

Implementation	Implementation Step	Strategy	Partners	Resources Needed	Timing	
<i>T-1: Improve street conditions to function better for everyone</i>						
T-IS-1	Invest in street preservation that will extend the life of pavement, such as crack sealing and chip sealing.	S1	City Engineering			
T-IS-2	Inventory transit and bike routes and high volume streets with a Pavement Quality Index lower than 70 and create a CIP to strategically repair and reconstruct these streets.	S1, S2, S8	City Engineering			
T-IS-3	Establish a public review body with clear recommendation and decision-making authority for street planning, designs, and capital transportation improvements.	S5, T2-S2, T2-S4, T3-S11, T3-S19, T4-S3, T4-S7, T5-S2, T6-S2				
T-IS-4	Include consideration of on-road bicycle facilities in street resurfacing plans, when indicated on the adopted city bikeways plan.	S5	City Engineering			
T-IS-5	Create a public information map about which sidewalks are cleared by the city, county, state, and property owners, and publish annually on the city web site and social media.	S6, T3-S1, T3-S14				
T-IS-6	Convert from calendar parking to a snow emergency plowing system in order to clear all streets of snow within 72 hours after a significant snow event.	S6, T2-S3				
T-IS-7	Improve snow clearing of sidewalks by reestablishing the Snow Angels program, educating citizens about the importance of snow clearing, and enforcing the snow clearing ordinance. In particular, multi-modal priority routes should be cleared immediately after a snowfall.	S4, S6, T3-S1, T3-S11, T3-S14	Commission on Disabilities			
T-IS-8	When constructing streets, include boulevards between sidewalks and driving lanes, sized to ensure viability of street trees and landscaping where space allows. Retain existing trees where possible.	S5, S9, T3-S1, T5-S3, T5-S4				
T-IS-9	Restore and maintain Skyline Parkway as a scenic and historic transportation route, and make road improvements for all modes.	S5, T3-S1				
T-IS-10	Improve safety at intersections: ensure vehicles park further from intersections to increase sight lines, and identify pedestrian crossings needing safety improvements, such as those near transit stops, schools, or pedestrian destinations.	S5, S7, S9, T3-S1, T3-S10				
T-IS-11	Encourage demonstration projects such as temporary bump outs and bike lanes to test proposed safety improvements.	S5, S7, S9, T3-S10	MIC			
T-IS-12	Repair sidewalks with a "poor condition" rating, focusing first on areas within 1/4 mile of a transit stop, along safe routes to school, or pedestrian destinations. Add handrails along sidewalks with slopes greater than 10%, particularly in Core Investment Areas and within 1/4 mile of transit stops.	S1, S4, S5, S7, S9, T3-S1, T3-S10, T3-S11				
T-IS-13	Prioritize and seek funding for Safe Routes to School improvements.	S7				
T-IS-14	When possible, conduct utility upgrades and replacement during road reconstruction/maintenance, and implement a policy to not allow utility upgrades within three years after street improvements.	S8				
T-IS-15	To encourage slower vehicle speeds, look at designing local residential streets using a lower design speed.	S9				
T-IS-16	Identify locations for electric vehicle charging stations, and make any necessary changes to local ordinances to allow for charging stations	S11				
T-IS-17	Plan for and pilot a concept of shared mobility areas along designated curbs that can be used for a wide range of transportation needs.	S10, T3-S6				
<i>T-2: Reduce infrastructure costs through innovation and wholesale design change</i>						
T-IS-18	When doing street construction, plan for lane widths at the narrowest standard width (9-10 feet), to be increased only after need is demonstrated.	S1, S2, T3-S3, T1-S9				
T-IS-19	Map residential areas with low-volume traffic, where lane widths could be reduced, and amend city road standards as appropriate. Include standards for areas where pedestrians and bicyclists can safely share the road surface with vehicles, as exists in some neighborhoods today, to further reduce infrastructure cost.	S2				

T-IS-20	When residential streets are being repaved in areas where properties have off-street parking available, evaluate the feasibility of eliminating a parking lane to reduce pavement, particularly in neighborhoods with larger suburban-style lots.	S1				
T-IS-21	As streets are narrowed, use extra right of way for sidewalks, trails, or bike facilities (all of which use shorter depth of asphalt and increase the use of the street), or for street trees, plantings, rain gardens and other stormwater treatment. Consider using mountable curbs to allow vehicles flexibility in moving slightly off the road when residents need occasional parking for gatherings and visitors.	S6, T1-S9, T1-S5, T3-S3, T3-S19, T3-S21				
T-IS-22	Establish a metric for evaluation of streets in low density areas that could be replaced, reduced, removed, or made private.	S4				
T-IS-23	Estimate wear and tear of waste haulers and other large trucks on city streets and make recommendations to reduce impacts of heavy trucks.	S5				
<i>T-3: Add to the transportation network by systematically enhancing multi-modal options</i>						
T-IS-24	Improve transit amenities and transit stop conditions including sidewalks and concrete landing pads, shelters, heat, signage (double-sided signs so pedestrians from both directions can see) and updated information, cleanliness and aesthetics, and snow clearing. Create standards for transit stops, including ADA accessibility, and use transit stop inventories to identify those in need of improvement, starting with those that are most used and at key nodes. Explore new strategies for funding at transit stops, such as sponsorship of transit shelters or stops.	S11, S14, S15, S16				
T-IS-25	Amend the UDC to ensure development and redevelopment includes pedestrian connections, bicycle parking, and transit stop amenities, and that buildings are placed and designed to encourage a pedestrian friendly streetscape and to support alternative modes of transportation. Require transit stops be brought up to standard if a new development or redevelopment abuts a transit line and has a transit stop directly adjacent to the property.	S1, S2, S3, S11, S18, S21, T5-S7				
T-IS-26	Support closed streets events in key locations such as Superior Street and other downtown streets, Canal Park, and Skyline Parkway.	S1				
T-IS-27	Plan for the area immediately around the future Northern Lights Express (NLX) station, focusing on connections to local transportation and wayfinding to Duluth destinations.	S9				
T-IS-28	Prioritize transit growth in areas where projected vehicle growth predicts future congestion, and in/between areas with the greatest population and employment density. This includes: a) the Woodland Avenue corridor and UMD area; b) between Lakeside and Congdon/I-35, using E 4th Street and London Road; c) United Healthcare and the airport area; and d) between West Duluth and the mall area.	S10, S17				
T-IS-29	Support development and redevelopment of mixed use nodes and corridors along transit lines that increases residential density and commercial square footage, and identify incentives to implement this. Multi-story buildings should be prioritized over single-story buildings, and parking ramps encouraged over parking lots as a more space-efficient way to provide parking.	S10, S13				
T-IS-30	Update city road standards to indicate that perpendicular /diagonal parking is not preferred on city streets.	S4				
T-IS-31	Implement dynamic pricing based on demand for on-street parking, and price on-street parking higher to incentivize ramp use.	S5				
T-IS-32	Conduct an alternatives analysis of ways to increase uphill/downhill transit connections.	S7				
T-IS-33	Participate in a bike sharing feasibility study, and support implementation of bike-share programs.	S6				
T-IS-34	Inventory and map existing public stairways and identify locations in which new stairways can improve pedestrian connections. Add bike rails to new public stairways and retrofit existing stairways where feasible.	S8				

T-IS-35	Participate in regular bike lane demonstration projects to test and determine the best locations for permanent bike infrastructure. <i>Photo: Michigan St bike lane project.</i>	S11				
T-IS-36	Complete the Cross City Trail and Campus Connector (including bikeway on St. Marie Street) to connect gaps in the existing paved bike infrastructure. Widen or reconstruct the Lakewalk from Canal Park to 21st Avenue E. Create bike lanes downtown to connect existing bike lanes on 4 th Street and London Road with the Cross City Trail, and refine the adopted bikeways plan, including a assessment using FHWA's "level of stress" metric, to implement a safe bike network across the city.	S11				
T-IS-37	Create a bike parking program with standardized racks, to be installed by the city in key areas and via an application process from property owners. Increase available bike facilities such as repair stations, lockers, and bike racks on public and private property. Provide infrastructure for bike share implementation in Canal Park and downtown.	S6, S11				
T-IS-38	In the UDC's Sustainability Point System, add a category for transit projects built along, in order of likelihood to boost frequency and service, 1) DTA Routes 1, 6, and 10; 2) DTA Routes 4, 9, and 13; and 3) DTA Routes 2, 3, 7, 11, and 12.	S10, S13				
T-IS-39	Create incentives for employers who offer reduced transit fares for employees, and for those who do not provide free vehicle parking but instead charge for parking. Work with institutions including the hospitals to provide free bus service to employees, similar to UMD's existing program.	S6, S12				
T-IS-40	Increase bike capacity on buses.	S14				
T-IS-41	Examine the feasibility of faster commuter transit, such as Bus Rapid Transit or rail transit along existing lines (i.e. Lakeside to downtown), and tools such as signal priority that could ensure reliable service.	S19				
T-IS-42	Continue to ensure transit connects to grocery stores and farmers markets, and that those buses have grocery bins.	S19				
T-IS-43	Make improvements and increase marketing for transit park 'n' rides in Piedmont and Woodland.	S18				
<i>T-4: Improve system condition and connections in and between downtown and Canal Park.</i>						
T-IS-44	Manage event congestion through a dynamic parking information system that will direct drivers where parking is available in private and public lots, including signage on the freeway directing drivers to the appropriate exit. This should include lots at the DECC and downtown to reduce vehicles circulating in Canal Park looking for parking.	S1, S2				
T-IS-45	Improve connections over I-35 at Lake Avenue and at 5th Avenue West to be more pedestrian and bike friendly. Work with MnDOT to secure funds to widen or replace these bridges. Work to create the previously planned link between Superior Street and Lake Place.	S3				
T-IS-46	Evaluate methods for increasing transit circulation and transit stops within downtown and Canal Park/Bayfront, connecting key destinations and parking facilities. Expand the downtown zone eligible for reduced fares, and create a free circulator between parking facilities and key destinations.	S4				
T-IS-47	Conduct a traffic study to identify how to best route vehicles between Park Point and the freeway, to minimize congestion from through traffic.	S3				
T-IS-48	In those areas with the highest pedestrian traffic, such as within Canal Park and along East Superior Street, investigate strategies to make pedestrian crossings of roadways easier, such as mid-block crossings, bumpouts, and signal phasing (i.e. exclusive pedestrian phasing, split phasing, or leading pedestrian interval).	S2, S3, S5, S6				
T-IS-49	Improve the alley between S Lake Avenue and Canal Park Drive as a woonerf; add a smoother driving surface for vehicles, but design so that all modes can use this alley. Include wayfinding and aesthetic improvements such as signage for businesses, trees, and landscaping where appropriate.	S6, S8				

T-IS-50	Redesign the Baywalk along the harbor behind the DECC from Pier B on the west to the Lakewalk on the east, including a pedestrian connection along Buchanan Street. This redesign should include wayfinding and a consistent “feel” for the Baywalk as an inviting thoroughfare for pedestrians and bicyclists that connects important public spaces and enhances views of the harbor.	S8				
T-IS-51	Create a downtown street plan to guide future street improvements, including plans for street layouts and amenities, bicycle connections, and sidewalks and pedestrian amenities.	S3, S4, S5, S6, S7				
T-IS-52	Complete a parking plan for downtown and Canal Park that estimates future parking demand, identifies strategies for market-based approaches that incentivize ramp parking and transit use where appropriate, creates efficiencies with shared parking, and suggests ways to incorporate parking in efficient land use scenarios that support economic development and other community goals	S1, S2				
T-IS-53	As redevelopment occurs, create missing skywalk links between downtown and the medical district.	S10				
T-IS-54	Complete a low profile lighting plan to improve safety for bikes and pedestrians along lakewalk and walkways throughout canal park and downtown.	S6, S8, S9				
<i>T-5: Base decisions about transportation infrastructure primarily in the context of improving city and neighborhood vitality, and not on automobile through traffic</i>						
T-IS-55	Develop plans for the Core Investment Areas that identify ways to improve the street conditions and streetscape of the areas.	S1, S2, S5, S6, S7				
T-IS-56	As part of city-wide parking policies, study ways in which on-street parking revenue can be used within neighborhood or business improvement districts.	T3-S5, S2, S4, S5				
T-IS-57	Use green infrastructure as aesthetic amenities in addition to providing stormwater treatment.	S3, S4				
T-IS-58	Transportation corridors serving as gateways -- Central Entrance, 6th Avenue E, London Road, I-35, and Becks Road -- should require streetscape plans with future street projects, to include defining aesthetic elements, identification signage, and streetscape design.	S2, S5, S7				
T-IS-59	Incorporate public art and creative placemaking into street, transit, and trail projects.	S1, S5				
T-IS-60	Explore opportunities to use bus stops and shelters, fire hydrants, bike racks, utility cabinets, and other normal components of streets as low-cost ways to implement public art. Identify locations where painting could be allowed in street intersections, and a process for permitting this.	S1				
T-IS-61	In neighborhood commercial areas, facilitate shared parking as a way to reduce expectations on individual businesses and promote walkability within those neighborhoods as well as create a common feel for the district.	S2, S5, S6				
T-IS-62	Incorporate low profile lighting for safe transportation systems	S1, S6				
<i>T-6: Protect and enhance regional and freight transportation</i>						
T-IS-63	The City will continue to work with the Army Corps of Engineers, Coast Guard, and stakeholders to maintain Duluth’s shipping channels and port facilities.	S1,				
T-IS-64	The City will continue to protect and enhance freight corridors and intermodal facilities that link water-borne shipping with rail and truck shipping.	S1, S2, S3, S5, S6				
T-IS-65	Support reconstruction of the Twin Ports Interchange for a more efficient, safe and sustainable roadway design that will enhance freight connections to the port area. Include local street connections from Lincoln Park to Courtland Street to improve neighborhood connectivity.	S3				
T-IS-66	Support for airport cargo growth through increased economic activity in the region based on population growth and an increase in business activity and employment.	S4, S5				
T-IS-67	Support expansion of the air cargo facility.	S4, S5				
T-IS-68	Invest in transportation improvements that support the export and mobility of freight by truck, rail, air, and shipping.	S2, S3, S5, S6				

T-IS-69	Form partnerships with rail freight lines to maintain, improve, and expand rail infrastructure.	S5, S6				
T-IS-70	Eliminate freight traffic on residential streets. Encourage appropriate use of truck routes; be thoughtful in positioning industry and truck routes. Get freight out of neighborhoods.	S3, S5				
T-IS-71	Promote industrial, port, transportation, and logistic businesses near the port, railroad, airport, or highway interchanges so those businesses can take advantage of infrastructure. Protect location-dependent economic uses, including port, railroad, and airport facilities, from encroachment by land uses that are incompatible or not location-dependent.	S2, S4, S5, S6				