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Duluth-Superior Metropolitan Pedestrian Plan

February 2021

Duluth-Superior Metropolitan Interstate Council (MIC)

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Introduction

Walking is the most basic and universal form of transportation, yet the needs of people walking are often overlooked or considered after those of other modes of transportation. Designing a transportation system that works well for people walking requires slowing motor vehicles and providing comfortable walking environments through separation from traffic, thoughtful intersection design, pedestrian amenities, and seamless integration with destinations. This Pedestrian Plan is a detailed path to maximize its role in making walking safe, convenient, and desirable for all.

- Walking plays an essential role in the urban transportation system.
- Provide guidance and recommendations on improving walking along and across roadways throughout the Twin Ports.
- Seamless continuity across jurisdictional boundaries and roadway authorities.

This Pedestrian Plan aspires to a vision, sets goals and priorities and measures progress. The Plan prioritized where to focus improvements for people walking. While sidewalks and trails provide spaces for people to walk along streets, they do not help people walking across streets. Busy streets and streets with fast moving traffic often serve as significant barriers for people on foot. The Plan recommends a general methodology for improving pedestrian crossings, while also recommending improvements at specific intersections.

Vision

- Walking is easy, safe and comfortable.
- Routing is direct and convenient.
- Access is seamless, intuitive, consistent and predictably available.

Walking

This plan uses the term ‘walking’ to include all the ways that people move themselves through the world, including with mobility devices such as walkers, strollers, and wheelchairs.

Investing in walking is essential to achieving the Duluth-Superior vision: a multimodal transportation system that maximizes the health of people, the environment, and our economy. Investing in walking is an effective approach for achieving multiple community goals including creating a vibrant economy, enhancing quality of life and improving health outcomes.

Pedestrian facilities along and across the transportation system are vital components. Everyone walks at some point, including walking to a nearby store, park or neighbors, from transit or from a parked car. While cars currently dominate the transportation landscape of the area, walking is the oldest, most universal, and most fundamental mode of transportation, and people across the region want to see more investment.

Existing Conditions

Walking infrastructure in the Duluth-Superior Area consists of sidewalks, streets, multi-use paths, skywalks.

Strength

Regional education, government, and medical center within the largely traditional walkable grid development pattern. Compact neighborhood activity/commercial nodes.

Walkable neighborhoods still remain.

Walking is a viable mode as distances between key destinations in the DS Metro area are close.

Plan Purpose

This Pedestrian Plan provides a 20-year visions with short term strategies and recommendations. This Plan is a guide to be utilized by the whole of the Duluth-Superior area, jurisdictions responsible for roadways, township, city and county officials carrying out and creating land use policies and development codes, public entities such as schools and colleges, and property owners building and maintain their connections in their part of the network.

Federal Rules & Guidance

The Duluth-Superior Metropolitan Interstate Council (MIC) is the officially designated Metropolitan Planning Organization (MPO) for the Twin Ports and receives federal funding to undertake transportation planning efforts on behalf of the Duluth-Superior Urban Area. Of the transportation planning responsibilities that MPOs must undertake, one is to plan for an integrated multimodal transportation system (including accessible pedestrian walkways) to facilitate safe and efficient movement of people and goods in addressing current and future transportation demand.

The following rules purtain to MPO's and pedestrian planning:

23 U.S. Code 134 – Metropolitan Transportation Planning

(a)Policy.—It is in the national interest—

(1)to encourage and promote the safe and efficient management, operation, and development of surface transportation systems that will serve the mobility needs of people and freight, foster economic growth and development within and between States and urbanized areas, and take into consideration resiliency needs while minimizing transportation-related fuel consumption and air pollution through metropolitan and statewide transportation planning processes identified in this chapter;

General Requirements:

(2)Contents.—

The plans and TIPs for each metropolitan area shall provide for the development and integrated management and operation of transportation systems and facilities (**including accessible pedestrian walkways**, bicycle transportation facilities, and intermodal facilities that support intercity

transportation, including intercity buses and intercity bus facilities and commuter vanpool providers) that will function as an intermodal transportation system for the metropolitan planning area and as an integral part of an intermodal transportation system for the State and the United States.

23 CFR 450.324

(b) The transportation plan shall include both long-range and short-range strategies/actions that provide for the development of an integrated multimodal transportation system (including accessible pedestrian walkways and bicycle transportation facilities) to facilitate the safe and efficient movement of people and goods in addressing current and future transportation demand.

Process

Public and Stakeholder Engagement

Advisory Committee

The project team worked with an Advisory Committee, which was composed of local and state staff; elected officials; representatives from community organizations and citizens. The Advisory Committee met 8 times beginning in April 2020 during the project to discuss project needs and priorities, provide local and institutional knowledge for the project, and review project materials.

Committee Members:

Name	Organization	Role
Broc Allen	Resident	Resident
Carol Andrews	St. Louis County	County Engineer/Environment
Gary Anderson	City of Duluth	Elected Official (city)
Eleanor Bacso	Public Arts Commission City of Duluth Econ Dev	Econ Dev/Public Art
Chris Belden	DTA	Transit Planner
Brian Bluhm	Community Health Board	Public Health (SHIP)
Amy Demmer	Zeitgeist	Public Health (SHIP)
Judy Gibbs	Community Member	Community Member
Ed Gleeson	DTA Board	Transit Board Member/Local Business Owner
Susie Green	Community Action Duluth	Equity/Direct Service
Russell Habermann	ARDC	Walkability Action Institute/SRTS
Holly Kostrzewski	MnDOT TZD	Towards Zero Deaths Initiative
Kris Liljeblad	City of Duluth	City Transportation Planner
Ben Margeson	CHUM	Equity/Direct Service
Shawna Mullen	Essentia Health	Hospital/Clinic/Walkability Action Institute
Nancy Nelson	Community Member	Older Adult
Theresa O'Halloran-Johnson	Resident	Resident
Dena Ryan	WisDOT	State DOT (Wisconsin)
Doug Stevens	Skyline Pkway Alliance	Pedestrian Advocacy
Tom Szukis	DTA	Transit Board Member
Rachel Thapa	LP Middle School	School District
Alice Tibbetts	We Walk Duluth	Pedestrian Advocacy
Maren Webb	MnDOT District 1	State DOT Planner
Andrea Crouse	Zeitgeist	Active Transportation Coordinator

One-on-One Meetings

Project staff met with individuals representing and from priority population communities to listen to the pedestrian issues including with the following organizations:

- CHUM – Outreach Coordinator
- Community Action Duluth – Transportation Advocate
- AICHO

General Public Input Survey

From July 17 thru August 10 a public input survey was open primarily online. MIC staff attended 3 community events and handed out paper survey. These events were located in priority population neighborhoods.

- Damiano Meal Center
- Hillside Farmers Market
- Harrison Farmers Market

Total Responses = 627 responses

Responses were received proportionally from all geographies of the Duluth-Superior area.

Surveying Findings: top areas to focus

Walking along Roadways improvements needed:

1. Clear of obstructions
2. Fill gaps
3. Easier access
4. Sidewalks on both sides
5. Streetscaping

Walking Across Roadways improvements needed:

1. Improve visibility
2. Increase yielding
3. Easier access
4. Longer WALK signal
5. More frequent crossings

Policy Priorities should focus on:

1. Snow clearing
2. Maintain sidewalks
3. Prioritize pedestrian needs
4. Clear of obstacles
5. Add vegetation along sidewalks

Public Open Houses (virtual)

October – two virtual public open houses were held during Fall Bus, Bike Walk Month event to discuss the Plan. One session focused as Pedestrian Safety and the other session focused on Pedestrian Accessibility.

February – two virtual public open houses were held during Winter Active Transportation Week event to discuss the draft Plan.

Plan, Reports & Document Review

The project staff conducted a review of existing plans and pedestrian related reports and documents relevant to this planning effort. A list of all reviewed plans and notes the emphasis area of each. Relevant recommendations from the reviewed plans are incorporated into this plan.

1999 Metro Pedestrian Plan

This was the first comprehensive pedestrian plan for the Duluth-Superior area. The plan identified recommendations. Following this plan, the MIC undertook a number of baseline condition analysis and planning efforts including a Sidewalk Inventory and Condition Analysis, priority pedestrian modeling and launched a pedestrian count program.

Safe Routes to School (SRTS)

This program is about making it easier for students to walk, bike or use active transportation modes with getting to and from school each day. The primary focus is from a student health perspective and helping students reach their minimum 60-minutes of needed physical activity each day. With less and less students actively transporting themselves to school, this planning initiative identifies the barriers to walking and strategies to remove them. SRTS plans across the Twin Ports have been in place starting in 2004.

Duluth – School District-wide plan with individual plans for the urban schools with walkable populations

Schools with Plans:

Schools that do not have an individual plan but could still use one in order of priority:

1. Ordean East Middle School
2. Homecroft Elementary
3. Lowell Elementary
4. Denfeld High School
5. Duluth East High School

Hermantown school district wide plan with a focus on the Hermantown Elementary, Middle & High Schools.

Marshall School

Proctor – school district wide plan with a focus on the Bay View Elementary, Jedlicka Middle and Proctor High School

School that could still use a plan is:

1. Pike Lake Elementary

Superior – school district wide plan with focus on the Bryant Elementary, Cooper Elementary, Great Lake Elementary, Northern Lights Elementary, Superior Middle and Superior High Schools.

Cathedral School was included in this plan as well.

Superior Active Transportation Plan

Vision Statement- Superior is a healthy city where walking and bicycling are encouraged as attractive, safe, comfortable, and convenient options for residents and visitors at every age and life stage. The plans call for the following strategies and recommendations:

- Improve safety for people who walk and bike in Superior.
- Reduce or eliminate pedestrian and bicycle-related crashes, serious injuries and fatalities.
- Build pedestrian and bicycle friendly streets that manage vehicular speed and reduce conflicts with motorists.
- Accommodate all users, especially more vulnerable populations such as children, seniors, and people with disabilities.
- Enhance street crossings along key walking and biking routes.
- Create a complete, comfortable and attractive pedestrian network that is usable year-round.
- Fill in gaps in the sidewalk and trail network.
- Retrofit or expand the existing sidewalk network to include accessible pathways for people with mobility devices.
- Ensure that the pedestrian network is maintained for year-round access.
- Enhance pedestrian accessibility to transit services.
- Improve connections between areas of the city currently separated by barriers such as rail corridors.
- Increase bicycle and pedestrian access to key destinations.
- Enhance multimodal connections that allow people to make trips using multiple modes of travel.
- Embrace bicycling and walking as ways of transportation, recreation, and healthy living in Superior.
- Increase the number of people who walk or bike for all trip purposes.
- Create a culture of safe walking and bicycling through education and enforcement programs.
- Ensure that City policies, ordinances, and plans support and promote active transportation.
- Increase sidewalk widths to at least 6 feet.
- Require sidewalk buffers that are at least 6 feet wide between the street and the sidewalk.
- Develop pedestrian crossing guidelines.

Duluth Comprehensive Plan – Imagine Duluth 2035 – overall policy guide. The vision is for Duluth's transportation system to connect all users in a way that promotes safety, health, and quality of life and that walking is a primary mode of transportation.

- Policy #1 – Improve street conditions to function better for everyone.
- Policy #2 – Reduce infrastructure costs through innovation and wholesale design change
- Policy #3 – Add to the transportation network by systematically enhancing multi-modal options. Policy #4 – Improve system condition and connections in and between downtown and Canal Park
- Policy #5 – Base decisions about transportation infrastructure primarily in the context of improving city and neighborhood vitality, and not on automobile through traffic.

Minnesota Walks – aims to make walking safe, convenient, and desirable for all**.**

- Pedestrians are the first priority in design of roadway infrastructure.

MnDOT Statewide Pedestrian Plan

MnDOT's Statewide Draft Pedestrian Plan sets a framework to create, safe, convenient and desirable walking for all. The Plan has identified that walking is essential to achieving MnDOT's vision: a multimodal transportation system that maximizes the health of people, the environment, and our economy. MnDOT is planning to invest more in walking with a focus on safety, equity, and climate change. The Plan calls for MnDOT to leverage its resources and role as statewide leader to support agencies at the regional and local levels in their efforts to advance walking. An overview of this Draft Plan will be presented.

Surgeon General's Call to Action to Promote Walking and Walkable Communities

US Department of Health and Human Services –

Step it up! Report

The Call to Action notes that although walking is a popular form of physical activity and can be done easily by most people, barriers to walking exist.

What has changed. Why are people not get their basic level of physical activity meet current guidelines now?

Over the last 50 years, the percentage of people who work in occupations that require physical activity has progressively decreased, making it difficult for adults to be physically active during work hours. However, the conveniences of modern life, have given more flexibility with their leisure time

Why don't people walk more? The report found that the most significant barriers to walking.

- Not enough time to walk (lack of time)
- Safety concerns –
  - Pedestrian deaths - Nationally the rate of pedestrian fatalities is increasing
  - Physical environments – lack of sidewalks and crosswalks, poor lighting, streets with high speed
  - Perceived traffic dangers
  - Fear of crime
- Community Design – ways in which communities are designed and built can present barriers to walking.
  - Large distances between homes – consolidating schools, grocery stores, etc into larger buildings provides economies of scale for delivering services, more choices for the user, but the trade-off is it is more difficult and requires more distances to get there. No longer does every neighborhood have a school that is walkable for the vast number of students to walk to.

Health Implications of Community Design – Moving to Combat Obesity

- Increase understanding of the importance of community design (and redesign) and recognize the potential it has to increase physical activity levels and create positive health outcomes for everyone.
- Discusses social trends, leading strategies to encourage higher levels of daily physical activity, key factors of what communities can and are doing and specific actions that state and local officials can undertake immediately to make communities more walkable.

National Association of Realtors – Walkable Neighborhoods

- Market Demand for Walkability
- Walking for Health Living
-

Trail Planning - various planning efforts have taken place across the Duluth-Superior area to focus on improving the walking environments and make pedestrian network conditions. The Plans include, Canosia Township, Duluth Township, Proctor Master Trails Plan, Proctor-Hermantown Munger Trail Spur, and the Munger Trail Extension.

Existing Network

Walkways are the foundation of any pedestrian transportation network. The sidewalk coverage in the urbanized area of the Twin Ports is in general is extensive, with most streets having sidewalks on both sides of the street. This is particularly true in the urban core areas and those built before 1950.

Many sidewalks are immediately behind the curb—there is no buffer or boulevard between the street and the sidewalk. This can make sidewalks very unattractive to use, particularly along busy streets. People walking are uncomfortable being placed close to fast moving traffic, and sidewalks immediately adjacent to streets often fill with debris from the street.

Issues

The top issues identified by the Pedestrian Plan Advisory Committee included:

Lack of year-round sidewalk upkeep

Deteriorating sidewalks – a majority of walkways were built prior to 1950.

Missing sidewalks

Unfriendly pedestrian building and site design that is car-oriented.

Inadequate funding to build and maintain walkways. - more needs, than resources – limited financial resources to cover the needs, much less the wants.

Additional key issues are:

Equity – decisions are made with little input from priority populations and vulnerable users of the system.

Natural barriers – topography hill in Duluth, waterbodies, including ravines and train tracks/yards in Superior.

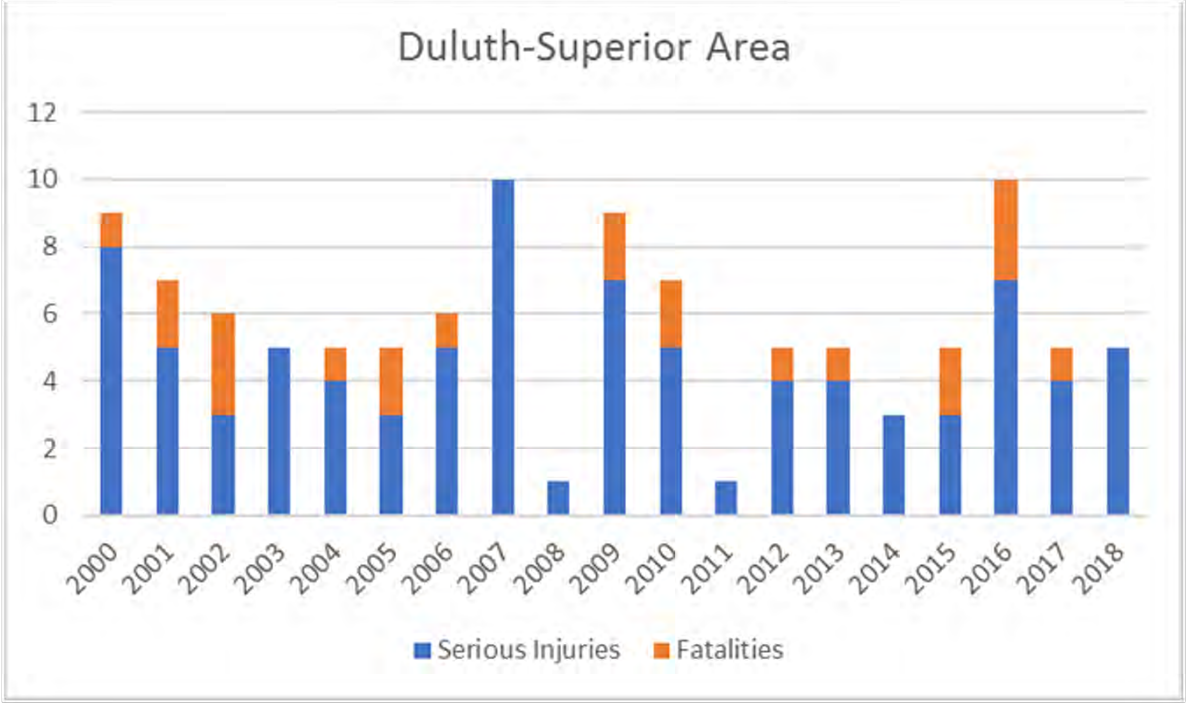
Sidewalks snow management is inconsistent and not treated through the system viewpoint.

Sidewalks are in poor condition and are not cleared of snow. There is not a priority given.

Design to create safe, convenient and desirable pedestrian environment is not a first priority.

System issue with system connectivity and maintenance.

Crashes involving pedestrians – fatalities and serious injuries range in the 5-9 per year and do not appear to be neither increase nor decreasing at this time.



In order to decrease the likelihood of pedestrian-motor vehicle crashes these strategies should be employed:

- Add traffic calming and street design measures to slow the car speeds to safe and appropriate motor vehicle travel speeds.
- Shorten crossing distances across motor vehicle lanes.
- Create better visibility between motorists and pedestrians.
- Fail-safe design - mistakes happen, reduce chance of tragedy.

Network Gaps – no roadway exists but need pedestrian connections:

Haines Road to Decker Road – connection thru Matternhorn Circle & Burning Tree Rd

Piedmont Ave to Lake Superior College – connection through Piedmont Park

Saints Dr to Chinook Dr and Barner Rd (Campus Connector Trail segments)

London Rd to I-35 Bike & Ped Bridge by Edgewater

Lincoln Park Middle School to Wheeler Field/Denfeld Neighborhood

Bong Bridge to Grand Ave connection – 44th Ave W – 1st St to 2nd St

Klang Park/Zenith /Terrace to Bay View Elementary School

Duluth International Airport – sidewalk from Airport Rd/Haines Rd intersection to Oberstar Terminal

Priority Areas for Walking & Investing

This plan identifies priority walkways and areas as part of the overall pedestrian network. The majority of the priorities are connections that connect to numerous destinations, including schools, employment and shopping areas, and community facilities.

To better identify priority locations for people walking, an analysis integrating equity, safety, land use, health, and infrastructure considerations to identify the highest priority areas for walking. The analysis indicates demand for walking and need for improvement to the walking environment. This analysis is to be used to prioritize investment in walking infrastructure throughout the Duluth-Superior area. The analysis has two-parts:

1. High Quality Walkways - scoring based on various factors and threshold weights prioritizing roadways where high-quality walkways are needed.
2. Pedestrian Network Gaps – the scoring combined with identified gaps, barriers, pinchpoints, and existing sidewalk conditions give a composite ranking to where the most needed sidewalk gaps are to be filled.

Note that high quality walkways is defined as a corridor that needs to have a pedestrian facility that is reliable, convenient and direct and maintained and free of obstructions.

Although most streets in the Duluth-Superior urbanized area should include a sidewalk both sides of the street, sidewalk construction should be prioritized in the Priority Pedestrian Areas. Priority should focus on providing sidewalks on at least one side of these streets and filling sidewalk gaps before providing sidewalk on both sides of streets, unless there is a missing sidewalk along an arterial functionally classified route with high daily traffic volumes (greater than 10,000 AADT) of traffic. Whenever possible, sidewalk installation should be integrated with larger projects such as street reconstructions, repaving projects, or utility updates. Reasons include proximity to schools, transit lines, and recommendations from the past Safe Routes to School Plan

Priority Gaps to be filled - **Critical Gaps –** not safe to walk along road due traffic speeds and/or volumes and no reasonable separated walkway available.

The analysis is meant as a starting point for considering walking in decision-making. The analysis highlights areas that are important for walking but does not recommend specific treatments or standards.

In the Duluth-Superior area there are limited resources making it difficult to nearly impossible to provide high-quality pedestrian infrastructure needed to create vibrant walkable places. Therefore, focusing on targeted areas, places that generate high levels of pedestrian traffic, activity clusters and commercial nodes is key. Places where walking and transit infrastructure is existing or planned where population density exists or future development is planned.

The priority area analysis focused on scoring the roadway and pedestrian network based on a number of factors. Thresholds within each factor were given weights.

Category		Threshold				
Traffic Volumes (daily count)						
	Motor Vehicle	<1,000	1,000-2,500	2,500-5,000	5,000-10,000	>10,000
	Heavy Truck	<10%	10-30%	>30%		
	Pedestrian	<100	100-250	250-750	750+	
	Micro-Mobility (bike, scooter, etc)	<50	50-100	100-250	250+	
Traffic Speeds (mph)		0-15	15-30	30+		
Safe Route to School						
	School	Yes	No			
	SRTS	Yes	No			
Transit Route (frequency)		Hour or greater	30-60 min	15-30 min	15 min or less	
Civic Center						
	Town Hall, City Hall, Court House	Yes	No			
	Polling Place	Yes	No			
	Library	Yes	No			
	Cultural/Museum/Entertainment Facility	Yes	No			
	Park	Yes	No			
Activity Node						
	Grocery Store	Yes	No			
	Pharmacy	Yes	No			
	Health Care facility	Yes	No			
	Retail Shop	Yes	No			
	Service provider	Yes	No			
Priority Populations		Thresholds based on MIC area proportions, still working on these.				
	Disability - Ambulatory Difficulties	≤2%	≤4%	≤6%	≤8%	>8%
	Poverty	Yes	No			
	Minority	<10%	10-20%	>20%		
	<18 age	≤100 People	≤200	≤300	≤400	>400
	> 65 age	≤100 People	≤150	≤200	≤300	>300
	Households w/o vehicle	0-5%	5-15%	15-25%	25-40%	40+%

Other considerations include:

Bridges & Viaducts – are significant barriers walking and once built, can serve as a barrier for 50-75+ years if they do not have adequate pedestrian facilities. All bridges on collectors and arterials are critical to the network and must have high quality pedestrian infrastructure, pathways on both sides and maintained, debris removal and snow management at high rate, quick response, to where these are reliable and available for use.

Multimodal – integration – aline all things well. Walking, cycling, driving, transit and other micro-mobilities transport modes.

Very limited to door-to-door connectivity – walking provides the first and last mile.

Urban settings – combine trips offer high performance. Choices made by travelers, operators and governments with combining the transport modes.

1. Increased catchment areas
2. Increased choice on how to make journeys – provides an increase in choice to travelers on where to enter or disembark, what route to take and what time.

3. Increased choice stretches out – customization of journeys, leads to a better match between travelers preferences and available facilities and services.
4. Trends reinforce themselves – create more demand
5. Increased liveliness of urban areas – safer and more attractive public space
6. Land use changed – investments in fully integrating walking, car-based transport and multimodes lead to compact and public centric urbanization.

Gaps & Barriers

Critical Gaps to be filled by roadway jurisdiction:

City of Duluth

Piedmont Ave – in front of Piedmont Shopping Center (sidewalk abruptly ends)

Chambersburg Rd

- Morris Thomas Rd to Piedmont Ave
- Ensign St to Leonard St

London Rd

- 21st Ave E to 23rd Ave E (upper side)
- 29th Ave E (approx.) to 32nd Ave E (upper side)
- 3900 block (upper side)

21st Ave E (west side) – London Rd to 23rd Ave E

40th Ave East

- London Rd to NSSR tracks (west side)
- Cooke St to Dodge St (east side)

Glenwood St (southside) – Snively Rd/Jean Duluth Rd to 43rd Ave E

Crosley Ave – Glenwood St to 51st Ave E/Oakley St

Oakley St – 51st Ave E to 52nd Ave E

Superior St (upper side) – 36th Ave E to 40th Ave E

Mall Drive – Decker Rd to Miller Hill Mall walkways

Matterhorn Circle –

Burning Tree Rd – Mountain Shadow Rd to Maple Grove Rd

Mountain Shadow Dr – Burning Tree Rd to Mall Dr

Decker Rd – Mall Dr to Mountain Shadow Dr

Joshua Ave – Miller Trunk Hwy (US 53) to Stone Ridge Shopping Center driveway

Arrowhead Rd (north side) – Kenwood Ave to Triggs Ave

Kenwood Ave (east side)

- College St to Arrowhead Rd
- Skyline Pkwy to College St

11th St – Myers-Wilkins School to 11th Ave E

11th Ave E – end of sidewalk 11th St to Kenwood Ave

Skyline Parkway – gaps missing along urban sections at various spots

Carlton St – Superior St to Michigan St

Michigan St (lower side) – Carlton St to 29th Ave W

W 1st St/Superior St – 46th Ave W to 40th Ave W

46th Ave W – Mike Colalillo Dr/1st St to Michigan St

Mike Colalillo Dr – 50th Ave W to 46th Ave W

Bristol St (upper side) – Central Ave to 52nd Ave W

Garfield Ave – Nelson St to Port Terminal Rd

Railroad St (lower side)

- Jeno's Walk (11th Ave W approx.) to 8th Ave W
- Garfield Ave to Jeno's Walk

City of Hermantown

Timber Ridge Ln – Mall Dr to Sundance Loop

Ugstad Rd

- Roosevelt Rd to Lavaque Junction Rd (west side)
- Hawk Circle Dr to Miller Trunk Hwy (US 53)

City of Proctor

9th St (school side) – 1st St to 3rd St

City of Rice Lake

Calvary Rd – Rice Lake Rd to Howard Gnesen Rd

City of Superior

Susquehanna Ave – US Hwy 2 to Belknap St

N 5th St – cul-de-sac across US Hwy 53 to Main St

Grand Ave – E 2nd St (US Hwy 53) to N 3rd St

N 3rd St (north side) – Grand Ave to Cumming Ave

Belkanp St – Ohio Ave to Beacon Ln

28th St (upper side) – Wyoming Ave to Logan Ave

Tower Ave – 34th St to 40th St

St. Louis County

Calvary Rd

- Howard Gnesen Rd to 1st Ave S/Raymond Ave
- 1st Ave S/Raymond Ave to Woodland Ave

Howard Gnesen Rd

- Linzie Rd (south of intersection) to Norton Rd
- Ridgeview Rd to Martin Rd

Morris Thomas Rd – Haines Rd to Piedmont Ave

Arrowhead Rd (north side) – Haines Rd to Miller Trunk Highway (US Hwy 53)

Haines Rd – Arrowhead Rd to Airport Rd

Rice Lake Rd – Technology Dr to Airport Rd

Boundary Ave –

- Grove St to Vinland St
- Skyline Pkwy to Mountain Dr

MnDOT

Central Entrance

- Pecan Ave to Arlington Ave (north side)
- Trinity Rd to Teak Ave (south side)
- Joshua Ave to Mall Dr (north side)

Miller Trunk Highway

- Stebner Rd to Mall Dr
- Lavaque Rd to Cirrus Dr with connection to Airport Rd dead-end (former US 53 intersection)

US Hwy 2 (Proctor) – 1st to Boundary Ave

MN Hwy 23 – Pleasant View to Commonweath Ave

MnDOT/WISDOT

Blatnik Bridge – Conners Point to Rice's Point

Walk Types and Design Guidance

Pedestrian facility and treatments

Elements of a streetscape

Sidewalks

Curb ramps

Marked crosswalks

Corners and curb radii

Curb extensions

Sidepaths/Trails (shared-use paths)

Sidepaths

Curb Radius Reductions

Curb Extensions

Pedestrian Signals

- Pedestrian Hybrid Beacon
- Rectangular Rapid Flash Beacon (RRFB)
- Lead Pedestrian Interval
- Pedestrian Scrammble

In-Street Pedestrian Signs

Crossing Islands

Mid-Block Crossings

Pedestrian Crossing Guidelines – US DOT, FHWA Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations (2018)

Roadway Configuration	Posted Speed Limit and AADT								
	Vehicle AADT <9,000			Vehicle AADT 9,000–15,000			Vehicle AADT >15,000		
	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph
2 lanes (1 lane in each direction)	● 2 4 5 6	● 5 6 7 9	○ 5 6 ● 9	● 4 5 6	● 5 6 7 9	○ 5 6 ● 9	● 4 5 6 7 9	○ 5 6 7 9	○ 5 6 ● 9
3 lanes with raised median (1 lane in each direction)	● 2 3 4 5 ● 5 7 9	● ● 5 7 9	○ ● 5 ● 9	○ 3 4 5 7 9	○ ● 5 ● 9	○ ● 5 ● 9	○ 4 5 7 9	○ ● 5 ● 9	○ ● 5 ● 9
3 lanes w/o raised median (1 lane in each direction with a two-way left-turn lane)	● 2 3 4 5 6 7 9	● ● 5 6 7 9	○ ● 5 6 ● 9	○ 3 4 5 6 7 9	○ ● 5 6 ● 9	○ ● 5 6 ● 9	○ 4 5 6 7 9	○ ● 5 6 ● 9	○ ● 5 6 ● 9
4+ lanes with raised median (2 or more lanes in each direction)	● ● 5 7 8 9	● ● 5 7 8 9	○ ● 5 8 ● 9	○ ● 5 7 8 9	○ ● 5 ● 8 ● 9	○ ● 5 8 ● 9	○ ● 5 ● 8 ● 9	○ ● 5 8 ● 9	○ ● 5 ● 8 ● 9
4+ lanes w/o raised median (2 or more lanes in each direction)	● ● 5 6 7 8 9	○ ● 5 ● 6 7 8 9	○ ● 5 ● 6 8 ● 9	○ ● 5 ● 6 7 8 9	○ ● 5 ● 6 ● 8 ● 9	○ ● 5 ● 6 8 ● 9	○ ● 5 ● 6 ● 8 ● 9	○ ● 5 ● 6 8 ● 9	○ ● 5 ● 6 ● 8 ● 9

Given the set of conditions in a cell,

- # Signifies that the countermeasure is a candidate treatment at a marked uncontrolled crossing location.
- ● Signifies that the countermeasure should always be considered, but not mandated or required, based upon engineering judgment at a marked uncontrolled crossing location.
- ○ Signifies that crosswalk visibility enhancements should always occur in conjunction with other identified countermeasures.*

The absence of a number signifies that the countermeasure is generally not an appropriate treatment, but exceptions may be considered following engineering judgment.

1 High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs
2 Raised crosswalk
3 Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line
4 In-Street Pedestrian Crossing sign
5 Curb extension
6 Pedestrian refuge island
7 Rectangular Rapid-Flashing Beacon (RRFB)**
8 Road Diet
9 Pedestrian Hybrid Beacon (PHB)**

* Refer to Chapter 4, 'Using Table 1 and Table 2 to Select Countermeasures,' for more information about using multiple countermeasures.

** It should be noted that the PHB and RRFB are not both installed at the same crossing location.

Maintenance – ongoing and seasonal

Maintain year-round walking infrastructure be ensuring necessary repairs and clearing/management of snow and ice in a timely fashion to ensure people are able to go about their everyday routines.
Removing obstacles

Weather conditions and degraded walkways create serous mobility limitations.

Existing obstacles – utilities posts in sidewalk, construction signage place on sidewalks

Like streets, walkways must be regularly maintained to remain accessible, safe, and comfortable to use. The need for ongoing maintenance of walkways including pavement maintenance, and seasonal maintenance including activities like snow removal and sweeping. The maintenance highlights best practices for maintenance including the frequency of different maintenance activities.

Snow management models

With snow and ice possible 8 months of the year, and the continuous presence of snow and ice typically and n walkways for half that time (4 months) in a typical year, the management of snow and ice is imperative. The "wait until it melts" approach

Goal is to have walkways reliably available for people to use everyday, whether going to work, school grocery store, running errands, etc. The management technique should be tailored to the weather conditions typically expected in this area, where snow falls and persists for months, goes through a freeze, thaw cycle, creating icy conditions, where there are hills that become treacherous.

Clearing snow or grooming snow may be a seasonal strategy. In the Fall and Spring months, device a clearing schedule. In the Winter month (December-February) with temperature staying around or below the freezing mark and low Sun-angle reducing melting.

Individual property owner

Community – roadway authority takes responsibility for clearing all walkways.

Hybrid – roadway authority clears priority routes, special districts clear high use areas, and individual property own clears everything else.

Funding of walkways – models

1. Individual property owner funded
2. Community funded repairs – local government takes responsibility for repairing all sidewalk
3. Hybrid approaches – special districts, cost sharing programs

Sidewalks in disrepair and/or snow and ice covered can make walking challenging and hazardous. situations for people with assistive mobility devices, for people with visual impairments and for many people who have temporary impairments, sprained or broken leg/ankle.

Recommendations:

Roadways, except for I-35 and I-535, are available for people who walk or use mobility devices, the Plan recommendations identify streets and areas for the roadway authorities to focus upgrades and it recommends context sensitive strategies to improve pedestrian safety and access. The guidance will help decide where to allocate resources to improve pedestrian safety, comfort, and access to transit.

The planning process identified streets and areas for pedestrian improvements. These Priority Pedestrian Areas and highlight locations that should be prioritized for investment in safe and comfortable pedestrian infrastructure such as sidewalks, high visibility crossings, and trails.

While sidewalks and high-quality crossings are important throughout, priority should be placed on making improvements within these Priority Pedestrian Areas. As project opportunities arise and funding becomes available, use the following approach to improve the pedestrian environment in Superior: • Review Priority Pedestrian Areas to inform capital and in-house projects.

• Close sidewalk gaps, first in the Priority Pedestrian Areas and then metro-wide as opportunities arise.

- Leverage opportunities through private development, public utilities projects, and major street projects to construct or reconstruct sidewalks and provide improved pedestrian crossings.
- Identify and fill sidewalk gaps that don't require detailed engineering, major grading or clearing of vegetation, or right-of-way acquisition.

• Improve pedestrian crossings using the latest best practice guidance, first in the pedestrian focus areas and then metrowide as opportunities arise.

• Add street trees and street furniture to select streets in the pedestrian focus areas.

• Implement context-specific enhancements that respond to the design and expected pedestrian use of each street. For example, crossings where children or older adults will be frequent users should include an extended walk phase of any traffic signals to accommodate slower walking speeds.

1. All bridges and viaducts in the urban area should include high quality pedestrian facilities that meet current best practices when they are reconstructed or undergo significant rehabilitation.
2. Reduce the use of back of curb abutting walkways. These walkways lacking a buffer between pedestrians and motorists are uncomfortable and undesirable for pedestrians (reducing their potential use), and do not provide a recovery zone in case of a mishap (trip or slip and fall, etc). This abutting sidewalks naturally gather debris and snow. Removing snow requires more frequency and is more difficult as the fallen snow has to be removed as well as the snow cleared each time a plow. Snow does not just have to be removed when the snow is done falling, but each time a plow passes, which can be numerous times in a single day to addition plow days after the snow has stopped falling. This mix of fallen snow and plowed snow with debris, salt and chemicals turns into ice and is difficult and time consuming to remove even with snow removal equipment. Finally, abutting sidewalks place pedestrians in a splash zone with during rain and snow events and after these with puddles and slush.
3. Land use and development codes that makes it conducive to walk (main access points near public sidewalk reduce setbacks and other detractors to walking (large parking lots between sidewalk and main entrances, blank walls (safety/visibility/uninteresting/uninviting

environments discouraging people from walking. Long distance, single use, with limited to none mixed use in neighborhoods.

4. With the goal of zero deaths, reduce or eliminate pedestrian and bicycle-related crashes, serious injuries and fatalities.
5. Preserve/retain pedestrian easement along Rights-of-Way and linear rail corridors for future pedestrian connections.
6. Prioritize pedestrian safety and comfort in transportation improvements.
7. Maintain existing public stairways and add ADA compliant elements where possible.
8. Improve pedestrian friendly conditions at transit stops.
9. Improve pedestrian crossings in high-traffic areas through the use of mid-block crossings, curb extensions, and pedestrian signal phasing/design/priority.
10. Improve/enhance/create pedestrian gathering spaces in activity hubs/commercial nodes downtown/neighborhood
    - Downtown Superior – corner of Tower Ave and Belknap
    - Woodland Neighborhood – corner of Woodland Ave and Calvary Rd
    - West Duluth – corner of Grand Ave and Central Ave
    - Piedmont – corner of Piedmont Ave and Chambersberg Rd
    - Hillside Neighborhood – corner of 4th Street & 6th Ave E
11. Activate urban alleys as shared pedestrian-oriented zones (employ living and/or green alley concepts)
    - Downtown Duluth – alley between Superior St and First St
    - Downtown Superior,
    - Canal Park – alley between Canal Park Drive and Lake Ave – from _____ to Buchanan St
    - Lincoln Park Craft District – alley between Superior St and 1st Street
    - West Duluth/Spirit Valley – alley space on the west side of Central Ave
12. Add handrails on one-side to stairways and steep sidewalks.
13. Incorporate creative placemaking and art into street, transit and pedestrian projects.
14. Pro-actively (without a corresponding roadway re-surface or reconstruction project key sidewalk network gaps, especially in gaps near K-12 schools and transit routes.
15. Continue the MPO pedestrian count program – look for ways to incorporate automated counters to gather more and robust data sets.
16. ADA
    - Prioritize implementation of the ADA Transition Plans, with a focus on ADA Priority Areas, Core Investment Areas and pedestrian connections in the Mall area (Duluth Comp Plan)
    - ADA in Skywalk system.
17. Dedicate/develop a dedicated pedestrian funding source for the installation and maintenance of sidewalk networks.
18. Slower motor vehicle traffic speeds – narrow lanes, add traffic calming measure, Design streets for appropriate level of pedestrian activity, slower speeds on streets with high levels of pedestrian use and near schools
19. Consider shared streets and the traffic calming measures that would be needed. Where separated sidewalks would be needed.
20. Incorporate green stormwater infrastructure as part of pedestrian and street projects.

21. Buffer between pedestrian zone and moving traffic.
22. Whenever conducting resurfacing or reconstruction activities on streets, identify opportunities for installing pedestrian facilities.
23. Ensure that sidewalks and crosswalks are rapidly cleared of snow (and continuously cleared, in Core Investment Areas) to ensure ease of system use by all residents.
24. Continue to develop, improve, implement and evaluate the SRTS plans and programs.
25. Monitor autonomous vehicle technology and the possible impacts to pedestrians.
26. Evaluate/education best practice designs for pedestrian safety and comfort.
27. Align policies and investments for transportation and land use.
    - Create opportunities for multimodal transportation
    - Direct investment where walking is well develop or make well developed walkways a factor where urban densities increase and public space improved.
28. Lighting at the pedestrian scale – use appropriate lighting to promote safety and comfort but isa balanced the negative impacts of (dark sky, light shining into neighboring property windows, (keep lighting at scale and designed for pedestrian needs. Pay attention to creating blind spots by too bright of lighting.
29. With limited resources, concentrate policy and investment in a few targets areas, focusing on areas where walking, cycling and transit use is or could be at high levels (catchment areas and for people is more flexible. Land use policies design to encourage this in targeted areas.
30. Establish a winter prioritization network for clearing pedestrian facilities that ensures that the best access is provided to the greatest number of people possible following a heavy storm event.
31. Public art – add, utility cabinets, murals, sculpture, etc
32. Snow management – view from a system viewpoint. Creating a reliable pedestrian system for people of all ages and abilities to traverse to their everyday destinations. Provide education to the following on the key role the pedestrian network plays for all and that it must be reliably available:
    - Public roadway snow management
    - Private snow management operators
    - Private property owners
33. Retain public rights-of-way for pedestrian use, short blocks, direct access. If/when vacate ROW – ensure a pedestrian connection is made available.
34. Build education, encourage and enforcement strategy to make the Duluth-Superior area aware:
    - Pedestrian crosswalk – yielding laws
    - The reliability needs of the interconnected network

Future Studies:

1. Up hill/down hill mobility - Conduct analysis of options for improving uphill/downhill mobility in areas of high housing, education, healthcare, job and tourist density especially between key destinations that provide services to priority populations and areas where households without vehicles is high. Explore concepts such as a gondola and/or funicular systems that would be the appropriate scale and costs for the region and key locations/corridors with steep slopes from a pedestrian perspective are, but not limited too:
    a. 24th Ave West
    b. Lake Ave
    c. 19th Ave East

2. Study motor vehicle yield rates at crosswalks.
3. Study trail spurs and connections from neighborhoods to Cross City and Lakewalk Trails.
4. Waterfront Area
    - Bayfront to Lakewalk Connection - along the waterfront from the Lakewalk to Pier B
    - Directly connect pedestrian walkways at Bayfront Festival Park and Pier B to Railroad St walkway.
    - Create continuous intuitive connection along the Cross City Trail through Lake Ave Parking.
    - Consider re-aligning Cross City Trail from under I-35 to crossing Railroad St at the Downtown Spur trail intersection and then parallel to Railroad St along the waterfront side.

5. Central Hillside – pedestrian way – 1st Ave East to Central Entrance/Mesaba Ave/Rice Lake Rd intersection
6. Superior - railroad crossings and ways to overcome the dividing nature of the railroad tracks and yards in the city.
7. Skyline Pkwy – study shared street and separated walkway segments to create an all ages, all abilities facility. Consider applying Open Streets concept for stretches, all year, Summer season and/or Sundays. Improve Skyline Parkway for all modes, all ages and all abilities. Provide traffic calming, slow the vehicles on shared street segments, separate facilities on both sides in urban neighborhoods and separated pedestrian space on the ridge (Lake/Bay side).
8. Duluth's Skywalk system – study to improve to meet ADA, be more intuitive entry/exit street-level access points, add to vibrancy to street
9. Study green infrastructure challenges and opportunities. Emphasis both environmental and aesthetic amenities and ongoing maintenance needs.

General Timeframe for Implementation:

Short Term - Interim

Enforce snow clearing regulations

Devise snow clearing priority (tier system)

Prioritize sidewalks that need to be kept cleared

Enforce sidewalk clear zones for vegetation

Steep slopes – add hand rails, and create flat rest areas on each block alley, or every 100-200 feet in distance.

Long Term – Permanent

Sidewalk Design- buffer space for snow storage

Coordinate snow clearing among jurisdictions

Create a system of routine maintenance/response.

Steep slopes – examine people-mover systems that are frequent and assist people with getting up and down the hills, particularly a system that is not dependent on roadways being cleared of snow and ice.

Measuring Progress

With the a great deal of baseline date collection from sidewalk condition, mileage of key gaps, and pedestrian counts, measuring progress is more possible now.

Additional data will need to continue to be collected to fill holes in the data sets and keep the baseline data updated.

Sidewalk condition – continue to update maps when sidewalks are replace or new ones installed.

Pedestrian Counts – continue to count pedestrians and determine ways to gather more robust counts that covers more of the pedestrian network. Look at more permanent count sites in high pedestrian traffic areas.

Measures:

- Conduct before and after counts to measure level of use changes.
- Percent of sidewalks in condition – increase the percent in good condition.
- Percent of sidewalk gaps filled
- Motorist yielding rates
- Pedestrian crash rates – decreasing the number of serious injuries and fatalities.
- ADA compliance – number of curb ramps – percent left to convert.