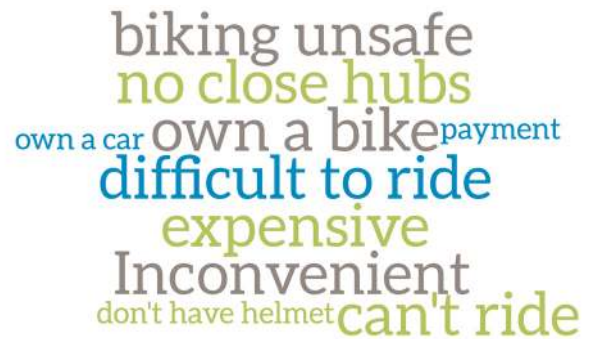
When explaining why they use or don't use Nice Ride bike share, convenience is also a primary consideration. People who ride Nice Ride do it when hubs are convenient and as part of a flexible, multi-modal trip. The most common reason why people didn't use Nice Ride was owning their own bike, but beyond that, people felt the hubs were not close to their destination and the bikes were difficult to ride.

Another barrier that a respondent highlighted was "I'm very short & the bikes don't fit me well. Plus, I can't just use my GO-TO card to unlock them." Diminished range when Nice Ride suspended service in St. Paul was also cited as a barrier for another user. "My use has definitely gone down since Nice Ride left St. Paul, though, as that's where I work and where a significant number of my meetings are held. I used to use it to connect from light rail to my meeting locations." These comments helped shed light on how Nice Ride users want their trips to better integrate with their multi-modal, jurisdiction-crossing trips.



Bikes are great. I don't have the hassle of owning one with Nice Ride.

### Survey Results: Why Respondents Don't Use Nice Ride



### Survey Results: Why Respondents Do Use Nice Ride





## Scooter Use

The main reason respondents choose not to use scooters was because of fear of injury while riding them. Those who do choose to use scooters found that they were quick, easy and convenient.

Responses also highlighted information barriers to using scooters more. One user said, “they still confuse me - can you ride them on the sidewalk or the road? Also they don’t have a bike basket so it’s not as good for errands.” Another barrier is the inconvenience of each scooter company having their own app. “I don’t like having to download additional apps in order to use these services,” according to a comment. Some users may not have storage space on their phones for multiple, or the desire to open multiple apps in search of the closest vehicle.

Pop-up engagement events this season included scooter and Nice Ride demonstration rides with helmet giveaways and supporting new riders. Based on the barriers shared in these survey responses, engagement should continue to focus on safety education, and the City should work with providers to expand placement of scooters, as well as simplify the system for locating and paying for shared modes.

Engagement can continue to focus on safety education, and the City can work with providers to expand placement of scooters, as well as simplify the system for locating and paying for shared modes.



The scooter station is nice, it was frustrating when they were only downtown. Scooters are helpful for low-income people I think.

## Survey Results: Why Respondents Don't Use Scooters



## Survey Results: Why Respondents Do Use Scooters



## Discount Program Awareness

The survey also revealed limited awareness in the community about equity programs that offer discounted access to scooters, with fewer than 15% of respondents knowing about these programs. Further potential exists to raise awareness and increase utilization of these programs by establishing local standards that must be incorporated into equity programs.

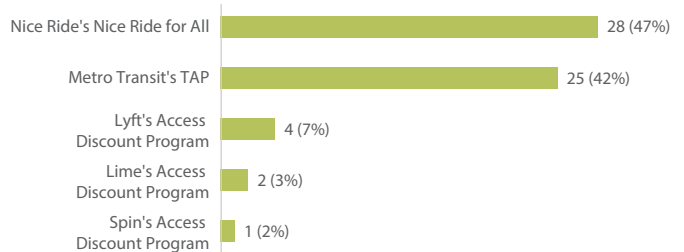
## Engagement Events

Partnerships were a large part of the success of pop-up engagements. Every time engagement was being conducted on-site, a community group, artist, or mobility service provider was there as well. By offering this platform for other partners, this pilot produced community benefit as well as adding to our understanding of the next steps for mobility hubs. Bus riders had the chance to interact with scooter companies and get information about low-income programs available. Nice Ride came out to let people try the new electric bikes and show how to unlock new dockless bikes. Throughout the events, approximately 285 helmets were distributed, 60 demo rides given, and over 200 flyers about the low-income programs were provided. Nice Ride bikeshare saw 38 new enrollments in Nice Ride for All as a result of the events, as a result of their ability to enroll customers on the spot at events.

Throughout the events, approximately 285 helmets were distributed, 60 demo rides given, and over 200 flyers about the low-income programs were provided.

With the rapid pace of change occurring in Minneapolis' transportation system, this demonstrated the importance and success of connecting users with information through in-person, on-site engagements. The City of Minneapolis has made this type of participation in outreach an expectation of companies who receive licenses to operate mobility services in the city. This policy ensured that operators were enthusiastic participants in the mobility hub pilot. Mobility providers also received the benefit of building a positive relationship with new potential customers.

**Survey Results:** Check the box for the discount programs you knew about before this survey.





“We had a great time at the event and would love to do more of these with you going forward! It really seemed like a lot of people were curious about the scooters and wanted to ride, they just needed the information about how.”

– Spin Management

Future phases of the mobility hub program should continue to engage alongside mobility service providers and build on these partnerships. Neighborhood organizations were also excited about a place where their messages can be communicated. Access to non-digital mechanisms for sharing information is a challenge, even for those already embedded in the community. During the pilot season (without being prompted by the project team), the Folwell Neighborhood Association put door hangers with community information in the Info Box placed at the Penn and Lowry mobility hub.

The platform to distribute information to people who could be eligible for equity programs was a key positive outcome of this phase of the pilot.

Partnerships were also formed with neighborhood groups and local artists. The two community partners who participated in the micro-grant program were the Powderhorn Park Neighborhood Association’s Advocacy Booth and artists Sally Nixon and Ashley Satorius’s Picture Wagon. Both community partners were compensated for their contributions.

Powderhorn Park Neighborhood Association’s Advocacy Booth was an artist-designed engagement for neighborhood events to connect the voices and concerns of residents to the elected officials who serve them,

overcoming barriers to advocacy for traditionally under-represented groups. PPNA also shared their advocacy on Community Safety initiatives, which provided insights into how neighborhood leaders envision addressing safety challenges like those we see at mobility hub sites.

Picture Wagon is a bicycle-pulled photobooth and interactive art piece by Ashley Satorius and Sally Nixon. Satorius and Nixon proposed a theme for the installation of “I Was Here Too,” which prompted hub users to see themselves as connected to the other users of the site who are in the same place at different times. By taking playful portraits of subjects that would be printed and taken home and taking second portraits with uplifting messages to leave for the next person, Satorius and Nixon created a link between community members who may not otherwise meet. From families with kids who loved to dress up, to others who were touched to have a photo with their loved one, this piece impacted many in a positive way.

Future phases would benefit from more time to connect with potential grant recipients, especially to allow time for new work to be conceived around the program. Other opportunities to create art and community engagement were also open during the same period as the mobility hub pilot, which may have also factored into volume of responses to the mini-grant. Additionally, as was done during this phase of the pilot, community partners need to be compensated for their contributions to the mobility hub program.

Partnership over time could potentially build capacity within those organizations or individuals to respond more quickly to future opportunities that benefit the community, within and beyond the mobility hub program.





**Engagement is a two-way street.**

Partnerships enabled the mobility hub pilot to connect to users in a unique way and enabled local artists and rooted organizations to take part in shaping the project narrative.

Picture Wagon - Ashley Satorius and Sally

Nixon



Advocacy Booth - Powderhorn Park  
Neighborhood Association





## Pop-Up Engagements On-Site

The top priority of engagement was to understand how everyday users at the site experienced the current environment and responded to the pilot interventions. To capture this, we spent over 20 hours at mobility hub locations talking with users about their transportation experiences, and what they see as the most important improvements. Surveys were conducted at Penn and Lowry Avenue and at Uptown Transit Center.

### Frequency of Use

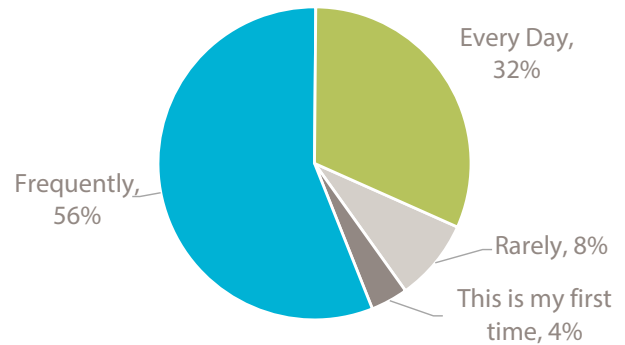
The majority of users surveyed (88%) were frequent or daily users of the hub. This helps us understand both the value of these experienced users' insights, and also understand that this intercept approach may under-represent the opinions of people for whom barriers limit or restrict their use of transit, bikes, or scooters.

### Impact of Pilot on Use of Transportation Options

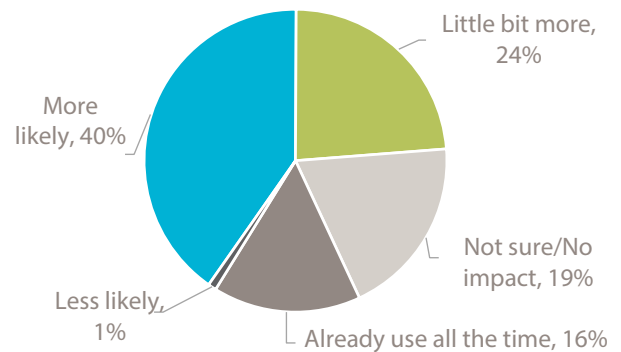
After giving a brief explanation of the pilot and pointing out the elements at the site, users were asked whether these pilot elements made them more or less likely to use the transportation options available at that hub, and they responded on a spectrum. This data shows that 64% of users reported that they would be more likely to use the transportation options at the hub. A total of 35% of users reported that they already use the services all the time or that there would be no impact on their travel choices. All but three of the people who said the hub features would have no impact on their travel choices (or weren't sure), were already using the available transportation options frequently or every day.

64% of users reported that they would be more likely to use the transportation options at the hub.

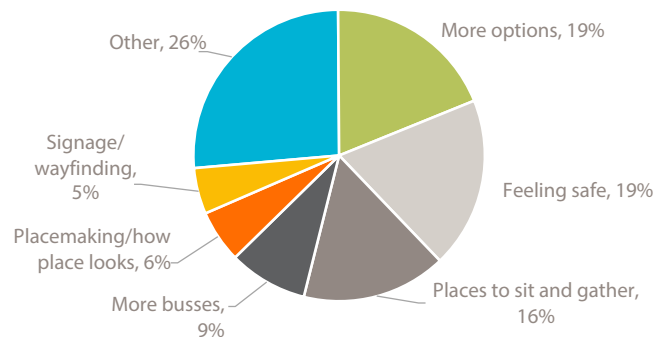
Survey Results: Frequency of Use



Survey Results: Impact of Pilot on Use of Transportation Options



Survey Results: Key Element at Mobility Hub



## Important Element to Improve Trips

We also asked users about what would be most important to improve their trip, giving users an opportunity to talk about what impacts them most. Three key themes which people value most emerged from the responses: feeling safe, access to more transportation options, and places to sit and gather. Many other ideas arose, and some valuable insights were not common enough to make a category, but still warrant further exploration.

Three key themes which people value most emerged from the responses: feeling safe, access to more transportation options, and places to sit and gather.

- » “[I]<sup>1</sup> use the bus. The signs are really colorful and I like them. It’s nice to have the other options close to the bus so that if I miss my bus I can take a scooter or bike. You should be able to pay for the scooters and bikes with a bus card.”
- » “Seating is helpful because I have bad knees.”
- » “Having a dedicated area for scooters, it’s helpful to have a “parking spot” rather than knocked over, on the sidewalk, etc.”
- » “I meet people here, use the bus, and will use the scooters. You get tired of standing. Scooters [are nice] when you can’t catch the bus. Winter’s coming [and] the bus shelter is open and the wind is cold. It would be nice if there was a door to close so that the cold doesn’t keep coming. Everything else is good.”
- » “[I] use the bus to get to work. If the seating was over here [near the 32 stop] so you can see the bus. The bus is always late. This one is nine minutes late and you’re just standing here.”

The project team moved the seats in response to this comment.

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<sup>1</sup> Words in brackets were filled in after the conversation. The rest of the quotes were verbatim from the respondent.

- » “[I want] more places to sit, [I feel] scared, so [I want] more lighting, free monthly bus cards, barbeque in the lot.”
- » “[I go] to Penn and Lowry twice a day. Haven’t tried scooters/bikes but seeing people around makes me want to try. Looks fun, especially for younger people. [I] like bright color[ed] signs. [They] look pleasant and inviting. [I] would want more planters and flowers. [It’s] about community. [I] like all signs with good information. Seems like we’re growing, like downtown.”

In response to this comment and others like it, the project team added planters and planted them for the fall and winter at Penn and Lowry.

“It’s nice to have the other options close to the bus so that if I miss my bus I can take a scooter or bike. You should be able to pay for the scooters and bikes with a bus card.”

“I use the bus to get to work. If the seating was over here [near the 32 stop] so you can see the bus. The bus is always late. This one is nine minutes late and you’re just standing here.”

“...Looks fun, especially for younger people. I like bright colored signs. They look pleasant and inviting. I would want more planters and flowers...”

## Further Insights

The less quantifiable outcome of this intercept survey was the opportunity to have broader conversations with users at the hub. For several people, having furniture at their bus stop was more than just a convenience, it multiplied the possible uses of the hub for them. When the project team was on site for maintenance of the mobility hub, one person shared that the new seat had especially helped the other day when their knee flared up while they were walking. At the hub, they had a place to sit and call a friend for a ride from a hub that they could easily describe. Another person said how helpful it was to have something to set their grocery bags on, instead of the ground (see Snapshot #1). Some users at North Regional Library pulled a seat over to an outlet on the building so they could charge their phone (see Snapshot #2).

For several others, they wanted us to know that seeing these colorful, cared-for elements on their trip lifted them up and made them feel valued in a way they usually didn't while riding the bus or walking. Over and over people shared what they would envision being able to accomplish in their community with a hub like this.

While the core purpose of these spaces is to serve a transportation purpose, people who were engaged resonated with the potential for mobility hubs to make streets more social, and to celebrate neighborhood identity. Whether they were envisioning barbecue pits in adjacent vacant parcels, or distribution of leftover community garden produce, community members saw deeper potential for mobility hubs playing a role in restorative practices already being developed.



Snapshot #1



Snapshot #2







# MOBILITY HUB PILOT LEARNINGS + OUTCOMES

The 2019 Mobility Hub Pilot provided a fruitful platform to plan by doing and engage by meeting people where they are. Stakeholders responded in ways that demonstrate that, though the concept of mobility hubs is new, potential exists for creating a space where multiple mobility options are available, convenient, and reliable, and where the surrounding community can connect and build. The 2019 mobility hub pilot revealed key themes, lessons and recommendations to inform the further development of mobility hubs.

## Users prioritize seating, safety and choice at the hubs

### Seating

Seating was commonly heard as an important piece of support infrastructure in the city's right of way, whether as a place to sit while waiting for a bus, a place to set your backpack while you find your bike key, or a place to rest while walking. Seating is especially important to facilitate comfortable journeys for older adults, children, and people with heavy bags, physical mobility challenges or chronic pain.

During the pilot, we encountered some situations where seating had been removed from a bus stop or sidewalk due to previous incidents of negative behavior. While it is important to take these concerns seriously, it is critical to understand and clarify the root cause of that behavior. The challenges communities face - such as substance abuse, unemployment, homelessness and poverty - exist and outside the presence of a bench. Removing a bench will not remove these challenges that underpin negative behaviors,

but adding a bench will make many people's trip significantly better. A bench is just a bench, and a bench is good.

To fulfill the need for accessible seating at mobility hubs, features could include:

- » More durable, permanent seating
- » Seating options for enhanced comfort and accessibility, such as seat backs, arm rests, and cushioning
- » Movable furnishings that can serve multiple purposes
- » Partnership with Metro Transit to add seating in the bus stop shelters
- » Partnership with local businesses or stakeholders to maintain seating elements

*See Next Steps section for further discussion of a holistic mobility hubs approach.*

## Safety

Safety is a key driver of utilization of mobility hubs. The experience of safety is fostered through a variety of interconnected factors and differs based on the perception of the individuals interacting with the space. Safety consists of both personal interactions and physical space concerns from adjacent car traffic. Many people who were engaged with during this pilot brought up feeling unsafe. For some that meant wanting more lighting or bike lanes, for others that meant wanting more security or police present. For others, there was concern about experiencing harassment at transit stops. If in-person surveys had been conducted in the early morning or late night, these concerns may have come up even more. As we seek to eliminate barriers to accessing transit and shared mobility, a complex understanding of safety and what that means for each neighborhood around these sites needs to be considered.



“Space in cities is not the sum of its infrastructural parts. While there is a critical aspect of safety composed of how we design and build streets, there is a multidimensional experiential safety that overlays that infrastructure.”

– The Untokening Collective

The mobility hub pilot site on E Lake St, demonstrated how a multi-dimensional experience of “safety” is present in the public realm. Metro Transit Police work diligently to remove dangerous objects from the Chicago & Lake Transit Station. However, community members described how increased police presence near transit puts neighbors who may not

have documentation at risk. Partners at Powderhorn Park Neighborhood Association have already begun charting a path to a safer environment on Lake Street by advocating for resources for community-based outreach in response to livability crimes. And finally, Lake Street has also been identified as a high-crash corridor for pedestrians, bicyclists and vehicles, and therefore is being evaluated for infrastructural safety improvements by Hennepin County and the City of Minneapolis. This is the complex environment in which mobility hubs are being integrated.

It is likely that future mobility hubs will face similar safety challenges. Therefore, a future approach must incorporate resources to contribute to safer environments in order to successfully respond to concerns of current users and attract new users. Solutions will be chosen with an understanding that encouraging and facilitating positive activity helps to mitigate negative activity. Pushing people out of the space is not a humane approach and will only move the activity to another (and often nearby) location.

Working to create a stronger sense of safety could involve a variety of approaches, including:

- » Adding enhanced lighting
- » Providing phone charging stations
- » Placing ambassadors to help facilitate positive activities and interactions at mobility hub sites
- » Locating mobility hubs near existing hubs of activity, such as libraries, active parks, and commercial hubs
- » Coordinating with Vision Zero efforts to improve the safety of walking, biking and riding scooters

*See Next Steps section for further discussion of a holistic mobility hubs approach.*



## Choice (or Space)

Users want the flexibility and convenience of having multiple transportation options to fit their trip needs, yet the biggest constraint to providing these options at each hub is space. Placement of bike share, scooters, bus stops and other infrastructure in a constrained right-of-way, while maintaining a walkable and accessible sidewalk will be a challenge for some mobility hub locations.

This pilot demonstrated that close proximity of multiple mobility services is key to a cohesive hub. Proximity is especially important for hubs located on larger, multi-lane roads, where users may not see designated scooter or bike parking just across the intersection. When the pilot began, site layouts spanned two or even three out of four corners of an intersection, based on available space. Later in the pilot process, tighter configurations created a more recognizable presence in the streetscape, making it easier for people to quickly identify and access the full range of options available to them.

During this pilot, elements were placed on concrete sidewalks, in grass, and in preliminary layouts on-street. When it became clear that tighter proximity of elements was key, layouts were tested to utilize on-street space in the 20-30ft No Parking zone between an intersection and where on-street parking begins. However, it was observed that in many of the pilot locations, the most consistently available space for mobility hub elements was in on-street parking spaces.

Where available, utilizing on-street parking for mobility hub elements relieves pressure on congested sidewalk space, clearly indicates that the proper place to ride bikes or scooters is on-street, and provides a consistent template for co-location of mobility options.

To maximize transportation options available in space, future mobility hubs could use several strategies:

- » Developing site layouts that preserve accessible, comfortable walking spaces and keep mobility hub options in a cohesive, tight arrangement
- » Utilizing on-street parking spaces where practical to maximize available space for mobility hub elements

- » Expanding the number of mobility hub sites so more mobility options are reliably available in more places
- » Continuing work with mobility service providers to ensure mobility hubs are priority sites for distribution of shared vehicles

*See Next Steps section for further discussion of a holistic mobility hubs approach.*

## Other Barriers

Age was a frequent factor in why people were disinterested in, or wary of, shared bikes and scooters. Follow-up engagement should target better understanding of how to reduce barriers to mobility experienced by those who don't see their needs met by the currently available mobility options. Future changes to vehicle types, such as inclusion of adaptive cycles or scooters, or additional modes such as carshare, ridehailing, or dynamic transit service may better accommodate those users.

“ I can't use [Nice Ride] bikes without a credit card. My friend was telling me about scooters but when they talked about paying for it in an app I removed myself from conversation.”

Another consideration is the financial and technology barriers to access for shared mobility. Whether because of cost, lack of access to banking services, or lack of access to a smartphone and/or data plan, having app-based services leaves some Minneapolis residents behind. One person told us, “I can't use [Nice Ride] bikes without a credit card. My friend was telling me about scooters but when they talked about paying for it in an app I removed myself from conversation.” Nice Ride is working with local non-profit Prepare and Prosper to connect people to basic banking services to fit their situations, but alternatives to app-based payments are still a necessity. The City is working to develop standards for equity programs which all mobility service providers may be required to incorporate.



## Further Takeaways from Implementation Team

### Maintenance

One of the challenges of building out a mobility hub network is the care necessary to keep these places functioning well, and projecting care and reliability into the community. The City of Minneapolis, Metro Transit and other property owners work diligently to maintain existing right-of-way and property. Coordination of these roles and responsibilities across the city is a complex logistical challenge. Adding elements to the right-of-way, especially when it expands beyond the services usually provided by existing maintenance staff, can increase costs without having a clear source of funding to cover it. With this in mind, it is important to account for maintenance services as a part of planning new infrastructure, such as mobility hubs.

Despite the additional maintenance required in implementing mobility hubs, there is an important case to be made for continuing to include elements like signage, benches, planters, and bright colored paints in the mobility hub system. Users called these elements out as impactful to their perception of the space and as a reason why they would use the transportation options at this hub more.

An effective mobility hub strategy must seek efficiencies and assign responsibilities for maintenance to entities whose proximity and incentives align them well for partnerships. Existing maintenance systems are centralized, where maintenance staff are housed within each jurisdiction's departments, making it a challenge

to provide consistent care to elements that require small check-ins on a regular basis, over a large geographic range. Regular maintenance tasks at mobility hubs include collecting litter, tending plants, clearing snow, site repairs, managing artwork, and adjusting signage. These tasks can usually be handled by an individual or group close to the site with little or no training needed. Pursuing a more decentralized model through maintenance partnerships at future mobility hub sites could allow for greater efficiency in accomplishing good repair at mobility hub sites with robust features. As networks of mobility hubs grow, needs for ongoing maintenance and a safety presence could be rolled into an "ambassador" role.

To ensure mobility hubs are maintained as a welcoming and accessible space, the following strategies should be considered:

- » Identifying maintenance responsibilities and allocating tasks to most efficient entity possible, exploring strategies for decentralized maintenance partnerships
- » Allocating specific resources to maintenance if developing an ongoing mobility hub program
- » Placing ambassadors to help facilitate ongoing maintenance of mobility hub elements

*See Next Steps section for further discussion of a holistic mobility hubs approach.*





## Mobility Hubs in Winter

This year's pilot concluded fully in the second week of December, which provided a window into the operation of mobility hubs in winter conditions. Current census data shows that more than one in six households in Minneapolis do not have access to a car, a fact that necessitates consideration of mobility options that can be reliably available year-round.

The two big issues that came up during winter operation of the 2019 pilot sites were snow clearance and diminished transportation options. Upon the first major snow of the year, it was difficult and/or dangerous to get to transit stops at the hubs because of inconsistent or complete lack of snow clearing at bus stops and intersections. Although the Nice Ride and scooter season had been extended for this pilot, soon after the first significant snowfall, bikes and scooters were collected for the season.

The limited winter functionality of the currently available shared bikes and scooters is another barrier to their year-round usability. The City of Minneapolis can work with mobility service providers to identify and pilot modes and vehicle types which cater to this environment, allowing mobility hubs to be prepared to fully function year-round.

In the future, structured shelter and electrical connections would allow the addition of lighting, heat and weather protection, which would enhance the experience at mobility hub in winter conditions. Metro Transit's experience demonstrates that even these basic elements are difficult to keep operational, as is visible when station heaters and light fixtures fail and require frequent repair.

As such, a mobility hub strategy could include:

- » Service standards for mobility hub snow clearance incorporated into a maintenance plan
- » Partner with Metro Transit to build or enhance bus shelters at mobility hub sites
- » Partner with mobility service providers to explore deployment of winter-ready vehicles
- » Building out select hubs with electricity to enable addition of lighting and heating elements

*See Next Steps section for further discussion of a holistic mobility hubs approach.*

## Winter Site Snapshots



This year, the project team was able to clear an accessible path to transit stops at mobility hub sites, clear crossings at adjacent intersections, and clear hub elements (seats, bike/scooter parking). The results were a clear shift in the usability of spaces for users.

## Next Steps for Minneapolis Mobility Hub Pilot

Table 6: Recommendations from 2019 Pilot

Recommendation	Why?	How?
Expand locations of mobility hub pilot	<ul style="list-style-type: none"> <li>- Reach and engage more users in an interactive format</li> <li>- Users reported the features positively impacted their choice to use transportation options at the hubs, helping Minneapolis progress toward mode-share goals</li> </ul>	<ul style="list-style-type: none"> <li>- Replicate the location identification approach from 2019 pilot with modifications</li> <li>- Return and build momentum at 2019 sites and add other high-potential sites</li> <li>- Pursue grant funding and ongoing funding streams</li> </ul>
Prioritize seating, safety and choice of mode	<ul style="list-style-type: none"> <li>- Users surveyed identified these three features as most important to improving their trip at mobility hubs</li> </ul>	<ul style="list-style-type: none"> <li>- Test improved seating options in 2020 pilot</li> <li>- Test a hub ambassador approach to creating safe environment</li> <li>- Coordinate with Vision Zero efforts on safety and accessibility of sites</li> <li>- Expand on best practices in locating modes in tight configurations in public right-of-way</li> <li>- Incorporate Mobility as a Service Pilot to better facilitate access and payment among multiple modes</li> </ul>
Develop a kit-based design primarily for underutilized on-street parking and sidewalk space	<ul style="list-style-type: none"> <li>- On-street parking can provide cohesive base for replicating hub design</li> <li>- On-street space encourages riding bikes and scooters in on-street lanes. Relieves congestion on the sidewalk.</li> <li>- Kit encourages consistency in network</li> </ul>	<ul style="list-style-type: none"> <li>- Build on 2019 pilot layouts to create easily replicable packages that can still reflect community identity</li> </ul>
Continue to build partnerships with agency partners, community groups, mobility providers, and artists	<ul style="list-style-type: none"> <li>- Successful partnerships this season were built. Participation ensures better outcomes.</li> </ul>	<ul style="list-style-type: none"> <li>- Extend the micro-grant programming approach for 2020</li> </ul>
Continue to build partnerships with public right of way owners and operators like Metro Transit, Hennepin County, and MnDOT	<ul style="list-style-type: none"> <li>- Agency partnerships will be necessary for long-term placement of elements in right-of-way</li> </ul>	<ul style="list-style-type: none"> <li>- Work on provisional basis for placement of pilot elements in other right-of-way</li> <li>- Develop agreements for long-term mobility hub elements</li> </ul>
Pilot on-site ambassadors to fulfill maintenance and safety functions	<ul style="list-style-type: none"> <li>- Geographic distribution of mobility hubs presents logistical challenge for centralized maintenance</li> <li>- Enhanced maintenance and safety make the investment in a mobility hub more efficient at serving existing users and attracting drivers to non-car mode existing users and attracting drivers to non-car modes</li> </ul>	<ul style="list-style-type: none"> <li>- Approach neighborhood organizations and business coalitions to identify best fit for partnerships</li> <li>- Test community-based maintenance and safety approach through ambassadors at 2020 pilot sites</li> </ul>

# APPENDIX

**Pre-Pilot Survey**

**Index of intercept responses**

**University of Minnesota Land Use Class Posters**

**Data from Metro Transit and Nice Ride and Scooters**

**Data Analysis from Arcadis**