Application

13862 - 2020 Roadway Spot Mobility

14368 - Lake Road and Pioneer Drive Intersection Improvement Project

Regional Solicitation - Roadways Including Multimodal Elements

Status:	Submitted
Submitted Date:	05/15/2020 11:22 AM

Primary Contact

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What Grant Programs are you most interested in?	Regional Solicitation - Bicycle and Pedestrian Facilities			

Organization Information

Name:	WOODBURY,CITY OF
Jurisdictional Agency (if different):	

Organization Type:	City
Organization Website:	
Address:	8301 VALLEY CREEK RD

*	WOODBURY	Minnesota	55125
	City	State/Province	Postal Code/Zip

County:	Washington
Phone:*	612-739-5972 Ext.
Fax:	
PeopleSoft Vendor Number	0000021013A1

Project Information

Project Name	Lake Road and Pioneer Drive Intersection Improvement Project
Primary County where the Project is Located	Washington
Cities or Townships where the Project is Located:	Woodbury
Jurisdictional Agency (If Different than the Applicant):	

Brief Project Description (Include location, road name/functional class, type of improvement, etc.)

As part of the Lake Road Restriping and Safety Improvement Study it was recommended that Lake Road be converted from a 4-lane undivided roadway to a 3-lane roadway with center left turn lane. Lake Road is currently a community barrier functioning as a 4-lane undivided roadway through the study area with a speed limit of 40 MPH. However, the lane conversion was anticipated to result in capacity issues at its intersection with Pioneer Drive and the current all-way stop control. This proposed Lake Road and Pioneer Drive Intersection Improvement project will implement a Single Lane Roundabout to replace the current all-way stop control and prepare Lake Road for the four to three lane conversion.

This is an important intersection for connectivity of the community. Lake Road and Pioneer Drive are A-Minor Expanders within the City of Woodbury connecting a vast majority of the large residential neighborhoods to regional job and amenity routes such as I-494 and I-94. Locally, Lake Road and Pioneer Drive connect multifamily and affordable neighborhoods to several schools, healthcare, a commercial activity center, parks, and regional trail connections within the project area. Pioneer Drive is planned to be extended further south to Military Road in the future to accommodate rapid residential growth which will soon result in increased demand at this intersection. Pioneer Drive is currently a 2-lane undivided roadway with turn lanes at most intersections/accesses through the study area.

This project will provide significant improvements in safety and operations for existing and future traffic and pedestrians demands at the intersections and adjacent pedestrian crossings. The single lane roundabout approaches will match into the near future 3-lane roadway on Lake Road and replace

the current right, through, and left lanes on Pioneer drive. The improvement will continue the center median to the north providing exclusive left turn lanes to Woodbury Community Church, located in the northeast quadrant, and Savanna Oaks Pass. Additionally, south of the roundabout will be restriped to a three-lane section and an improved pedestrian crossing will be implemented at Juniper Lane for Lake Middle School and Middleton Elementary School, located in the southeast quadrant.

Furthermore, all legs of the intersection include trail facilities. The single lane roundabout will provide two-staged pedestrian crossings on all four legs that will shorten the crossing distance for pedestrians and improve the visibility of pedestrians at the intersection.

(Limit 2,800 characters; approximately 400 words)

TRANSPORTATION IMPROVEMENT PROGRAM (TIP) DESCRIPTION - will be used in TIP if the project is selected for funding. See MnDOT's TIP description guidance.	Reconstruct Lake Road and Pioneer Drive intersection in Woodbury
Project Length (Miles) *to the nearest one-tenth of a mile*	0.41

Project Funding

Are you applying for competitive funds from another source(s) to implement this project?	No
If yes, please identify the source(s)	
Federal Amount	$2,057,591.00
Match Amount *Minimum of 20% of project total*	$514,398.00
Project Total *For transit projects, the total cost for the application is total cost minus fare revenues.*	$2,571,989.00
Match Percentage *Minimum of 20%* *Compute the match percentage by dividing the match amount by the project total*	20.0%
Source of Match Funds	City Funds

A minimum of 20% of the total project cost must come from non-federal sources; additional match funds over the 20% minimum can come from other federal sources

Preferred Program Year

Select one: 2024

Select 2022 or 2023 for TDM projects only. For all other applications, select 2024 or 2025.

Additional Program Years: 2021, 2022, 2023

Select all years that are feasible if funding in an earlier year becomes available.

Project Information: Roadway Projects

County, City, or Lead Agency City of Woodbury, MN

Functional Class of Road A Minor Expander/Other Arterial

Road System MSAS, City Street

TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET

Road/Route No. 192108

i.e., 53 for CSAH 53

Name of Road Lake Road/Pioneer Drive

Example; 1st ST., MAIN AVE

Zip Code where Majority of Work is Being Performed 55125

(Approximate) Begin Construction Date 06/01/2023

(Approximate) End Construction Date 10/31/2023

TERMINI:(Termini listed must be within 0.3 miles of any work)

From:
(Intersection or Address) Lake Road and Pioneer Drive

To:
(Intersection or Address) North to Savanna Oaks Pass / South to Juniper Lane / East and West approximately 400'

DO NOT INCLUDE LEGAL DESCRIPTION

Or At

Miles of Sidewalk (nearest 0.1 miles) 0

Miles of Trail (nearest 0.1 miles) 0.3

Miles of Trail on the Regional Bicycle Transportation Network (nearest 0.1 miles) 0

Primary Types of Work Grade, Agg Base, Bit Surface, Concrete Medians, Curb and Gutter, Trails, Ped Ramps, Bike Paths, Striping

Examples: GRADE, AGG BASE, BIT BASE, BIT SURF, SIDEWALK, CURB AND GUTTER,STORM SEWER, SIGNALS, LIGHTING, GUARDRAIL, BIKE PATH, PED RAMPS, BRIDGE, PARK AND RIDE, ETC.

BRIDGE/CULVERT PROJECTS (IF APPLICABLE)

Old Bridge/Culvert No.:

New Bridge/Culvert No.:

Structure is Over/Under (Bridge or culvert name):

Requirements - All Projects

All Projects

1.The project must be consistent with the goals and policies in these adopted regional plans: Thrive MSP 2040 (2014), the 2040 Transportation Policy Plan (2018), the 2040 Regional Parks Policy Plan (2018), and the 2040 Water Resources Policy Plan (2015).

Check the box to indicate that the project meets this requirement. Yes

2.The project must be consistent with the 2040 Transportation Policy Plan. Reference the 2040 Transportation Plan goals, objectives, and strategies that relate to the project.

Briefly list the goals, objectives, strategies, and associated pages:

The project aligns with the 2040 Transportation Policy Plan by prioritizing the following goals and strategies:

Goal: Transportation System Stewardship (p. 2.2) Sustainable investments in the transportation system are protected by strategically preserving, maintaining, and operating system assets. Objective: Operate the regional transportation system to efficiently and cost-effectively move people and freight Strategies: A2) Regional transportation partners should regularly review planned maintenance preservation and reconstruction projects to identify cost-effective opportunities to incorporate improvements for safety, lower-cost congestion management and mitigation, MnPASS, strategic capacity, transit, bicycle, and pedestrian facilities (p. 2.3);

Goal: Safety and Security (p. 44) The regional transportation system is safe and secure for all users. Objective: Reduce fatal and serious injury crashes and improve safety and security for all modes of passenger travel and freight transport Strategies: B6) Regional transportation partners will use best practices to provide and improve facilities for safe walking and bicycling, since pedestrians and bicyclists are the most vulnerable users of the transportation system (p. 2.8)

Goal: Access to Destinations (p. 46)

Objectives: E) Improve the availability and quality of multimodal travel options for people of all ages and abilities to connect to jobs and other opportunities, particularly for historically underrepresented populations (p. 46)Strategies: C1) The Metropolitan Council will prioritize regional projects that are multimodal and cost effective and encourage

investments to include appropriate provisions for bicycle and pedestrian travel (p. 2.10); C17) Regional transportation partners will provide or encourage reliable, cost-effective, and accessible transportation choices that provide and enhance access to employment, housing, education, and social connections for pedestrians and people with disabilities (p. 2.24)

Goal: Healthy and Equitable Communities (p. 50)

Objectives: A) Reduce transportation-related air emissions; Increase the availability and attractiveness of transit, bicycling, and walking to encourage healthy communities through the use of active transportation options; D) Provide a transportation system that promotes community cohesion and connectivity for people of all abilities, particularly for historically under-represented populations (p. 50)Strategies: E3) Regional transportation partners will plan and implement a transportation system that considers the needs of all potential users, including children, senior citizens, and persons with disabilities, and that promotes active lifestyles and cohesive communities.

Limit 2,800 characters, approximately 400 words

3.The project or the transportation problem/need that the project addresses must be in a local planning or programming document. Reference the name of the appropriate comprehensive plan, regional/statewide plan, capital improvement program, corridor study document [studies on trunk highway must be approved by the Minnesota Department of Transportation and the Metropolitan Council], or other official plan or program of the applicant agency [includes Safe Routes to School Plans] that the project is included in and/or a transportation problem/need that the project addresses.

List the applicable documents and pages:

a. Woodbury 2040 Comprehensive Plan (2019): pg. 23, 36, 47, 87, 112, 123, 141, 142, 146, 148, 150, 152, 154, 159, 161, 162

i. Existing mixed land use will provide a connection and access to various resources for the residents, schools, and businesses in the area.
ii.The City's current growth trends and projections determine the need for new infrastructure and municipal services to meet the future growing population demand.
iii. The implementation of the roundabout is identified as a project that will organize the community in a manner that seeks and promotes alternative mobility options. This includes non-motorized transportation options like biking and walking and provides safe connections to existing parks, businesses, and residential neighborhoods.
1. The City of Woodbury is committed to improving various roadway networks and address areas such as access management, functional classification revisions and design considerations. This includes the extension of Pioneer Drive. In adding the roundabout to the current improvement plan, it will ensure a response to the local and regional travel demand changes.
v. A continuous, connected system that facilitates the movement of people and access to parks, open spaces, schools, and other city destinations.

Washington County 2040 Comprehensive Plan (2019): Transportation Chapter pg. 5-3, 5-5 - 5-7, 5-13 - 5-16, 5-18, 5-30, 5-41 - 5-42, 5-47, 5-51, 5-54, 5-60, 5-70 - 5-73

While not on the county system it is in close proximity and provides connections between three county highways and adjacent trail facilities.

i. Provides a connection to non-motorized facilities

such as sidewalks and trails.
ii. Supports the Regional Bicycle Transportation Network (RBTN) by serving as a connector to bikeways and trails
iii. Transportation Goal 1: Plan, build, and maintain an interconnected and accessible transportation system that considers all users and modes of travel

iv. Transportation Goal 3: Improve safety and efficiency for all users.

City of Woodbury Bicycle and Pedestrian Plan (in process)

i. Serves as a connector to parks, demand centers, schools, and homes of various income levels

ii. Implementing the roundabout will help to enhance the user's experience by providing access to alternative modes of transportation and pedestrian facilities that improve safety and security, comfortability and ultimately reduce congestion and emissions in the high traffic areas.

Limit 2,800 characters, approximately 400 words

4.The project must exclude costs for studies, preliminary engineering, design, or construction engineering. Right-of-way costs are only eligible as part of transit stations/stops, transit terminals, park-and-ride facilities, or pool-and-ride lots. Noise barriers, drainage projects, fences, landscaping, etc., are not eligible for funding as a standalone project, but can be included as part of the larger submitted project, which is otherwise eligible.

Check the box to indicate that the project meets this requirement. Yes

5.Applicants that are not State Aid cities or counties in the seven-county metro area with populations over 5,000 must contact the MnDOT Metro State Aid Office prior to submitting their application to determine if a public agency sponsor is required.

Check the box to indicate that the project meets this requirement. Yes

6.Applicants must not submit an application for the same project elements in more than one funding application category.

Check the box to indicate that the project meets this requirement. Yes

7.The requested funding amount must be more than or equal to the minimum award and less than or equal to the maximum award. The cost of preparing a project for funding authorization can be substantial. For that reason, minimum federal amounts apply. Other federal funds may be combined with the requested funds for projects exceeding the maximum award, but the source(s) must be identified in the application. Funding amounts by application category are listed below.
Strategic Capacity (Roadway Expansion): *$1,000,000 to $10,000,000*
Roadway Reconstruction/Modernization: *$1,000,000 to $7,000,000*
Traffic Management Technologies (Roadway System Management): *$250,000 to $3,500,000*
Spot Mobility and Safety: *$1,000,000 to $3,500,000*
Bridges Rehabilitation/Replacement: *$1,000,000 to $7,000,000*

Check the box to indicate that the project meets this requirement. Yes

8.The project must comply with the Americans with Disabilities Act (ADA).

Check the box to indicate that the project meets this requirement. Yes

9.In order for a selected project to be included in the Transportation Improvement Program (TIP) and approved by USDOT, the public agency sponsor must either have a current Americans with Disabilities Act (ADA) self-evaluation or transition plan that covers the public right of way/transportation, as required under Title II of the ADA. The plan must be completed by the local agency before the Regional Solicitation application deadline. For the 2022 Regional Solicitation funding cycle, this requirement may include that the plan is updated within the past five years.

The applicant is a public agency that employs 50 or more people and has a completed ADA transition plan that covers the public right of way/transportation. Yes

Date plan completed: 02/12/2014

Link to plan:

The applicant is a public agency that employs fewer than 50 people and has a completed ADA self-evaluation that covers the public right of way/transportation.

Date self-evaluation completed:

Link to plan:

Upload plan or self-evaluation if there is no link 1589386803120_9_ ADA Transition Plan.pdf

Upload as PDF

10.The project must be accessible and open to the general public.

Check the box to indicate that the project meets this requirement. Yes

11.The owner/operator of the facility must operate and maintain the project year-round for the useful life of the improvement, per FHWA direction established 8/27/2008 and updated 6/27/2017.

Check the box to indicate that the project meets this requirement. Yes

12.The project must represent a permanent improvement with independent utility. The term independent utility means the project provides benefits described in the application by itself and does not depend on any construction elements of the project being funded from other sources outside the regional solicitation, excluding the required non-federal match. Projects that include traffic management or transit operating funds as part of a construction project are exempt from this policy.

Check the box to indicate that the project meets this requirement. Yes

13.The project must not be a temporary construction project. A temporary construction project is defined as work that must be replaced within five years and is ineligible for funding. The project must also not be staged construction where the project will be replaced as part of future stages. Staged construction is eligible for funding as long as future stages build on, rather than replace, previous work.

Check the box to indicate that the project meets this requirement. Yes

14.The project applicant must send written notification regarding the proposed project to all affected state and local units of government prior to submitting the application.

Check the box to indicate that the project meets this requirement. Yes

Roadways Including Multimodal Elements

1.All roadway and bridge projects must be identified as a principal arterial (non-freeway facilities only) or A-minor arterial as shown on the latest TAB approved roadway functional classification map.

Check the box to indicate that the project meets this requirement. Yes

Roadway Expansion and Reconstruction/Modernization and Spot Mobility projects only:

2.The project must be designed to meet 10-ton load limit standards.

Check the box to indicate that the project meets this requirement. Yes

Bridge Rehabilitation/Replacement and Strategic Capacity projects only:

3.Projects requiring a grade-separated crossing of a principal arterial freeway must be limited to the federal share of those project costs identified as local (non-MnDOT) cost responsibility using MnDOTs Cost Participation for Cooperative Construction Projects and Maintenance Responsibilities manual. In the case of a federally funded trunk highway project, the policy guidelines should be read as if the funded trunk highway route is under local jurisdiction.

Check the box to indicate that the project meets this requirement.

4.The bridge must carry vehicular traffic. Bridges can carry traffic from multiple modes. However, bridges that are exclusively for bicycle or pedestrian traffic must apply under one of the Bicycle and Pedestrian Facilities application categories. Rail-only bridges are ineligible for funding.

Check the box to indicate that the project meets this requirement.

Bridge Rehabilitation/Replacement projects only:

5.The length of the bridge must equal or exceed 20 feet.

Check the box to indicate that the project meets this requirement.

6. The bridge must have a National Bridge Inventory Rating of 6 or less for rehabilitation projects and 4 or less for replacement projects.

Check the box to indicate that the project meets this requirement.

Roadway Expansion, Reconstruction/Modernization, and Bridge Rehabilitation/Replacement projects only:

7. All roadway projects that involve the construction of a new/expanded interchange or new interchange ramps must have approval by the Metropolitan Council/MnDOT Interchange Planning Review Committee prior to application submittal. Please contact Michael Corbett at MnDOT (Michael.J.Corbett@state.mn.us or 651-234-7793) to determine whether your project needs to go through this process as described in Appendix F of the 2040 Transportation Policy Plan.

Check the box to indicate that the project meets this requirement.

Requirements - Roadways Including Multimodal Elements

Specific Roadway Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Mobilization (approx. 5% of total cost)	$102,880.00
Removals (approx. 5% of total cost)	$70,420.00
Roadway (grading, borrow, etc.)	$418,334.00
Roadway (aggregates and paving)	$529,829.00
Subgrade Correction (muck)	$0.00
Storm Sewer	$211,260.00
Ponds	$0.00

Concrete Items (curb & gutter, sidewalks, median barriers)	$376,235.00
Traffic Control	$102,880.00
Striping	$56,336.00
Signing	$56,336.00
Lighting	$84,000.00
Turf - Erosion & Landscaping	$100,420.00
Bridge	$0.00
Retaining Walls	$0.00
Noise Wall (not calculated in cost effectiveness measure)	$0.00
Traffic Signals	$0.00
Wetland Mitigation	$0.00
Other Natural and Cultural Resource Protection	$0.00
RR Crossing	$0.00
Roadway Contingencies	$308,639.00
Other Roadway Elements	$70,420.00
Totals	**$2,487,989.00**

Specific Bicycle and Pedestrian Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	**Cost**
Path/Trail Construction	$0.00
Sidewalk Construction	$0.00
On-Street Bicycle Facility Construction	$0.00
Right-of-Way	$0.00
Pedestrian Curb Ramps (ADA)	$84,000.00
Crossing Aids (e.g., Audible Pedestrian Signals, HAWK)	$0.00
Pedestrian-scale Lighting	$0.00
Streetscaping	$0.00
Wayfinding	$0.00
Bicycle and Pedestrian Contingencies	$0.00
Other Bicycle and Pedestrian Elements	$0.00
Totals	**$84,000.00**

Specific Transit and TDM Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Fixed Guideway Elements	$0.00
Stations, Stops, and Terminals	$0.00
Support Facilities	$0.00
Transit Systems (e.g. communications, signals, controls, fare collection, etc.)	$0.00
Vehicles	$0.00
Contingencies	$0.00
Right-of-Way	$0.00
Other Transit and TDM Elements	$0.00
Totals	**$0.00**

Transit Operating Costs

Number of Platform hours	0
Cost Per Platform hour (full loaded Cost)	$0.00
Subtotal	$0.00
Other Costs - Administration, Overhead,etc.	$0.00

Totals

Total Cost	$2,571,989.00
Construction Cost Total	$2,571,989.00
Transit Operating Cost Total	$0.00

Congestion within Project Area:

Free-Flow Travel Speed:	31
The free-flow travel speed is the black number	
Peak Hour Travel Speed:	24
The peak hour travel speed is the red number	
Percentage Decrease in Travel Speed in Peak Hour Compared to Free-Flow (calculation):	22.58%
Upload the "Level of Congestion" map:	1589494736133_1A. Level of Congestion.pdf

Congestion on adjacent Parallel Routes:

Adjacent Parallel Corridor	Radio Drive (CSAH 13)

Adjacent Parallel Corridor Start and End Points:

Start Point:	Pioneer Dr
End Point:	Lake Rd
Free-Flow Travel Speed:	37

The Free-Flow Travel Speed is black number.

Peak Hour Travel Speed:	33

The Peak-Hour Travel Speed is red number.

Percentage Decrease in Travel Speed in Peak Hour Compared to Free-Flow (calculation):	10.81%
Upload the "Level of Congestion" map:	1589494736133_1A. Level of Congestion.pdf

Principal Arterial Intersection Conversion Study:

Proposed at-grade project that reduces delay at a High Priority Intersection:

(100 Points)

Proposed at-grade project that reduces delay at a Medium Priority Intersection:

(90 Points)

Proposed at-grade project that reduces delay at a Low Priority Intersection:

(80 Points)

Not listed as a priority in the study:	Yes

(0 Points)

Congestion Management and Safety Plan IV:

Proposed at-grade project that reduces delay at a CMSP opportunity area:

(100 Points)

Not listed as a CMSP priority location:	Yes

(0 Points)

Measure C: Current Heavy Commercial Traffic

RESPONSE: Select one for your project, based on the Regional Truck Corridor Study:

Along Tier 1:

Miles:	0

(to the nearest 0.1 miles)

Along Tier 2:	
Miles:	0
(to the nearest 0.1 miles)	
Along Tier 3:	
Miles:	0
(to the nearest 0.1 miles)	
The project provides a direct and immediate connection (i.e., intersects) with either a Tier 1, Tier 2, or Tier 3 corridor:	
None of the tiers:	Yes

Measure A: Connection to disadvantaged populations and projects benefits, impacts, and mitigation

*1.**Sub-measure**: Equity Population Engagement: A successful project is one that is the result of active engagement of low-income populations, people of color, persons with disabilities, youth and the elderly. Engagement should occur prior to and during a projects development, with the intent to provide direct benefits to, or solve, an expressed transportation issue, while also limiting and mitigating any negative impacts. Describe and map the location of any low-income populations, people of color, disabled populations, youth or the elderly within a ½ mile of the proposed project. Describe how these specific populations were engaged and provided outreach to, whether through community planning efforts, project needs identification, or during the project development process. Describe what engagement methods and tools were used and how the input is reflected in the projects purpose and need and design. Elements of quality engagement include: outreach and engagement to specific communities and populations that are likely to be directly impacted by the project; techniques to reach out to populations traditionally not involved in community engagement related to transportation projects; feedback from these populations identifying potential positive and negative elements of the proposed project through engagement, study recommendations, or plans that provide feedback from populations that may be impacted by the proposed project. If relevant, describe how NEPA or Title VI regulations will guide engagement activities.*

Over seventeen meetings, site visits, or formal correspondences have occurred between the City of Woodbury and school and district staff, crossing guards, parents, and residents between September of 2013 and February 2020 to discuss project needs, opportunities, and solicit feedback as it relates to the 4-lane to 3-lane conversion and improvements at the Lake Road and Pioneer Drive intersection. The groups engaged represented a comprehensive perspective of safety concerns and opportunities for this project. This includes two neighborhood meetings. Much of the engagement was focused on high traffic speeds, vehicle stopping compliance and concerns for pedestrian and bicycle crossing, particularity for school age children.

Response:

Throughout the 2040 comprehensive plan update the City emphasized community engagement. All meetings, including resident task force meetings, were publicized using email updates and posted meeting information on a comprehensive plan web page. Community development staff coordinated a wide variety of meetings with local businesses, schools, faith groups, civic groups and more. Opportunity to stay involved was also featured in several issues of the City newsletter mailed to all residences and businesses 10 times per year and posted on the city website. Staff also utilized community wide surveys and to understand community priorities and needs.

(Limit 2,800 characters; approximately 400 words)

*2.**Sub-measure**: Equity Population Benefits and Impacts: A successful project is one that has been designed to provide direct benefits to low-income populations, people of color, persons with disabilities, youth and the elderly. All projects must mitigate potential negative benefits as required under federal law. Projects that are designed to provide benefits go beyond the mitigation requirement to proactively provide transportation benefits and solve transportation issues experienced by Equity populations.*
a.Describe the projects benefits to low-income populations, people of color, children, people with disabilities, and the elderly. Benefits could relate to pedestrian and bicycle safety improvements; public health benefits; direct access improvements for residents or improved access to destinations such as jobs, school, health care or other; travel time improvements; gap closures; new transportation services or modal options, leveraging of other beneficial projects and investments; and/or community connection and cohesion improvements. Note that this is not an exhaustive list.

Response:

This intersection project provides improved mobility, and continuous ADA accessible accommodations for adjacent low-income populations, children, persons with disabilities, and persons of color.

One of Woodbury's greatest assets is its growing diversity. Between 2000 and 2010, racial diversity in Woodbury doubled from 10 to 20 percent, now placing it among the highest in the Twin Cities. Within a half-mile project area of the Lake Road and Pioneer Drive intersection is home to 23% people of color, 20% of owner and 56% of renter households near the project site are cost burdened and 8% of the household residents have a disability (mncompass.org). Cost burdened residents often rely on walking/biking as a means of transportation. Populations with disabilities rely on access to accessible and continuous trails and sidewalks. This project introduces a balanced mobility intersection with a single lane roundabout providing improved and accessible trail crossing amidst lower traffic speed and safer operations.

The project area includes several multifamily housing options. Two townhome communities are located directly adjacent the project at the northwest and southwest intersection quadrants. With a healthcare and commercial activity center less than a mile north of the project and Lake Road and Pioneer Drive being primary community routes to I-494 and I-94, majority of trips from these multifamily units pass through this projects intersection.

A half-mile walking distance to the north of the project, on Pioneer Drive and Interlachen Parkway are a variety of multifamily affordable housing options including two townhome neighborhoods

and a senior living facility offering over 50% AMI units combined. Families in the surrounding multifamily and affordable housing units are more likely to be single-vehicle or no vehicle households. Most children walking to school and pedestrians accessing a nearby commercial area must pass through this project's intersection.

The proposed roundabout improvement project aligns with goals of the Metropolitan Council's Thrive MSP 2040 Equity outcomes of creating more active transportation choices for residents to travel and recreate, and increasing the quality of life for residents in the area, specifically those who rely on non-vehicle transportation methods. In addition to improved transportation options, particularly non-motorized, this project provides improved connection to the several public parks, trail loops, and lakes within a half-mile walk of this project.

(Limit 2,800 characters; approximately 400 words)

b. Describe any negative impacts to low-income populations, people of color, children, people with disabilities, and the elderly created by the project, along with measures that will be taken to mitigate them. Negative impacts that are not adequately mitigated can result in a reduction in points.
Below is a list of negative impacts. Note that this is not an exhaustive list.
Increased difficulty in street crossing caused by increased roadway width, increased traffic speed, wider turning radii, or other elements that negatively impact pedestrian access.
Increased noise.
Decreased pedestrian access through sidewalk removal / narrowing, placement of barriers along the walking path, increase in auto-oriented curb cuts, etc.
Project elements that are detrimental to location-based air quality by increasing stop/start activity at intersections, creating vehicle idling areas, directing an increased number of vehicles to a particular point, etc.
Increased speed and/or cut-through traffic.
Removed or diminished safe bicycle access.
Inclusion of some other barrier to access to jobs and other destinations.
Displacement of residents and businesses.
Mitigation of temporary construction/implementation impacts such as dust; noise; reduced access for travelers and to businesses; disruption of utilities; and eliminated street crossings.
Other

Response:

The City of Woodbury does not anticipate any negative impacts, outside minimal construction detour and noise disturbances, associated with the proposed roundabout project. No affordable housing units will be impacted and access to all private properties will easily be maintained. This is largely due to minimal right-of-way or temporary easement needs for construction.

Throughout construction, signage and resident updates will be utilized to ensure that adjacent property owners, community members, commuters, and school parents and staff understand what is currently under construction; where vehicular, bicycle, and pedestrian detour routes are located if such detours are even necessary. Particular attention will be given to ensuring access to existing trail connections and school sites are maintained. However, most if not all construction activities are expected to occur outside of school months.

The project will have minimal to no impact on the surrounding natural environment. Most of the proposed project fits within the existing intersection and grass boulevard footprint, limiting the environmental impact and construction impacts due to excavation and earthwork. It is highly anticipated that all existing boulevard and residential property trees will be maintained.

For any short-term inconveniences that may arise during construction, numerous long-term benefits will ultimately be produced including improvements to intersection traffic operations, lower traffic speeds, decreased traffic noise and emissions with reduced stop and start activity, school access, and reduced distance and two-staged pedestrian and bicyclist crossings.

(Limit 2,800 characters; approximately 400 words)

Select one:

*3.**Sub-measure: Bonus Points** Those projects that score at least 80% of the maximum total points available through sub-measures 1 and 2 will be awarded bonus points based on the geographic location of the project. These points will be assigned as follows, based on the highest-scoring geography the project contacts:*
a.25 points to projects within an Area of Concentrated Poverty with 50% or more people of color
b.20 points to projects within an Area of Concentrated Poverty
c.15 points to projects within census tracts with the percent of population in poverty or population of color above the regional average percent
d.10 points for all other areas

Project is located in an Area of Concentrated Poverty where 50% or more of residents are people of color (ACP50):	
Project located in Area of Concentrated Poverty:	
Projects census tracts are above the regional average for population in poverty or population of color:	
Project located in a census tract that is below the regional average for population in poverty or populations of color or includes children, people with disabilities, or the elderly:	Yes

(up to 40% of maximum score)

Upload the "Socio-Economic Conditions" map used for this measure. The second map created for sub measure A1 can be uploaded on the Other Attachments Form, or can be combined with the "Socio-Economic Conditions" map into a single PDF and uploaded here.

Upload Map	1589382854604_2A. Socio-Economic Conditions.pdf

Measure B: Part 1: Housing Performance Score

City	Segment Length (For stand-alone projects, enter population from Regional Economy map) within each City/Township	Segment Length/Total Project Length	Score	Housing Score Multiplied by Segment percent
Woodbury	0.4	1.0	85.0	85.0

Total Project Length

Total Project Length	0.41

Project length entered on the Project Information - General form.

Housing Performance Score

Total Project Length (Miles) or Population	0.4
Total Housing Score	85.0

Affordable Housing Scoring

Part 2: Affordable Housing Access

Reference Access to Affordable Housing Guidance located under Regional Solicitation Resources for information on how to respond to this measure and create the map.
If text box is not showing, click Edit or "Add" in top right of page.

Response:

The project area includes two affordable housing developments with a total of 25 units affordable at or below 60% AMI.

? Stonecrest Senior Living: preservation; 17 units at 50% AMI; 1 BR; affordability guaranteed until 2026 through TIF funding

? Mosaic Homes: preservation; 8 units at 60% AMI; affordability through HTF funding

Affordable housing development and preservation are priorities identified in the City of Woodbury 2040 Comprehensive Plan. To fulfil housing needs, the City will improve loan programs to help low- to moderate-income residents purchase homes, plan for the construction of new affordable housing units, use HRA tools to assist residents with home improvements, and use land use tools such as density bonuses and cluster zoning to incentivize affordable housing developments.
Woodbury is committed to providing low-income households with efficient multimodal transportation options. These improvements will directly benefit residents from the above affordable housing units who utilize the intersection daily to access education, employment, and daily services. The proposed improvements set Lake Road up for the planned four to three lane conversion on Lake Road. This project will decrease peak-hour traffic delays at the intersection and reduce vehicles speeds. The roundabout intersection will reduce the number of travel lanes pedestrians need to cross and provide a two-stage crossing, improving safety measures for bicyclists, pedestrians, and students traveling to and from Lake Middle School and Middleton Elementary School. Pedestrian access will also be improved to Woodbury Community Church and other destinations along the multiple trails that meet at this intersection.

(Limit 2,100 characters; approximately 300 words)

Upload map: 1589383851968_2B_Lake Rd Pioneer Tr Affordable Housing.pdf

Measure A: Congestion Reduction/Air Quality

Total Peak Hour Delay Per Vehicle Without The Project (Seconds/ Vehicle)	Total Peak Hour Delay Per Vehicle With The Project (Seconds/ Vehicle)	Total Peak Hour Delay Per Vehicle Reduced by Project (Seconds/ Vehicle)	Volume without the Project (Vehicles per hour)	Volume with the Project (Vehicles Per Hour):	Total Peak Hour Delay Reduced by the Project:	Total Peak Hour Delay Reduced by the Project:	EXPLANATION of methodology used to calculate railroad crossing delay, if applicable.	Synchro or HCM Reports
40.4	16.3	24.1	1218	1218	29353.8	29353.8	NA - Intersection of Lake Road and Pioneer Drive is currently All-Way Stop Controlled	1589384816381_3A_Sychro_data.pdf
						29354		

Vehicle Delay Reduced

Total Peak Hour Delay Reduced	29353.8
Total Peak Hour Delay Reduced	29353.8

Measure B:Roadway projects that do not include new roadway segments or railroad grade-separation elements

Total (CO, NOX, and VOC) Peak Hour Emissions without the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions with the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):
2.47	2.47	0
2	**2**	**0**

Total

Total Emissions Reduced:	0
Upload Synchro Report	1589387009188_3A_Sychro_data.pdf

Please upload attachment in PDF form. (Save Form, then click 'Edit' in top right to upload file.)

Measure B: Roadway projects that are constructing new roadway segments, but do not include railroad grade-separation elements (for Roadway Expansion applications only):

Total (CO, NOX, and VOC) Peak Hour Emissions without the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions with the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):
0	**0**	**0**

Total Parallel Roadway

Emissions Reduced on Parallel Roadways	0
Upload Synchro Report	

Please upload attachment in PDF form. (Save Form, then click 'Edit' in top right to upload file.)

New Roadway Portion:

Cruise speed in miles per hour with the project:	0
Vehicle miles traveled with the project:	0
Total delay in hours with the project:	0
Total stops in vehicles per hour with the project:	0
Fuel consumption in gallons:	0
Total (CO, NOX, and VOC) Peak Hour Emissions Reduced or Produced on New Roadway (Kilograms):	0
EXPLANATION of methodology and assumptions used:(Limit 1,400 characters; approximately 200 words)	
Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):	0.0

Measure B:Roadway projects that include railroad grade-separation elements

Cruise speed in miles per hour without the project:	0
Vehicle miles traveled without the project:	0
Total delay in hours without the project:	0

Total stops in vehicles per hour without the project:	0
Cruise speed in miles per hour with the project:	0
Vehicle miles traveled with the project:	0
Total delay in hours with the project:	0
Total stops in vehicles per hour with the project:	0
Fuel consumption in gallons (F1)	0
Fuel consumption in gallons (F2)	0
Fuel consumption in gallons (F3)	0
Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):	0
EXPLANATION of methodology and assumptions used:(Limit 1,400 characters; approximately 200 words)	

Measure A: Benefit of Crash Reduction

Crash Modification Factor Used: *(Limit 700 Characters; approximately 100 words)*	__Conversion of stop-controlled intersection into single-lane roundabout_____
Rationale for Crash Modification Selected: *(Limit 1400 Characters; approximately 200 words)*	__The crash modification factor selected for the proposed improvement is reflective upon the improvements to be made. The existing stop-controlled intersection is proposed to be a single lane roundabout.__
Project Benefit ($) from B/C Ratio	$0.86
Total Fatal (K) Crashes:	0
Total Serious Injury (A) Crashes:	0
Total Non-Motorized Fatal and Serious Injury Crashes:	5
Total Crashes:	5
Total Fatal (K) Crashes Reduced by Project:	0
Total Serious Injury (A) Crashes Reduced by Project:	0
Total Non-Motorized Fatal and Serious Injury Crashes Reduced by Project:	4
Total Crashes Reduced by Project:	4
Worksheet Attachment *Upload Crash Modification Factors and B/C Worksheet in PDF form.*	1589385341531_4A_Safety.pdf

Measure A: Multimodal Elements and Existing Connections

Response:

- The proposed Road Diet and the single lane roundabout will reduce vehicle speeds and number of lanes pedestrians need to cross. The median approaches of the roundabout will create pedestrian refuge islands that allow pedestrians only focus on one direction of travel at a time. New ADA pedestrian ramps and bicycle slip ramps will be constructed for all four approaches. Finally, roundabout lighting will improve visibility of pedestrians at night.

(Limit 2,800 characters; approximately 400 words)

Measure A: Multimodal Elements and Existing Connections

Response:

Lake Road and Pioneer Drive is an important connection for trail facilities in the City of Woodbury connecting residents to nearby schools, churches, healthcare, and commercial centers. Community wide trail facilities from all directions converge at Lake Road and Pioneer Drive at the intersection. Currently, pedestrians or bicyclists must cross four lanes of traffic and need to navigate both directions of traffic at once.

The proposed single-lane roundabout will shorten the crossing distance for all legs of the intersection and create a two-stage crossing with the center median and ADA pedestrian ramps on all crossings. As a result, users only need to navigate one direction of travel at a time. In addition, the single lane roundabout design includes design features to slow vehicle traffic and make pedestrians more visible as they approach and navigate the intersection. Roundabout lighting that will further improve the visibility of vehicles and pedestrians. These improvements are even more important considering the proximity to Lake Middle School and Middleton Elementary School which experience children traveling to and from school using this intersection several hours out of day.

Furthermore, the project is preparing for the four to three lane conversion of Lake Road, reconstructing the south leg of the intersection as a three lane section from Lake Road through Juniper Lane and continuing the center median on the north leg to Savana Oaks Pass. The three-lane roadway design will increase the distance between vehicle traffic and the pedestrian facilities and provide shoulder space for those bikers who prefer to use the roadway. The roundabout includes slip ramps for bicyclist that allow them to exit the roadway prior to the intersection and utilize the two-stage pedestrian crossings. Extending the center median on the north leg will also allow for a safer two-staged

pedestrian crossing at the intersection of Pioneer Drive and Savanna Oaks Pass.

Mobility and safety improvements also benefit school bus traffic that heavily travels through this intersection as it a primary access point to the directly adjacent Lake Middle School and Middleton Elementary School. While no other public transit routes currently utilize this intersection, the City of Woodbury is actively building out its non-motorized transportation system in anticipation for the 2024 Gold Line BRT route and stations on Bielenberg Drive. This project is located less than two miles from Bielenberg Drive and already connected through existing trail facilities.

(Limit 2,800 characters; approximately 400 words)

Transit Projects Not Requiring Construction

If the applicant is completing a transit application that is operations only, check the box and do not complete the remainder of the form. These projects will receive full points for the Risk Assessment.
Park-and-Ride and other transit construction projects require completion of the Risk Assessment below.

Check Here if Your Transit Project Does Not Require Construction

Measure A: Risk Assessment - Construction Projects

1)Layout (25 Percent of Points)

Layout should include proposed geometrics and existing and proposed right-of-way boundaries.

Layout approved by the applicant and all impacted jurisdictions (i.e., cities/counties that the project goes through or agencies that maintain the roadway(s)). A PDF of the layout must be attached along with letters from each jurisdiction to receive points.

Yes

100%

Attach Layout

1589385615368_6_Roundabout Concept_Draft Alt.pdf

Please upload attachment in PDF form.

Layout completed but not approved by all jurisdictions. A PDF of the layout must be attached to receive points.

50%

Attach Layout

Please upload attachment in PDF form.

Layout has not been started

0%

Anticipated date or date of completion

2)Review of Section 106 Historic Resources (15 Percent of Points)

No known historic properties eligible for or listed in the National Register of Historic Places are located in the project area, and project is not located on an identified historic bridge Yes

100%

There are historical/archeological properties present but determination of no historic properties affected is anticipated.

100%

Historic/archeological property impacted; determination of no adverse effect anticipated

80%

Historic/archeological property impacted; determination of adverse effect anticipated

40%

Unsure if there are any historic/archaeological properties in the project area.

0%

Project is located on an identified historic bridge

3)Right-of-Way (25 Percent of Points)

Right-of-way, permanent or temporary easements either not required or all have been acquired

100%

Right-of-way, permanent or temporary easements required, plat, legal descriptions, or official map complete

50%

Right-of-way, permanent or temporary easements required, parcels identified Yes

25%

Right-of-way, permanent or temporary easements required, parcels not all identified

0%

Anticipated date or date of acquisition

4)Railroad Involvement (15 Percent of Points)

No railroad involvement on project or railroad Right-of-Way agreement is executed (include signature page, if applicable) Yes

100%

Signature Page

Please upload attachment in PDF form.

Railroad Right-of-Way Agreement required; negotiations have begun

50%

Railroad Right-of-Way Agreement required; negotiations have not begun.

0%

Anticipated date or date of executed Agreement

5) Public Involvement (20 percent of points)

Projects that have been through a public process with residents and other interested public entities are more likely than others to be successful. The project applicant must indicate that events and/or targeted outreach (e.g., surveys and other web-based input) were held to help identify the transportation problem, how the potential solution was selected instead of other options, and the public involvement completed to date on the project. List Dates of most recent meetings and outreach specific to this project:

Meeting with general public:	02/02/2020
Meeting with partner agencies:	05/03/2018
Targeted online/mail outreach:	
Number of respondents:	
Meetings specific to this project with the general public and partner agencies have been used to help identify the project need.	Yes

100%

Targeted outreach to this project with the general public and partner agencies have been used to help identify the project need.

75%

At least one meeting specific to this project with the general public has been used to help identify the project need.

50%

At least one meeting specific to this project with key partner agencies has been used to help identify the project need.

50%

No meeting or outreach specific to this project was conducted, but the project was identified through meetings and/or outreach related to a larger planning effort.

25%

No outreach has led to the selection of this project.

0%

Response (Limit 2,800 characters; approximately 400 words):

This project was informed heavily by school and neighborhood engagement activities first initiated in 2013. Outside of meetings correspondence with these groups occurred often. In total, over seventeen documented meetings, site visits, or formal correspondences have occurred between the City and school and district staff, crossing guards, parents, and residents between September of 2013 and February 2020 to discuss project needs, opportunities, and solicit feedback as it relates to the 4-lane to 3-lane conversion and improvements at the Lake Road and Pioneer Drive intersection. This includes two neighborhood meetings.

The public groups engaged represented a comprehensive perspective of safety concerns and opportunities for this project. Much of the engagement was focused on high traffic speeds, vehicle stopping compliance and concerns for pedestrian and bicycle crossing, particularity for school age children. The School Principal and District support letters highlight the concerns discussed and support for the project.

The City of Woodbury is currently conducting a city-wide bicycle and pedestrian plan that recognized the high priority and safety concerns of this Lake Road and Pioneer Drive intersection project. This plan is early in its process and will resume engagement activities once current social distancing requirements are lifted. This planning process also includes a Safe Routes to School component. This will provide opportunities to educate the students, staff, and parents about safe pedestrian and bicycle crossing at roundabouts prior to and following project construction.

The 2040 Comprehensive Plan recognized improvement needs to the Lake Road corridor including this project. Throughout the plan update the City emphasized community engagement. The City Council appointed a resident task force to serve as the steering committee for the planning process. The Task Force kick-off meeting was May 12, 2016 and they continued to meet monthly to guide staff and consultants on drafting updates to the Plan. Community development staff coordinated a wide variety of meetings with local businesses, schools, faith groups, civic groups and more. On April 1, 2017, the City presented draft updates at the Woodbury Community Expo. All meetings, including resident task force meetings, were publicized using email updates and posted meeting information on a comprehensive plan web page. Opportunity to stay involved was also featured in several issues of the City newsletter mailed to all residences and businesses 10 times per year and posted on the city website. Staff also utilized community wide surveys and to understand community priorities and needs.

Measure A: Cost Effectiveness

Total Project Cost (entered in Project Cost Form):	$2,571,989.00
Enter Amount of the Noise Walls:	$0.00
Total Project Cost subtract the amount of the noise walls:	$2,571,989.00
Enter amount of any outside, competitive funding:	$0.00
Attach documentation of award:	
Points Awarded in Previous Criteria	
Cost Effectiveness	$0.00

Other Attachments

File Name	Description	File Size
00_Woodbury Lake Rd and Pioneer Trail Intersection Project Pager.pdf	00_Woodbury Lake Rd and Pioneer Trail Intersection Project Pager.pdf	2.0 MB
1A. Level of Congestion.pdf	1A. Level of Congestion.pdf	2.2 MB
2A. Socio-Economic Conditions.pdf	2A. Socio-Economic Conditions	1006 KB
2B_Lake Rd Pioneer Tr Affordable Housing.pdf	2B_Lake Rd Pioneer Tr Affordable Housing	530 KB
3A-2_Existing_Roundabout AM.pdf	3A-2_Existing_Roundabout AM	45 KB
3A_1_Existing_No Build AM.pdf	3A_1_Existing_No Build AM	48 KB
4A_1_benefitcost2020.pdf	4A_1_BenefitCost2020	81 KB
4A_2_CMF 206.pdf	4A_2_CMF 206	128 KB
4A_3_List of Crashes_Detail_Report.pdf	4A_3_List of Crashes_Detail_Report	163 KB
5_Project Location Map.pdf	5_Project Location Map	733 KB
6_Roundabout Concept_Draft Alt.pdf	6_Roundabout Concept Draft ALT	829 KB
7_Letters of Support.pdf	7_Letters of Support	685 KB
8_Existing Conditions Photos.pdf	8_Existing Conditions Photos	441 KB
91_All Public and Agency Meeting Dates.pdf	91_All Public and Agency Meeting Dates.pdf	67 KB
9_ ADA Transition Plan.pdf	9_ADA Transition Plan	391 KB

CITY OF Woodbury **COUNCIL DIRECTIVE**	Adopted: **1/24/1996** Revised: **2/12/14**	Number: **CD-ADMIN-1.7**
	Mayor:	City Administrator:
	For: **All Employees and Community Members**	
	Subject: **City of Woodbury ADA Transition Plan**	

PURPOSE

The Americans with Disabilities Act was enacted in 1990 to provide a national mandate to eliminate discrimination against individuals with disabilities. Under the Act, all state and local government entities or agencies are required to perform self-evaluations of their current facilities, programs and activities. Agencies are then required to develop a plan outlining ways to accommodate those with disabilities and addressing any deficiencies in current operations. This directive addresses how the City of Woodbury complies with the applicable portions of this Act. The plan is required to be updated periodically.

POLICY

A. Coordination

The City of Woodbury has more than 50 employees; therefore, it is required that the City appoint an ADA Coordinator. The Assistant to the City Administrator(s) will act as the City's ADA Coordinator. This individual will educate the organization on ADA regulations, ensure the City acts upon all ADA accommodation requests, and coordinate City efforts to be compliant.

B. Statement of Non-Discrimination on the Basis of Disability

The City of Woodbury does not discriminate on the basis of disability in the admission or access to, or treatment or employment in, its programs, activities and services. The City will not use eligibility criteria that discriminate on the basis of disability. The ADA Coordinator will coordinate compliance with the non-discrimination requirements contained in Section 35.107 of the U.S. Department of Justice Regulations. Information concerning the provisions of ADA, and the rights there under, are available from the ADA Coordinator. Notice of this policy shall be published in the City's legal newspaper to inform the public of the rights and protection afforded by ADA.

C. Public Involvement

The City solicited public input from multiple community agencies when the ADA Transition Plan was created in 1996. As the City continues to update its ADA Transition Plan, the City invites the public to address any ADA compliance concerns with the ADA Coordinator and/or City staff.

D. Programs, Activities and Services

The City of Woodbury provides a broad range of programs, activities, and services to its residents. The City will make reasonable accommodation efforts to make these programs accessible whenever possible. When possible, these programs will be provided in an integrated setting. In cases where access is not feasible, the City will make reasonable efforts to provide like opportunities. These programs include, but are not limited to the following:

- Dissemination of information in various forms
- Public meetings (City Council and Advisory Commissions)
- Inspections, permits, and licenses
- Planning and Community Development services
- Utility services and billing
- Elections
- Street maintenance
- Public education including printed and online materials
- Park and Recreation programs and facilities
- Police and Fire services
- Employment
- Cable television (broadcast of public information)
- Recycling and sustainability programs
- Contracting of services

Access to these programs may be through telephone contacts, in person contacts at a City facility, at a private home or business, or at a facility owned by another. The City of Woodbury will reasonably accommodate access to these programs as set forth in the Evaluation for Non-Structural Changes for Programmatic Barriers (Appendix I).

E. Self-Evaluation Process

Staff conducted an initial self-evaluation of City owned facilities open to the public in 1996. This evaluation was conducted using forms provided by the Minnesota State Council on Disability. The survey forms used were designed to reflect the most restrictive requirements of either the Minnesota State Building Code or the Americans with Disabilities Act Accessibility Guidelines as they existed at the time the facilities were evaluated. Staff also evaluated the City's programs, services, and activities to determine potential barriers. A copy of the transition plan will be kept in the administration office of the City of Woodbury.

F. Structural Barriers Identified

A list of the structural barriers that staff identified is included in Appendix II, Transition Plan for Structural Barriers. Structural barriers listed will also include curb ramps. Barriers in employee areas will be addressed as the need arises.

G. New Construction

The City of Woodbury will comply with all current ADA standards for new construction in city facilities, public right-of-way, and public parks and trails.

H. Maintenance of City Facilities and Infrastructure

The City of Woodbury will comply with all current ADA standards for maintenance projects and when updating city facilities, public right-of-way, and public parks and trails.

I. Employment

The City of Woodbury must meet the requirements of Title I of ADA concerning employment. The City's employment compliance actions are set forth in Appendix IV, Employee Compliance Plan.

J. Grievance Procedure

Appendix V outlines the grievance procedure for investigating ADA alleged violations.

K. Curb Ramps

The City's compliance actions regarding curb ramps are set forth in Appendix II.

L. Training

The City will educate all employees who have regular contact with the public in the provision of the City's programs, activities, and services on ADA requirements as well as sensitize employees to the needs of the disabled community.

M. Emergency Evacuation

The City will provide audible and visual alarm systems as required by ADA compliance laws. Employees will address the needs of disabled persons who may be in City facilities when an emergency situation occurs.

N. Undue Financial or Administrative Burdens

The City Council will make the final determination in instances where compliance with ADA creates an undue financial or administrative burden. In making its determination, the City Council will consider the following factors:

1. Nature and cost of the accommodations needed.
2. Overall financial resources involved in providing reasonable accommodations, the number of individuals affected, and the effect on expenses and resources.
3. Impact of the accommodation upon the operation of the facility, including the impact on the ability of employees to perform their duties and the impact on the facility's ability to conduct business.

O. ADA Review

To prevent creation of new barriers, the ADA Coordinator may request staff to submit plans for new programs, services, activities, remodeling or construction of new City facilities. The

ADA Coordinator will review these plans with the appropriate staff to ensure compliance with ADA compliance laws.

P. Areas Not Specifically Addressed

It is neither possible nor feasible for this policy to specifically address accommodations for all of the disabilities covered by ADA. Upon notice of situations not addressed by this policy, the ADA Coordinator will meet with the party to determine if any accommodation can be made which is both suitable and reasonable.

APPENDIX I

TRANSITION PLAN FOR NON STRUCTURAL CHANGES TO ELIMINATE PROGRAMMATIC BARRIERS

1. **To accommodate the needs of individuals whose mobility is otherwise impaired due to a disability, the City will:**

   a. Accommodate the needs of individuals who are not able to leave their homes. For example, an employee may go to a resident's home to complete a job application.

   b. Schedule programs at locations for which the access meets the needs of the scheduled event.

   c. Wheelchairs (and other devices designed for use by people with mobility impairments) will be permitted in all areas open to pedestrian use. Other power-driven mobility devices are permitted to use unless safety concerns are present in a given public facility or area.

2. **To accommodate the needs of individuals who are deaf or who have hearing impairments, the City will:**

   a. Give notice that an interpreter will be provided at public meetings if the City receives notice within 72 hours before the meeting. This notice will be incorporated with the general meeting notice. The City will make a good effort to accommodate emergency requests which do not meet the length of notice requirement.

   b. Provide assistive listening devices for public meetings.

   c. Instruct employees on the use of note writing for communication in unscheduled situations.

   d. Provide telephone devices for the deaf. The City's 911 system already provides TDD access. The City Hall TDD number is 731-5796.

   e. Utilize the services of state agencies for the deaf to improve communications.

3. **To accommodate the needs of individuals who are blind or who are visually impaired, the City will:**

   a. Provide notice on printed materials which states that the material may also be provided in other forms including Braille, large print, electronic copy, or audio recordings. The City may use discretion in providing alternative forms of materials so that the form suits the document size.

b. Utilize the services of state agencies for the blind to improve communications.

c. Provide readers the public, as needed.

d. Permit use of a service animal in a public facility or area. A service animal is defined as a dog that has been individually trained to do work or perform tasks for the benefit of an individual with a disability. ADA states that dogs used purely for emotional support are not service animals.

4. Miscellaneous Program Issues

a. The City of Woodbury Park and Recreation Department offers many programs. In regards to these programs, the City will:

   1. Accommodate requests for reasonable accommodations.

   2. For more complicated accommodation requests, the City may utilize the services of an integration specialist. The specialist will determine if integration is feasible in a manner that will not compromise the safety of other program participants.

b. The City of Woodbury strives to ensure its published information, printed and electronic, is accessible to people with disabilities. When resources are not available to meet this goal in a timely fashion, items are prioritized using the following criteria:

   1. Emergency/crisis information (top priority).

   2. Important/meaningful information with the longest shelf-life – the content is not expected to change or expire over time.

c. The City will not discriminate against the use of service animals in City facilities or while an individual is participating in a City program.

d. As requested, staff will review the City's policies and ordinances to ensure that they are not discriminatory.

APPENDIX II

TRANSITION PLAN TO ELIMINATE STRUCTURAL BARRIERS

CURB RAMPS

All curb ramps that have been constructed after January 26, 1992 have been designed and constructed to meet ADA regulations at the time of installation. The City will review and update curb ramps when there is a need for reconstruction.

1. Identification. In 1992 a field survey of the entire City was taken to identify locations where curb ramps were required to be constructed. The results of the field survey indicated there were approximately 145 locations where existing curb and sidewalk should be removed and replaced with a curb ramp. These locations of proposed curb ramp improvements have all been addressed to meet curb ramp regulations at the time of reconstruction.

2. Design. In addition to the field survey, design and construction standards for the proposed curb ramps were researched. Based on this research, the City adopted the design endorsed by the Minnesota Department of Transportation. Exposed aggregate was used for the surface texture for the proposed curb ramps. Exposed aggregate provides a detectable warning surface and provides a relatively stable foundation under Minnesota's snow and ice conditions.

3. Schedule of self-evaluation. In 1992, the City dedicated $25,000 of funding annually for curb ramp installation. This level of funding helped to maintain and install all curb ramps across the City. The City will ensure all newly installed curb ramps follow the current ADA requirements at the time of reconstruction. In addition, the City will listen to requests and concerns from disabled residents in the community if a curb ramp is damaged or needs to be maintained. Any curb ramp needing to be repaired and/or is identified as a problematic structural barrier by a member of the community will be handled on an immediate and timely basis.

EXTERIOR & INTERIOR PUBLIC ACCESS

The City completed an evaluation of all the public access facilities constructed before 1992 and identified areas that did not meet ADA requirements. These areas have all been addressed since the implementation of the transition plan and meet ADA requirements at the time of reconstruction. All buildings constructed after 1992 meet ADA requirements at the time of construction. Barriers in the original self-evaluation include (but not limited to) restrooms, water fountains, public telephones, walkways, parking, stairs, corridors and entrances. The City will continue to ensure newly constructed buildings meet ADA requirements at the time of construction and will update any non-compliant matters when a reconstruction project is needed. The City will listen to requests and concerns from disabled residents in the community if there is an issue of concern in a publicly accessible building. Any building or curb ramp having a

maintenance concern and/or is identified as a problematic structural barrier by a member of the community will be handled on an immediate and timely basis.

APPENDIX III

PARK AND RECREATION DIVISION
ACCESSIBILITY SELF-EVALUATION

1. Parking lots have been provided with the necessary numbers of accessible parking spaces. These spaces have been properly signed and marked.

2. Public information regarding the parks and trails system will include accessibility information.

3. Amenities in the parks and trails system will be made accessible for all new construction. Existing facilities will be made accessible and the modification phased.

4. Trail intersections at streets and parking lots will have proper ramps according to accessibility standards for all new construction. For existing construction, existing ramps that intersect with public streets and public parking lots shall meet ADA requirements.

5. Recreation programs will be conducted in accessible buildings and spaces. If participants require an accommodation, support services such as an interpreter or a mobility aide can be arranged by calling or registering in person at least two weeks in advance of the program start date. This information will be placed in all recreation program materials.

APPENDIX IV

EMPLOYMENT COMPLIANCE PLAN

The City of Woodbury does not discriminate against persons with disabilities in the various areas of employment including: recruitment, hiring, transfers, promotions and terminations. To this end, the City's employment practices will include the following actions:

Recruitment
When a vacancy occurs, the Administrative Services Director will require the job description to include the physical requirements and essential job functions for the position.

Job Advertisements
Job notices and advertisements for vacancies will state that the City of Woodbury does not discriminate on the basis of disability. Further, the cover letter which accompanies each application will state that reasonable accommodations will be made upon request throughout the recruitment process. The City's application form will not ask for information related to an individual's disabilities. Advertisements will be submitted to appropriate agencies to ensure that a broad range of individual with disabilities will be reached.

Testing / Interviews
The ADA Coordinator will work with the candidate(s) requesting reasonable accommodations.

Accommodations for New and Existing Employees
Newly hired employees and existing employees who acquire disabilities shall work with the ADA Coordinator to achieve reasonable and appropriate accommodations.

Miscellaneous
The City requires a physical examination after making a contingent offer of employment to a qualified applicant to ensure that they can perform the essential job functions of the position for which they are being considered. This medical examination is required of all regular full-time and part-time employees, and the offer of employment is conditioned on the results of the examination. Social and recreational activities which are provided for employees will be accessible.

APPENDIX V

GRIEVANCE PROCEDURE
INVESTIGATING ALLEGED VIOLATIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA)

The purpose of this grievance procedure is to provide prompt and equitable resolution of complaints alleging any action prohibited by the U.S. Department of Justice regulations implementing Title II of the Americans with Disabilities Act. Title II of the ADA states, in part, that "no otherwise qualified disabled individual shall, solely by reason of such disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination" in programs or activities sponsored by a public entity.

GRIEVANCE PROCEDURE

1. Filing a complaint
ADA complaints shall be filed with the administration office of the City of Woodbury, 8301 Valley Creek Road, Woodbury MN 55125. All complaints shall be filed in writing or verbally; shall contain the name, address and phone number of the complainant; and describe the alleged violation. A complaint shall be filed within 180 days after the complainant becomes aware of the alleged violation.

2. Investigation and ADA Coordinator Determination
Upon receipt of the complaint, the ADA Coordinator or a person designated by the ADA Coordinator shall conduct such investigation as may be necessary to determine the facts of the alleged violation. The investigator shall also (a) determine whether or not the complaint is governed by Title II of the ADA; and (b) if Title II is applicable, attempt to devise a plan, if practical, which will address necessary modifications to City programs or activities covered by Title II.

The ADA Coordinator or a person designated by the ADA Coordinator shall then meet with the complainant and attempt to resolve the complaint.

The determination of the ADA Coordinator shall be issued within thirty (30) working days of receipt of the complaint and shall be in written form or other appropriate media of communication. A copy of the ADA Coordinator's determination shall be sent by certified mail to the complainant. Arrangements for sending the ADA Coordinator's determination to a visually impaired complainant shall be made. The City Administrator will be informed and provided a copy of the ADA Coordinator's determination.

3. Appeal to City's Selected Impartial Hearing Examiner
Within twenty (20) working days of the receipt by the complainant of the ADA Coordinator's determination, the complainant may request a hearing in front of the City's selected impartial

examiner. The request for appeal shall be filed with the City Administrator. If a hearing before the City's selected impartial examiner is requested, the City Administrator shall set the matter for hearing before the City's impartial hearing examiner within 20 days from the date of the request for hearing. The complainant and a representative of the City Administrator may be present at the hearing, may be represented by counsel, may present evidence and witnesses, and may cross-examine witnesses. An audio or visual recording, whichever is appropriate, of the proceeding shall be made. Within thirty (30) working days of the completion of the hearing, the City's impartial hearing examiner shall issue a written decision, which shall be sent to the complainant. Arrangements for submission of the City's impartial hearing examiner's decisions to a visually impaired complainant shall be made.

All determinations throughout this grievance process shall be rendered in a form additional to writing, if necessary, to the understanding of the complainant. An advocate may be appointed to aid a complainant in the filing of a complaint.

This grievance procedure will involve thorough investigations, affording all interested persons and their representatives, if any, an opportunity to submit evidence relevant to a complaint.

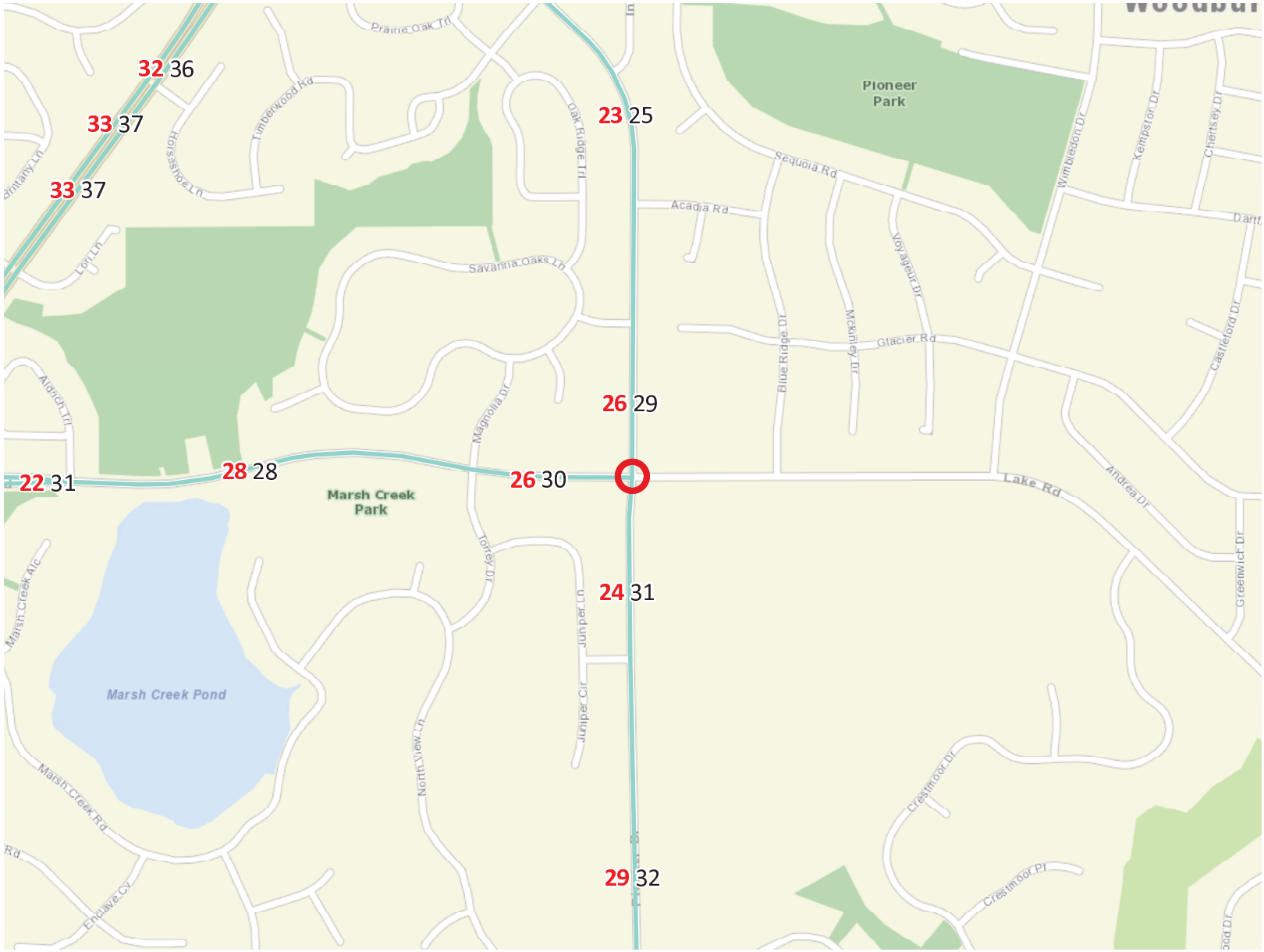
The rights of a person to a prompt and equitable resolution of the complaint filed hereunder shall not be impaired by the person's pursuit of other remedies such as the filing of a complaint with the responsible federal department or agency. The use of this grievance procedure is not a prerequisite to the pursuit of other remedies.

This grievance procedure shall be construed to protect the substantive rights of interested persons to meet appropriate due process standards and to assure that the City of Woodbury complies with the ADA.

Adopted by the Woodbury City Council on February 12, 2014, Resolution No. 14-27

Level of Congestion

Roadway Spot Mobility & Safety Project: Pioneer and Lake - WBRY | Map ID: 1587761732937



Project Points

A Minor Arterials

A Minor Arterials Planned

Principal Arterials

Principal Arterials Planned

0 0.075 0.15 0.3 0.45 0.6 Miles

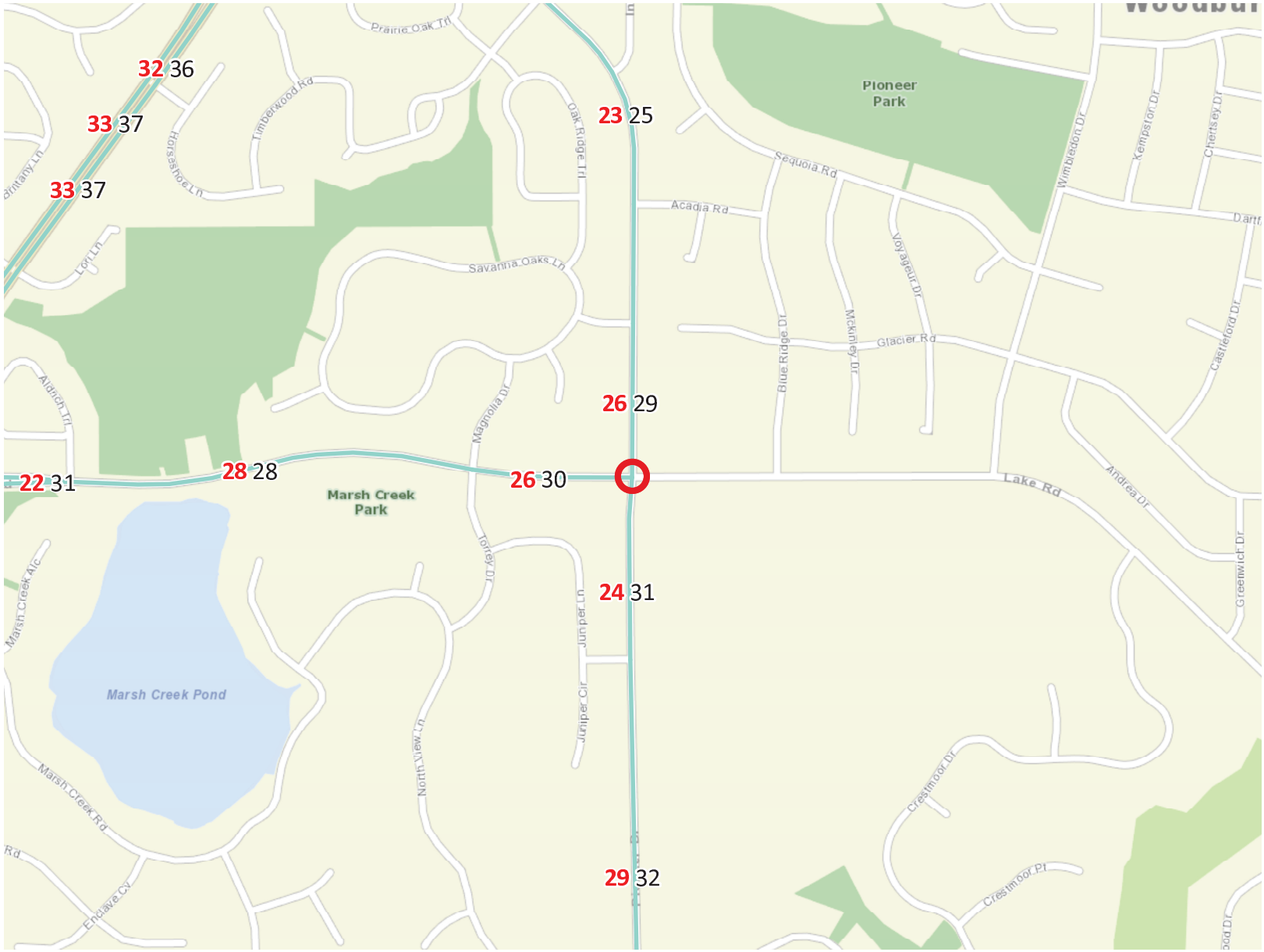
Created: 4/24/2020
LandscapeRSA1

For complete disclaimer of accuracy, please visit
https://giswebsite.metc.state.mn.us/gissite/notice.aspx

METROPOLITAN COUNCIL

Level of Congestion

Roadway Spot Mobility & Safety Project: Pioneer and Lake - WBRY | Map ID: 1587761732937



Project Points

A Minor Arterials

A Minor Arterials Planned

Principal Arterials

Principal Arterials Planned

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Created: 4/24/2020
LandscapeRSA1

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https://giswebsite.metc.state.mn.us/gissite/notice.aspx

METROPOLITAN COUNCIL

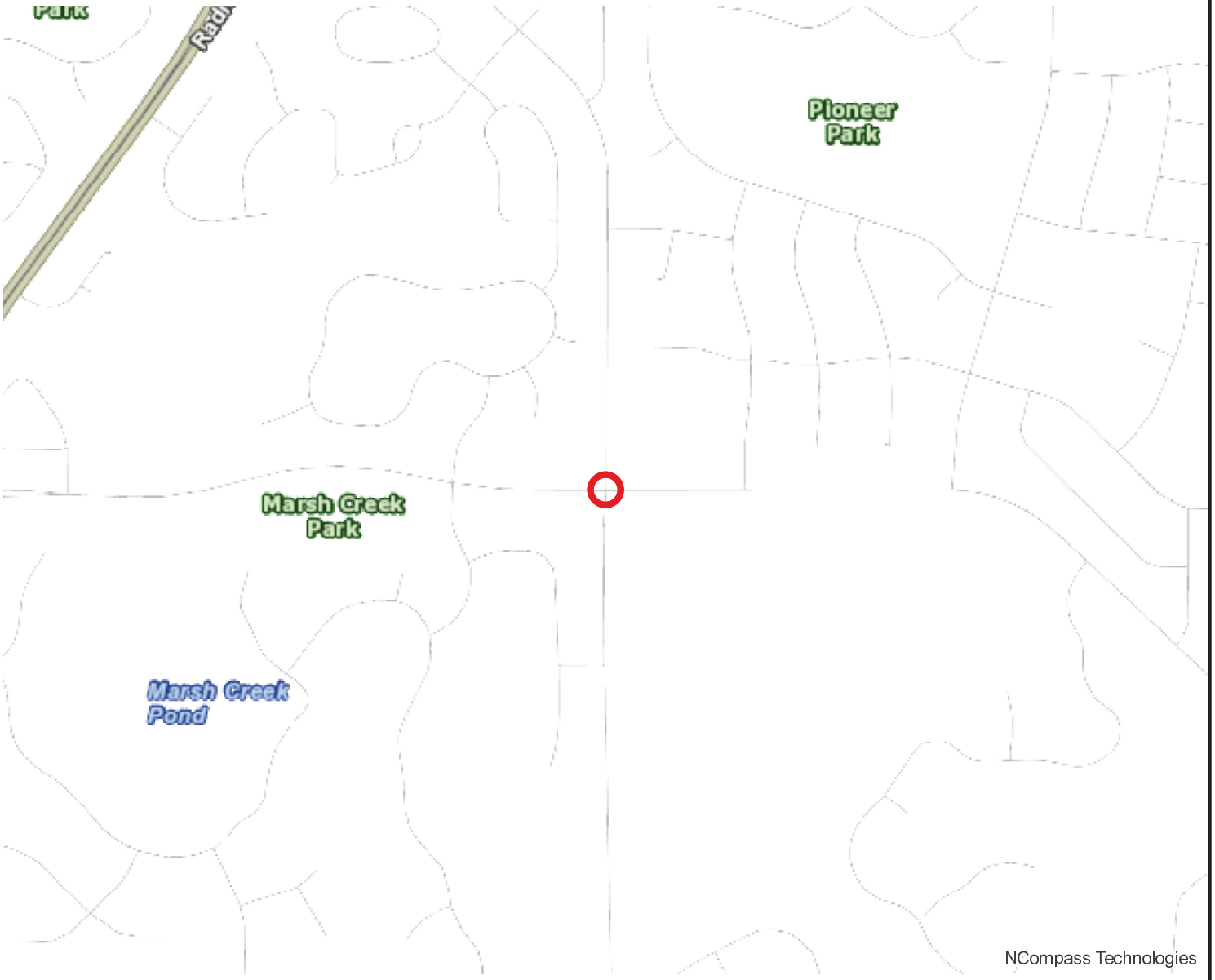
Socio-Economic Conditions

Roadway Spot Mobility & Safety Project: Pioneer and Lake - WBRY | Map ID: 1587761732937

Results

Project located in
a census tract that is below
the regional average for
population in poverty
or populations of color,
or includes children,
people with disabilities,
or the elderly:
(0 to 12 Points)

Tracts within half-mile:
71015 71016



Points

Area of Concentrated Poverty

Area of Concentrated Povertry > 50% residents of color

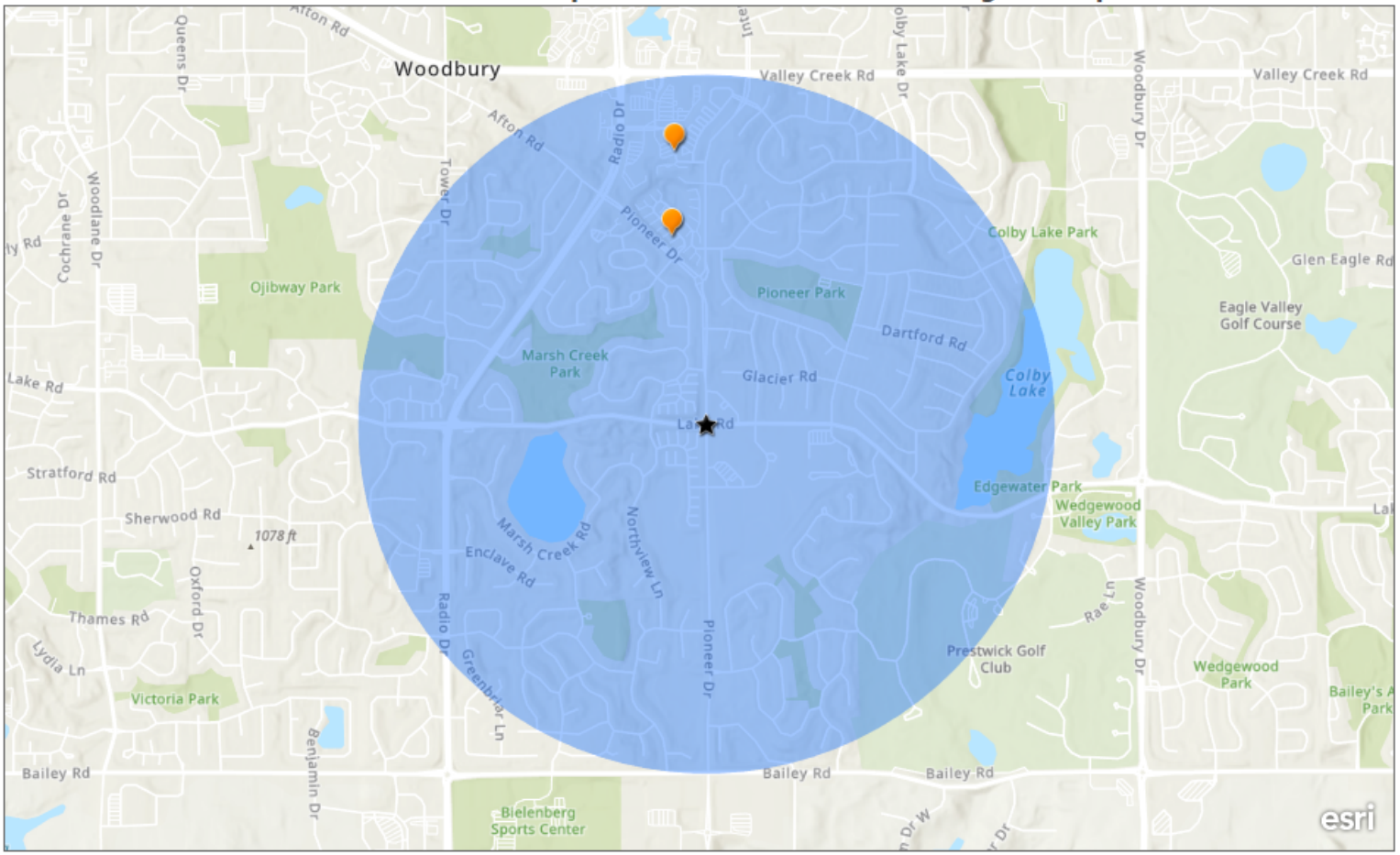
Above reg'l avg conc of race/poverty

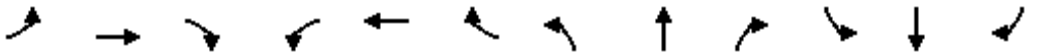
0 0.1 0.2 0.4 0.6 0.8 Miles

Created: 4/24/2020
LandscapeRSA2

METROPOLITAN COUNCIL

Lake Rd and Pioneer Drive Intersection Improvement - Affordable Housing Developments





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	106	34	113	297	54	89	187	106	37	139	36
Future Volume (vph)	19	106	34	113	297	54	89	187	106	37	139	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	280		290	425		250
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	100			100			160			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.967			0.982			0.955			0.977	
Flt Protected		0.994			0.983			0.985			0.990	
Satd. Flow (prot)	0	1790	0	0	1798	0	0	1752	0	0	1802	0
Flt Permitted		0.994			0.983			0.985			0.990	
Satd. Flow (perm)	0	1790	0	0	1798	0	0	1752	0	0	1802	0
Link Speed (mph)		40			40			45			45	
Link Distance (ft)		1080			1892			1068			1056	
Travel Time (s)		18.4			32.3			16.2			16.0	
Peak Hour Factor	0.69	0.67	0.58	0.51	0.89	0.63	0.43	0.72	0.46	0.55	0.70	0.66
Adj. Flow (vph)	28	158	59	222	334	86	207	260	230	67	199	55
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	245	0	0	642	0	0	697	0	0	321	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization 75.5%		ICU Level of Service D	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	16.3
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	245	642	697	321
Demand Flow Rate, veh/h	250	655	711	327
Vehicles Circulating, veh/h	497	505	258	778
Vehicles Exiting, veh/h	608	464	489	382
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.8	23.3	13.6	14.8
Approach LOS	A	C	B	B

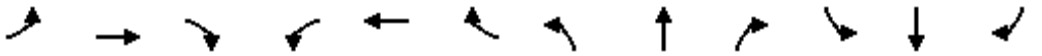
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	250	655	711	327
Cap Entry Lane, veh/h	831	824	1061	624
Entry HV Adj Factor	0.979	0.981	0.980	0.982
Flow Entry, veh/h	245	642	697	321
Cap Entry, veh/h	814	808	1039	613
V/C Ratio	0.301	0.794	0.670	0.524
Control Delay, s/veh	7.8	23.3	13.6	14.8
LOS	A	C	B	B
95th %tile Queue, veh	1	8	5	3

1: Pioneer Dr & Lake Rd

Direction	All
Future Volume (vph)	1218
Total Delay (hr)	0
CO Emissions (kg)	1.73
NOx Emissions (kg)	0.34
VOC Emissions (kg)	0.40

1: Pioneer Dr & Lake Rd

Direction	EB	WB	NB	SB	All
Future Volume (vph)	159	465	382	212	1218
Control Delay / Veh (s/v)	0	0	0	0	0
Queue Delay / Veh (s/v)	0	0	0	0	0
Total Delay / Veh (s/v)	0	0	0	0	0
Total Delay (hr)	0	0	0	0	0
Stops / Veh	1.00	1.00	1.00	1.00	1.00
Stops (#)	159	465	382	212	1218
Average Speed (mph)	40	40	45	45	42
Total Travel Time (hr)	1	4	2	1	8
Distance Traveled (mi)	33	167	77	42	319
Fuel Consumed (gal)	3	11	7	4	25
Fuel Economy (mpg)	11.9	15.8	10.4	10.4	12.9
CO Emissions (kg)	0.19	0.74	0.52	0.29	1.73
NOx Emissions (kg)	0.04	0.14	0.10	0.06	0.34
VOC Emissions (kg)	0.04	0.17	0.12	0.07	0.40
Unserved Vehicles (#)	0	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	106	34	113	297	54	89	187	106	37	139	36
Future Volume (vph)	19	106	34	113	297	54	89	187	106	37	139	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	280		290	425		250
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	100			100			160			90		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.964			0.980				0.850			0.850
Flt Protected		0.994			0.983		0.950			0.950		
Satd. Flow (prot)	0	3391	0	0	3409	0	1770	1863	1583	1770	1863	1583
Flt Permitted		0.994			0.983		0.950			0.950		
Satd. Flow (perm)	0	3391	0	0	3409	0	1770	1863	1583	1770	1863	1583
Link Speed (mph)		40			40			45			45	
Link Distance (ft)		1080			1892			1068			1056	
Travel Time (s)		18.4			32.3			16.2			16.0	
Peak Hour Factor	0.69	0.67	0.58	0.51	0.89	0.63	0.43	0.72	0.46	0.55	0.70	0.66
Adj. Flow (vph)	28	158	59	222	334	86	207	260	230	67	199	55
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	245	0	0	642	0	207	260	230	67	199	55
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	40.4
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	106	34	113	297	54	89	187	106	37	139	36
Future Vol, veh/h	19	106	34	113	297	54	89	187	106	37	139	36
Peak Hour Factor	0.69	0.67	0.58	0.51	0.89	0.63	0.43	0.72	0.46	0.55	0.70	0.66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	158	59	222	334	86	207	260	230	67	199	55
Number of Lanes	0	2	0	0	2	0	1	1	1	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	2
HCM Control Delay	19.9	70.9	27.3	23.6
HCM LOS	C	F	D	C

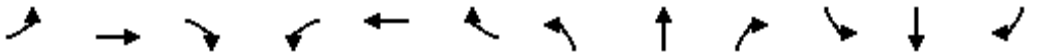
Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	26%	0%	43%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	74%	61%	57%	73%	0%	100%	0%
Vol Right, %	0%	0%	100%	0%	39%	0%	27%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	89	187	106	72	87	262	203	37	139	36
LT Vol	89	0	0	19	0	113	0	37	0	0
Through Vol	0	187	0	53	53	149	149	0	139	0
RT Vol	0	0	106	0	34	0	54	0	0	36
Lane Flow Rate	207	260	230	107	138	388	253	67	199	55
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.575	0.692	0.567	0.322	0.4	1.067	0.665	0.207	0.588	0.15
Departure Headway (Hd)	10.369	9.846	9.115	11.178	10.761	9.885	9.474	11.501	10.975	10.24
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	350	369	399	324	336	369	384	314	332	352
Service Time	8.069	7.546	6.815	8.878	8.461	7.575	7.164	9.201	8.675	7.94
HCM Lane V/C Ratio	0.591	0.705	0.576	0.33	0.411	1.051	0.659	0.213	0.599	0.156
HCM Control Delay	26.2	32	23.1	19.1	20.5	98.1	29.1	17.2	28.2	14.7
HCM Lane LOS	D	D	C	C	C	F	D	C	D	B
HCM 95th-tile Q	3.4	5	3.4	1.4	1.9	13.7	4.6	0.8	3.5	0.5

1: Pioneer Dr & Lake Rd

Direction	All
Future Volume (vph)	1218
Total Delay (hr)	0
CO Emissions (kg)	1.73
NOx Emissions (kg)	0.34
VOC Emissions (kg)	0.40

1: Pioneer Dr & Lake Rd

Direction	EB	WB	NB	SB	All
Future Volume (vph)	159	465	382	212	1218
Control Delay / Veh (s/v)	0	0	0	0	0
Queue Delay / Veh (s/v)	0	0	0	0	0
Total Delay / Veh (s/v)	0	0	0	0	0
Total Delay (hr)	0	0	0	0	0
Stops / Veh	1.00	1.00	1.00	1.00	1.00
Stops (#)	159	465	382	212	1218
Average Speed (mph)	40	40	45	45	42
Total Travel Time (hr)	1	4	2	1	8
Distance Traveled (mi)	33	167	77	42	319
Fuel Consumed (gal)	3	11	7	4	25
Fuel Economy (mpg)	11.9	15.8	10.4	10.4	12.9
CO Emissions (kg)	0.19	0.74	0.52	0.29	1.73
NOx Emissions (kg)	0.04	0.14	0.10	0.06	0.34
VOC Emissions (kg)	0.04	0.17	0.12	0.07	0.40
Unserved Vehicles (#)	0	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	106	34	113	297	54	89	187	106	37	139	36
Future Volume (vph)	19	106	34	113	297	54	89	187	106	37	139	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	280		290	425		250
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	100			100			160			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.967			0.982			0.955			0.977	
Flt Protected		0.994			0.983			0.985			0.990	
Satd. Flow (prot)	0	1790	0	0	1798	0	0	1752	0	0	1802	0
Flt Permitted		0.994			0.983			0.985			0.990	
Satd. Flow (perm)	0	1790	0	0	1798	0	0	1752	0	0	1802	0
Link Speed (mph)		40			40			45			45	
Link Distance (ft)		1080			1892			1068			1056	
Travel Time (s)		18.4			32.3			16.2			16.0	
Peak Hour Factor	0.69	0.67	0.58	0.51	0.89	0.63	0.43	0.72	0.46	0.55	0.70	0.66
Adj. Flow (vph)	28	158	59	222	334	86	207	260	230	67	199	55
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	245	0	0	642	0	0	697	0	0	321	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization 75.5%		ICU Level of Service D	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	16.3
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	245	642	697	321
Demand Flow Rate, veh/h	250	655	711	327
Vehicles Circulating, veh/h	497	505	258	778
Vehicles Exiting, veh/h	608	464	489	382
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.8	23.3	13.6	14.8
Approach LOS	A	C	B	B

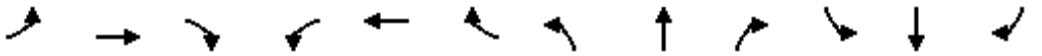
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	250	655	711	327
Cap Entry Lane, veh/h	831	824	1061	624
Entry HV Adj Factor	0.979	0.981	0.980	0.982
Flow Entry, veh/h	245	642	697	321
Cap Entry, veh/h	814	808	1039	613
V/C Ratio	0.301	0.794	0.670	0.524
Control Delay, s/veh	7.8	23.3	13.6	14.8
LOS	A	C	B	B
95th %tile Queue, veh	1	8	5	3

1: Pioneer Dr & Lake Rd

Direction	All
Future Volume (vph)	1218
Total Delay (hr)	0
CO Emissions (kg)	1.73
NOx Emissions (kg)	0.34
VOC Emissions (kg)	0.40

1: Pioneer Dr & Lake Rd

Direction	EB	WB	NB	SB	All
Future Volume (vph)	159	465	382	212	1218
Control Delay / Veh (s/v)	0	0	0	0	0
Queue Delay / Veh (s/v)	0	0	0	0	0
Total Delay / Veh (s/v)	0	0	0	0	0
Total Delay (hr)	0	0	0	0	0
Stops / Veh	1.00	1.00	1.00	1.00	1.00
Stops (#)	159	465	382	212	1218
Average Speed (mph)	40	40	45	45	42
Total Travel Time (hr)	1	4	2	1	8
Distance Traveled (mi)	33	167	77	42	319
Fuel Consumed (gal)	3	11	7	4	25
Fuel Economy (mpg)	11.9	15.8	10.4	10.4	12.9
CO Emissions (kg)	0.19	0.74	0.52	0.29	1.73
NOx Emissions (kg)	0.04	0.14	0.10	0.06	0.34
VOC Emissions (kg)	0.04	0.17	0.12	0.07	0.40
Unserved Vehicles (#)	0	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	106	34	113	297	54	89	187	106	37	139	36
Future Volume (vph)	19	106	34	113	297	54	89	187	106	37	139	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	280		290	425		250
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	100			100			160			90		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.964			0.980				0.850			0.850
Flt Protected		0.994			0.983		0.950			0.950		
Satd. Flow (prot)	0	3391	0	0	3409	0	1770	1863	1583	1770	1863	1583
Flt Permitted		0.994			0.983		0.950			0.950		
Satd. Flow (perm)	0	3391	0	0	3409	0	1770	1863	1583	1770	1863	1583
Link Speed (mph)		40			40			45			45	
Link Distance (ft)		1080			1892			1068			1056	
Travel Time (s)		18.4			32.3			16.2			16.0	
Peak Hour Factor	0.69	0.67	0.58	0.51	0.89	0.63	0.43	0.72	0.46	0.55	0.70	0.66
Adj. Flow (vph)	28	158	59	222	334	86	207	260	230	67	199	55
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	245	0	0	642	0	207	260	230	67	199	55
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	40.4
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	106	34	113	297	54	89	187	106	37	139	36
Future Vol, veh/h	19	106	34	113	297	54	89	187	106	37	139	36
Peak Hour Factor	0.69	0.67	0.58	0.51	0.89	0.63	0.43	0.72	0.46	0.55	0.70	0.66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	158	59	222	334	86	207	260	230	67	199	55
Number of Lanes	0	2	0	0	2	0	1	1	1	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	2
HCM Control Delay	19.9	70.9	27.3	23.6
HCM LOS	C	F	D	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	26%	0%	43%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	74%	61%	57%	73%	0%	100%	0%
Vol Right, %	0%	0%	100%	0%	39%	0%	27%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	89	187	106	72	87	262	203	37	139	36
LT Vol	89	0	0	19	0	113	0	37	0	0
Through Vol	0	187	0	53	53	149	149	0	139	0
RT Vol	0	0	106	0	34	0	54	0	0	36
Lane Flow Rate	207	260	230	107	138	388	253	67	199	55
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.575	0.692	0.567	0.322	0.4	1.067	0.665	0.207	0.588	0.15
Departure Headway (Hd)	10.369	9.846	9.115	11.178	10.761	9.885	9.474	11.501	10.975	10.24
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	350	369	399	324	336	369	384	314	332	352
Service Time	8.069	7.546	6.815	8.878	8.461	7.575	7.164	9.201	8.675	7.94
HCM Lane V/C Ratio	0.591	0.705	0.576	0.33	0.411	1.051	0.659	0.213	0.599	0.156
HCM Control Delay	26.2	32	23.1	19.1	20.5	98.1	29.1	17.2	28.2	14.7
HCM Lane LOS	D	D	C	C	C	F	D	C	D	B
HCM 95th-tile Q	3.4	5	3.4	1.4	1.9	13.7	4.6	0.8	3.5	0.5

1: Pioneer Dr & Lake Rd

Direction	All
Future Volume (vph)	1218
Total Delay (hr)	0
CO Emissions (kg)	1.73
NOx Emissions (kg)	0.34
VOC Emissions (kg)	0.40

1: Pioneer Dr & Lake Rd

Direction	EB	WB	NB	SB	All
Future Volume (vph)	159	465	382	212	1218
Control Delay / Veh (s/v)	0	0	0	0	0
Queue Delay / Veh (s/v)	0	0	0	0	0
Total Delay / Veh (s/v)	0	0	0	0	0
Total Delay (hr)	0	0	0	0	0
Stops / Veh	1.00	1.00	1.00	1.00	1.00
Stops (#)	159	465	382	212	1218
Average Speed (mph)	40	40	45	45	42
Total Travel Time (hr)	1	4	2	1	8
Distance Traveled (mi)	33	167	77	42	319
Fuel Consumed (gal)	3	11	7	4	25
Fuel Economy (mpg)	11.9	15.8	10.4	10.4	12.9
CO Emissions (kg)	0.19	0.74	0.52	0.29	1.73
NOx Emissions (kg)	0.04	0.14	0.10	0.06	0.34
VOC Emissions (kg)	0.04	0.17	0.12	0.07	0.40
Unserved Vehicles (#)	0	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0	0

Traffic Safety Benefit-Cost Calculation

Highway Safety Improvement Program (HSIP) Reactive Project

DEPARTMENT OF TRANSPORTATION

A. Roadway Description

Route	Lake and Pioneer	**District**	Metro	**County**	Washington
Begin RP		**End RP**		**Miles**	0.400
Location	Lake Rd and Pioneer Dr, City of Woodbury				

B. Project Description

Proposed Work	Intersection Improvement - All-Way Stop Control to Single Lane Roundabout		
Project Cost*	$2,571,989	**Installation Year**	2022
Project Service Life	20 years	**Traffic Growth Factor**	1.3%

** exclude Right of Way from Project Cost*

C. Crash Modification Factor

0.28	**Fatal (K) Crashes**	**Reference**	CMF 206
0.28	**Serious Injury (A) Crashes**		
0.28	**Moderate Injury (B) Crashes**	**Crash Type**	All
0.28	**Possible Injury (C) Crashes**		
0.28	**Property Damage Only Crashes**		www.CMFclearinghouse.org

D. Crash Modification Factor (optional second CMF)

	Fatal (K) Crashes	**Reference**	
	Serious Injury (A) Crashes		
	Moderate Injury (B) Crashes	**Crash Type**	
	Possible Injury (C) Crashes		
	Property Damage Only Crashes		www.CMFclearinghouse.org

E. Crash Data

Begin Date	1/1/2016	**End Date**	12/31/2018	3 years
Data Source	MnDOT			

Crash Severity	**All**	**< optional 2nd CMF >**
K crashes		
A crashes		
B crashes	1	
C crashes	2	
PDO crashes	2	

F. Benefit-Cost Calculation

$2,189,459	**Benefit (present value)**	**B/C Ratio = 0.86**
$2,571,989	**Cost**	

Proposed project expected to reduce 2 crashes annually, 0 of which involving fatality or serious injury.

F. Analysis Assumptions

Crash Severity	Crash Cost
K crashes	$1,360,000
A crashes	$680,000
B crashes	$210,000
C crashes	$110,000
PDO crashes	$12,000

Link: mndot.gov/planning/program/appendix_a.html

Real Discount Rate 1.2%

Traffic Growth Rate 1.3%

Project Service Life 20 years

G. Annual Benefit

Crash Severity	Crash Reduction	Annual Reduction	Annual Benefit
K crashes	0.00	0.00	$0
A crashes	0.00	0.00	$0
B crashes	0.72	0.24	$50,400
C crashes	1.44	0.48	$52,800
PDO crashes	1.44	0.48	$5,760
			$108,960

H. Amortized Benefit

Year	Crash Benefits	Present Value
2022	$108,960	$108,960
2023	$110,322	$109,014
2024	$111,701	$109,068
2025	$113,097	$109,122
2026	$114,511	$109,175
2027	$115,942	$109,229
2028	$117,392	$109,283
2029	$118,859	$109,337
2030	$120,345	$109,391
2031	$121,849	$109,445
2032	$123,372	$109,500
2033	$124,914	$109,554
2034	$126,476	$109,608
2035	$128,057	$109,662
2036	$129,657	$109,716
2037	$131,278	$109,770
2038	$132,919	$109,825
2039	$134,581	$109,879
2040	$136,263	$109,933
2041	$137,966	$109,987
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0

Total = $2,189,459

CMF / CRF Details

CMF ID: 206

Conversion of stop-controlled intersection into single-lane roundabout

Description:

Prior Condition: ***No Prior Condition(s)***

Category: Intersection geometry

Study: ***Observational Before-After Study of the Safety Effect of U.S. Roundabout Conversions Using the Empirical Bayes Method*****, Persaud et al., 2001**

Star Quality Rating:	★★★★☆

Crash Modification Factor (CMF)	
Value:	0.28
Adjusted Standard Error:	0.11
Unadjusted Standard Error:	0.06

Crash Reduction Factor (CRF)	
Value:	72 *(This value indicates a **decrease** in crashes)*
Adjusted Standard Error:	11

Unadjusted Standard Error:	6

Applicability

Crash Type:	All
Crash Severity:	All
Roadway Types:	Not specified
Number of Lanes:	
Road Division Type:	
Speed Limit:	
Area Type:	Urban
Traffic Volume:	
Time of Day:	

If countermeasure is intersection-based

Intersection Type:	Roadway/roadway (not interchange related)
Intersection Geometry:	Not specified
Traffic Control:	Stop-controlled
Major Road Traffic Volume:	
Minor Road Traffic Volume:	

Development Details

Date Range of Data Used:	
Municipality:	
State:	

Country:	
Type of Methodology Used:	Before/after using empirical Bayes or full Bayes
Sample Size Used:	

Other Details

Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Dec-01-2009
Comments:	

This site is funded by the U.S. Department of Transportation Federal Highway Administration and maintained by the University of North Carolina Highway Safety Research Center

Crash Detail Report - Short Form

Lake Road and Pioneer Drive

Report Version 1.0
February 2020

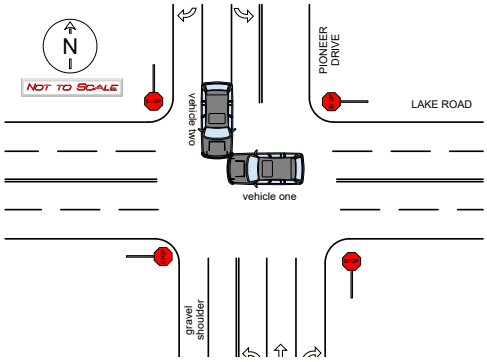
INCIDENT ID	ROUTE SYS	ROUTE NUM	MEASURE	ROUTE NAME	ROUTE ID	COUNTY	CITY
00661800	05-MSAS	0107	2.133	PIONEER DR	0500023973690107-I	82	Woodbury

INTERSECT WITH	NUM VEH	NUM KILLED	DATE	TIME	DAY OF WEEK	LAT	LONG	UTM X	UTM Y	WORK ZONE TYPE
LAKE RD	2	0	11/20/18	18:00	Tue	44.9053	-92.9289	505614.4	4972433.1	NOT APPLICABLE

BASIC TYPE	CRASH SEVERITY	FIRST HARMFUL	LIGHT CONDITION	WEATHER PRIMARY
Angle	B - Minor Injury	Motor Vehicle In Transport	Dark (Str Lights On)	Clear

	Unit 1	Unit 2	Unit 3	Unit 4
Unit Type	Motor Vehicle in Transport	Motor Vehicle in Transport		
Vehicle Type	Sport Utility Vehicle	Sport Utility Vehicle		
Direction of Travel	Westbound	Southbound		
Veh Manuever	Moving Forward	Moving Forward		
Age/Sex	57 M	32 M		
Physical Cond	Apparently Normal	Apparently Normal		
Contributing Factor 1	No Clear Contributing Action	Ran Stop Sign		

OFFICER SKETCH



NARRATIVE

OFFICERS RESPONDED TO THE LISTED INTERSECTION FOR A TWO VEHICLE CRASH WITH INJURIES. DRIVER OF VEHICLE ONE STATED HE WAS TRAVELING WESTBOUND LAKE RD. HE STATED HE STOPPED AT THE STOP SIGN AND WAITED FOR HIS TURN TO PROCEED. HE STATED AS HE PROCEEDED THROUGH THE INTERSECTION VEHICLE TWO FAILED TO STOP AT THE STOP SIGN TRAVELLING SOUTHBOUND ON PIONEER DR AND COLLIDED INTO HIM IN THE MIDDLE OF THE INTERSECTION. DRIVER OF VEHICLE TWO STATED HE WAS JUST DRIVING ALONG AND ALL OF A SUDDEN SOME ONE CRASHED INTO HIM. DRIVER OF VEHICLE TWO WAS UNAWARE HE RAN THE STOP SIGN AT THE INTERSECTION OF PIONEER DR AND LAKE RD. I CONFIRMED THAT HE HAD A VALID INSTRUCTION PERMIT DRIVING STATUS, ALTHOUGH HE STATED THAT HE HAD PASSED HIS DRIVER'S LICENSE TEST AND HAD NOT YET RECEIVED HIS DRIVER'S LICENSE IN THE MAIL. HE STATED THAT HIS UNCLE JOSE HAD THE INSURANCE

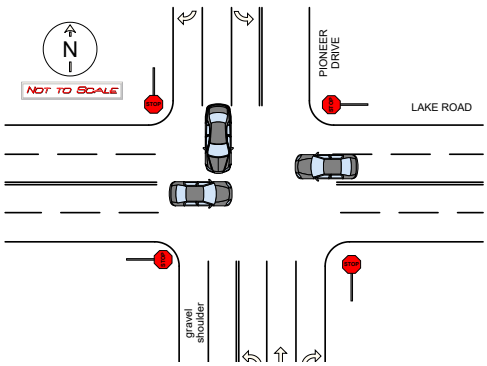
INCIDENT ID	ROUTE SYS	ROUTE NUM	MEASURE	ROUTE NAME	ROUTE ID	COUNTY	CITY
00606224	05-MSAS	0107	2.136	PIONEER DR	0500023973690107-I	82	Woodbury

INTERSECT WITH	NUM VEH	NUM KILLED	DATE	TIME	DAY OF WEEK	LAT	LONG	UTM X	UTM Y	WORK ZONE TYPE
LAKE RD	3	0	06/22/18	22:05	Fri	44.9053	-92.9289	505612.6	4972437.5	NOT APPLICABLE

BASIC TYPE	CRASH SEVERITY	FIRST HARMFUL	LIGHT CONDITION	WEATHER PRIMARY
Angle	C - Possible Injury	Motor Vehicle In Transport	Dark (Str Lights On)	Clear

	Unit 1	Unit 2	Unit 3	Unit 4
Unit Type	Motor Vehicle in Transport	Motor Vehicle in Transport	Motor Vehicle in Transport	
Vehicle Type	Passenger Car	Passenger Car	Passenger Car	
Direction of Travel	Southbound	Eastbound	Eastbound	
Veh Manuever	Moving Forward	Moving Forward	Moving Forward	
Age/Sex	27 M	65 M	47 F	
Physical Cond	Has Been Drinking Alcohol	Apparently Normal	Apparently Normal	
Contributing Factor 1	Ran Stop Sign	No Clear Contributing Action	No Clear Contributing Action	

OFFICER SKETCH



NARRATIVE

UNIT 1 WAS TRAVELING SOUTH ON PIONEER AT LAKE ROAD AND FAILED TO STOP FOR THE FOUR WAY STOP SIGN, CAUSING A COLLISION. DRIVER OF UNIT 1 WAS ARRESTED FOR DWI. THE DRIVER OF UNIT 3 WAS TRANSPORTED BY WOODBURY AMBULANCE TO THE HOSPITAL.

Crash Detail Report - Short Form

Lake Road and Pioneer Drive

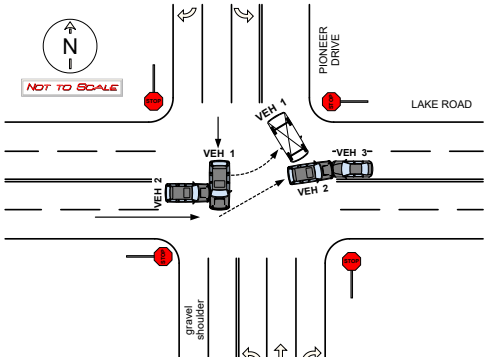
INCIDENT ID	ROUTE SYS	ROUTE NUM	MEASURE	ROUTE NAME	ROUTE ID	COUNTY	CITY
00423211	05-MSAS	0107	3.098	PIONEER DR	0500023973690107-I	82	Woodbury

INTERSECT WITH	NUM VEH	NUM KILLED	DATE	TIME	DAY OF WEEK	LAT	LONG	UTM X	UTM Y	WORK ZONE TYPE
	3	0	02/14/17	09:00	Tue	44.9053	-92.9289	505612.8	4972434.0	NOT APPLICABLE

BASIC TYPE	CRASH SEVERITY	FIRST HARMFUL	LIGHT CONDITION	WEATHER PRIMARY
Angle	N - Prop Damage Only	Motor Vehicle In Transport	Daylight	Clear

	Unit 1	Unit 2	Unit 3	Unit 4
Unit Type	Motor Vehicle in Transport	Motor Vehicle in Transport	Motor Vehicle in Transport	
Vehicle Type	Sport Utility Vehicle	Sport Utility Vehicle	Passenger Car	
Direction of Travel	Southbound	Eastbound	Westbound	
Veh Manuever	Moving Forward	Moving Forward	Vehicle Stopped or Stalled in	
Age/Sex	45 F	62 F	50 M	
Physical Cond	Apparently Normal	Apparently Normal	Apparently Normal	
Contributing Factor 1	No Clear Contributing Action	Ran Stop Sign	No Clear Contributing Action	

OFFICER SKETCH



NARRATIVE

VEH 1, S/B PIONEER DR @ LAKE RD. VEH 1 STOPS AT 4-WAY STOP SIGN, AND THEN STARTS TO CROSS THROUGH INTERSECTION. VEH 2, E/B LAKE RD @ PIONEER DR FAILS TO STOP AT POSTED/VISIBLE STOP SIGN, STRIKING VEH 1, CAUSING MAJOR DAMAGE TO BOTH VEH 1 AND VEH 2. COLLISION CAUSES VEH 1 TO ROLL ONTO ROOF. MOMENTUM OF VEH 2 CONTINUES E/B THROUGH INTERSECTION, AND FRONT OF VEH 2 THEN COLLIDES WITH FRONT OF VEH 3, STOPPED AT STOP SIGN, WAITING TO ENTER INTERSECTION. COLLISION WITH VEH 3 BY VEH 2 CAUSES MODERATE (DRIVEABLE) DAMAGE TO FRONT OF VEH 3. NO INJURIES REPORTED. VEH 1 & VEH 2 TOWED. VEH 3 DRIVEN AWAY UNDER OWN POWER. DRIVER 2 STATED THAT SHE DIDN'T REMEMBER WHAT HAPPENED. NO ICE OR DEBRIS IN ROADWAY PRIOR TO CRASH. DRIVER 2 AT FAULT. DRIVER 2 CITED FOR FAIL TO STOP AT STOP SIGN. CITED AND RELEASED.

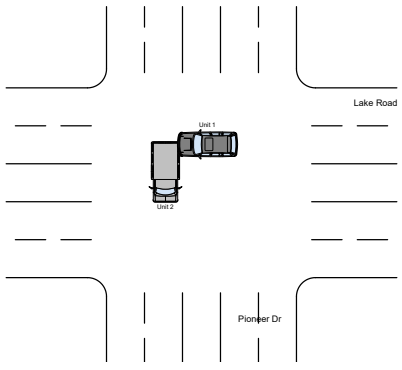
INCIDENT ID	ROUTE SYS	ROUTE NUM	MEASURE	ROUTE NAME	ROUTE ID	COUNTY	CITY
00400328	05-MSAS	0107	3.099	PIONEER DR	0500023973690107-I	82	Woodbury

INTERSECT WITH	NUM VEH	NUM KILLED	DATE	TIME	DAY OF WEEK	LAT	LONG	UTM X	UTM Y	WORK ZONE TYPE
LAKE RD	2	0	12/05/16	06:57	Mon	44.9053	-92.9289	505613.4	4972435.3	NOT APPLICABLE

BASIC TYPE	CRASH SEVERITY	FIRST HARMFUL	LIGHT CONDITION	WEATHER PRIMARY
Angle	N - Prop Damage Only	Motor Vehicle In Transport	Sunrise	Cloudy

	Unit 1	Unit 2	Unit 3	Unit 4
Unit Type	Motor Vehicle in Transport	Motor Vehicle in Transport		
Vehicle Type	Sport Utility Vehicle	Transit Bus		
Direction of Travel	Westbound	Southbound		
Veh Manuever	Moving Forward	Moving Forward		
Age/Sex	40 F	34 M		
Physical Cond	Apparently Normal	Apparently Normal		
Contributing Factor 1	Unknown	No Clear Contributing Action		

OFFICER SKETCH



NARRATIVE

UNIT 1 WAS WEST ON LAKE ROAD. UNIT 2 WAS SOUTHBOUND ON PIONEER. UNIT 1 STRUCK UNIT 2 ON THE REAR DRIVERS SIDE. UNIT 1 DID NOT KNOW IF THEY STOPPED FOR THE STOP SIGN AND COULDN'T REALLY SAY WHAT HAPPENED.

Crash Detail Report - Short Form

Lake Road and Pioneer Drive

Report Version 1.0
February 2020

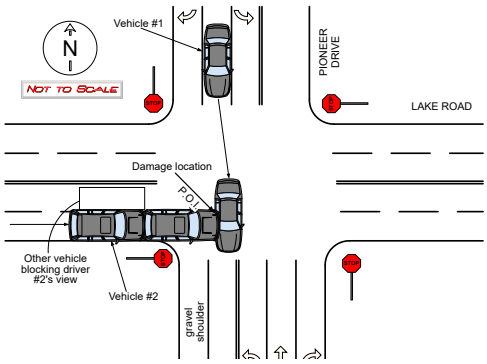
INCIDENT ID	ROUTE SYS	ROUTE NUM	MEASURE	ROUTE NAME	ROUTE ID	COUNTY	CITY
00445800	05-MSAS	0108	3.226	LAKE RD	0500023973690108-I	82	Woodbury

INTERSECT WITH	NUM VEH	NUM KILLED	DATE	TIME	DAY OF WEEK	LAT	LONG	UTM X	UTM Y	WORK ZONE TYPE
	2	0	04/17/17	16:40	Mon	44.9053	-92.9289	505615.8	4972434.7	NOT APPLICABLE

BASIC TYPE	CRASH SEVERITY	FIRST HARMFUL	LIGHT CONDITION	WEATHER PRIMARY
Angle	C - Possible Injury	Motor Vehicle In Transport	Daylight	Clear

	Unit 1	Unit 2	Unit 3	Unit 4
Unit Type	Motor Vehicle in Transport	Motor Vehicle in Transport		
Vehicle Type	Passenger Car	Sport Utility Vehicle		
Direction of Travel	Southbound	Eastbound		
Veh Manuever	Moving Forward	Moving Forward		
Age/Sex	23 M	21 M		
Physical Cond	Apparently Normal	Apparently Normal		
Contributing Factor 1	No Clear Contributing Action	No Clear Contributing Action		

OFFICER SKETCH



NARRATIVE

PERSONAL INJURY ACCIDENT ON 04/17/17, I RESPONDED TO PIONEER DR & LAKE RD FOR A TWO VEHICLE PERSONAL INJURY ACCIDENT. ON ARRIVAL, I MET WITH BOTH DRIVERS AND CONFIRMED DRIVER #1, HOFSTEAD, HAD MINOR CHEST PAIN, BUT REFUSED TO BE EVALUATED BY EMS. DRIVER #2, RENNING, REPORTED NO INJURIES. DRIVER #1 STATED HE WAS DRIVING SOUTHBOUND ON PIONEER DRIVE THROUGH THE LAKE RD INTERSECTION WHEN THE ACCIDENT OCCURRED. DRIVER #1 STATED HE WAS PROCEEDING THROUGH THE FOUR WAY STOP SIGN INTERSECTION WHEN VEHICLE #2, TRAVELING EASTBOUND ON LAKE RD THROUGH THE INTERSECTION COLLIDED WITH THE RIGHT SIDE OF HIS VEHICLE. VEHICLE #1 SUSTAINED MODERATE DAMAGE. DRIVER #2 SAID HE WAS TRAVELING EASTBOUND ON LAKE RD AND WAS STOPPED AT THE STOP SIGN AT THE PIONEER DRIVE INTERSECTION. VEHICLE #2 WAS IN THE OUTSIDE STRAIGHT LANE AND THERE WAS A VEHICLE STOPPED

Selection Filter:

WORK AREA: County('659526') - FILTER: Year('2016','2017','2018') - SPATIAL FILTER APPLIED

Analyst: Ross Tillman

Notes: 2016-18

JUNIPER LN.

PIONEER DR

SAVANNA OAKS PASS

LAKE ROAD

LAKE MIDDLE SCHOOL

WOODBURY COMMUNITY CHURCH

LAKE MIDDLE SCHOOL ACCESS

BLUE RIDGE DR

SEH
PHONE: (651)490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

154903

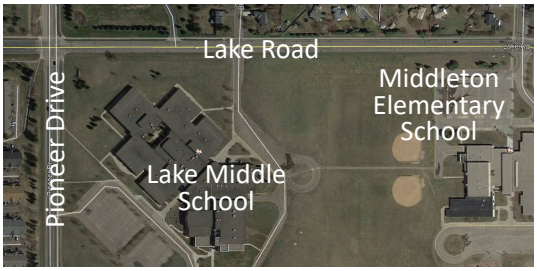
DATE:
5/6/2020

LAKE RD./PIONEER DR. ICE ROUNDABOUT CONCEPT

FIGURE
2

Lake Road and Pioneer Drive Intersection Improvement Project in the City of Woodbury

As part of the Lake Road Restriping and Safety Improvement Study it was recommended that Lake Road be converted from a 4-lane undivided roadway to a 3-lane roadway with center left turn lane. Lake Road is currently a community barrier functioning as a 4-lane undivided roadway through the study area with a speed limit of 40 MPH. However, the lane conversion was anticipated to result in capacity issues at its intersection with Pioneer Drive and the current all-way stop control. This proposed Lake Road and Pioneer Drive Intersection Improvement project will implement a Single Lane Roundabout to replace the current all-way stop control and prepare Lake Road for the four to three lane conversion.



Project location adjacent to two public schools

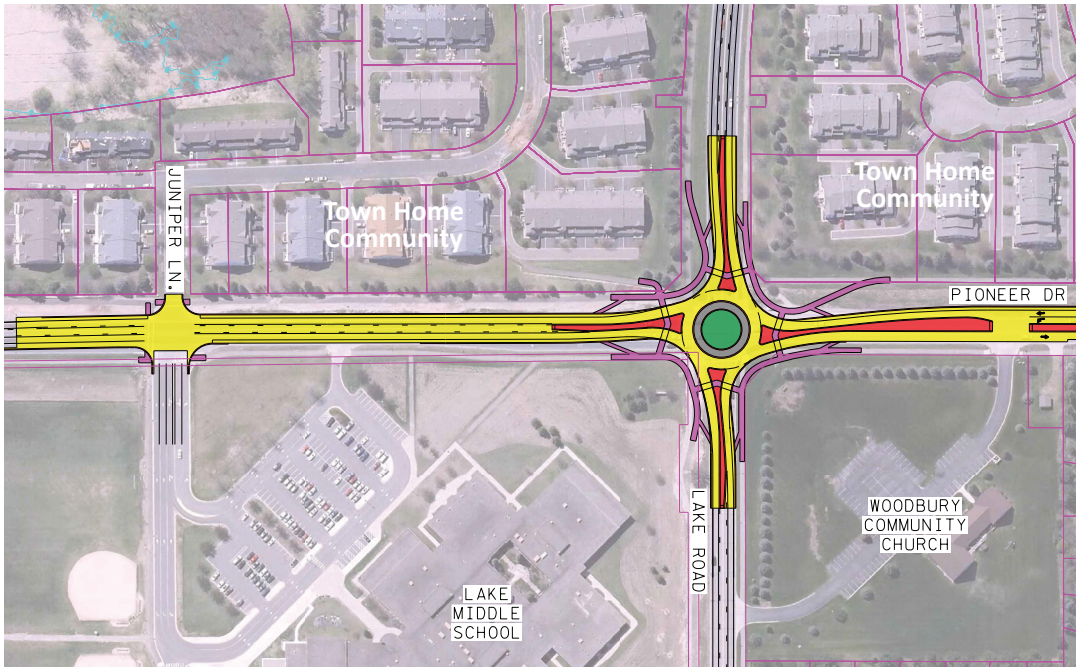
This is an important intersection for connectivity of the community. Lake Road and Pioneer Drive are A-Minor Expanders within the City of Woodbury connecting a vast majority of the large residential neighborhoods to regional job and amenity routes such as I-494 and I-94. Locally, Lake Road and Pioneer Drive connect multifamily and affordable neighborhoods to several schools, healthcare, a commercial activity center, parks, and regional trail connections within the project area. Pioneer Drive is planned to be extended further south to Military Road in the future to accommodate rapid residential growth which will soon result in increased demand at this intersection. Pioneer Drive is currently a 2-lane undivided roadway with turn lanes at most intersections/accesses through the study area.


Pedestrian crossing across 4 travel lanes


High traffic and bike/pedestrian demands exists

This project will provide significant improvements in safety and operations for existing and future traffic and pedestrians demands at the intersections and adjacent pedestrian crossings. The single lane roundabout approaches will match into the near future 3-lane roadway on Lake Road and replace the current right, through, and left lanes on Pioneer drive. The improvement will continue the center median to the north providing exclusive left turn lanes to Woodbury Community Church, located in the northeast quadrant, and Savanna Oaks Pass. Additionally, south of the roundabout will be restriped to a three-lane section and an improved pedestrian crossing will be implemented at Juniper Lane for Lake Middle School and Middleton Elementary School, located in the southeast quadrant.

Furthermore, all legs of the intersection include trail facilities. The single lane roundabout will provide two-staged pedestrian crossings on all four legs that will shorten the crossing distance for pedestrians and improve the visibility of pedestrians at the intersection.



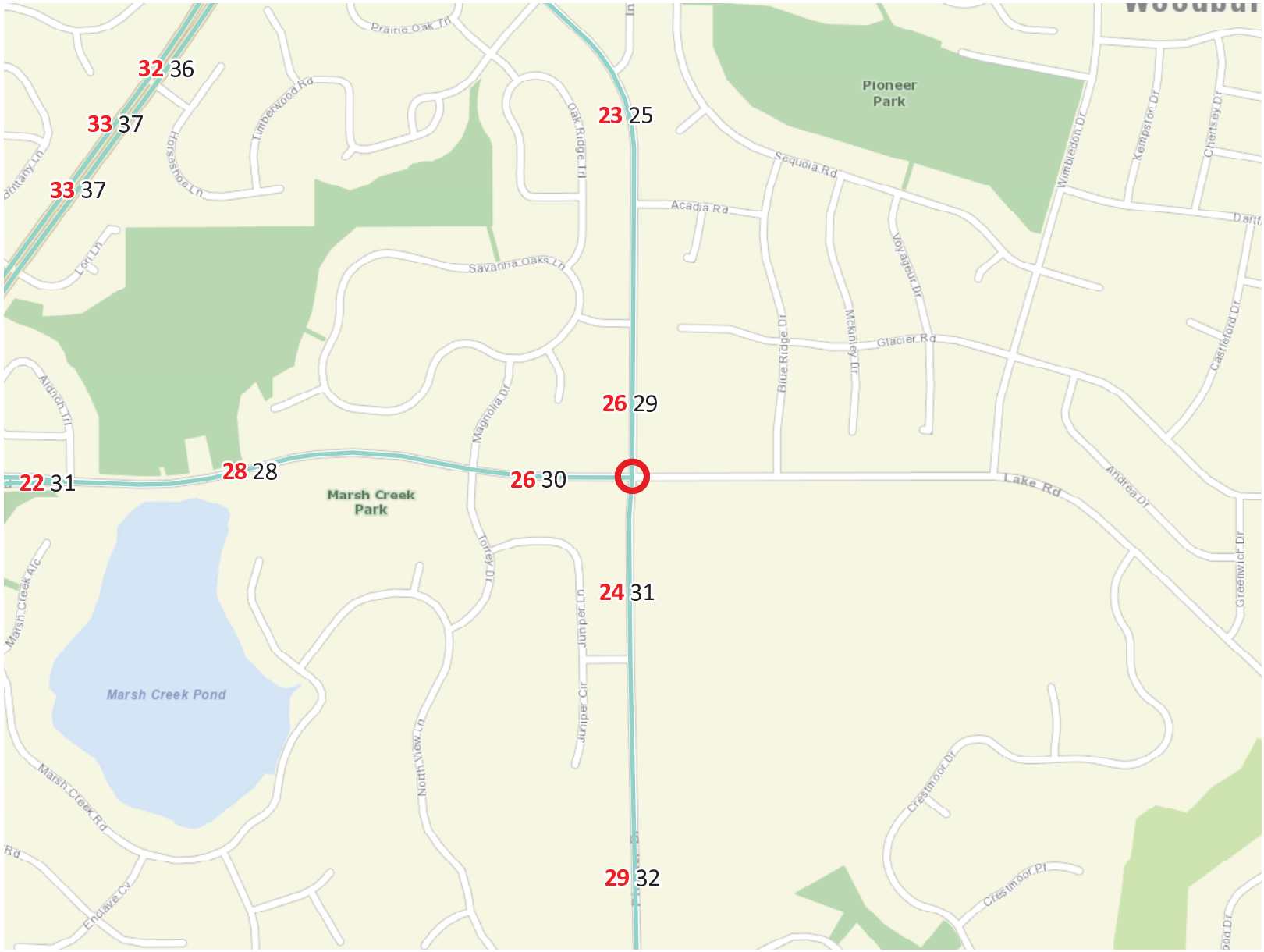
Proposed Lake Road and Pioneer Drive Roundabout Intersection Improvement

Project Details

- Applicant: City of Woodbury
- Current all-way stop control intersection control demonstrating publicly expressed traffic and pedestrian safety issues
- The project area includes several multifamily housing options and equity populations
- Federal Request: $2,057,591 + Local Match: $514,398 = Total project cost: $2,571,989

Level of Congestion

Roadway Spot Mobility & Safety Project: Pioneer and Lake - WBRY | Map ID: 1587761732937



Project Points

A Minor Arterials

A Minor Arterials Planned

Principal Arterials

Principal Arterials Planned

0 0.075 0.15 0.3 0.45 0.6 Miles

Created: 4/24/2020
LandscapeRSA1

For complete disclaimer of accuracy, please visit
https://giswebsite.metc.state.mn.us/gissite/notice.aspx

METROPOLITAN COUNCIL

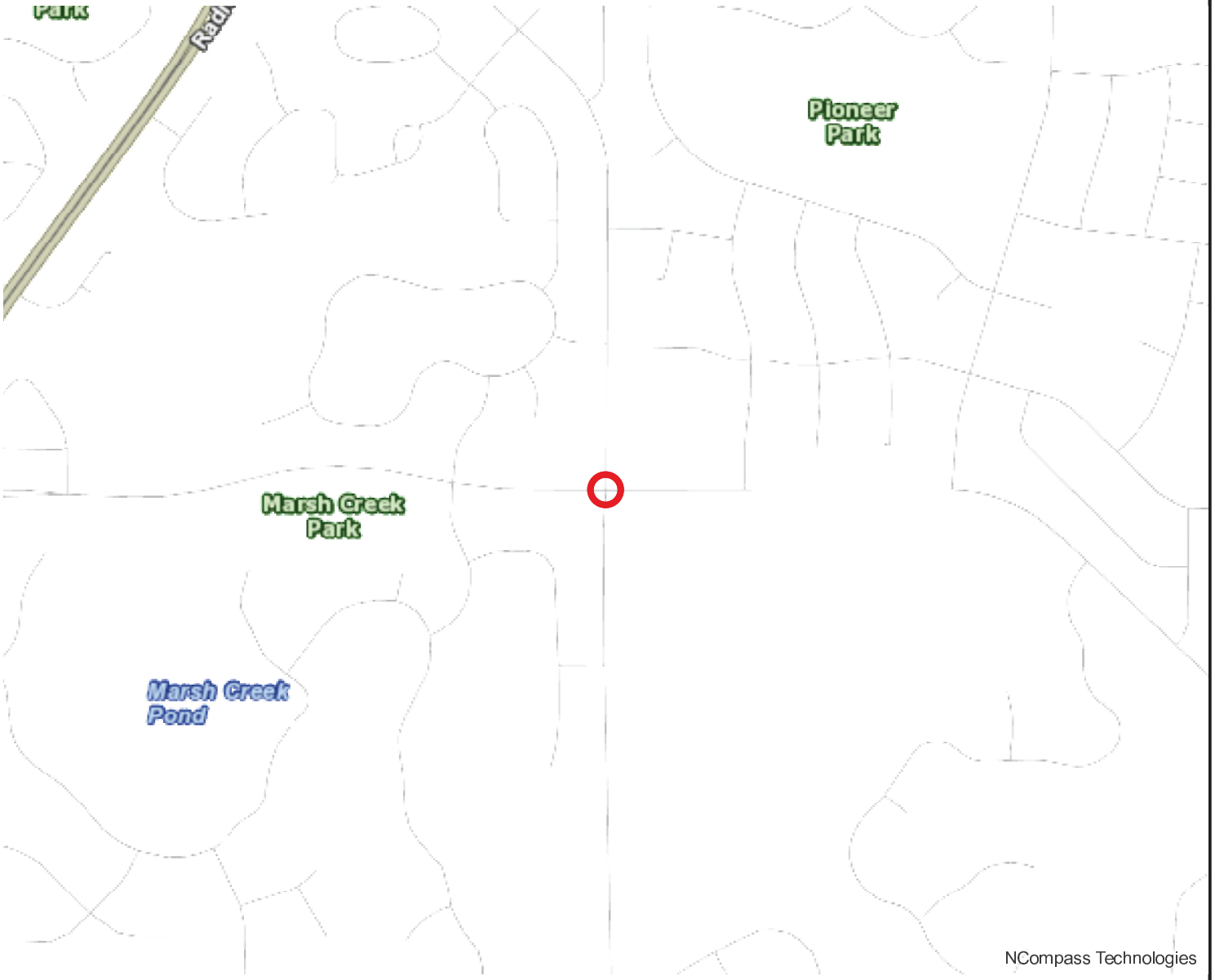
Socio-Economic Conditions

Roadway Spot Mobility & Safety Project: Pioneer and Lake - WBRY | Map ID: 1587761732937

Results

Project located in
a census tract that is below
the regional average for
population in poverty
or populations of color,
or includes children,
people with disabilities,
or the elderly:
(0 to 12 Points)

Tracts within half-mile:
71015 71016



Points

Area of Concentrated Poverty

Area of Concentrated Povertry > 50% residents of color

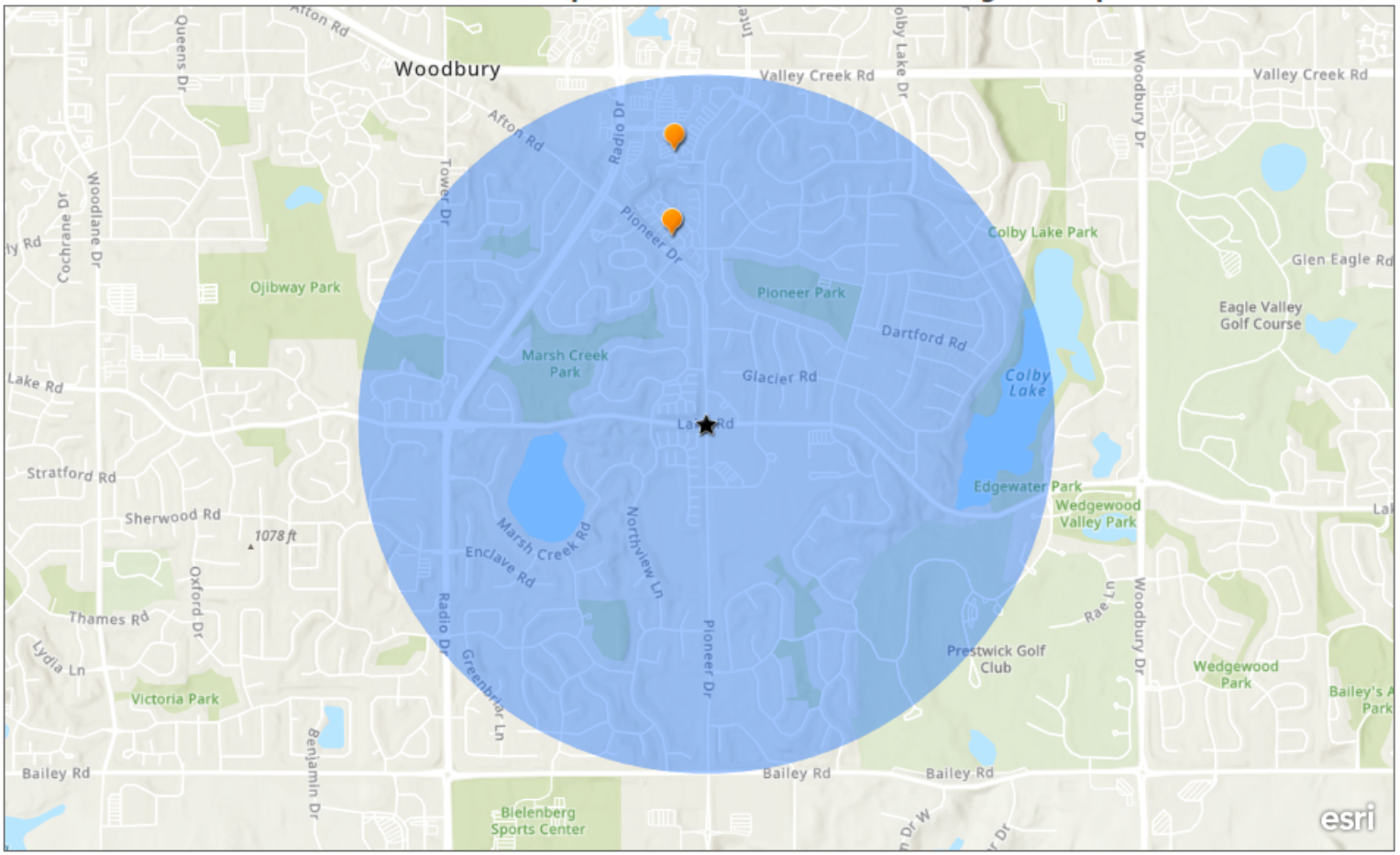
Above reg'l avg conc of race/poverty

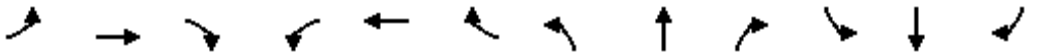
0 0.1 0.2 0.4 0.6 0.8 Miles

Created: 4/24/2020
LandscapeRSA2

METROPOLITAN COUNCIL

Lake Rd and Pioneer Drive Intersection Improvement - Affordable Housing Developments





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	106	34	113	297	54	89	187	106	37	139	36
Future Volume (vph)	19	106	34	113	297	54	89	187	106	37	139	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	280		290	425		250
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	100			100			160			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.967			0.982			0.955			0.977	
Flt Protected		0.994			0.983			0.985			0.990	
Satd. Flow (prot)	0	1790	0	0	1798	0	0	1752	0	0	1802	0
Flt Permitted		0.994			0.983			0.985			0.990	
Satd. Flow (perm)	0	1790	0	0	1798	0	0	1752	0	0	1802	0
Link Speed (mph)		40			40			45			45	
Link Distance (ft)		1080			1892			1068			1056	
Travel Time (s)		18.4			32.3			16.2			16.0	
Peak Hour Factor	0.69	0.67	0.58	0.51	0.89	0.63	0.43	0.72	0.46	0.55	0.70	0.66
Adj. Flow (vph)	28	158	59	222	334	86	207	260	230	67	199	55
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	245	0	0	642	0	0	697	0	0	321	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization 75.5%		ICU Level of Service D	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	16.3
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	245	642	697	321
Demand Flow Rate, veh/h	250	655	711	327
Vehicles Circulating, veh/h	497	505	258	778
Vehicles Exiting, veh/h	608	464	489	382
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.8	23.3	13.6	14.8
Approach LOS	A	C	B	B

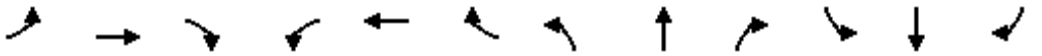
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	250	655	711	327
Cap Entry Lane, veh/h	831	824	1061	624
Entry HV Adj Factor	0.979	0.981	0.980	0.982
Flow Entry, veh/h	245	642	697	321
Cap Entry, veh/h	814	808	1039	613
V/C Ratio	0.301	0.794	0.670	0.524
Control Delay, s/veh	7.8	23.3	13.6	14.8
LOS	A	C	B	B
95th %tile Queue, veh	1	8	5	3

1: Pioneer Dr & Lake Rd

Direction	All
Future Volume (vph)	1218
Total Delay (hr)	0
CO Emissions (kg)	1.73
NOx Emissions (kg)	0.34
VOC Emissions (kg)	0.40

1: Pioneer Dr & Lake Rd

Direction	EB	WB	NB	SB	All
Future Volume (vph)	159	465	382	212	1218
Control Delay / Veh (s/v)	0	0	0	0	0
Queue Delay / Veh (s/v)	0	0	0	0	0
Total Delay / Veh (s/v)	0	0	0	0	0
Total Delay (hr)	0	0	0	0	0
Stops / Veh	1.00	1.00	1.00	1.00	1.00
Stops (#)	159	465	382	212	1218
Average Speed (mph)	40	40	45	45	42
Total Travel Time (hr)	1	4	2	1	8
Distance Traveled (mi)	33	167	77	42	319
Fuel Consumed (gal)	3	11	7	4	25
Fuel Economy (mpg)	11.9	15.8	10.4	10.4	12.9
CO Emissions (kg)	0.19	0.74	0.52	0.29	1.73
NOx Emissions (kg)	0.04	0.14	0.10	0.06	0.34
VOC Emissions (kg)	0.04	0.17	0.12	0.07	0.40
Unserved Vehicles (#)	0	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	106	34	113	297	54	89	187	106	37	139	36
Future Volume (vph)	19	106	34	113	297	54	89	187	106	37	139	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	280		290	425		250
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	100			100			160			90		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.964			0.980				0.850			0.850
Flt Protected		0.994			0.983		0.950			0.950		
Satd. Flow (prot)	0	3391	0	0	3409	0	1770	1863	1583	1770	1863	1583
Flt Permitted		0.994			0.983		0.950			0.950		
Satd. Flow (perm)	0	3391	0	0	3409	0	1770	1863	1583	1770	1863	1583
Link Speed (mph)		40			40			45			45	
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Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	245	0	0	642	0	207	260	230	67	199	55
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	40.4
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	106	34	113	297	54	89	187	106	37	139	36
Future Vol, veh/h	19	106	34	113	297	54	89	187	106	37	139	36
Peak Hour Factor	0.69	0.67	0.58	0.51	0.89	0.63	0.43	0.72	0.46	0.55	0.70	0.66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	158	59	222	334	86	207	260	230	67	199	55
Number of Lanes	0	2	0	0	2	0	1	1	1	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	2
HCM Control Delay	19.9	70.9	27.3	23.6
HCM LOS	C	F	D	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	26%	0%	43%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	74%	61%	57%	73%	0%	100%	0%
Vol Right, %	0%	0%	100%	0%	39%	0%	27%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	89	187	106	72	87	262	203	37	139	36
LT Vol	89	0	0	19	0	113	0	37	0	0
Through Vol	0	187	0	53	53	149	149	0	139	0
RT Vol	0	0	106	0	34	0	54	0	0	36
Lane Flow Rate	207	260	230	107	138	388	253	67	199	55
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.575	0.692	0.567	0.322	0.4	1.067	0.665	0.207	0.588	0.15
Departure Headway (Hd)	10.369	9.846	9.115	11.178	10.761	9.885	9.474	11.501	10.975	10.24
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	350	369	399	324	336	369	384	314	332	352
Service Time	8.069	7.546	6.815	8.878	8.461	7.575	7.164	9.201	8.675	7.94
HCM Lane V/C Ratio	0.591	0.705	0.576	0.33	0.411	1.051	0.659	0.213	0.599	0.156
HCM Control Delay	26.2	32	23.1	19.1	20.5	98.1	29.1	17.2	28.2	14.7
HCM Lane LOS	D	D	C	C	C	F	D	C	D	B
HCM 95th-tile Q	3.4	5	3.4	1.4	1.9	13.7	4.6	0.8	3.5	0.5

1: Pioneer Dr & Lake Rd

Direction	All
Future Volume (vph)	1218
Total Delay (hr)	0
CO Emissions (kg)	1.73
NOx Emissions (kg)	0.34
VOC Emissions (kg)	0.40

1: Pioneer Dr & Lake Rd

Direction	EB	WB	NB	SB	All
Future Volume (vph)	159	465	382	212	1218
Control Delay / Veh (s/v)	0	0	0	0	0
Queue Delay / Veh (s/v)	0	0	0	0	0
Total Delay / Veh (s/v)	0	0	0	0	0
Total Delay (hr)	0	0	0	0	0
Stops / Veh	1.00	1.00	1.00	1.00	1.00
Stops (#)	159	465	382	212	1218
Average Speed (mph)	40	40	45	45	42
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NOx Emissions (kg)	0.04	0.14	0.10	0.06	0.34
VOC Emissions (kg)	0.04	0.17	0.12	0.07	0.40
Unserved Vehicles (#)	0	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0	0

Traffic Safety Benefit-Cost Calculation

Highway Safety Improvement Program (HSIP) Reactive Project

DEPARTMENT OF TRANSPORTATION

A. Roadway Description

Route	Lake and Pioneer	**District**	Metro	**County**	Washington
Begin RP		**End RP**		**Miles**	0.400
Location	Lake Rd and Pioneer Dr, City of Woodbury				

B. Project Description

Proposed Work	Intersection Improvement - All-Way Stop Control to Single Lane Roundabout		
Project Cost*	$2,571,989	**Installation Year**	2022
Project Service Life	20 years	**Traffic Growth Factor**	1.3%

** exclude Right of Way from Project Cost*

C. Crash Modification Factor

0.28	**Fatal (K) Crashes**	**Reference**	CMF 206
0.28	**Serious Injury (A) Crashes**		
0.28	**Moderate Injury (B) Crashes**	**Crash Type**	All
0.28	**Possible Injury (C) Crashes**		
0.28	**Property Damage Only Crashes**		www.CMFclearinghouse.org

D. Crash Modification Factor (optional second CMF)

	Fatal (K) Crashes	**Reference**	
	Serious Injury (A) Crashes		
	Moderate Injury (B) Crashes	**Crash Type**	
	Possible Injury (C) Crashes		
	Property Damage Only Crashes		www.CMFclearinghouse.org

E. Crash Data

Begin Date	1/1/2016	**End Date**	12/31/2018	3 years
Data Source	MnDOT			

Crash Severity	**All**	**< optional 2nd CMF >**
K crashes		
A crashes		
B crashes	1	
C crashes	2	
PDO crashes	2	

F. Benefit-Cost Calculation

$2,189,459	**Benefit (present value)**	**B/C Ratio = 0.86**
$2,571,989	**Cost**	

Proposed project expected to reduce 2 crashes annually, 0 of which involving fatality or serious injury.

F. Analysis Assumptions

Crash Severity	Crash Cost
K crashes	$1,360,000
A crashes	$680,000
B crashes	$210,000
C crashes	$110,000
PDO crashes	$12,000

Link: mndot.gov/planning/program/appendix_a.html

Real Discount Rate 1.2%

Traffic Growth Rate 1.3%

Project Service Life 20 years

G. Annual Benefit

Crash Severity	Crash Reduction	Annual Reduction	Annual Benefit
K crashes	0.00	0.00	$0
A crashes	0.00	0.00	$0
B crashes	0.72	0.24	$50,400
C crashes	1.44	0.48	$52,800
PDO crashes	1.44	0.48	$5,760
			$108,960

H. Amortized Benefit

Year	Crash Benefits	Present Value
2022	$108,960	$108,960
2023	$110,322	$109,014
2024	$111,701	$109,068
2025	$113,097	$109,122
2026	$114,511	$109,175
2027	$115,942	$109,229
2028	$117,392	$109,283
2029	$118,859	$109,337
2030	$120,345	$109,391
2031	$121,849	$109,445
2032	$123,372	$109,500
2033	$124,914	$109,554
2034	$126,476	$109,608
2035	$128,057	$109,662
2036	$129,657	$109,716
2037	$131,278	$109,770
2038	$132,919	$109,825
2039	$134,581	$109,879
2040	$136,263	$109,933
2041	$137,966	$109,987
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0

Total = $2,189,459

CMF / CRF Details

CMF ID: 206

Conversion of stop-controlled intersection into single-lane roundabout

Description:

Prior Condition: ***No Prior Condition(s)***

Category: Intersection geometry

Study: ***Observational Before-After Study of the Safety Effect of U.S. Roundabout Conversions Using the Empirical Bayes Method*****, Persaud et al., 2001**

Star Quality Rating:	★★★★☆

Crash Modification Factor (CMF)	
Value:	0.28
Adjusted Standard Error:	0.11
Unadjusted Standard Error:	0.06

Crash Reduction Factor (CRF)	
Value:	72 *(This value indicates a **decrease** in crashes)*
Adjusted Standard Error:	11

Unadjusted Standard Error:	6

Applicability

Crash Type:	All
Crash Severity:	All
Roadway Types:	Not specified
Number of Lanes:	
Road Division Type:	
Speed Limit:	
Area Type:	Urban
Traffic Volume:	
Time of Day:	

If countermeasure is intersection-based

Intersection Type:	Roadway/roadway (not interchange related)
Intersection Geometry:	Not specified
Traffic Control:	Stop-controlled
Major Road Traffic Volume:	
Minor Road Traffic Volume:	

Development Details

Date Range of Data Used:	
Municipality:	
State:	

Country:	
Type of Methodology Used:	Before/after using empirical Bayes or full Bayes
Sample Size Used:	

Other Details

Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Dec-01-2009
Comments:	

This site is funded by the U.S. Department of Transportation Federal Highway Administration and maintained by the University of North Carolina Highway Safety Research Center

Crash Detail Report - Short Form

Lake Road and Pioneer Drive

Report Version 1.0
February 2020

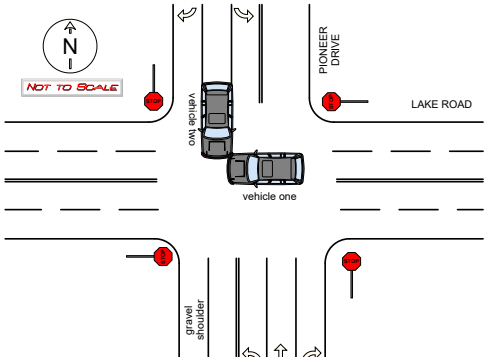
INCIDENT ID	ROUTE SYS	ROUTE NUM	MEASURE	ROUTE NAME	ROUTE ID	COUNTY	CITY
00661800	05-MSAS	0107	2.133	PIONEER DR	0500023973690107-I	82	Woodbury

INTERSECT WITH	NUM VEH	NUM KILLED	DATE	TIME	DAY OF WEEK	LAT	LONG	UTM X	UTM Y	WORK ZONE TYPE
LAKE RD	2	0	11/20/18	18:00	Tue	44.9053	-92.9289	505614.4	4972433.1	NOT APPLICABLE

BASIC TYPE	CRASH SEVERITY	FIRST HARMFUL	LIGHT CONDITION	WEATHER PRIMARY
Angle	B - Minor Injury	Motor Vehicle In Transport	Dark (Str Lights On)	Clear

	Unit 1	Unit 2	Unit 3	Unit 4
Unit Type	Motor Vehicle in Transport	Motor Vehicle in Transport		
Vehicle Type	Sport Utility Vehicle	Sport Utility Vehicle		
Direction of Travel	Westbound	Southbound		
Veh Manuever	Moving Forward	Moving Forward		
Age/Sex	57 M	32 M		
Physical Cond	Apparently Normal	Apparently Normal		
Contributing Factor 1	No Clear Contributing Action	Ran Stop Sign		

OFFICER SKETCH



NARRATIVE

OFFICERS RESPONDED TO THE LISTED INTERSECTION FOR A TWO VEHICLE CRASH WITH INJURIES. DRIVER OF VEHICLE ONE STATED HE WAS TRAVELING WESTBOUND LAKE RD. HE STATED HE STOPPED AT THE STOP SIGN AND WAITED FOR HIS TURN TO PROCEED. HE STATED AS HE PROCEEDED THROUGH THE INTERSECTION VEHICLE TWO FAILED TO STOP AT THE STOP SIGN TRAVELLING SOUTHBOUND ON PIONEER DR AND COLLIDED INTO HIM IN THE MIDDLE OF THE INTERSECTION. DRIVER OF VEHICLE TWO STATED HE WAS JUST DRIVING ALONG AND ALL OF A SUDDEN SOME ONE CRASHED INTO HIM. DRIVER OF VEHICLE TWO WAS UNAWARE HE RAN THE STOP SIGN AT THE INTERSECTION OF PIONEER DR AND LAKE RD. I CONFIRMED THAT HE HAD A VALID INSTRUCTION PERMIT DRIVING STATUS, ALTHOUGH HE STATED THAT HE HAD PASSED HIS DRIVER'S LICENSE TEST AND HAD NOT YET RECEIVED HIS DRIVER'S LICENSE IN THE MAIL. HE STATED THAT HIS UNCLE JOSE HAD THE INSURANCE

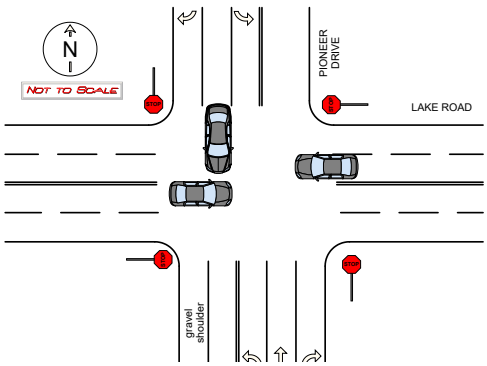
INCIDENT ID	ROUTE SYS	ROUTE NUM	MEASURE	ROUTE NAME	ROUTE ID	COUNTY	CITY
00606224	05-MSAS	0107	2.136	PIONEER DR	0500023973690107-I	82	Woodbury

INTERSECT WITH	NUM VEH	NUM KILLED	DATE	TIME	DAY OF WEEK	LAT	LONG	UTM X	UTM Y	WORK ZONE TYPE
LAKE RD	3	0	06/22/18	22:05	Fri	44.9053	-92.9289	505612.6	4972437.5	NOT APPLICABLE

BASIC TYPE	CRASH SEVERITY	FIRST HARMFUL	LIGHT CONDITION	WEATHER PRIMARY
Angle	C - Possible Injury	Motor Vehicle In Transport	Dark (Str Lights On)	Clear

	Unit 1	Unit 2	Unit 3	Unit 4
Unit Type	Motor Vehicle in Transport	Motor Vehicle in Transport	Motor Vehicle in Transport	
Vehicle Type	Passenger Car	Passenger Car	Passenger Car	
Direction of Travel	Southbound	Eastbound	Eastbound	
Veh Manuever	Moving Forward	Moving Forward	Moving Forward	
Age/Sex	27 M	65 M	47 F	
Physical Cond	Has Been Drinking Alcohol	Apparently Normal	Apparently Normal	
Contributing Factor 1	Ran Stop Sign	No Clear Contributing Action	No Clear Contributing Action	

OFFICER SKETCH



NARRATIVE

UNIT 1 WAS TRAVELING SOUTH ON PIONEER AT LAKE ROAD AND FAILED TO STOP FOR THE FOUR WAY STOP SIGN, CAUSING A COLLISION. DRIVER OF UNIT 1 WAS ARRESTED FOR DWI. THE DRIVER OF UNIT 3 WAS TRANSPORTED BY WOODBURY AMBULANCE TO THE HOSPITAL.

Crash Detail Report - Short Form

Lake Road and Pioneer Drive

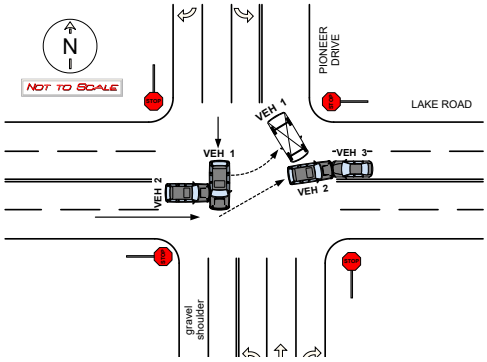
INCIDENT ID	ROUTE SYS	ROUTE NUM	MEASURE	ROUTE NAME	ROUTE ID	COUNTY	CITY
00423211	05-MSAS	0107	3.098	PIONEER DR	0500023973690107-I	82	Woodbury

INTERSECT WITH	NUM VEH	NUM KILLED	DATE	TIME	DAY OF WEEK	LAT	LONG	UTM X	UTM Y	WORK ZONE TYPE
	3	0	02/14/17	09:00	Tue	44.9053	-92.9289	505612.8	4972434.0	NOT APPLICABLE

BASIC TYPE	CRASH SEVERITY	FIRST HARMFUL	LIGHT CONDITION	WEATHER PRIMARY
Angle	N - Prop Damage Only	Motor Vehicle In Transport	Daylight	Clear

	Unit 1	Unit 2	Unit 3	Unit 4
Unit Type	Motor Vehicle in Transport	Motor Vehicle in Transport	Motor Vehicle in Transport	
Vehicle Type	Sport Utility Vehicle	Sport Utility Vehicle	Passenger Car	
Direction of Travel	Southbound	Eastbound	Westbound	
Veh Manuever	Moving Forward	Moving Forward	Vehicle Stopped or Stalled in	
Age/Sex	45 F	62 F	50 M	
Physical Cond	Apparently Normal	Apparently Normal	Apparently Normal	
Contributing Factor 1	No Clear Contributing Action	Ran Stop Sign	No Clear Contributing Action	

OFFICER SKETCH



NARRATIVE

VEH 1, S/B PIONEER DR @ LAKE RD. VEH 1 STOPS AT 4-WAY STOP SIGN, AND THEN STARTS TO CROSS THROUGH INTERSECTION. VEH 2, E/B LAKE RD @ PIONEER DR FAILS TO STOP AT POSTED/VISIBLE STOP SIGN, STRIKING VEH 1, CAUSING MAJOR DAMAGE TO BOTH VEH 1 AND VEH 2. COLLISION CAUSES VEH 1 TO ROLL ONTO ROOF. MOMENTUM OF VEH 2 CONTINUES E/B THROUGH INTERSECTION, AND FRONT OF VEH 2 THEN COLLIDES WITH FRONT OF VEH 3, STOPPED AT STOP SIGN, WAITING TO ENTER INTERSECTION. COLLISION WITH VEH 3 BY VEH 2 CAUSES MODERATE (DRIVEABLE) DAMAGE TO FRONT OF VEH 3. NO INJURIES REPORTED. VEH 1 & VEH 2 TOWED. VEH 3 DRIVEN AWAY UNDER OWN POWER. DRIVER 2 STATED THAT SHE DIDN'T REMEMBER WHAT HAPPENED. NO ICE OR DEBRIS IN ROADWAY PRIOR TO CRASH. DRIVER 2 AT FAULT. DRIVER 2 CITED FOR FAIL TO STOP AT STOP SIGN. CITED AND RELEASED.

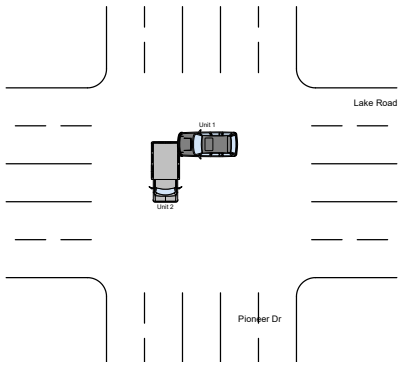
INCIDENT ID	ROUTE SYS	ROUTE NUM	MEASURE	ROUTE NAME	ROUTE ID	COUNTY	CITY
00400328	05-MSAS	0107	3.099	PIONEER DR	0500023973690107-I	82	Woodbury

INTERSECT WITH	NUM VEH	NUM KILLED	DATE	TIME	DAY OF WEEK	LAT	LONG	UTM X	UTM Y	WORK ZONE TYPE
LAKE RD	2	0	12/05/16	06:57	Mon	44.9053	-92.9289	505613.4	4972435.3	NOT APPLICABLE

BASIC TYPE	CRASH SEVERITY	FIRST HARMFUL	LIGHT CONDITION	WEATHER PRIMARY
Angle	N - Prop Damage Only	Motor Vehicle In Transport	Sunrise	Cloudy

	Unit 1	Unit 2	Unit 3	Unit 4
Unit Type	Motor Vehicle in Transport	Motor Vehicle in Transport		
Vehicle Type	Sport Utility Vehicle	Transit Bus		
Direction of Travel	Westbound	Southbound		
Veh Manuever	Moving Forward	Moving Forward		
Age/Sex	40 F	34 M		
Physical Cond	Apparently Normal	Apparently Normal		
Contributing Factor 1	Unknown	No Clear Contributing Action		

OFFICER SKETCH



NARRATIVE

UNIT 1 WAS WEST ON LAKE ROAD. UNIT 2 WAS SOUTHBOUND ON PIONEER. UNIT 1 STRUCK UNIT 2 ON THE REAR DRIVERS SIDE. UNIT 1 DID NOT KNOW IF THEY STOPPED FOR THE STOP SIGN AND COULDN'T REALLY SAY WHAT HAPPENED.

Crash Detail Report - Short Form

Lake Road and Pioneer Drive

Report Version 1.0
February 2020

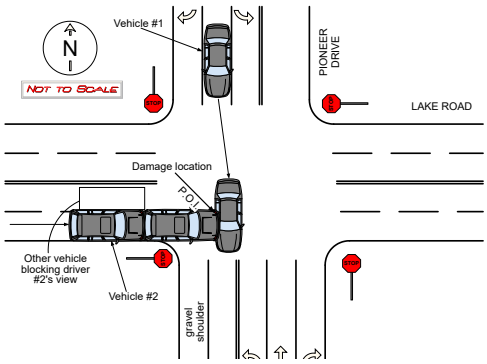
INCIDENT ID	ROUTE SYS	ROUTE NUM	MEASURE	ROUTE NAME	ROUTE ID	COUNTY	CITY
00445800	05-MSAS	0108	3.226	LAKE RD	0500023973690108-I	82	Woodbury

INTERSECT WITH	NUM VEH	NUM KILLED	DATE	TIME	DAY OF WEEK	LAT	LONG	UTM X	UTM Y	WORK ZONE TYPE
	2	0	04/17/17	16:40	Mon	44.9053	-92.9289	505615.8	4972434.7	NOT APPLICABLE

BASIC TYPE	CRASH SEVERITY	FIRST HARMFUL	LIGHT CONDITION	WEATHER PRIMARY
Angle	C - Possible Injury	Motor Vehicle In Transport	Daylight	Clear

	Unit 1	Unit 2	Unit 3	Unit 4
Unit Type	Motor Vehicle in Transport	Motor Vehicle in Transport		
Vehicle Type	Passenger Car	Sport Utility Vehicle		
Direction of Travel	Southbound	Eastbound		
Veh Manuever	Moving Forward	Moving Forward		
Age/Sex	23 M	21 M		
Physical Cond	Apparently Normal	Apparently Normal		
Contributing Factor 1	No Clear Contributing Action	No Clear Contributing Action		

OFFICER SKETCH



NARRATIVE

PERSONAL INJURY ACCIDENT ON 04/17/17, I RESPONDED TO PIONEER DR & LAKE RD FOR A TWO VEHICLE PERSONAL INJURY ACCIDENT. ON ARRIVAL, I MET WITH BOTH DRIVERS AND CONFIRMED DRIVER #1, HOFSTEAD, HAD MINOR CHEST PAIN, BUT REFUSED TO BE EVALUATED BY EMS. DRIVER #2, RENNING, REPORTED NO INJURIES. DRIVER #1 STATED HE WAS DRIVING SOUTHBOUND ON PIONEER DRIVE THROUGH THE LAKE RD INTERSECTION WHEN THE ACCIDENT OCCURRED. DRIVER #1 STATED HE WAS PROCEEDING THROUGH THE FOUR WAY STOP SIGN INTERSECTION WHEN VEHICLE #2, TRAVELING EASTBOUND ON LAKE RD THROUGH THE INTERSECTION COLLIDED WITH THE RIGHT SIDE OF HIS VEHICLE. VEHICLE #1 SUSTAINED MODERATE DAMAGE. DRIVER #2 SAID HE WAS TRAVELING EASTBOUND ON LAKE RD AND WAS STOPPED AT THE STOP SIGN AT THE PIONEER DRIVE INTERSECTION. VEHICLE #2 WAS IN THE OUTSIDE STRAIGHT LANE AND THERE WAS A VEHICLE STOPPED

Selection Filter:

WORK AREA: County('659526') - FILTER: Year('2016','2017','2018') - SPATIAL FILTER APPLIED

Analyst: Ross Tillman

Notes: 2016-18

Path: C:\Traffic Projects\Lake Rd-Pioneer Dr ICE\GIS\Figure 1_Project Location.mxd

SEH

Project: WOODB 154903
Print Date: 4/29/2020

Map by: jdanibas
Projection: Washington Co. Coords.
Source: ESRI

STUDY LOCATION

Lake Rd at Pioneer Drive ICE Study

Woodbury, MN

Figure 1

JUNIPER LN.

PIONEER DR

SAVANNA OAKS PASS

LAKE ROAD

LAKE MIDDLE SCHOOL

WOODBURY COMMUNITY CHURCH

LAKE MIDDLE SCHOOL ACCESS

BLUE RIDGE DR

SEH
PHONE: (651)490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

154903

DATE:
5/6/2020

LAKE RD./PIONEER DR. ICE ROUNDABOUT CONCEPT

FIGURE
2

4/28/2020

Tony Kutzke
City Engineer
City of Woodbury
8301 Valley Creek Road
Woodbury, MN 55125

RE: Support for City of Woodbury Lake Road and Pioneer Drive Intersection Improvements Project

Dear Tony Kutzke,

On behalf of South Washington County School District, I extend our support for the Lake Road and Pioneer Drive intersection project proposed by the City of Woodbury. The school district is committed to providing safe and reliable transportation choices for our students and staff members. We recognize the benefits that the proposed Lake Road and Pioneer Drive Intersection improvements project will provide to our Middleton Elementary and Lake Middle schools.

School staff has been in communication with the City of Woodbury to express our concerns for the existing intersection of Lake Road and Pioneer Drive. These concerns include school and pedestrian crossing safety, crossing guard safety, traffic circulation, vehicle stopping compliance, school speed zones and trail connectivity. Improvements prioritizing these concerns will improve safety for students, parents and staff accessing the schools as pedestrians, bicyclists, drivers and by bus.

For the reasons listed, South Washington County School District supports the Lake Road and Pioneer Drive intersection project proposed by the city and looks forward to continued coordination to realize the benefits of the proposed project.

Sincerely,

Daniel Hines
Engineering & Planning Manager
South Washington County Schools

South Washington County Schools
MOLLY ROESKE, Principal

Lake Middle School
3133 Pioneer Drive
Woodbury, MN 55125
Phone: 651-425-6400 Fax: 651-425-6428
lms.sowashco.org

April 21st, 2020

Tony Kutzke
City Engineer
City of Woodbury
8301 Valley Creek Road
Woodbury, MN 55125

RE: Support for City of Woodbury Lake Road and Pioneer Drive Intersection Improvements Project

Dear Tony Kutzke,

On behalf of Lake Middle School, I extend our support for the Lake Road and Pioneer Drive intersection project proposed by the City of Woodbury. Our school facility is directly adjacent the project area and therefor directly impacted by the current operations and safety issues at this intersection. Such impacts include the safety of middle school students walking and biking to school and guardians or bus drivers transporting them. We recognize and support the City of Woodbury's efforts to improve safety at this intersection that connects large residential areas to our school facilities.

School staff has been in communication with the City of Woodbury to express our concerns for the existing intersection of Lake Road and Pioneer Drive. These concerns include school and pedestrian crossing safety, crossing guard safety, traffic circulation, vehicle stopping compliance, school speed zones and trail connectivity. Improvements prioritizing these concerns will improve safety for students, parents and staff accessing the schools as pedestrians, bicyclists, drivers and by bus.

For all the reasons above, Lake Middle School supports the Lake Road and Pioneer Drive intersection project proposed by the city and looks forward to continued coordination with the city to deliver the proposed project.

Sincerely,

Molly Roeske
Principal
Lake Middle School

igniting a passion

South Washington County Schools

Arthur Williams, Principal

Middleton Elementary
9105 Lake Road
Woodbury, MN 55125
Phone: 651-425-4900 Fax: 651-425-4915

April 21, 2020

Tony Kutzke
City Engineer
City of Woodbury
8301 Valley Creek Road
Woodbury, MN 55125

RE: Support for City of Woodbury Lake Road and Pioneer Drive Intersection Improvements Project

Dear Tony Kutzke,

Middleton Elementary extends our support for the Lake Road and Pioneer Drive intersection project proposed by the City of Woodbury. The current operations and safety issues present at this intersection impact the safety of all transportation choices for student travel to and from school. We recognize and support the City of Woodbury's efforts to improve safety at this intersection that connects large residential areas to our school facilities.

School staff has been in communication with the City of Woodbury to express our concerns for the existing intersection of Lake Road and Pioneer Drive. These concerns include school and pedestrian crossing safety, crossing guard safety, traffic circulation, vehicle stopping compliance, school speed zones and trail connectivity. Improvements prioritizing these concerns will improve safety for students, parents and staff accessing the schools as pedestrians, bicyclists, drivers and by bus.
For all the reasons above, the Middleton Elementary supports the Lake Road and Pioneer Drive intersection project proposed by the city and looks forward to continued coordination with the city and experiencing the benefits this will provide to our schools and community.

Sincerely,

Arthur Williams
Principal
Middleton Elementary School

Existing Conditions Photos

Lake Road and Pioneer Drive intersection adjacent Lake Middle School and Middleton Elementary School and two town home neighborhoods at the northwest and southwest quadrant

Existing pedestrian crossings across four travel lanes

Current high traffic and pedestrian and bicycle demand at the intersection

List Dates of most recent meetings and outreach specific to this project:

- Meeting with general public: 14

  9/30/2013 – Meeting with school district staff to discuss school crossings at Lake Middle and Middleton Elementary

  3/1/2016 – Site meet with crossing guards Kathi Sobota and Betsy

  3/7/2016 – Site meet with school crossing guard at Lake Road and Pioneer Drive intersection

  4/1/2016 - Lake Road Study Completed, included Council Workshop public

  4/7/2016 – Site meet with crossing guards Kathi Sobota and Betsy

  8/7/2017 – Pioneer Drive and Bailey Ridge Drive school crossing neighborhood meeting

  8/8/2017 – Neighborhood meeting for Lake Road roadway rehabilitation

  8/14/2017 – Lake Road and Middle School campus meeting with school staff

  9/1/2017 – Public Safety meeting with Lake Middle and Middleton Elementary schools regarding traffic operations and safety concerns

  12/20/2017 – Review Lake Middle school circulation concerns with school district staff

  1/5/2018 – Site review of Lake Middle school traffic circulation issues with district staff

  5/8/2018 – Pioneer Drive trail improvements neighborhood meeting (Bailey Rd to Lake Rd)

  5/3/2018 – Review Lake Middle school parking lot and traffic circulation plan with school district staff

  2/2/2020 – Parent meeting regarding school crossing to Lake Middle School

- Meeting with partner agencies: School District and Staff meetings on 9/30/2013, 8/14/2017, 9/1/2017, 12/20/2017, 1/5/2018, 5/3/2018
- Targeted online/mail outreach: _____na____
  - Number of respondents: _____na____

CITY OF Woodbury **COUNCIL DIRECTIVE**	Adopted: **1/24/1996** Revised: **2/12/14**	Number: **CD-ADMIN-1.7**
	Mayor:	City Administrator:
	For: **All Employees and Community Members**	
	Subject: **City of Woodbury ADA Transition Plan**	

PURPOSE

The Americans with Disabilities Act was enacted in 1990 to provide a national mandate to eliminate discrimination against individuals with disabilities. Under the Act, all state and local government entities or agencies are required to perform self-evaluations of their current facilities, programs and activities. Agencies are then required to develop a plan outlining ways to accommodate those with disabilities and addressing any deficiencies in current operations. This directive addresses how the City of Woodbury complies with the applicable portions of this Act. The plan is required to be updated periodically.

POLICY

A. Coordination

The City of Woodbury has more than 50 employees; therefore, it is required that the City appoint an ADA Coordinator. The Assistant to the City Administrator(s) will act as the City's ADA Coordinator. This individual will educate the organization on ADA regulations, ensure the City acts upon all ADA accommodation requests, and coordinate City efforts to be compliant.

B. Statement of Non-Discrimination on the Basis of Disability

The City of Woodbury does not discriminate on the basis of disability in the admission or access to, or treatment or employment in, its programs, activities and services. The City will not use eligibility criteria that discriminate on the basis of disability. The ADA Coordinator will coordinate compliance with the non-discrimination requirements contained in Section 35.107 of the U.S. Department of Justice Regulations. Information concerning the provisions of ADA, and the rights there under, are available from the ADA Coordinator. Notice of this policy shall be published in the City's legal newspaper to inform the public of the rights and protection afforded by ADA.

C. Public Involvement

The City solicited public input from multiple community agencies when the ADA Transition Plan was created in 1996. As the City continues to update its ADA Transition Plan, the City invites the public to address any ADA compliance concerns with the ADA Coordinator and/or City staff.

D. Programs, Activities and Services

The City of Woodbury provides a broad range of programs, activities, and services to its residents. The City will make reasonable accommodation efforts to make these programs accessible whenever possible. When possible, these programs will be provided in an integrated setting. In cases where access is not feasible, the City will make reasonable efforts to provide like opportunities. These programs include, but are not limited to the following:

- Dissemination of information in various forms
- Public meetings (City Council and Advisory Commissions)
- Inspections, permits, and licenses
- Planning and Community Development services
- Utility services and billing
- Elections
- Street maintenance
- Public education including printed and online materials
- Park and Recreation programs and facilities
- Police and Fire services
- Employment
- Cable television (broadcast of public information)
- Recycling and sustainability programs
- Contracting of services

Access to these programs may be through telephone contacts, in person contacts at a City facility, at a private home or business, or at a facility owned by another. The City of Woodbury will reasonably accommodate access to these programs as set forth in the Evaluation for Non-Structural Changes for Programmatic Barriers (Appendix I).

E. Self-Evaluation Process

Staff conducted an initial self-evaluation of City owned facilities open to the public in 1996. This evaluation was conducted using forms provided by the Minnesota State Council on Disability. The survey forms used were designed to reflect the most restrictive requirements of either the Minnesota State Building Code or the Americans with Disabilities Act Accessibility Guidelines as they existed at the time the facilities were evaluated. Staff also evaluated the City's programs, services, and activities to determine potential barriers. A copy of the transition plan will be kept in the administration office of the City of Woodbury.

F. Structural Barriers Identified

A list of the structural barriers that staff identified is included in Appendix II, Transition Plan for Structural Barriers. Structural barriers listed will also include curb ramps. Barriers in employee areas will be addressed as the need arises.

G. New Construction

The City of Woodbury will comply with all current ADA standards for new construction in city facilities, public right-of-way, and public parks and trails.

H. Maintenance of City Facilities and Infrastructure

The City of Woodbury will comply with all current ADA standards for maintenance projects and when updating city facilities, public right-of-way, and public parks and trails.

I. Employment

The City of Woodbury must meet the requirements of Title I of ADA concerning employment. The City's employment compliance actions are set forth in Appendix IV, Employee Compliance Plan.

J. Grievance Procedure

Appendix V outlines the grievance procedure for investigating ADA alleged violations.

K. Curb Ramps

The City's compliance actions regarding curb ramps are set forth in Appendix II.

L. Training

The City will educate all employees who have regular contact with the public in the provision of the City's programs, activities, and services on ADA requirements as well as sensitize employees to the needs of the disabled community.

M. Emergency Evacuation

The City will provide audible and visual alarm systems as required by ADA compliance laws. Employees will address the needs of disabled persons who may be in City facilities when an emergency situation occurs.

N. Undue Financial or Administrative Burdens

The City Council will make the final determination in instances where compliance with ADA creates an undue financial or administrative burden. In making its determination, the City Council will consider the following factors:

1. Nature and cost of the accommodations needed.
2. Overall financial resources involved in providing reasonable accommodations, the number of individuals affected, and the effect on expenses and resources.
3. Impact of the accommodation upon the operation of the facility, including the impact on the ability of employees to perform their duties and the impact on the facility's ability to conduct business.

O. ADA Review

To prevent creation of new barriers, the ADA Coordinator may request staff to submit plans for new programs, services, activities, remodeling or construction of new City facilities. The

ADA Coordinator will review these plans with the appropriate staff to ensure compliance with ADA compliance laws.

P. Areas Not Specifically Addressed

It is neither possible nor feasible for this policy to specifically address accommodations for all of the disabilities covered by ADA. Upon notice of situations not addressed by this policy, the ADA Coordinator will meet with the party to determine if any accommodation can be made which is both suitable and reasonable.

APPENDIX I

TRANSITION PLAN FOR NON STRUCTURAL CHANGES TO ELIMINATE PROGRAMMATIC BARRIERS

1. **To accommodate the needs of individuals whose mobility is otherwise impaired due to a disability, the City will:**

   a. Accommodate the needs of individuals who are not able to leave their homes. For example, an employee may go to a resident's home to complete a job application.

   b. Schedule programs at locations for which the access meets the needs of the scheduled event.

   c. Wheelchairs (and other devices designed for use by people with mobility impairments) will be permitted in all areas open to pedestrian use. Other power-driven mobility devices are permitted to use unless safety concerns are present in a given public facility or area.

2. **To accommodate the needs of individuals who are deaf or who have hearing impairments, the City will:**

   a. Give notice that an interpreter will be provided at public meetings if the City receives notice within 72 hours before the meeting. This notice will be incorporated with the general meeting notice. The City will make a good effort to accommodate emergency requests which do not meet the length of notice requirement.

   b. Provide assistive listening devices for public meetings.

   c. Instruct employees on the use of note writing for communication in unscheduled situations.

   d. Provide telephone devices for the deaf. The City's 911 system already provides TDD access. The City Hall TDD number is 731-5796.

   e. Utilize the services of state agencies for the deaf to improve communications.

3. **To accommodate the needs of individuals who are blind or who are visually impaired, the City will:**

   a. Provide notice on printed materials which states that the material may also be provided in other forms including Braille, large print, electronic copy, or audio recordings. The City may use discretion in providing alternative forms of materials so that the form suits the document size.

b. Utilize the services of state agencies for the blind to improve communications.

c. Provide readers the public, as needed.

d. Permit use of a service animal in a public facility or area. A service animal is defined as a dog that has been individually trained to do work or perform tasks for the benefit of an individual with a disability. ADA states that dogs used purely for emotional support are not service animals.

4. Miscellaneous Program Issues

a. The City of Woodbury Park and Recreation Department offers many programs. In regards to these programs, the City will:

   1. Accommodate requests for reasonable accommodations.

   2. For more complicated accommodation requests, the City may utilize the services of an integration specialist. The specialist will determine if integration is feasible in a manner that will not compromise the safety of other program participants.

b. The City of Woodbury strives to ensure its published information, printed and electronic, is accessible to people with disabilities. When resources are not available to meet this goal in a timely fashion, items are prioritized using the following criteria:

   1. Emergency/crisis information (top priority).

   2. Important/meaningful information with the longest shelf-life – the content is not expected to change or expire over time.

c. The City will not discriminate against the use of service animals in City facilities or while an individual is participating in a City program.

d. As requested, staff will review the City's policies and ordinances to ensure that they are not discriminatory.

APPENDIX II

TRANSITION PLAN TO ELIMINATE STRUCTURAL BARRIERS

CURB RAMPS

All curb ramps that have been constructed after January 26, 1992 have been designed and constructed to meet ADA regulations at the time of installation. The City will review and update curb ramps when there is a need for reconstruction.

1. Identification. In 1992 a field survey of the entire City was taken to identify locations where curb ramps were required to be constructed. The results of the field survey indicated there were approximately 145 locations where existing curb and sidewalk should be removed and replaced with a curb ramp. These locations of proposed curb ramp improvements have all been addressed to meet curb ramp regulations at the time of reconstruction.

2. Design. In addition to the field survey, design and construction standards for the proposed curb ramps were researched. Based on this research, the City adopted the design endorsed by the Minnesota Department of Transportation. Exposed aggregate was used for the surface texture for the proposed curb ramps. Exposed aggregate provides a detectable warning surface and provides a relatively stable foundation under Minnesota's snow and ice conditions.

3. Schedule of self-evaluation. In 1992, the City dedicated $25,000 of funding annually for curb ramp installation. This level of funding helped to maintain and install all curb ramps across the City. The City will ensure all newly installed curb ramps follow the current ADA requirements at the time of reconstruction. In addition, the City will listen to requests and concerns from disabled residents in the community if a curb ramp is damaged or needs to be maintained. Any curb ramp needing to be repaired and/or is identified as a problematic structural barrier by a member of the community will be handled on an immediate and timely basis.

EXTERIOR & INTERIOR PUBLIC ACCESS

The City completed an evaluation of all the public access facilities constructed before 1992 and identified areas that did not meet ADA requirements. These areas have all been addressed since the implementation of the transition plan and meet ADA requirements at the time of reconstruction. All buildings constructed after 1992 meet ADA requirements at the time of construction. Barriers in the original self-evaluation include (but not limited to) restrooms, water fountains, public telephones, walkways, parking, stairs, corridors and entrances. The City will continue to ensure newly constructed buildings meet ADA requirements at the time of construction and will update any non-compliant matters when a reconstruction project is needed. The City will listen to requests and concerns from disabled residents in the community if there is an issue of concern in a publicly accessible building. Any building or curb ramp having a

maintenance concern and/or is identified as a problematic structural barrier by a member of the community will be handled on an immediate and timely basis.

APPENDIX III

PARK AND RECREATION DIVISION
ACCESSIBILITY SELF-EVALUATION

1. Parking lots have been provided with the necessary numbers of accessible parking spaces. These spaces have been properly signed and marked.

2. Public information regarding the parks and trails system will include accessibility information.

3. Amenities in the parks and trails system will be made accessible for all new construction. Existing facilities will be made accessible and the modification phased.

4. Trail intersections at streets and parking lots will have proper ramps according to accessibility standards for all new construction. For existing construction, existing ramps that intersect with public streets and public parking lots shall meet ADA requirements.

5. Recreation programs will be conducted in accessible buildings and spaces. If participants require an accommodation, support services such as an interpreter or a mobility aide can be arranged by calling or registering in person at least two weeks in advance of the program start date. This information will be placed in all recreation program materials.

APPENDIX IV

EMPLOYMENT COMPLIANCE PLAN

The City of Woodbury does not discriminate against persons with disabilities in the various areas of employment including: recruitment, hiring, transfers, promotions and terminations. To this end, the City's employment practices will include the following actions:

Recruitment
When a vacancy occurs, the Administrative Services Director will require the job description to include the physical requirements and essential job functions for the position.

Job Advertisements
Job notices and advertisements for vacancies will state that the City of Woodbury does not discriminate on the basis of disability. Further, the cover letter which accompanies each application will state that reasonable accommodations will be made upon request throughout the recruitment process. The City's application form will not ask for information related to an individual's disabilities. Advertisements will be submitted to appropriate agencies to ensure that a broad range of individual with disabilities will be reached.

Testing / Interviews
The ADA Coordinator will work with the candidate(s) requesting reasonable accommodations.

Accommodations for New and Existing Employees
Newly hired employees and existing employees who acquire disabilities shall work with the ADA Coordinator to achieve reasonable and appropriate accommodations.

Miscellaneous
The City requires a physical examination after making a contingent offer of employment to a qualified applicant to ensure that they can perform the essential job functions of the position for which they are being considered. This medical examination is required of all regular full-time and part-time employees, and the offer of employment is conditioned on the results of the examination. Social and recreational activities which are provided for employees will be accessible.

APPENDIX V

GRIEVANCE PROCEDURE
INVESTIGATING ALLEGED VIOLATIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA)

The purpose of this grievance procedure is to provide prompt and equitable resolution of complaints alleging any action prohibited by the U.S. Department of Justice regulations implementing Title II of the Americans with Disabilities Act. Title II of the ADA states, in part, that "no otherwise qualified disabled individual shall, solely by reason of such disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination" in programs or activities sponsored by a public entity.

GRIEVANCE PROCEDURE

1. Filing a complaint
ADA complaints shall be filed with the administration office of the City of Woodbury, 8301 Valley Creek Road, Woodbury MN 55125. All complaints shall be filed in writing or verbally; shall contain the name, address and phone number of the complainant; and describe the alleged violation. A complaint shall be filed within 180 days after the complainant becomes aware of the alleged violation.

2. Investigation and ADA Coordinator Determination
Upon receipt of the complaint, the ADA Coordinator or a person designated by the ADA Coordinator shall conduct such investigation as may be necessary to determine the facts of the alleged violation. The investigator shall also (a) determine whether or not the complaint is governed by Title II of the ADA; and (b) if Title II is applicable, attempt to devise a plan, if practical, which will address necessary modifications to City programs or activities covered by Title II.

The ADA Coordinator or a person designated by the ADA Coordinator shall then meet with the complainant and attempt to resolve the complaint.

The determination of the ADA Coordinator shall be issued within thirty (30) working days of receipt of the complaint and shall be in written form or other appropriate media of communication. A copy of the ADA Coordinator's determination shall be sent by certified mail to the complainant. Arrangements for sending the ADA Coordinator's determination to a visually impaired complainant shall be made. The City Administrator will be informed and provided a copy of the ADA Coordinator's determination.

3. Appeal to City's Selected Impartial Hearing Examiner
Within twenty (20) working days of the receipt by the complainant of the ADA Coordinator's determination, the complainant may request a hearing in front of the City's selected impartial

examiner. The request for appeal shall be filed with the City Administrator. If a hearing before the City's selected impartial examiner is requested, the City Administrator shall set the matter for hearing before the City's impartial hearing examiner within 20 days from the date of the request for hearing. The complainant and a representative of the City Administrator may be present at the hearing, may be represented by counsel, may present evidence and witnesses, and may cross-examine witnesses. An audio or visual recording, whichever is appropriate, of the proceeding shall be made. Within thirty (30) working days of the completion of the hearing, the City's impartial hearing examiner shall issue a written decision, which shall be sent to the complainant. Arrangements for submission of the City's impartial hearing examiner's decisions to a visually impaired complainant shall be made.

All determinations throughout this grievance process shall be rendered in a form additional to writing, if necessary, to the understanding of the complainant. An advocate may be appointed to aid a complainant in the filing of a complaint.

This grievance procedure will involve thorough investigations, affording all interested persons and their representatives, if any, an opportunity to submit evidence relevant to a complaint.

The rights of a person to a prompt and equitable resolution of the complaint filed hereunder shall not be impaired by the person's pursuit of other remedies such as the filing of a complaint with the responsible federal department or agency. The use of this grievance procedure is not a prerequisite to the pursuit of other remedies.

This grievance procedure shall be construed to protect the substantive rights of interested persons to meet appropriate due process standards and to assure that the City of Woodbury complies with the ADA.

Adopted by the Woodbury City Council on February 12, 2014, Resolution No. 14-27