MnDOT District 4

Third Avenue (Trunk Highway 29) Pedestrian Study

AUGUST 2023

DEPARTMENT OF TRANSPORTATION

alta

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Chapter 1. Corridor Context

In May 2022, Alta Planning + Design was contracted by the Minnesota Department of Transportation (MnDOT) to study pedestrian safety along Trunk Highway 29/Third Avenue in Alexandria, MN. The following report contains an analysis of existing conditions along the corridor, as well as proposed recommendations for short- to long-term safety improvements.

Background

The Alexandria Third Avenue Pedestrian Study is a seven-block corridor study for MNDOT District 4 on Highway 29/Third Avenue in Alexandria, MN. This seven-block corridor, between Broadway Street and Nokomis Street, is a commercial street in downtown Alexandria that sees an average of 18,000 vehicles a day (as of 2018). Despite a 30 mile per hour speed limit, traffic moves quickly through this area, with observed average speeds up to 38 miles per hour.

People walking and biking interact with this corridor to access businesses and connect to Lake Agnes and the Central Lakes Regional Trail, along with nearby schools and senior facilities. This corridor is important locally, with a grocery store and two schools nearby. It is also important regionally, serving as both a destination and connection for seasonal vacation traffic heading north to cabin country in the summer.

These factors contribute to a complex and vitally important corridor for the local Alexandria community and MnDOT. To understand the many challenges and opportunities in the project corridor, this report outlines the current conditions for people walking, biking and driving along this stretch of Third Avenue, including gaps and safety challenges. Each of these sections is supported by quantitative analysis, observations of the corridor, and qualitative information gathered through engagement events.

A review of previous planning efforts along the project corridor is available in Appendix A.

Existing Infrastructure

Figure 1 shows the existing pedestrian infrastructure in the project area. Third Avenue is lined by sidewalks, as well as Broadway and Nokomis Streets on either end of the corridor. Sidewalks along Third Avenue are typically five feet wide, adjacent to the curb with no buffer from traffic and no green boulevard space. Approximately half of the adjacent side streets have a sidewalk on at least one side of the street.

The Central Lakes Trail is a regional destination stretching 55 miles from Osakis to Fergus Falls, connecting to additional trail networks beyond that. As a parallel route to Third Avenue just over a block to the north, the trail serves as a calmer east-west route if the detour to reach it does not deter people who prioritize an efficient route.

Public Engagement Feedback

Throughout the data collection phase, the project team heard from residents and stakeholders about the role of Third Avenue in the project area. The full set of feedback is listed in Appendix B, but notable uses include:

- Provides a route for seasonal cabin traffic heading north through Alexandria
- Connects employees and jobs in the city's growing economy
- Provides access to multiple schools, churches, and businesses
- Helps people reach recreational opportunities at Big Ole Central Park and the Central Lakes Trail
- Serves as a route for police and fire first responders

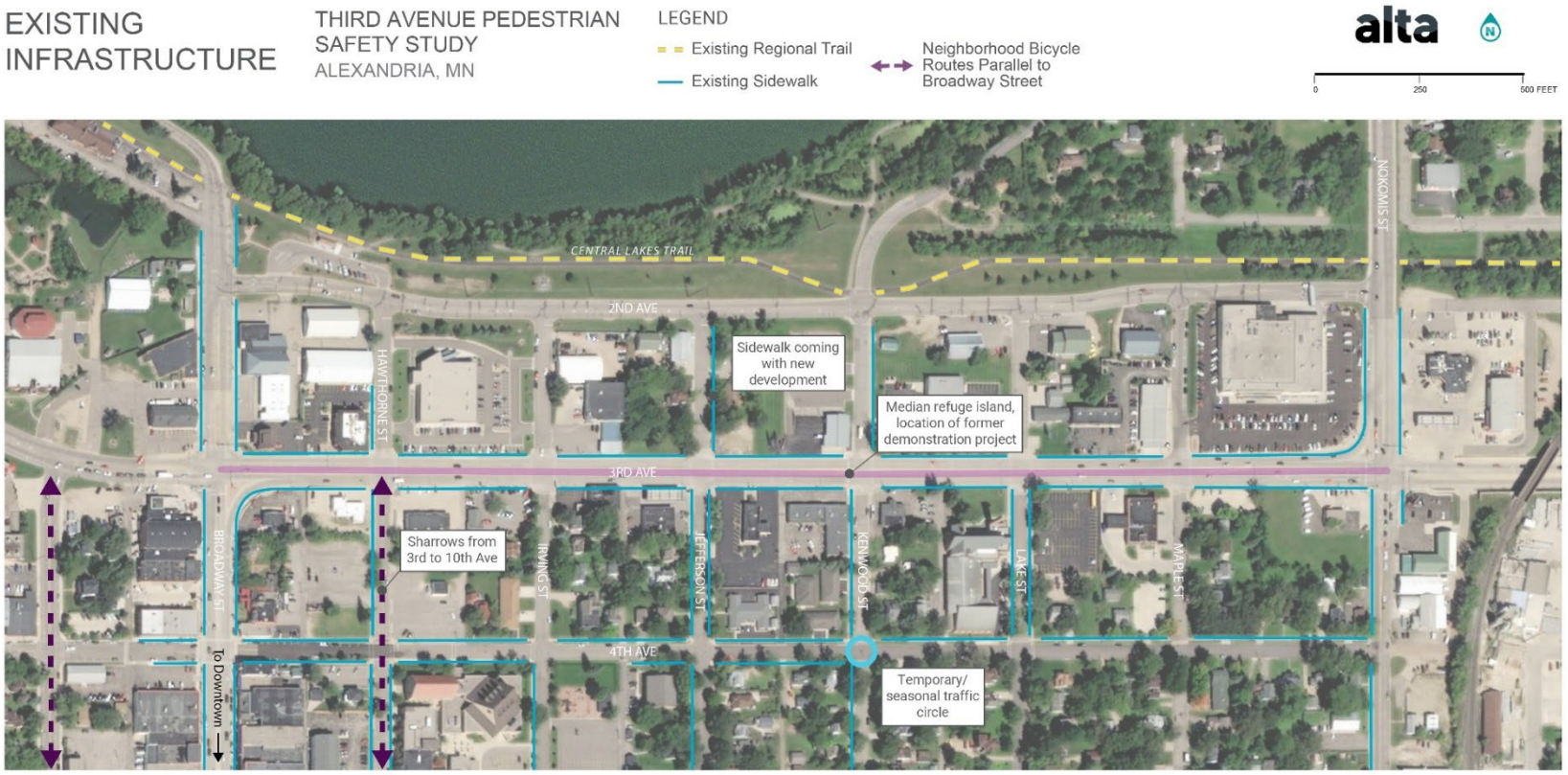

Figure 1. Existing Pedestrian Infrastructure in the Project Area

Gap Analysis

Overview

The existing pedestrian infrastructure along and adjacent to Third Avenue is not very welcoming for people walking. For this gap analysis the project team examined not only where pedestrian infrastructure is missing, but the uncomfortable accommodations that cause people to avoid using what infrastructure is present. For example, while Third Avenue does have sidewalks, they are adjacent to the curb with little to no buffer from traffic. There are a number of driveways cutting through the sidewalk that create a challenging slope for pedestrians, as well as objects obstructing the pedestrian right-of-way, such as utility boxes and sign posts. Figure 2 identifies the location of these concerns through the project area.

Public Engagement Feedback

Throughout public engagement the project team heard feedback about specific gaps in infrastructure and uncomfortable conditions along Third Avenue, as well as preferred routes to take in order to avoid Third Avenue:

- Most people who provided feedback avoid walking along Third Avenue. They cited the uncomfortable sidewalk, proximity to vehicle traffic, and lack of green space throughout the corridor. Most would feel uncomfortable with a child, elderly adult, or someone with mobility challenges.
- Marked crossings are uncomfortable, due to the crossing distance, vehicle speeds, and visibility concerns at the ends of the corridor (due to traffic taking free rights) and Hawthorne Street (due to slope).
- The existing marked crossing at Kenwood Street is challenging, despite markings and a median crossing island. Many people shared that they fear a “double threat” while crossing. This is a dangerous situation where a vehicle in the outside of two traffic lanes stops for a pedestrian to cross, but a driver on the inside lane does not see the pedestrian, and proceeds through the intersection (sometimes swerving around the stopped vehicle), posing a safety risk to the pedestrian.
- Crossing the free right of southbound Nokomis Street turning onto Third Avenue is challenging for pedestrians. There are visibility issues from a utility box and light post blocking drivers’ view of pedestrians waiting to cross.
- Businesses encroach on the sidewalk, for example the auto dealer on the northwest corner of Kenwood Street and Third Avenue.
- People on bikes will use the crossing at Kenwood Street to reach the Central Lakes Trail on the north side of Third Avenue, but note that there is no sidewalk access on the west side of the street between Second and Third Avenues. Some people bike northbound through the marked crossing on Third Avenue, and proceed north on the left (west) side of Kenwood Street (against traffic) to line up with the wide curb ramp getting onto the trail at Second Avenue.
- Most people walking and biking prefer to move east-west through the project corridor on either Second or Fourth Avenues where there is less and slower moving traffic.
- Overall, Third Avenue is seen as a barrier for non-motorized users moving between the neighborhoods around downtown and the recreational opportunities to the north of the corridor along the trail and lake.

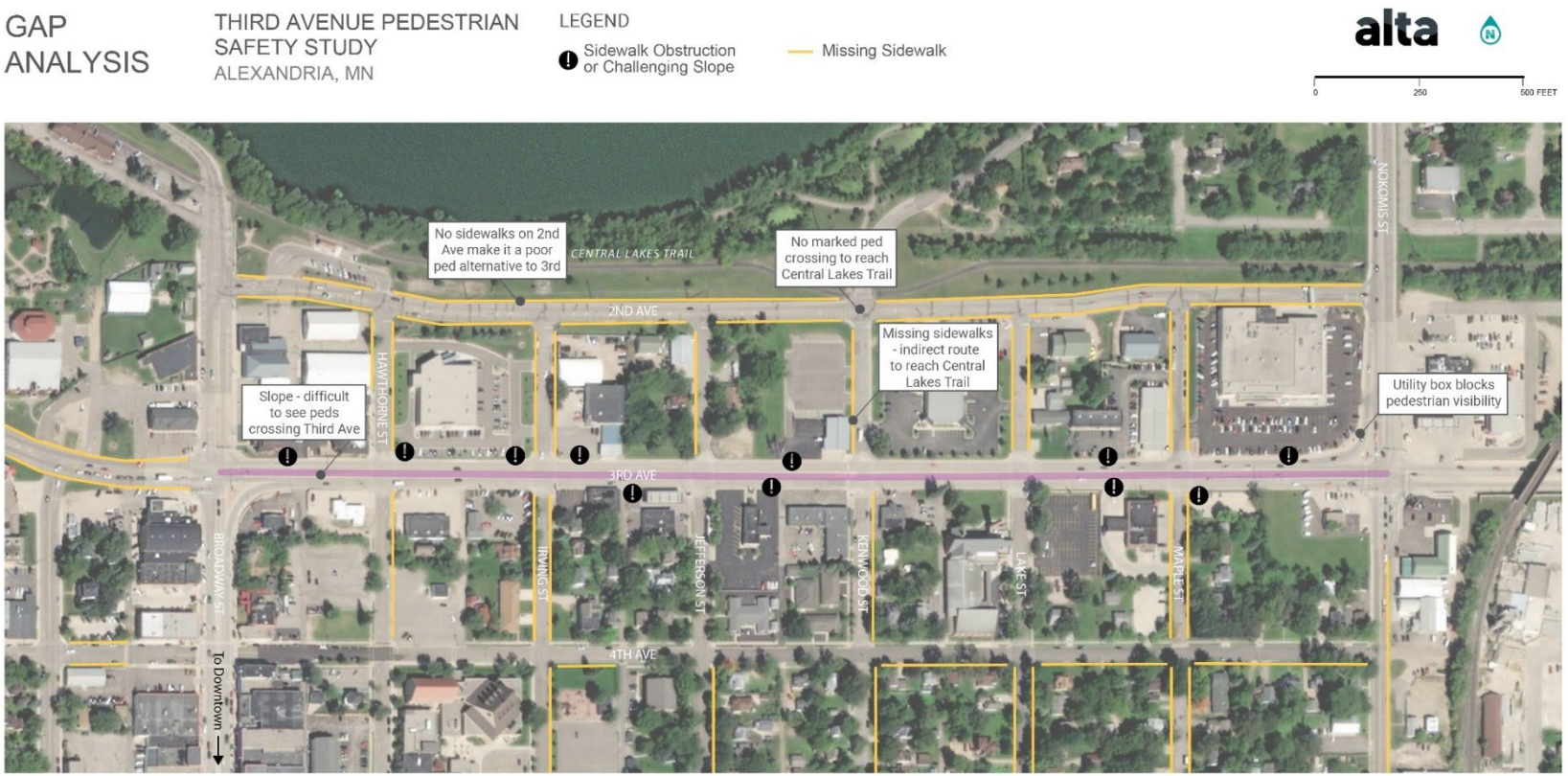

Figure 2. Gaps in Pedestrian Infrastructure in the Project Area

Origins and Destinations

Notable destinations within two blocks of the project corridor are identified in Figure 3, including:

- Big Ole Central Park – site of the Alexandria Farmers Market
- Central Lakes Regional Trail
- Elden's grocery store
- Goodwill
- Holiday gas station and convenience store
- St. Mary's School and Church
- Thrifty White pharmacy
- Wells Fargo bank
- Zion Lutheran School and Church

At either end of the corridor there are additional destinations that people use Third Avenue to reach. On Broadway Street on the west, as Highway 29 continues south through downtown, there are many blocks of historic downtown businesses. Here commercial buildings line Broadway Street with greater density than the surrounding neighborhoods. Recent reconstruction of this section of Highway 29 created parallel parking, sidewalks, a paved furnishing zone, and curb extensions for crossing pedestrians.

At the east end on Nokomis Street, as Highway 29 continues north, commercial development turns more suburban in nature. Businesses are more spread out than on Broadway Street to the south, with some set back and separated from Nokomis Street by parking lots. These businesses are also connected to the project corridor by Kenwood Drive on the back/west side, which many drivers take to avoid congestion and challenging turning movements on southbound Nokomis Street.

Project stakeholders also noted two new developments on the project corridor that will influence future traffic patterns and pedestrian/bicyclist activity. At Third Avenue and Hawthorne Street there will be a new mixed-use development with 75 residential units, with access points on Hawthorne Street and 4th Avenue. Additionally, on Jefferson Street between Second Avenue and Third Avenue the City of Alexandria has approved permits for a new development including a dentist's office. As these properties are built out there will be additional traffic, both motorized and non-motorized, concentrated around the project corridor.

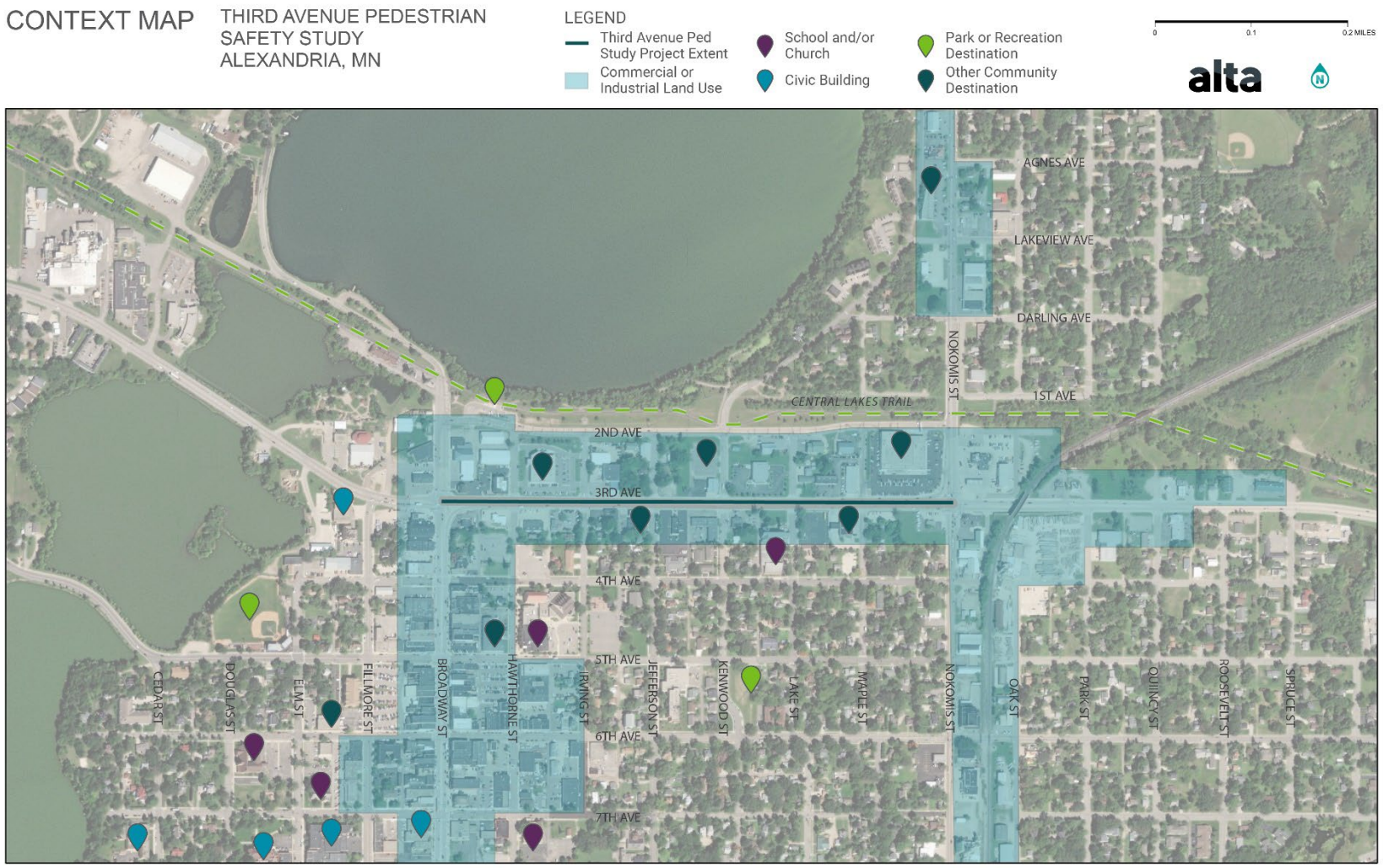

Figure 3. Context Map Surrounding the Project Corridor

Chapter 2. Safety Analysis

The project team completed two safety analyses for the project corridor: a Design Flag Assessment and a crash analysis. The following sections document the considerations and findings of each analysis.

Design Flag Assessment

Analysis Overview

Using NCHRP Report 948, Guide for Pedestrian and Bicycle Safety at Alternative Intersections and Interchanges, the project team analyzed pedestrian and bicyclist safety factors at corridor intersections through a Design Flag Assessment. This approach gathers data for 20 “flags” listed in Table 1, to identify locations that are uncomfortable or pose a higher risk for people walking and biking through an intersection.

The Design Flag Assessment analyzes risk factors that are applicable to people walking, people biking, or both. Factors address safety, accessibility, operational and comfort issues for non-motorized users. Each intersection movement was assessed for any relevant factors, and assigned either a yellow or red flag based on the quality of conditions. Yellow flags generally represent a condition related to level of comfort, delay or travel time. Red flags generally represent a condition related to safety and accessibility, posing a higher risk for people walking or biking than yellow flag conditions. Flags are assessed for the four pedestrian crossing movements and 12 bicycle turning movements at each intersection.

To summarize intersection or movement conditions, the number of yellow or red flags is divided by the total number of flags relevant to that movement. The project team then looked at the corridor relatively to see which intersections posed the greatest safety challenges for people walking or biking.

Table 1. Pedestrian and Bicycle Design Flags

Design Flag	Bikes	Peds	Flag Type	Design Flag Description
Motor Vehicle Right-Turns		X	Y/R	Permissive motor vehicles right-turns across pedestrian paths
Uncomfortable/Tight Walking Environment		X	Y	Pedestrian facilities of narrow width
Nonintuitive Motor Vehicle Movements		X	Y/R	Motor vehicle movements arriving from an unexpected direction
Crossing Yield- or Uncontrolled Vehicle Paths	X	X	Y/R	Yield or uncontrolled pedestrian crossings
Indirect Paths	X	X	Y/R	Paths resulting in out-of-direction travel
Executing Unusual Movements	X	X	Y	Movements that are unexpected given local context
Multilane Crossings	X	X	Y/R	Crossing distances of significant length across multiple lanes
Long Red Times	X	X	Y/R	Excessive stopped delay at signalized crossings
Undefined Crossings at Intersections	X	X	Y	Unmarked paths through intersections
Motor Vehicle Left-Turns	X	X	Y/R	Permissive and protected left-turns across pedestrian and bicycle paths
Intersection Driveways and Side Streets	X	X	Y/R	Driveways or streets within intersection area of influence
Sight Distance for Gap Acceptance Movements	X	X	R	Providing adequate sight distance to conflict points
Grade Change	X	X	Y/R	Vertical curves adjacent to intersections
Riding in Mixed Traffic	X		Y/R	On-street bicycle facilities on high-speed/volume roads
Bicycle Clearance Times	X		Y/R	Bicycles require longer clearance times than vehicles at signals
Lane Change Across Motor Vehicle Travel Lane(s)	X		Y/R	Lane changes by bicycles across motor vehicle lanes
Channelized Lanes	X		Y/R	Bicyclist traveling in channelized lane adjacent to motor vehicles
Turning Motorists Crossing Bicycle Path	X		Y/R	Lane changes by motor vehicles across bicycle facility
Riding between Travel Lanes, Lane Additions, or Lane Merges	X		Y/R	Bicycle lanes with motor vehicle lanes on both sides
Off-Tracking Trucks in Multilane Curves	X		Y/R	The tendency of trucks to swing into bicycle lanes while turning

Findings

The highest number of pedestrian safety flags are located along the free rights on Broadway Street and Nokomis Street, as well as the east and west legs of Third Avenue at Hawthorne Street (shown in Figure 4). Additional crash analysis shows that more severe crashes occurred at Hawthorne Street than any other location along the corridor. Public engagement also identified this location for visibility issues due to slope and natural lighting challenges with the morning sun in drivers' eyes.

Figure 4. Intersection Legs with High Total Pedestrian Design Safety Flags Along the Project Corridor

The approaches shown in Figure 5 represent the top 25% of pedestrian crossings by percent of red flags, with over 20% of the total flags showing conditions that pose safety and accessibility challenges for people walking and biking. These locations rose to the top because of the length of pedestrian crossings, and the volume of traffic moving and turning through the intersections.

Figure 5. Intersection Legs with High Red Pedestrian Design Safety Flags Along the Project Corridor

The approaches shown in Figure 6 represent the top 25% of pedestrian approaches by percent of yellow flags. At all of the intersection approaches shown, 31% of the total flags represent conditions that are uncomfortable for people walking and biking. Many of these locations are highlighted because of driveways near the intersection that create opportunities for conflicts between people walking on the sidewalk and drivers accessing businesses along the corridor.

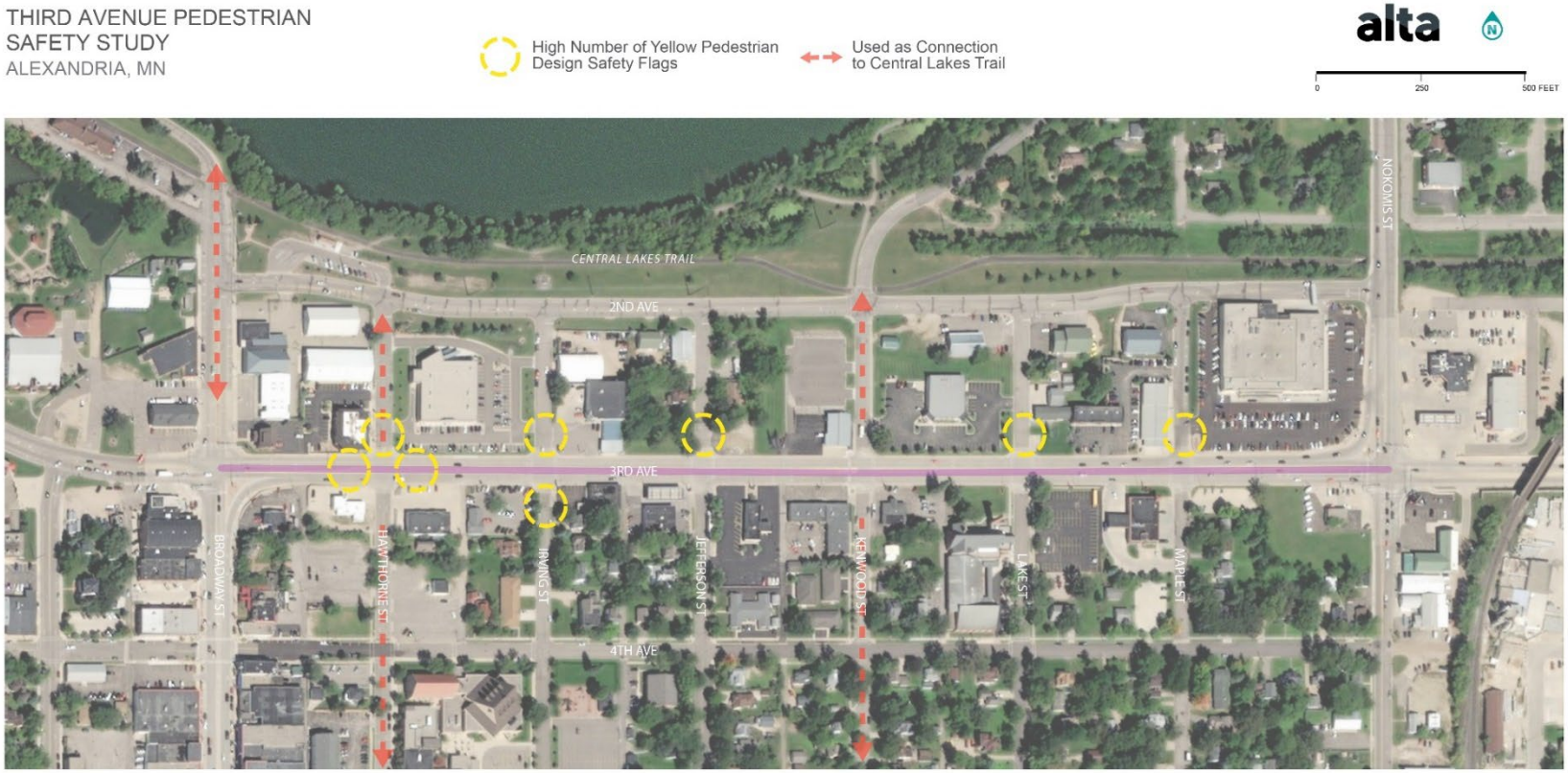

Figure 6. Intersection Legs with High Yellow Pedestrian Design Safety Flags Along the Project Corridor

The 10% of movements with the highest number of red and yellow bicycle design safety flags are shown in Figure 7, all with 40% or more yellow and red flags. The two worst movements are northbound through movements on Broadway Street at Third Avenue, and westbound through movements on Third Avenue at Nokomis Street. These are likely due to interactions with vehicles entering/exiting the free rights at these locations. North and southbound travelers on Hawthorne faced the next highest red and yellow flags while crossing Third Avenue, likely due to the roadway slope at this location.

Figure 7. Bicycle Movements with a High Number of Total Bicycle Design Safety Flags

The bicycle movements shown in Figure 8 represent the top 20% of bicycle movements by percent of red flags, with over 20% of the total flags showing conditions that pose safety and accessibility challenges for people biking. Most of these movements involve turning across multiple lanes of traffic.

Figure 8. Bicycle Movements with a High Number of Red Bicycle Design Safety Flags

The approaches shown in Figure 9 represent the top 20% of bicycle approaches by percent of yellow flags. For all movements shown, at least 23% of the total flags represent conditions that are uncomfortable for people biking.

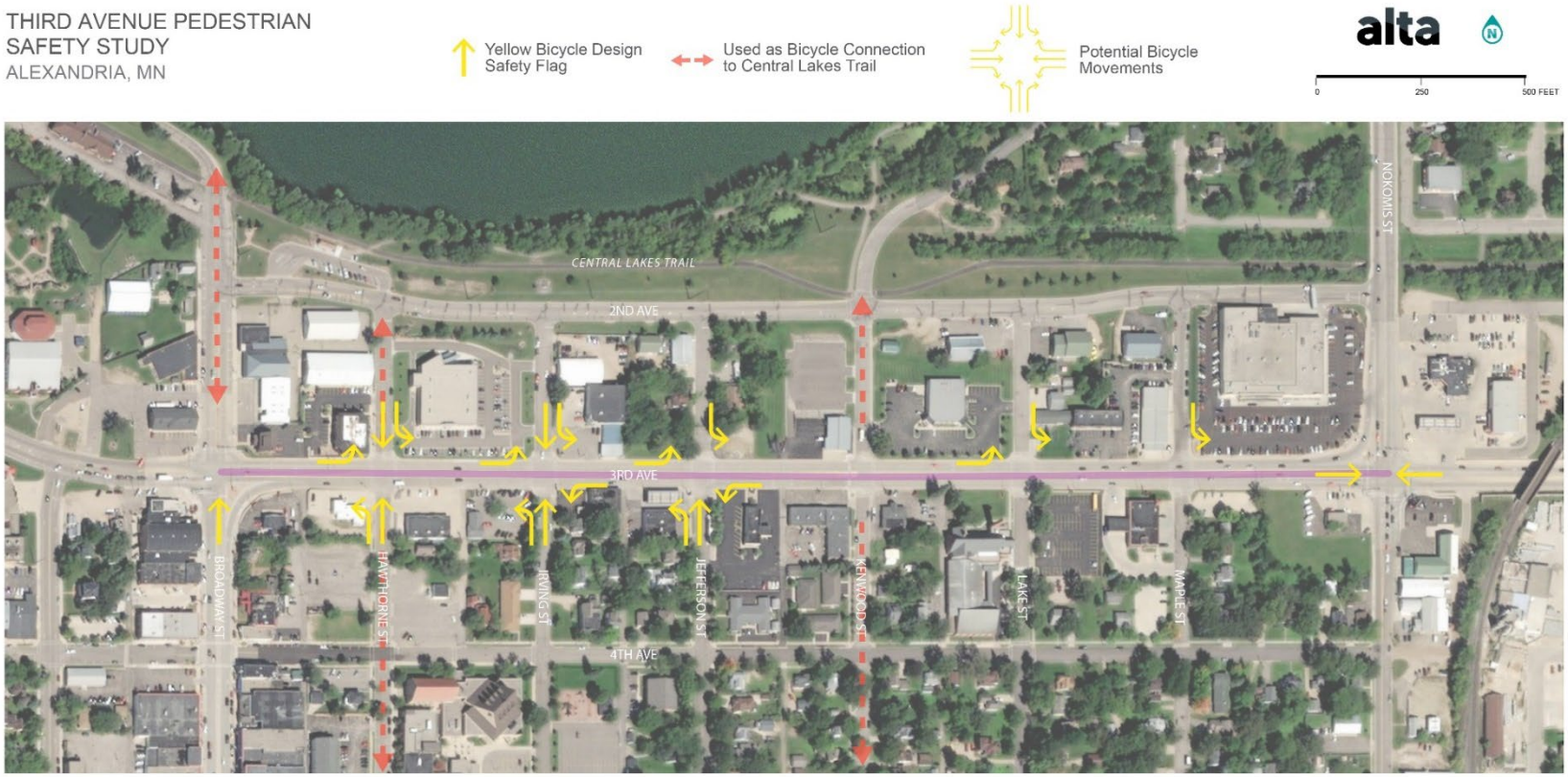

Figure 9. Bicycle Movements with a High Number of Yellow Bicycle Design Safety Flags

Design Flags Conclusion

The existing conditions identified in this memo highlight major considerations for safety improvements moving forward. Specific considerations include:

- Third Avenue is seen as a barrier for people walking and bicycling between the neighborhoods around downtown and the recreational opportunities to the north of the corridor along the trail and lake.
- Third Avenue is significant for both local traffic serving destinations on and near the project corridor, as well as regional traffic connecting to destinations further north along Highway 29.
- Existing pedestrian infrastructure is uncomfortable to use as it is too narrow, lacks a buffer from traffic, and has almost no green space to improve the pedestrian experience.
- Even marked crossings are uncomfortable due to the crossing distance, vehicle speeds, and visibility concerns at the ends of the corridor (due to traffic taking free rights) and Hawthorne Street (due to slope).
- The most challenging crossings for people walking and biking occur at Broadway Street, Hawthorne Street, and Nokomis Street.

Additional issues are summarized in the map in Figure 10.

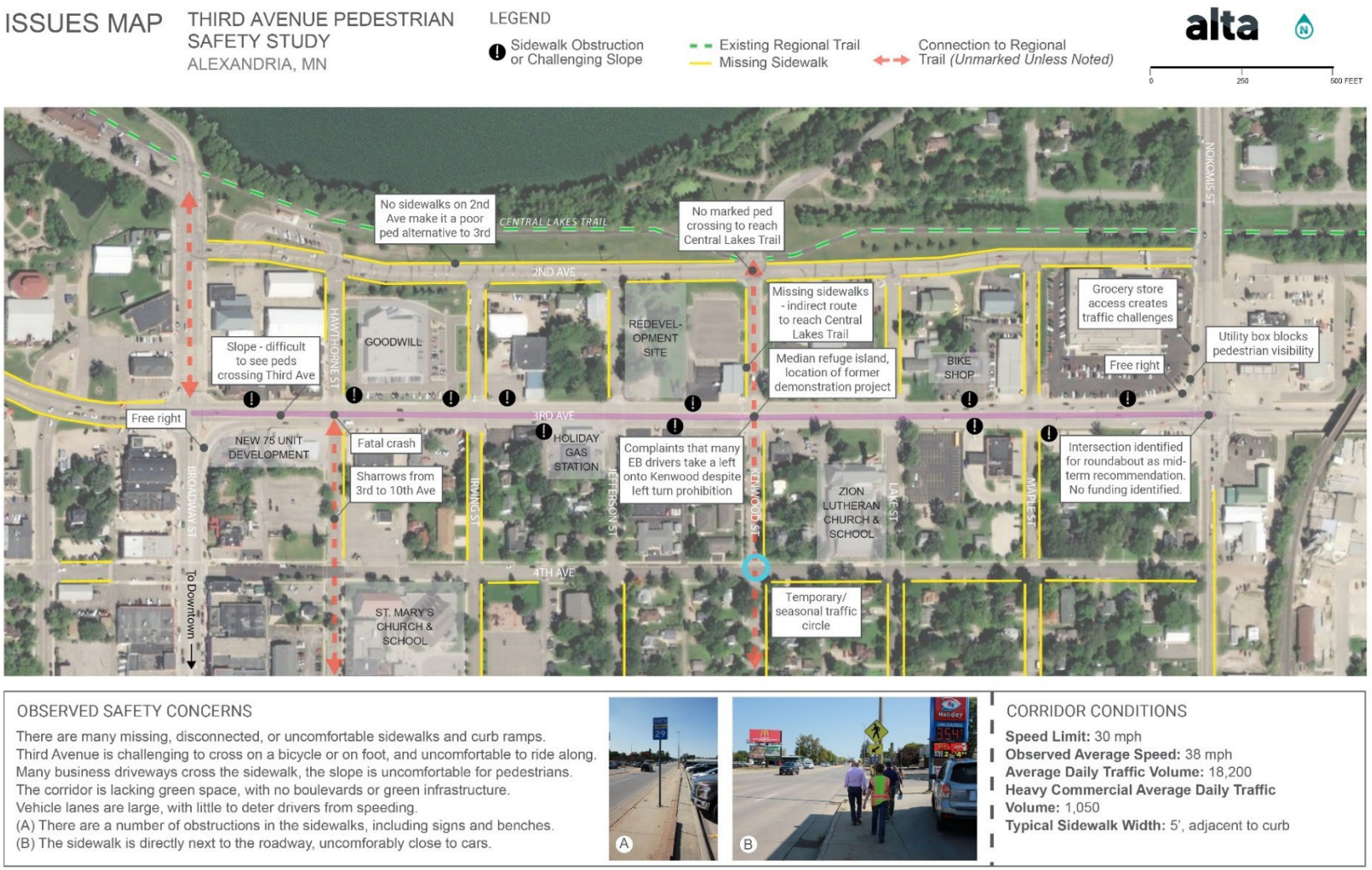

Figure 10. Summary Map of Issues Along the Project Corridor

Crash Analysis

Approach

The Highway 29 corridor has unique safety challenges and a history of crashes. Outside of this seven-block segment, Highway 29 is a north-south roadway. Therefore, drivers are required to make one right and one left turn at each end of the segment in order to continue on Highway 29. With two lanes of traffic in each direction, that requires changing lanes somewhere in the corridor, increasing the potential for conflict between drivers. The amount of seasonal traffic on this corridor creates additional activity, often with drivers unfamiliar with the location.

The crash analysis examines the amount, type and severity of crashes along Third Avenue, and is supported by quantitative analysis, observations of the corridor, and qualitative information gathered through a series of engagement events.

The project team obtained crash data from January 2012 to May 2022 from the State of Minnesota's crash database, MnCMAT2. Additional crash reports from incidents since the project began were also included in this safety analysis. The following summary examines crashes by mode, severity and crash types, and looks at the common contributing factors to crashes along the corridor.

Findings

From January 2012 to May 2022 there were 156 total crashes on the corridor, identified by mode in Table 2. The total number of crashes is slowly decreasing over time, as shown in Figure 11, but the number of crashes resulting in injury has remained relatively constant. Figure 12 shows the geographic distribution of crashes along the project corridor.

Table 2. Crash Severity by Mode (Where Identified)

Mode	Fatality	Serious Injury	Minor Injury	Possible Injury	Property Damage Only	Total Crashes
Pedestrian	1	0	2	1	0	4
Bicyclist	0	0	4	1	1	6
Motor Vehicle Driver	0	1	10	38	83	132

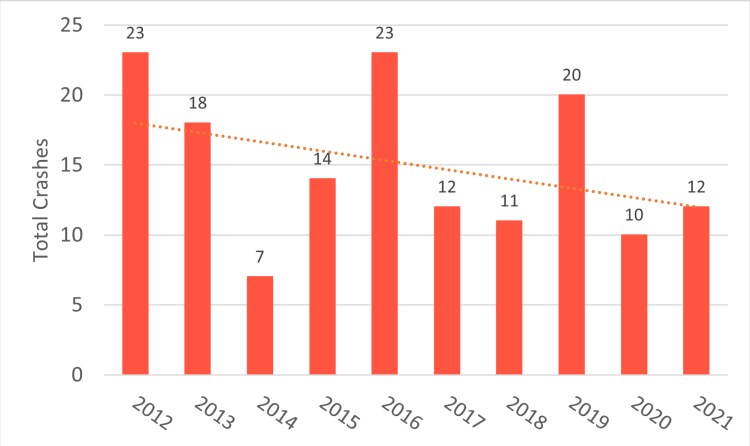

Figure 11. Trend in Crash Numbers in the Project Corridor over Time

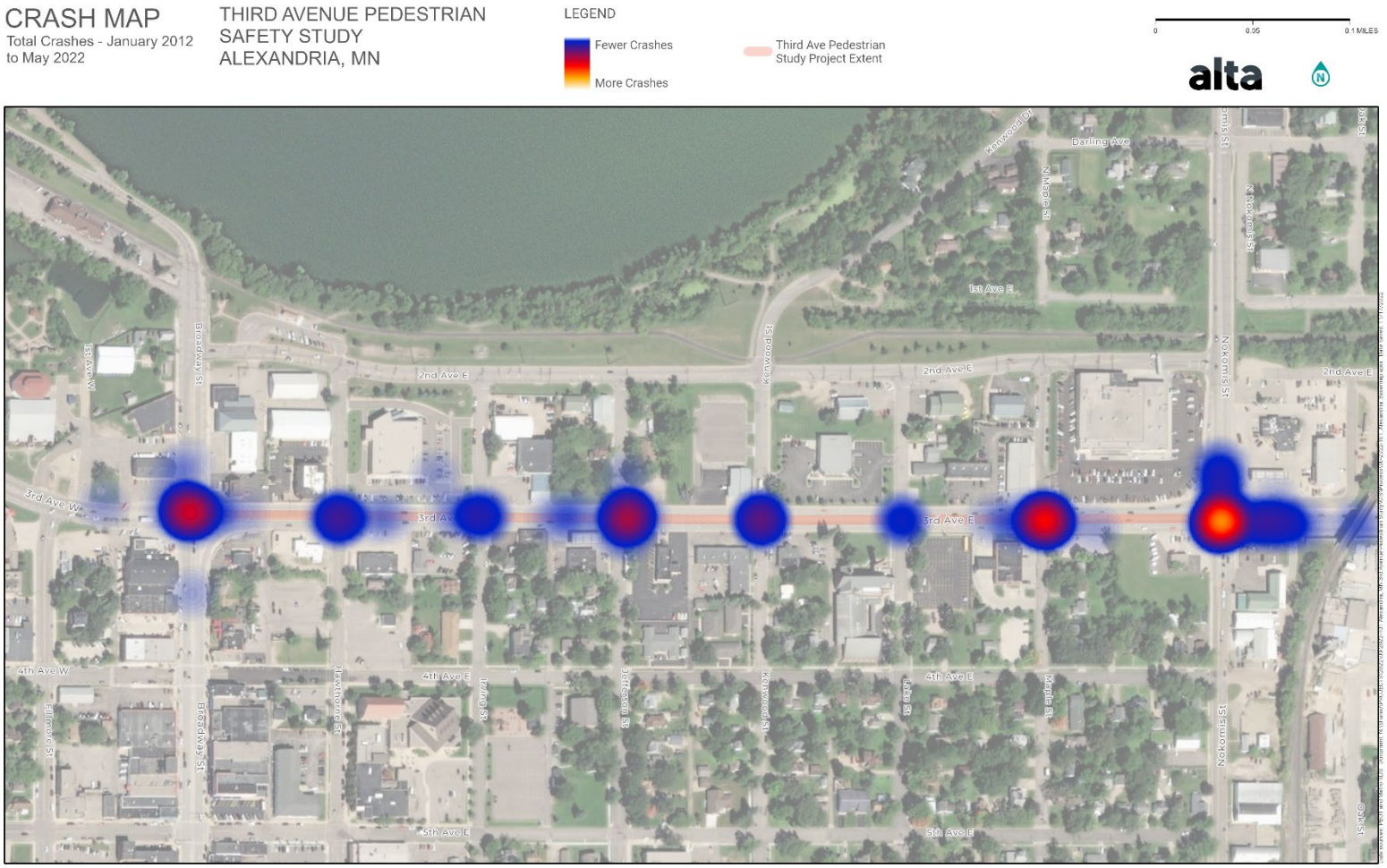

Figure 12. Total Crashes Along the Project Corridor

Crash Severity

Of the 156 crashes along the project corridor, two crashes involved fatal or serious injuries and 61 involved a minor or possible injury. Hawthorne Street was the intersection with the highest concentration of severe crashes (shown in Figure 13), including the corridor fatality.

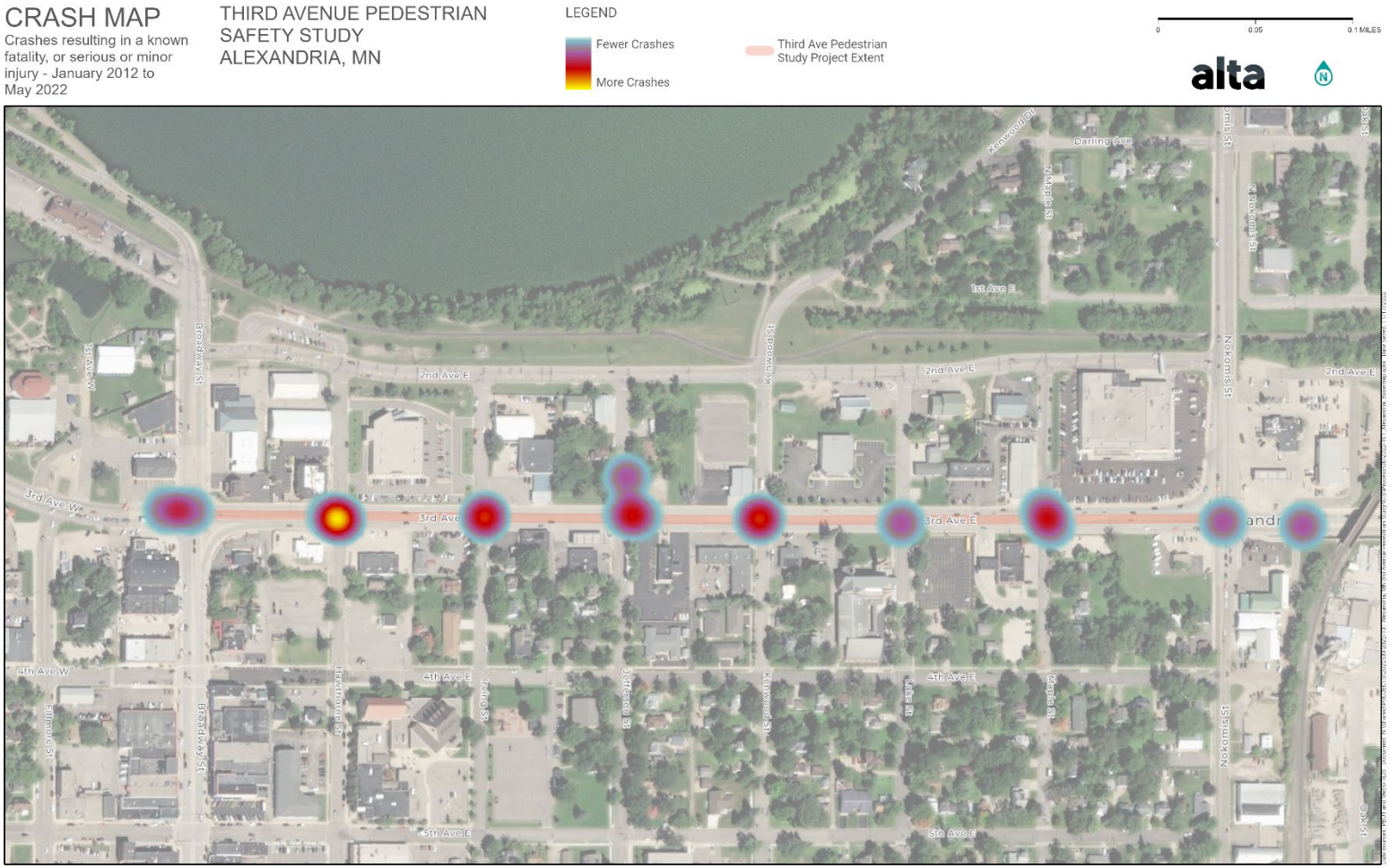

Figure 13. Crashes Resulting in a Known Fatality or Serious or Minor Injury

Crash Types and Factors

The most common crash type along the project corridor were right-angle crashes, accounting for 35% of total crashes. The concentration of right-angle crashes is the highest at Third Avenue and Maple Street, followed by Third Avenue and Nokomis (shown in Figure 14). These crashes are one of the most dangerous crash types, and should inform future corridor design.

Figure 14. Right-Angle Crashes Along the Project Corridor

In 30% of crashes, drivers were preparing to take or in the process of taking a left turn (shown in Figure 15). This was especially prevalent on the ends of the corridor at Third Avenue and Broadway/Nokomis Streets, where drivers are required to turn to continue on Highway 29. Left-turn crashes were also present throughout the project corridor at both Jefferson Street and Maple Street, where drivers turn to reach the Holiday gas station or Elden's grocery store, respectively.

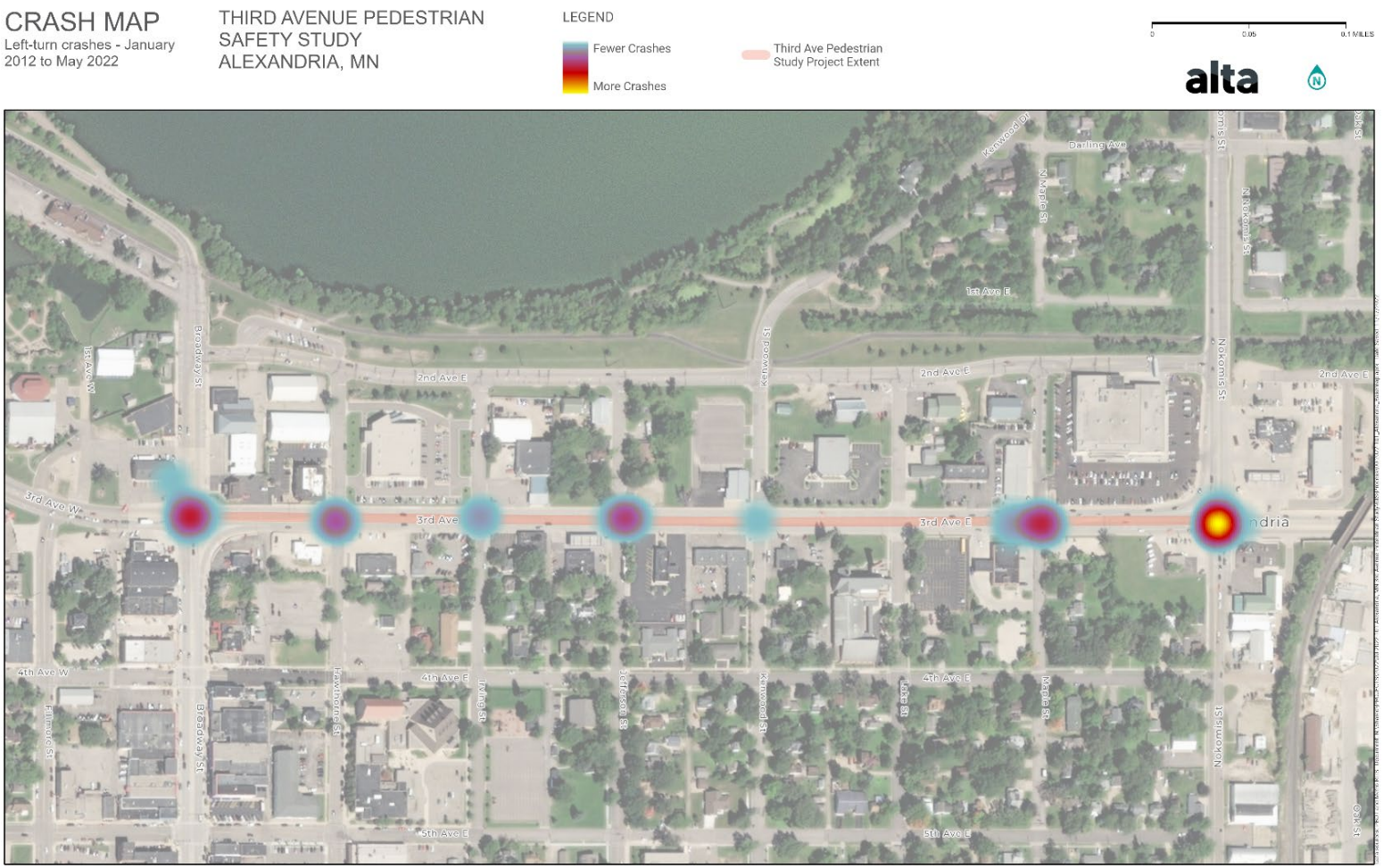

Figure 15. Left-Turn Crashes Along the Project Corridor

Pedestrian and Bicycle Crashes

Understanding the location and circumstances of pedestrian and bicycle crashes along the corridor is important for improving pedestrian safety on Third Avenue. The 10 crashes involving walking and biking were spread throughout the corridor, not clustered around any particular intersections. Of these, 90% resulted in an injury or fatality compared to 37% of motor vehicle crashes. This is consistent with crash trends nationally, as vulnerable users are more likely to be seriously injured or killed in a crash than a driver.

It is important to note with all crash analysis that we do not have quantitative data for "near-misses," where people walking and biking felt they had close calls with drivers. However, that qualitative data was obtained through public engagement, including focus groups and survey feedback with people who frequent the corridor. From those conversations we know that people are concerned about a "double threat[1]" when using existing crossing infrastructure on Third Avenue, especially at Kenwood Street. A number of rear-end crashes and one pedestrian crash occurred at Kenwood because of inattentive drivers not reacting appropriately to a vehicle yielding in advance of the crosswalk, or a pedestrian in the crosswalk.

A number of pedestrian and bicycle crashes were also caused by turning movements, and misread visual cues between drivers and people biking on the sidewalk. Through public engagement we heard that, while some people driving take circuitous routes to avoid left turns onto Third Avenue, many people take (fast) left turns off Third Avenue that are not permitted (see Figure 16). This makes it challenging for people walking to feel comfortable, feeling like drivers are paying more attention to oncoming vehicle traffic than whether there is a pedestrian crossing through their turning path.

Figure 16. Imagery Captured from Google Maps Streetview of a Driver Turning Left onto Kenwood Street, Despite the Signed Left-Turn Restriction

[1] Double-threats are situations where a vehicle in the outside of two traffic lanes stops for a pedestrian to cross, but a driver on the inside lane does not see the pedestrian, and proceeds through the intersection (sometimes swerving around the stopped vehicle), posing a safety risk to the pedestrian.

Crash Analysis Conclusion

This safety analysis highlights the need for both intersection and corridor-based safety improvements. The level of crash severity at Third Avenue and Hawthorne Street is important to address, as well as turning movements at Jefferson and Maple Streets. However, the prevalence of crashes along the project extent show that safety is a corridor-wide issue, requiring more than a spot solution.

Important safety analysis takeaways that will inform concept alternatives for the corridor include:

- Bicycle and pedestrian crashes were more likely to result in an injury or fatality than vehicle crashes (90% versus 37%)
- 35% of crashes were angle crashes
- 30% of crashes involved a left turn
- “Near-misses” from double-threats at Kenwood Street are a concern for people walking and biking

Chapter 3. Traffic Analysis

Existing Traffic Conditions

The study area in consideration is Third Avenue (Highway 29) between the intersections of Broadway Street and Nokomis Street in Alexandria, MN. On average, Third Avenue has a 5-lane cross section; two travel lanes in each direction and a two-way left-turn lane. The section of Third Avenue under study is part of the arterial Highway 29, which continues south at the intersection of Broadway Street and Highway 29 continues north at the intersection of Nokomis Street. There is an existing pedestrian crossing on the west side of the Kenwood Street intersection. Additionally, there is a trail connection on Kenwood Street one block north of the study corridor.

Figure 17 shows a map view of the study area, highlighting intersections considered in the traffic analysis:

- Broadway Street (Signal)
- Hawthorne Street
- Kenwood Street
- Maple Street
- Nokomis Street (Signal)

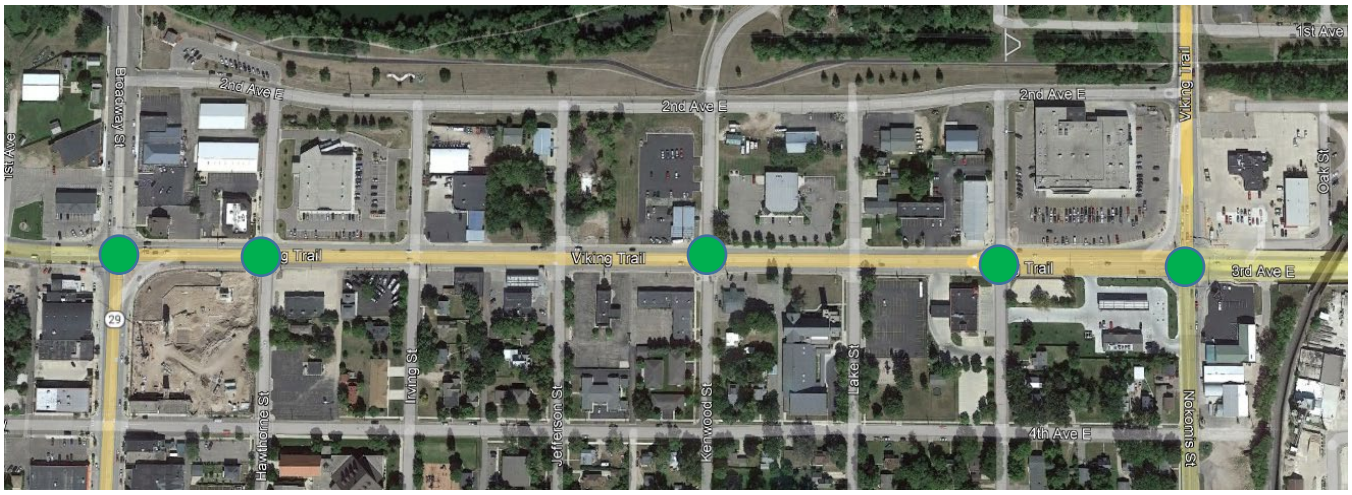

Figure 17. Project Study Area and Intersections Included in Traffic Analysis

At the intersection of Third Avenue and Broadway Street, the eastbound direction begins as one lane and opens up to a 100-foot left turn lane, a through lane, and a 270-foot right turn lane. The westbound direction begins as two lanes with the outer lane becoming a shared through/right turn lane and the inner lane becoming a left turn lane. An additional 200-foot left turn lane is provided. The northbound direction is two lanes where the inner lane opens into a 120-foot left turn lane, a through lane, and the outside lane becomes a free right turn lane that adds an additional lane in the eastbound direction along Third Avenue. The southbound direction is one lane that opens up into a 150-foot left turn lane, a shared through/right turn lane. All left turn phases are protected-permissive.

Figure 18 shows a map view of the intersection of Third Avenue at Broadway Street.

Figure 18. Intersection of Third Avenue at Broadway Street

The intersection of Third Avenue at Kenwood Street has two lanes in the east bound and westbound direction. The westbound direction has a left turn lane striped in the two-way left-turn lane and the eastbound direction has a striped crosswalk with a protected pedestrian refuge in the median. In regards to the pedestrian crossing, the eastbound direction restricts left turns. The northbound and southbound directions are a single lane with shared left/through/right turn lanes.

At the intersection of Third Avenue and Nokomis Street, the westbound lane begins as a single lane but opens up into a 350-foot left turn lane and a shared through/left turn lane. The eastbound direction begins as two lanes where the inner lane becomes a left turn lane and the outside lane becomes a through/right turn lane. An additional 285-foot left turn lane is provided. The northbound lane begins as two lanes and opens up into a 110-foot left turn lane, two through lanes, and a 75-foot right turn lane. The southbound lane begins as one lane and opens into a free right turn lane that adds an additional lane on Third Avenue in the westbound direction, a through lane, and a 115-foot left turn lane. The eastbound and westbound left turns are protected only while the northbound and southbound left turn movements are protected-permissive.

Figure 19 shows a map view of the intersection of Third Avenue at Nokomis Street.

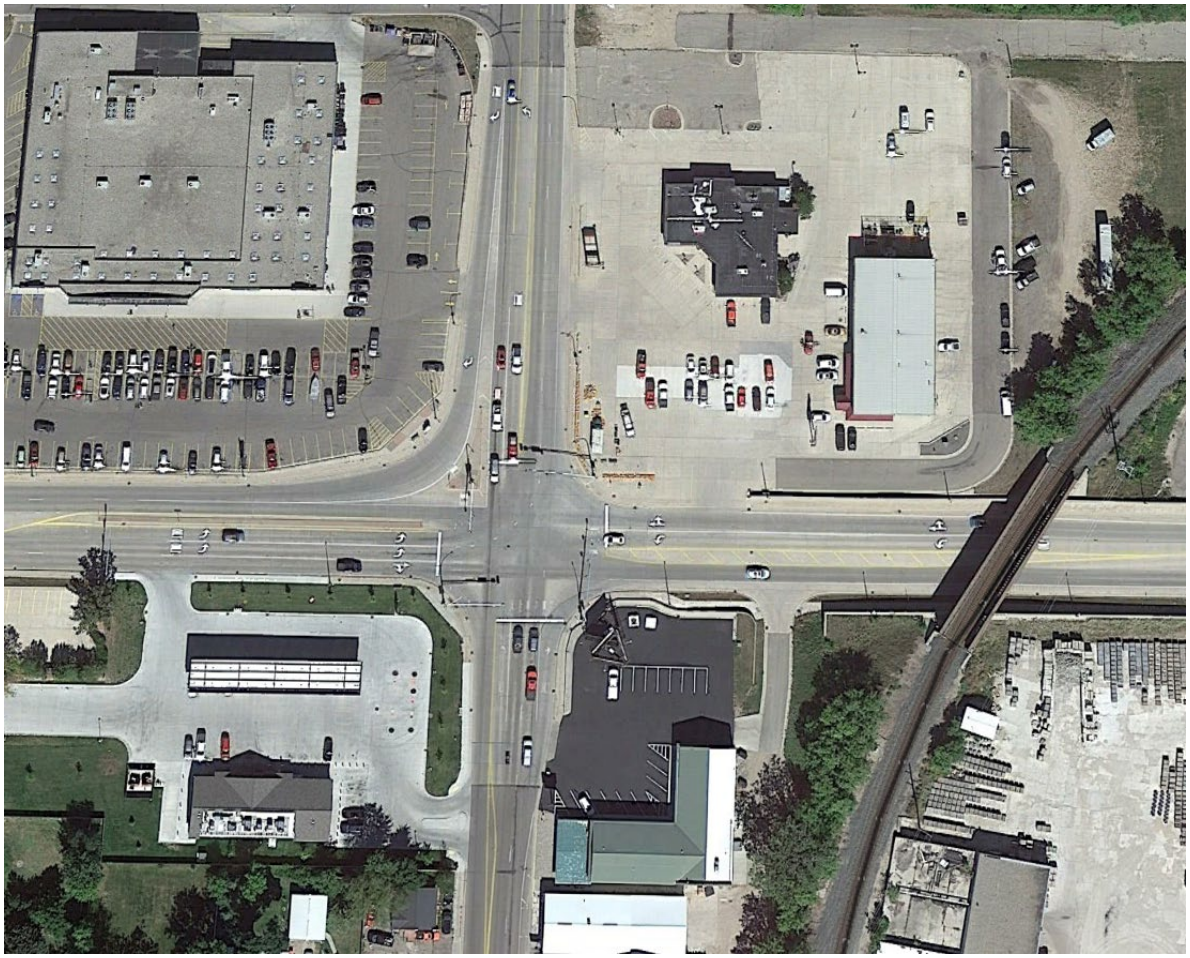

Figure 19. Intersection of Third Avenue and Nokomis Street

Traffic Analysis

The Level of Service (LOS), delay, and 95th percentile queues along Third Avenue were analyzed using Synchro 11 and the accompanying microsimulation program SimTraffic. All values reported use the Highway Capacity Manual 6 outputs. The AM counts were collected from September 28th through October 6th. PM counts were collected from October 26th through November 5th. The AM and PM peak hours are from 7:30-8:30 and 16:30-17:30, respectively.

The intersection of Third Avenue and Broadway Street operates on a Time of Day (TOD) schedule with an AM peak signal plan and a PM peak signal plan; 100 second and 116 second cycle lengths respectively. The intersection of Third Avenue at Nokomis operates on the same schedule for the entire day with a 160 second cycle length. Table 3 reports the AM and PM LOS and delay in seconds per vehicle for the existing conditions. Table 4 reports the 95th percentile queues in feet for all movements at the study intersections.

Table 3. Existing Conditions - Intersection LOS and Delay

Intersection *Traffic Control*	Weekday AM LOS[1]	Weekday AM Delay[2]	Weekday PM LOS[1]	Weekday PM Delay[2]
3rd Ave and Broadway St				
Traffic Signal	*C*	*26.5*	*C*	*31.1*
3rd Ave and Hawthorne St				
Eastbound Left Turn	*A*	*9.6*	*A*	*9.1*
Westbound Left Turn	*B*	*10.3*	*B*	*10.5*
Northbound	*C*	*18.9*	*D*	*26.5*
Southbound	*B*	*11.3*	*D*	*33.1*
3rd Ave and Kenwood St				
Westbound Left Turn	*A*	*9.6*	*B*	*11.4*
Northbound	*B*	*11.3*	*C*	*16.2*
Southbound	*C*	*15.1*	*B*	*14.6*
3rd Ave and Maple St				
Eastbound Left Turn	*B*	*11.8*	*A*	*0.9*
Westbound Left Turn	*A*	*8.7*	*A*	*0.1*
Northbound	*C*	*22.9*	*F*	*53.8*
Southbound	*C*	*19.7*	*D*	*29.3*
3rd Ave and Nokomis St				
Traffic Signal	*E*	*64.4*	*E*	*55.5*

1 – Level of Service
2 – Delay in seconds per vehicle

Table 4. Existing Conditions 95th Percentile Queues

Intersection *Traffic Control*	Weekday AM Left	Weekday AM Thru	Weekday AM Right	Weekday PM Left	Weekday PM Thru	Weekday PM Right
3rd Ave and Broadway St						
Eastbound	*41*	*253*	*87*	*67*	*294*	*65*
Westbound	*133*	*175*	*-*	*131*	*247*	*-*
Northbound	*107*	*66*	*-*	*213*	*307*	*-*
Southbound	*67*	*149*	*-*	*60*	*142*	*-*
3rd Ave and Hawthorne St						
Eastbound	19	4	*-*	*47*	*20*	*-*
Westbound	*54*	*28*	*-*	*44*	*13*	*-*
Northbound	*-*	*42*	*-*	*-*	*56*	*-*
Southbound	*-*	*12*	*-*	*-*	*37*	*-*
3rd Ave and Kenwood St						
Eastbound	*-*	*3*	*-*	*-*	*-*	*-*
Westbound	*28*	*-*	*-*	*25*	*-*	*-*
Northbound	*-*	*33*	*-*	*-*	*34*	*-*
Southbound	*-*	*37*	*-*	*-*	*45*	*-*
3rd Ave and Maple St						
Eastbound	*46*	*4*	*-*	*53*	*39*	*4*
Westbound	*15*	*-*	*-*	*8*	*6*	*-*
Northbound	*-*	*34*	*-*	*-*	*50*	*-*
Southbound	*-*	*53*	*-*	*-*	*75*	*-*
3rd Ave and Nokomis St						
Eastbound	*164*	*284*	*-*	*317*	*324*	*-*
Westbound	*330*	*579*	*-*	*126*	*374*	*-*
Northbound	*57*	*108*	*44*	*101*	*213*	*71*
Southbound	*132*	*253*	*-*	*140*	*207*	*-*

The above results indicate that the intersection of Third Avenue and Nokomis Street has a high delay and long queues, though none of the queue lengths spill into adjacent intersections. This could be attributed to the signal timings for the intersection operating at a 160 second cycle length based on the max times provided. A cycle length of this nature is rather long for the number of vehicles at the intersection and could be causing a higher delay due to long wait times at the signal.

In addition, the high delay at the Nokomis Street intersection adversely affects the intersection of Third Avenue and Maple Street. The PM delay for the northbound movement is at a LOS F (53.8 sec/veh) and could be attributed to queueing at the adjacent intersection.

Chapter 4. Alternatives Assessment

Key Priorities for Alternatives Development

Priorities from Safety Analysis

Based on the safety analyses that were conducted, it is clear that the prevalence of crashes along the study area is a corridor-wide issue, requiring more than a spot solution. Several key locations that were noted as being particularly unsafe include:

- Third Avenue and Hawthorne Street: The combination of a steep slope and poor visibility make it difficult for pedestrians to safely cross the roadway here.
- Third Avenue and Jefferson Street: Many crashes occur here as motorists turn into the Holiday gas station.
- Third Avenue and Maple Street: Many crashes, including a high percentage of angle crashes, involve motorists turning to access or leave the grocery store (Elden's).

Crash Analysis

When it comes to crashes on the corridor, bicycle and pedestrian crashes were more likely to result in an injury or fatality than vehicle crashes (90% versus 37%). Of the crashes that occurred along the corridor, 35% were angle crashes and 30% of crashes involved a motorist turning left.

Priorities from Public Engagement

Many common themes arose throughout the public engagement process, one of which was that this corridor is uncomfortable for everyone passing through, regardless of mode. Users of all modes worry about poor driver behavior, including distracted driving, driving over the speed limit, and ignoring turn prohibitions (especially at Kenwood Street).

Third Avenue is generally seen as a barrier for people walking and bicycling between the neighborhoods around downtown and the recreational opportunities to the north of the corridor along the Central Lakes Trail and lake. The pedestrian environment along the corridor is uncomfortable and feels dangerous to many users, especially those with children or mobility devices because it is too narrow, lacks a buffer from traffic, and has almost no green space to improve the experience.

When it comes to crossing Third Avenue, even marked crossings are uncomfortable due to the crossing distance, vehicle speeds, and visibility concerns at the ends of the corridor (due to traffic taking free rights) and Hawthorne Street (due to slope). The most challenging crossings for those walking and biking occur at Broadway Street, Hawthorne Street, and Nokomis Street. Those who bike and walk on the corridor also noted that "near-misses" from double-threats at Kenwood Street are a major concern.

While there are many key destinations along the corridor, stakeholders engaged in the process were mostly open to limiting some turning/through movements to simplify the corridor and make it feel safer for all users.

Assumptions

Before describing recommendations, the project team identified a few important considerations that provide context for potential solutions on the project corridor. (Additional planning context can be found in Appendix A.)

First, there are long-term capital improvement projects already on the City of Alexandria and MnDOT's radar that should be prioritized in future infrastructure investments. These improvements complement any proposed action on Third Avenue, and help to calm traffic or improve biking and walking access at either end of the corridor. Projects include the "Missing Link" on Broadway Street that would connect people walking and biking south of Third Avenue with the Central Lakes Trail. The City already conducted a well-received demonstration project for protected bike lanes on this segment in 2016, however they are waiting on additional improvements to Third Avenue before encouraging people to cross at Broadway Street.

The other major project is the addition of a multi-lane roundabout on Third Avenue at Nokomis Street to better regulate the flow of traffic moving north-south along Highway 29. The 2019 Trunk Highway 29 Corridor Study identified a roundabout as the preferred solution for minimizing congestion at this location, shown in Figure 20. A roundabout would allow for additional geometric improvements on the east end of the corridor that would complement traffic calming along Third Avenue, as less space would be required for vehicle queuing than current conditions call for.

Figure 20. Recommended Roundabout Layout at Third Avenue and Nokomis Street (Trunk Highway 29 Corridor Study)

The second consideration for corridor recommendations is that there should be consistency with Highway 29 to the north and south. Long-term changes to the road layout, such as lane alterations, should feel consistent as drivers and non-motorized users move between the north-south segments of Highway 29 and Third Avenue. A four-to-three lane conversion, for example, may be a viable solution for calming traffic in the long-term. However, it should be implemented in conjunction with signal, roundabout or lane changes transitioning on either end of the corridor.

Finally, the project team acknowledges that there is still engagement required with local businesses, residents and other corridor stakeholders before implementing any changes on Third Avenue. With Second and Fourth Avenues providing access to businesses and community destinations along the corridor, changes to access from Third Avenue will not prevent patrons or visitors from reaching these establishments. However, there may be additional traffic flow considerations that affect how these parallel streets are used and promoted among community members.

Overall Recommendation Theme – Corridor Simplification

Currently, there is no friction on the corridor to prevent drivers from speeding, and the space between speeding vehicles and pedestrians makes for an uncomfortable experience. Additionally, there are commonly unexpected vehicle movements from motorists not adhering to turning restrictions and trying to make turns between fast-moving traffic. This creates an uncomfortable experience for every mode of travel along Third Avenue.

To address these concerns and make the corridor feel safer for all modes of travel, corridor simplification, or lessening the number of movements taking place by motorists along the roadway, can be used. Simplifying the corridor allows for more pedestrian space, fewer conflict points, and a more pleasant experience for all users. The following treatment options employ corridor simplification strategies in different ways, with each treatment addressing the major themes pulled from the safety analysis and public input process. The three treatments range from simple, quick build techniques to full median construction, thus varying in the level of investment and timeline required for implementation.

Recommended Concepts

1. Quick Build Corridor Simplification

The Vision

Option 1 uses low-cost materials to close off the middle turn lane at Maple, Kenwood, and Hawthorne Streets, leaving Irving, Jefferson and Lake Streets accessible. The two-way left-turn lanes would remain along Third Avenue in between these locations. Additionally, a quick build two-way bikeway connection to the regional trail is added on the west side of Kenwood, north of Third Avenue, replacing one side of street parking. A rendering of this option is shown in Figure 21 below, with a layout shown in Figure 22.

This is the most time- and cost-effective concept, as it uses low-cost materials such as tape, paint, and plastic bollards, rather than concrete or more costly options.

Figure 21. Rendering of Option 1 - Quick Build Corridor Simplification

Figure 22. Layout for Option 1 - Quick Build Corridor Simplification

Why It's an Option

Over one third of crashes on the corridor were angle crashes involving a turning vehicle. Physically preventing turns at designated intersections will help limit these crashes while also preventing unanticipated dangers to crossing pedestrians; especially where turns are currently prohibited by signage but still physically feasible. Simplifying intersection movements also makes it easier for those crossing the street to focus on oncoming traffic and find appropriate crossing gaps.

Additionally, the vertical bollards that will close off these turns and limit access to the middle turn lane also add visual friction to the corridor, encouraging slower driving speeds. Finally, the Central Lakes Trail is a major destination north of Third Avenue, with no existing protected bicycle facility to reach it. By removing a parking lane and replacing it with a protected bicycle facility, more people will have comfortable access to this community destination.

Traffic Analysis

Overall traffic impacts of this option are negligible along the corridor, with slight improvements for some movements. The northbound and southbound movements along the corridor generally improve from the existing condition with the restrictions to left turns and through movements in Option 1. The intersections of Third Avenue at Broadway Street and at Nokomis Street maintain the existing condition in Option 1, as do the left turns at the intersection of Third Avenue and Hawthorne, Kenwood, and Maple Streets. The 95th percentile queues with this option vary based on the traffic modeling scenarios, but remain approximately the same as the existing conditions.

Table 5 reports the AM and PM Level of Service (LOS) and delay in seconds per vehicle for Option 1. Table 6 reports the 95th percentile queues in feet for all movements at the study intersections.

Table 5. Option 1 - Intersection LOS and Delay

Intersection *Traffic Control*	Weekday AM LOS[1]	Weekday AM Delay[2]	Weekday PM LOS[1]	Weekday PM Delay[2]
Third Ave and Broadway St				
Traffic Signal	*C*	*26.5*	*C*	*31.1*
Eastbound	*C*	*22.1*	*C*	*29.9*
Westbound	*B*	*15.4*	*C*	*23.9*
Northbound	*C*	*33.6*	*D*	*37.6*
Southbound	*E*	*56.0*	*D*	*48.1*
Third Ave and Hawthorne St				
Eastbound Left Turn	*A*	*9.6*	*A*	*9.1*
Westbound Left Turn	*B*	*10.3*	*B*	*10.5*
Northbound	*B*	*11.6*	*B*	*12.9*
Southbound	*B*	*11.3*	*B*	*10.7*
Third Ave and Kenwood St				
Westbound Left Turn	*A*	*9.6*	*B*	*11.4*
Northbound	*B*	*11.3*	*B*	*13.6*
Southbound	*B*	*12.2*	*B*	*11.1*
Third Ave and Maple St				
Eastbound Left Turn	*B*	*11.8*	*A*	*9.8*
Westbound Left Turn	*A*	*8.7*	*B*	*10.2*
Northbound	*B*	*10.4*	*B*	*12.5*
Southbound	*B*	*14.0*	*B*	*11.9*
Third Ave and Nokomis St				
Traffic Signal	*E*	*64.4*	*E*	*55.5*
Eastbound	*D*	*50.6*	*E*	*70.1*
Westbound	*F*	*124.9*	*E*	*79.7*
Northbound	*C*	*22.4*	*C*	*28.8*
Southbound	*C*	*25.5*	*C*	*27.4*

1 – Level of Service; 2 – Delay in seconds per vehicle

Table 6. Option 1 - 95th Percentile Queues

Intersection ***Traffic Control***	Weekday AM Left	Weekday AM Thru	Weekday AM Right	Weekday PM Left	Weekday PM Thru	Weekday PM Right
Third Ave and Broadway St						
Eastbound	*46*	*279*	*86*	*67*	*323*	*64*
Westbound	*117*	*197*	*-*	*118*	*253*	*-*
Northbound	*109*	*49*	*-*	*211*	*286*	*-*
Southbound	*72*	*156*	*-*	*57*	*120*	*-*
Third Ave and Hawthorne St						
Eastbound	*-*	15	*-*	*-*	*51*	*-*
Westbound	*58*	*44*	*-*	*42*	*-*	*-*
Northbound	*-*	*-*	*42*	*-*	*-*	*58*
Southbound	*-*	*-*	*15*	*-*	*-*	*38*
Third Ave and Kenwood St						
Eastbound	*-*	*-*	*-*	*-*	*-*	*-*
Westbound	*26*	*-*	*-*	*25*	*-*	*-*
Northbound	*-*	*-*	*29*	*-*	*-*	*32*
Southbound	*-*	*-*	*37*	*-*	*-*	*41*
Third Ave and Maple St						
Eastbound	*49*	*-*	*-*	*55*	*40*	*-*
Westbound	*9*	*3*	*-*	*9*	*-*	*-*
Northbound	*-*	*-*	*34*	*-*	*-*	*51*
Southbound	*-*	*-*	*52*	*-*	*-*	*54*
Third Ave and Nokomis St						
Eastbound	*173*	*275*	*-*	*308*	*317*	*-*
Westbound	*388*	*779*	*-*	*172*	*492*	*-*
Northbound	*49*	*107*	*48*	*114*	*211*	*84*
Southbound	*133*	*265*	*39*	*137*	*207*	*-*

2. Retrofit Corridor Simplification

The Vision

Option 2 is a medium-term option for simplifying the corridor. This concept involves adding raised concrete medians to prohibit turning movements for north-south traffic from Third Avenue onto Hawthorne, Kenwood and Maple Streets. Additional median space should be added throughout the corridor with as much green space in the medians as feasible. The length of these medians should be maximized based on space needed for turning movements. As part of these medians, pedestrian refuges should be added to accommodate pedestrians crossing at the three intersections, as well as a pedestrian crossing signal (either a Pedestrian Hybrid Beacon (HAWK) or a Rectangular Rapid Flashing Beacon (RRFB), depending on warrants and other factors at Kenwood Street to make crossing pedestrians more visible to motorists.

Additionally, just like in Option 1, a quick build two-way bikeway connection to the regional trail is added on the west side of Kenwood, north of Third Avenue, replacing one side of street parking.

A rendering of this option is shown in Figure 23, with a layout shown in Figure 24.

Figure 23. Rendering of Option 2 - Retrofit Corridor Simplification

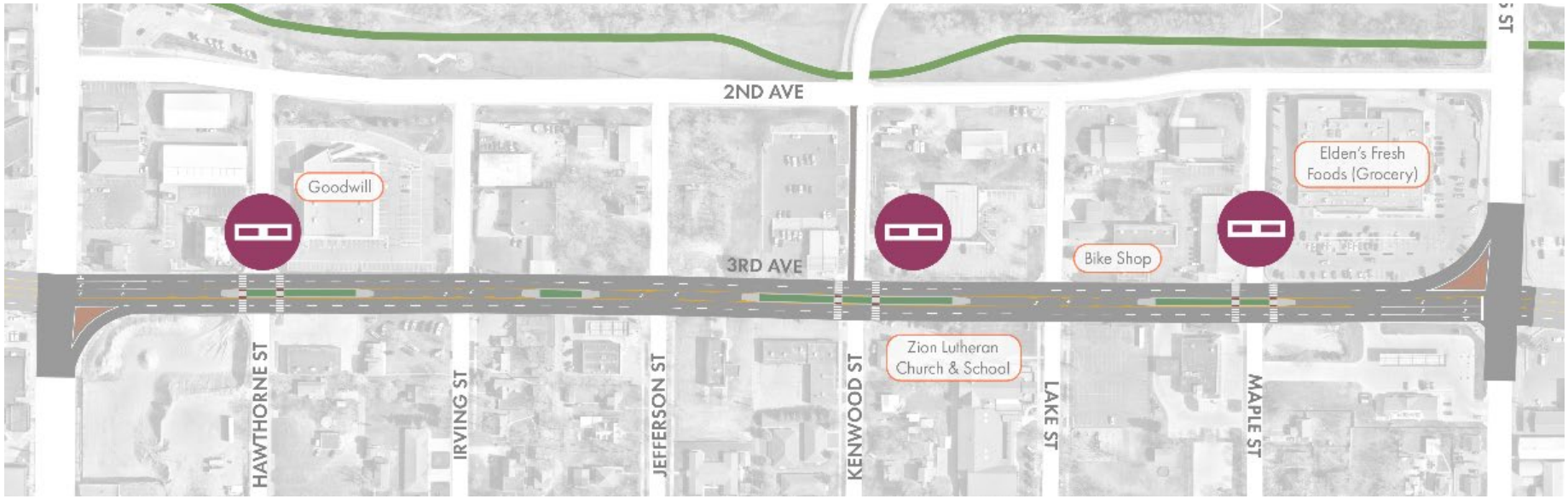

Figure 24. Layout of Option 2 - Retrofit Corridor Simplification

Why It's an Option

Option 2 provides the same reduction in potential angle crashes from dangerous and prohibited turns, while improving crossing opportunities for people walking and biking across the corridor and slowing traffic speeds. More permanent materials, such as concrete medians, provide opportunities for additional corridor enhancements beyond these geometric changes. For example, the median provides create space for additional corridor greening if planted with native grasses and other landscaping, an improvement that was mentioned as highly desired during the public engagement process. Concrete medians also create a separated refuge space for pedestrians crossing Third Avenue.

The addition of a HAWK or RRFB signal will bring even more attention to people walking or rolling looking to cross Third Avenue, creating a much more comfortable crossing environment. This improvement, with a quick build protected bicycle facility, will greatly improve access for people walking and biking to the Central Lakes Trail to the north.

Traffic Analysis

As with Option 1, the northbound and southbound movements along the corridor generally improve from the existing condition with the restrictions to left turns and through movements in Option 2. The intersections of Third Avenue at Broadway Street and at Nokomis Street maintain the existing condition in Option 2, as do the left turns at the intersection of Third Avenue and Hawthorne, Kenwood, and Maple Streets. The 95th percentile queues with this option vary based on the traffic modeling scenarios, but remain approximately the same as the existing conditions.

Table 7 reports the AM and PM LOS and delay in seconds per vehicle for Option 2. Table 8 reports the 95th percentile queues in feet for all movements at the study intersections.

Table 7. Option 2 - Intersection LOS and Delay

Intersection *Traffic Control*	Weekday AM LOS[1]	Weekday AM Delay[2]	Weekday PM LOS[1]	Weekday PM Delay[2]
Third Ave and Broadway St				
Traffic Signal	*C*	*26.5*	*C*	*31.1*
Eastbound	*C*	*22.1*	*C*	*29.9*
Westbound	*B*	*15.4*	*C*	*23.9*
Northbound	*C*	*33.6*	*D*	*37.6*
Southbound	*E*	*56.0*	*D*	*48.1*
Third Ave and Hawthorne St				
Eastbound Left Turn	*A*	*9.6*	*A*	*9.1*
Westbound Left Turn	*B*	*10.3*	*B*	*10.5*
Northbound	*B*	*11.6*	*B*	*12.9*
Southbound	*B*	*11.3*	*B*	*10.7*
Third Ave and Kenwood St				
Westbound Left Turn	*A*	*9.6*	*B*	*11.4*
Northbound	*B*	*11.3*	*B*	*13.6*
Southbound	*B*	*12.2*	*B*	*11.1*
Third Ave and Maple St				
Eastbound Left Turn	*B*	*11.8*	*A*	*9.8*
Westbound Left Turn	*A*	*8.7*	*B*	*10.2*
Northbound	*B*	*10.4*	*B*	*12.5*
Southbound	*B*	*14.0*	*B*	*11.9*
Third Ave and Nokomis St				
Traffic Signal	*E*	*64.4*	*E*	*55.5*
Eastbound	*D*	*50.6*	*E*	*70.1*
Westbound	*F*	*124.9*	*E*	*79.7*
Northbound	*C*	*22.4*	*C*	*28.8*
Southbound	*C*	*25.5*	*C*	*27.4*

Table 8. Option 2 - 95th Percentile Queues

Intersection ***Traffic Control***	Weekday AM Left	Weekday AM Thru	Weekday AM Right	Weekday PM Left	Weekday PM Thru	Weekday PM Right
Third Ave and Broadway St						
Eastbound	*22*	*258*	*83*	*52*	*296*	*67*
Westbound	*123*	*207*	*-*	*117*	*243*	*-*
Northbound	*102*	*56*	*-*	*212*	*268.*	*-*
Southbound	*82*	*161*	*-*	*53*	*129*	*-*
Third Ave and Hawthorne St						
Eastbound	*-*	14	*-*	*-*	*25*	*-*
Westbound	*60*	*-*	*-*	*16*	*-*	*-*
Northbound	*-*	*-*	*42*	*-*	*53*	*-*
Southbound	*-*	*-*	*8*	*-*	*36*	*-*
Third Ave and Kenwood St						
Eastbound	*-*	*-*	*-*	*-*	*-*	*-*
Westbound	*30*	*-*	*-*	*22*	*-*	*-*
Northbound	*-*	*-*	*26*	*-*	*34*	*-*
Southbound	*-*	*-*	*36*	*-*	*43*	*-*
Third Ave and Maple St						
Eastbound	*49*	*-*	*-*	*57*	*-*	*-*
Westbound	*11*	*3*	*-*	*11*	*4*	*-*
Northbound	*-*	*-*	*36*	*-*	*48*	*-*
Southbound	*-*	*-*	*54*	*-*	*59*	*-*
Third Ave and Nokomis St						
Eastbound	*161*	*264*	*-*	*295*	*302*	*-*
Westbound	*375*	*694*	*-*	*112*	*414*	*-*
Northbound	*51*	*110*	*45*	*110*	*222*	*91*
Southbound	*140*	*270*	*-*	*131*	*184*	*-*

3. Corridor Simplification with Lane Modifications

The Vision

Option 3, the most intensive option, involves the same concrete medians and signalized pedestrian crossing at Kenwood Street as Option 2, but includes two additional features to further simplify the corridor. The first feature is the closure of the outside travel lanes on both sides of Third Avenue. This would be done through the use of pre-cast concrete barriers, similar to parking stops. The barriers would be placed on the edge of the outside lane adjacent to the travel lane on each side, and would be strategically placed to maintain the right and left turn options at locations that aren't being close and guide motorists in turning slowly and safely onto the side streets. This could include leaving room for right turn lanes where needed. Within the closed lane, planter boxes could be placed to add additional greenery to the corridor.

The second added feature is the development of an Urban Smart Channel retrofit at the free right on Broadway Street heading north/east, and Nokomis Street heading south/west. This would slow traffic as it enters and exits the corridor, and provide safer crossing opportunities for people walking and biking. When entering the corridor from either side, the lanes coming from the Urban Smart Channel and the lane coming in straight would merge into one lane along most of Third Avenue, then open back up for two left turn lanes/queuing at the other end of the corridor.

Finally, just like in Option 1 and 2, a quick build two-way bikeway connection to the regional trail is added on the west side of Kenwood Street, north of Third Avenue, replacing one side of street parking.

A rendering of this option is shown in Figure 25, with a layout shown in Figure 26.

Figure 25. Rendering of Option 3 - Corridor Simplification with Lane Modifications

Figure 26. Layout of Option 3 - Corridor Simplification with Lane Modifications

Why It's an Option

The turning movement changes, median barriers, and protected bicycle facility have the same rationale as listed in the prior two concepts.

The Urban Smart Channels help to slow and control traffic in place of the existing free-right turns at locations that stakeholders repeatedly noted felt uncomfortable to cross. Directing traffic to merge out of these Urban Smart Channels into one lane of traffic reduces two concerns raised along the corridor. First, stakeholders noted that people drive "looking backwards" through the corridor, as they have to merge from the right lane to the left lane to continue north or south on Highway 29. There are many rear-end crashes along the corridor that would be eliminated with this traffic control change, and drivers approaching the crosswalk at Kenwood Street would not be preoccupied with navigating a lane change. The fatal pedestrian crash on this corridor was also attributed to looking in the rearview to navigate a lane change – a condition that would be eliminated with one lane of through traffic.

Second, stakeholders noted that some people speed through the free rights because there is nothing to slow them down. Meanwhile other drivers, not realizing they have a full receiving lane, slow down in anticipation of a merge that isn't immediately necessary. This range of understanding results in conflicts between drivers slowing down and speeding up while turning onto the corridor.

Traffic Analysis

At the intersections of Third Avenue with Broadway Street and Nokomis Street, delay increases slightly in Option 3 from the existing conditions. The PM condition increases by approximately 13 seconds at the intersection with Nokomis Street.

It should be noted that the intersections of Third Avenue at Broadway Street and Nokomis Street are already failing in specific movements. There is potential to improve delay through signal timing updates, as well as the potential future roundabout at Nokomis Street as proposed in the 2019 Trunk Highway 29 Corridor Study (for which there is no identified funding or timeline for implementation).

Table 9 reports the AM and PM LOS and delay in seconds per vehicle for Option 3. Table 10 reports the 95th percentile queues in feet for all movements at the study intersections.

Table 9. Option 3 - Intersection LOS and Delay

Intersection *Traffic Control*	Weekday AM LOS[1]	Weekday AM Delay[2]	Weekday PM LOS[1]	Weekday PM Delay[2]
Third Ave and Broadway St				
Traffic Signal	*C*	*26.7*	*C*	*31.2*
Eastbound	*C*	*23.5*	*C*	*30.7*
Westbound	*B*	*15.7*	*C*	*23.9*
Northbound	*C*	*33.6*	*D*	*37.6*
Southbound	*E*	*56.0*	*D*	*48.1*
Third Ave and Hawthorne St				
Northbound	*C*	*15.8*	*C*	*20.1*
Southbound	*C*	*16.4*	*B*	*14.4*
Third Ave and Kenwood St				
Northbound	*C*	*15.1*	*C*	*22.8*
Southbound	*C*	*18.1*	*B*	*14.5*
Third Ave and Maple St				
Northbound	*B*	*12.9*	*C*	*20.7*
Southbound	*C*	*24.7*	*C*	*16.1*
Third Ave and Nokomis St				
Traffic Signal	*E*	*66.5*	*E*	*68.0*
Eastbound	*D*	*51.3*	*F*	*98.5*
Westbound	*F*	*130.8*	*E*	*79.7*
Northbound	*C*	*23.1*	*C*	*28.8*
Southbound	*C*	*26.3*	*C*	*27.4*

1 – Level of Service
2 – Delay in seconds per vehicle

Table 10. Option 3 - 95th Percentile Queues

Intersection ***Traffic Control***	Weekday AM Left	Weekday AM Thru	Weekday AM Right	Weekday PM Left	Weekday PM Thru	Weekday PM Right
Third Ave and Broadway St						
Eastbound	*56*	*263*	*98*	*87*	*297*	*62*
Westbound	*138*	*182*	*-*	*112*	*246*	*-*
Northbound	*110*	*47*	*54*	*207*	*295*	*150*
Southbound	*76*	*159*	*-*	*60*	*135*	*-*
Third Ave and Hawthorne St						
Eastbound	*-*	*-*	*-*	*-*	*-*	*-*
Westbound	*-*	*-*	*-*	*-*	*-*	*-*
Northbound	*-*	*40*	*-*	*-*	*60*	*-*
Southbound	*-*	*8*	*-*	*-*	*32*	*-*
Third Ave and Kenwood St						
Eastbound	*-*	*-*	*-*	*-*	*-*	*-*
Westbound	*-*	*-*	*-*	*-*	*-*	*-*
Northbound	*-*	*30*	*-*	*-*	*32*	*-*
Southbound	*-*	*39*	*-*	*-*	*43*	*-*
Third Ave and Maple St						
Eastbound	*-*	*-*	*-*	*-*	*-*	*-*
Westbound	*-*	*-*	*-*	*-*	*-*	*-*
Northbound	*-*	*33*	*-*	*-*	*44*	*-*
Southbound	*-*	*55*	*-*	*-*	*58*	*-*
Third Ave and Nokomis St						
Eastbound	*188*	*272*	*-*	*371*	*304*	*-*
Westbound	*476*	*812*	*-*	*149*	*418*	*-*
Northbound	*60*	*120*	*47*	*105*	*209*	*82*
Southbound	*135*	*278*	*190*	*126*	*209*	*96*

Additional Considerations

Project stakeholders shared additional ideas during public engagement that either do not align with MnDOT's near-term goals for the corridor or engineering best practice given other corridor conditions. These ideas include adding a bicycle and pedestrian overpass or underpass to cross Third Avenue, and creating a bypass around town for traffic heading north-south on Highway 29.

Bridge or tunnel

The first of these ideas involves adding a bridge over or tunnel under Third Avenue to allow people walking and biking to cross the road without the possibility of vehicle conflict. This treatment works best where there is a clear, concentrated crossing location (such as a regional trail) and plenty of room for any on/off ramps that need to be built to ensure an accessible grade.

The City of Alexandria developed a concept for a potential underpass at Hawthorne Street. The concept creates a two-way walking and biking path between Second Avenue and Fourth Avenue, with a staircase connecting the sidewalk on Third Avenue with the trail below. The design would change Hawthorne Street to one-way vehicle traffic: northbound from Second to Third Avenue, and southbound serving as an exit for the new residential development between Third and Fourth Avenues. This concept is considered a long-term vision, with significant funding and construction challenges to overcome. For the purposes of this study it is not considered a short-to-medium-term option, but the City may pursue it in the long-term. A preliminary layout from the City is shown in Figure 27.

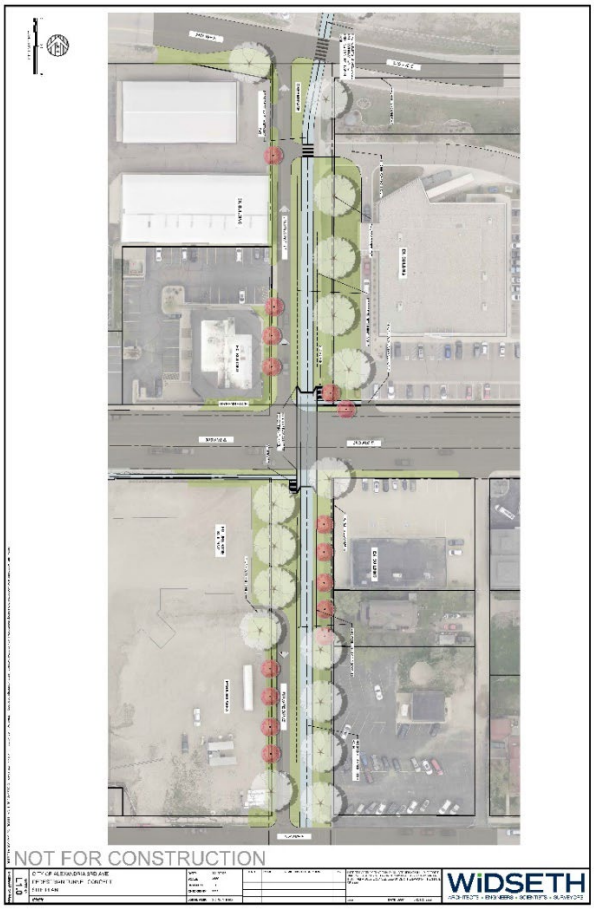

Figure 27. Preliminary Engineering Layout for an Underpass at Hawthorne Street

Bypass

The second idea involves promoting a bypass around town that would direct northbound/southbound traffic on Highway 29 from Interstate 94 to take an alternative route (such as 30th Avenue/Nokomis Street) rather than Highway 29 through downtown Alexandria. While this could reduce traffic volumes on Third Avenue, it would not directly address other safety concerns on the project corridor, such as speeding. A bypass would also redirect passenger vehicles away from the businesses lining Broadway Street/Highway 29.

Other Notes

- Additional smaller ideas could provide opportunities for businesses or residents to improve pedestrian conditions along the corridor, without making changes to the street itself. For example, adding planters or creatively-painted parking stops as a buffer between private parking lots and the sidewalk where cars can currently encroach. This is a common situation at the retail/gas station parking on the south side of Third Avenue and from Hawthorne Street to east of Kenwood Street.
- Existing signals at Broadway Street and Nokomis Street could be modified to include Flashing Yellow Arrows, which could allow for a Leading Pedestrian Interval.

Chapter 5. Implementation, Feasibility and Risk Assessment

Overview of Feasibility and Risks

The project team analyzed the risks and feasibility of each of the three corridor simplification concepts to determine which should be identified as a preferred concept. This analysis was completed at a high level, aimed at matching the timeline for potential construction options.

There are common themes for each of the concepts:

- Pedestrian and bicycle safety, comfort, and connectivity should be improved significantly in each of the concepts. The corridor should feel safer and more pleasant for all users, including people driving vehicles.
- Permanent/full reconstruction of the corridor is a long-term goal. A future reconstruction is an ideal time to include pedestrian and bicycle safety features in the design. The quick build and retrofit options described below are interim options to help realize safety benefits more quickly.
- Engaging with property owners, employees, and residents will be important as potential design processes move forward. The quick build and retrofit options below will include access tradeoffs in order to provide safety benefits for all users.
- Traffic analysis has been completed for the concepts. It will be important to continue to understand traffic impacts in any future project decisions.

Option 1 - Quick Build Corridor Simplification

Feasibility

The quick build project is technically feasible. The primary effort would involve ordering the materials, setting up traffic control, and implementing the layout relatively quickly. There are no underlying construction elements that would require complex coordination, such as stormwater management or impacts to adjacent properties.

Risks

There have been demonstration projects in the past on this stretch of Third Avenue. Feedback from agency stakeholders and the engagement process indicate that the improvements have not been robust enough to calm the corridor and make crossing feel safe for pedestrians. Stakeholders indicated that they want a more permanent solution. Installation, evaluation, and maintenance (particularly winter maintenance) are also considered risks.

Option 2 - Retrofit Corridor Simplification

Feasibility

The retrofit project is technically feasible, with less intense construction than a full roadway reconstruction. There will be additional requirements if implemented using Highway Safety Improvement Program funding. Given that the bulk of construction would be in the center of the existing highway, there would be minimal impacts to stormwater or adjacent properties.

Risks

The primary risks associated with the retrofit include access issues, traffic operations, and potential feedback from stakeholders along the corridor. It will be important to proactively address these issues in a potential design and engagement phase of a future construction project.

Option 3 - Corridor Simplification with Lane Modifications

Feasibility

Option 3 is the most resource-intensive concept. This concept could be considered a long-term goal and elements could be included in a full reconstruction project, instead of a retrofit. It is not considered an option that should be moved forward with as a retrofit project.

Risks

Implementing this option as a retrofit is risky because of the complexity of implementation. It includes intensive reconstruction of the two signalized intersections at Broadway Street and Nokomis Street. It also includes modifying two existing travel lanes along the corridor. There would also be additional winter maintenance considerations.

Implementation

Three concepts were developed under the theme of simplifying the corridor, as noted in previous memorandums. This section provides a preferred recommendation along with an analysis of risks and feasibility of each concept. The safety analysis highlighted the need for both intersection and corridor-based safety improvements. The engagement revealed that people do not feel comfortable walking, biking or driving along and across the corridor.

Based on the collective understanding of feasibility and risks, safety analysis, and themes from stakeholder engagement, the project team recommends moving forward with Option 2, the retrofit corridor simplification concept.

MnDOT District 4 applied for and received funding for the project via the Highway Safety Improvement Program. Funding was awarded with the intent to implement recommendations from this study. The preferred year for the funding is 2025 with an estimated cost of $825,000 ($750,00 in federal funds with a $75,000 match from MnDOT). The next step will be to proceed with a conceptual layout design phase and additional targeted engagement along the corridor.

Appendix A. Plan and Policy Review

MEMORANDUM

To: Mary Safgren, Planning Director, MnDOT District 4

From: Alta Planning + Design

Date: December 15, 2022

Re: Trunk Highway 29 Pedestrian Study Plan and Policy Review

To understand the context around the Highway 29 Pedestrian Study area, including how adopted design and policy guidance can support and guide this project work, the project team completed a high-level review of planning work along the study corridor. The plans identified below analyze different aspects of the study area for various users, with insight into existing conditions along the corridor.

Key findings

- ***Pedestrian safety, particularly crossing Highway 29, has been studied multiple times since 2010.*** The 2010 Pedestrian/Bicycle Crossing Enhancements Study explored a crossing at Third Avenue and Jefferson in order to provide an enhanced crossing. In 2013, a crossing improvement was installed at Kenwood Avenue instead of Jefferson based on additional feedback about the intersections. The improvement consisted of a median refuge island constructed on the west side of the Third Avenue crossing. Then in 2020, MnDOT constructed a demonstration project to enhance the existing crossing at Kenwood Avenue, including an RRFB installation and bollards to create/extend the median.
- ***Connections for people walking and bicycling to nearby destinations are important.*** The Comprehensive Plan notes the dense development pattern along the project corridor and access to destinations is strong. Highway 29 can, however, serve as a barrier for people walking and biking to access these destinations. On the west side of the project area there is a planned, but not programmed, project called the "Missing Link" that connects Big Ole/Central Park to the historic downtown area along Broadway Street. On the east side of the project area, the Highway 29 corridor study identified a roundabout at the intersection of Third Avenue and Nokomis Street. The City of Alexandria and Minnesota Department of Transportation both have commitments to a complete streets approach to transportation projects.
- ***Access management is an issue along Highway 29.*** The Transportation Study notes the numerous access points close to the intersection of Third Avenue and Nokomis Street make it a good candidate for access management improvements. The Trunk 29 Highway Corridor Study evaluated this issue and the preferred option would include a shared use path on the west side of the road and access management improvements for the roadway.
- ***The approach to pedestrian safety should be comprehensive.*** The SRTS Plan notes the need for enforcement and education strategies. While the focus of this study is short-term and long-term infrastructure improvements, it is important to consider opportunities to identify partners that could help with a more comprehensive approach.

Pedestrian/Bicycle Crossing Enhancements Study

Douglas County Active Living, WSB (2010)

This study described the existing conditions for people walking and biking at the intersection of Third Avenue and Jefferson Street. Three Alternatives were presented to enhance pedestrian safety. This memo also described two types of pedestrian signals that could be implemented at this location to draw motorist attention to pedestrians. Preliminary cost estimates for each of the three alternatives at the time of the study ranged from $23,000 to $124,000, depending on the size of the pedestrian island or median and the type of pedestrian actuated signal installed (HAWK signal or RRFBs).

Alternative 1 was chosen, which aims to provide a safe crossing for people walking or biking, while maintaining reasonable construction cost estimates. See Figure 1 below that illustrates a rendering and aerial depiction of the preferred alternative. In 2013 the recommended infrastructure was installed at Kenwood Avenue, rather than Jefferson Street.

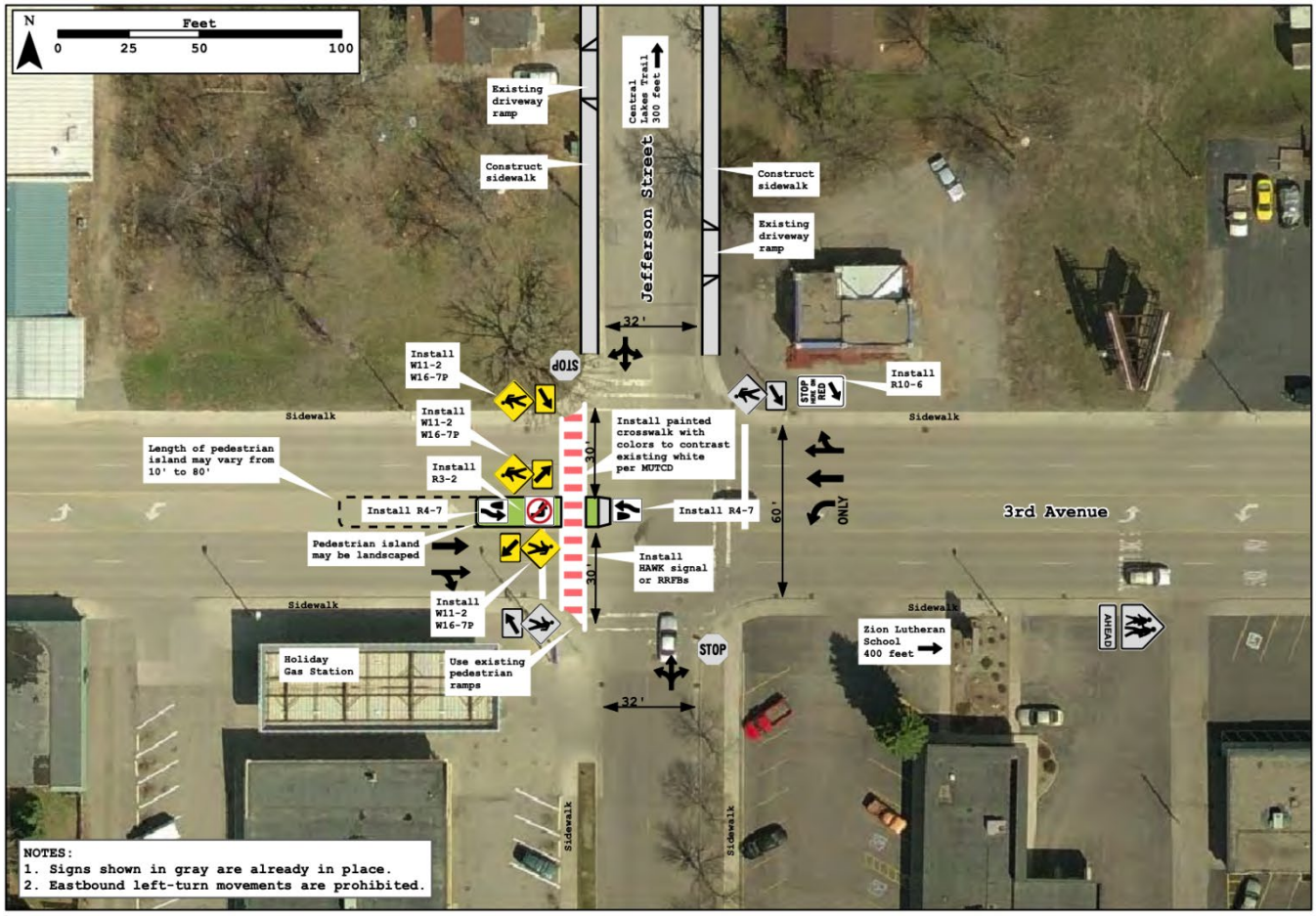

Figure 1. Preferred Alternative for Crossing Improvements at Third Avenue and Jefferson Street

Alexandria Area 2030 Transportation Study

KLJ, MnDOT (2011)

The purpose of the Transportation Study is to identify, plan, and guide future year transportation decisions and improvements within the greater Alexandria Area. The Transportation Study noted that the intersection of Nokomis Street and Third Avenue experiences significant through-way and business vehicle traffic. The high travel volumes combined with numerous access points close to Third Avenue and Nokomis Street makes this location a good candidate for access management improvements. The plan also proposes changing the functional classification of Third Avenue to the east of the study area (starting at Nokomis Street) from a principal arterial to a minor arterial.

The Plan also identifies active transportation improvements. As of 2011 there was a plan for protected crosswalks in downtown Alexandria on Third Avenue and on Highway 29 (Broadway), as well as a plan for a bike trail on the west side of the roadway. Other planned or recently studied bicycle improvements include striped bike lanes on Fillmore and Hawthorne Streets from Third to Eighth Avenues in the downtown area, and a bike route connection with the Central Lakes Trail from Agnes Avenue north of Third Avenue.

Based on crash data shared in the plan, there are high concentrations of crashes and traffic incidents within the pedestrian study area. Figure 2 includes a graphic from the transportation master plan that provides a high-level summary of crash incidents throughout the City.

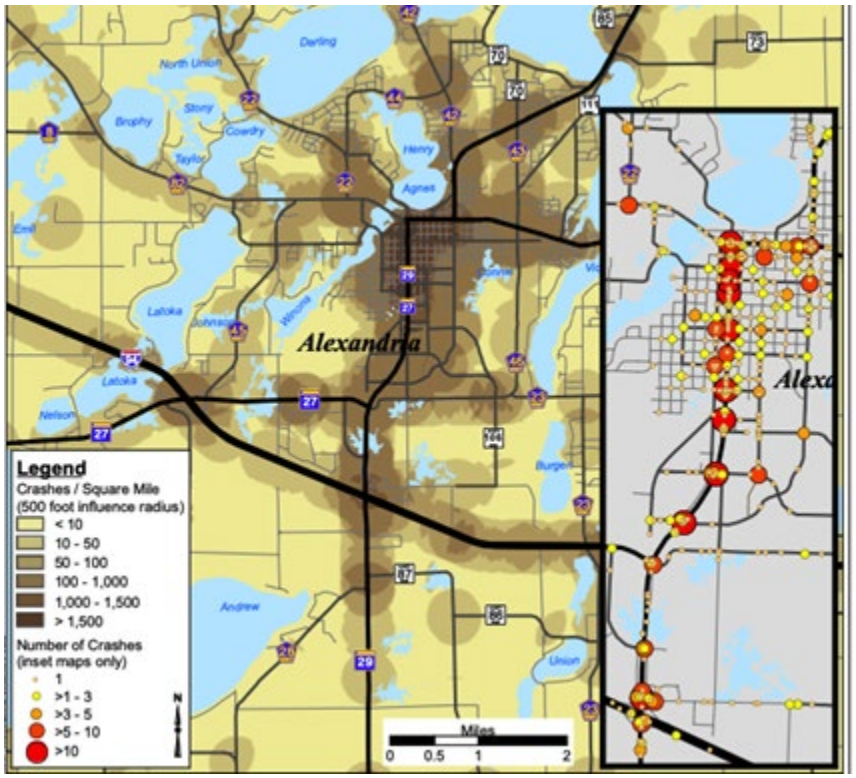

Figure 2. High Level Crash Concentrations for the City of Alexandria

Safe Routes to School Comprehensive Plan – Discovery Middle School

City of Alexandria, Douglas County, Kimley-Horn (2011)

The Safe Routes to School (SRTS) Comprehensive Plan (initiated by Douglas County Active Living) is intended to create a healthy community that makes active living a routine part of daily life. Two essential highlighted points were to enhance the transportation system to accommodate bicycling and walking, and to encourage physical activity throughout a child's school day.

The SRTS plan includes infrastructure and programming recommendations for the area surrounding Discovery Middle School. The infrastructure recommendations do not reach this project study area, but two programming efforts are related to the corridor:

- **Enforcement** – Having law enforcement support safe traffic behavior, such as speed zone enforcement or increased patrols along the designated routes to school.
- **Education and Encouragement** – Teaching children to walk and bike safely has impacts outside of the direct school zone. One of the goals of SRTS efforts is to help students become comfortable with safe biking and walking behaviors, so that they feel confident choosing those modes for other trips around their neighborhood – including in the project area.

Traffic Operations Review - Douglas County Hospital Surgery Center Expansion

Spack Consulting (2016)

This traffic operations review analyzed whether a hospital facility expansion at 17th Avenue and Highway 29 / Broadway Street would result in any adverse traffic impacts, and recommended an appropriate distance for parking lot access away from the intersection.

The study area of this report is not directly relevant to the study area of the Highway 29 Pedestrian Study. The report does however provide insight on guidelines for access spacing along Highway 29, as well as observed bicycle and pedestrian counts at that point on the corridor.

Missing Link Pilot Project Evaluation

City of Alexandria (2017)

In 2016 the City of Alexandria, with funding from Blue Cross Blue Shield, created a temporary pilot project improving walking and biking connectivity between Big Ole/Central Park and the historic downtown area along Broadway – also known as the "Missing Link." This vital corridor would complete a pedestrian connection between the regional Central Lakes Trail and Alexandria's vibrant downtown.

For the pilot project the City tested out a new design (shown in Figure 3) to trade on-street parking for on-street protected bikeways. The design also intended to slow traffic speeds and improve intersection safety through narrower vehicle lanes, painted curb extensions, plastic bollards and planters along the route. All of these improvements were installed using temporary materials, intended to study the effects of the treatments for potential future construction.

During the installation the City saw positive effects on vehicle safety. Data showed that more drivers complied with posted signage with the three-way stop in place at Second Ave, compared to the one-way stop and wide driving lanes. Data also showed fewer instances of speeding through the corridor. Traffic volumes remained consistent. The project team noted the improved overall comfort and perceived pedestrian and bicycle safety of the treatments.

Figure 3. Image of the Missing Link Pilot Project Shared in the Alexandria Echo Press (image courtesy of Echo Press)

Trunk Highway 29 Corridor Study

MnDOT, KLJ (2019)

The Corridor Study evaluated a 2.9-mile segment of Highway 29 in Alexandria, between Third Avenue East and County Road (CR) 73. The report highlights multimodal facility gaps and other issues in the study area, including anticipated future traffic growth, high access point density, and Right-of-Way (ROW) challenges in the urban core segment. The report identifies and recommends improvements for automobiles, trucks, pedestrians, and bicyclists through each of the corridor segments, including the Third Avenue and Nokomis Street intersection.

Relevant takeaways from the Trunk Highway 29 Corridor Study pertaining to this pedestrian study:

- The westbound approach at Third Avenue and Nokomis Street is currently operating with unacceptable vehicle delays, with further deterioration expected.
- Between Third Avenue and Nokomis Street/CR 42, a five-lane roadway section with a shared-use path received the highest overall score, based on a combination of technical performance, Study Review Committee support, and public input. This option would include a shared use path on the west side of the road and access management improvements for the roadway itself.
- The second highest ranking alternative for the segment between Third Avenue and Nokomis Street/CR 42 was a four-lane section with a raised median. This option would provide better access management, opportunities for median crossing islands, and traffic operations to support a roundabout at Third Avenue and Nokomis Street (right-in/right-out driveways).
- The urban core segment from Third Avenue to Carlos Avenue (directly north of the study area) equates to 69 access points per mile. This is more than five times the recommended MnDOT spacing of 12 access points per mile for urban core segments.
- The recommended improvement at Third Avenue and Nokomis Street is to construct a multi-lane roundabout (see Figure 4). The plan recommends implementing this solution as soon as feasible, but there is no funding or other support for implementation in the near-term.

Figure 4. Recommended Roundabout Layout at Third Avenue and Nokomis Street

Alexandria Demonstration Project Info Sheet

MnDOT (2020)

In 2020 MnDOT and the City of Alexandria constructed a demonstration project to make it more comfortable for people walking and biking across Highway 29 at Kenwood Street, at the existing crossing island. The project included four phases to test out varying levels of treatment – including an RRFB installation and bollards creating/extending a median. The last phase of the project restricted left turns from westbound Highway 29 to southbound Kenwood Avenue. A cross section and images of the demonstration project are shown in Figure 5 and Figure 6. Pedestrian counters installed during the installation did not show any significant changes in the number of people walking during the project duration.

The project came as a result of resident concerns around comfort and safety crossing Highway 29 specifically, as well as walking in Alexandria more broadly. Specific Highway 29 concerns came from recent (2011) Safe Routes to School plans that identified the roadway as a barrier for students walking and biking to school. Additional comments on "walking safety" more generally included themes around all ages and abilities access, network quality and continuity, and driver awareness.

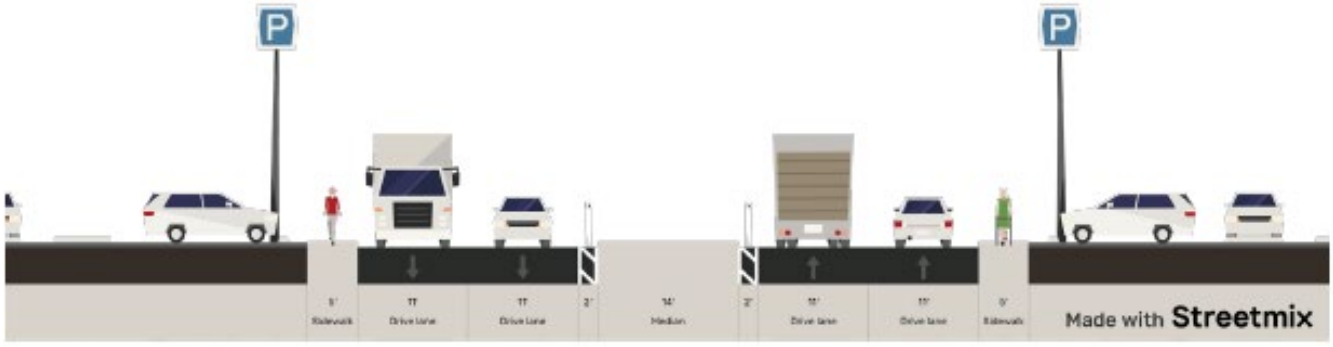

Figure 5. Demonstration Project Layout at Highway 29 and Kenwood Street

Figure 6. Images from the Demonstration Project at Highway 29 and Kenwood Street

Highway 29 Traffic Signal Optimization Project

MnDOT, Alliant (2020)

The Highway 29 Traffic Signal Optimization Project assessed the operational needs of and opportunities for efficiency improvements between 15 signals in Alexandria, from Interstate 94 to the start of this study extent at Third Avenue. The project aimed to update pedestrian and signal controller timing to align with MnMUTCD guidelines, as well as determine appropriate peak and off-peak timing plans for daily volume variations along the corridor. Overall, the project focused on efficiency, looking to reduce delays and provide flexibility in left turn/cross-street movements depending on demand, as well as flashing yellow arrow applicability. The project also identified potential low-cost improvements to address the most prevalent crash types along the corridor.

The project studied one intersection included in the extent of this study: Highway 29 at Broadway Street and Third Avenue. Level of Service (measurements for vehicle delay) at this intersection show stable flow conditions, with ratings of C during the AM and PM peak hours, and B during the midday peak hour.[1]

As a result of the analysis, the project identified recommendations for future improvements at Broadway St and Third Avenue:

- Construct ADA compliant pedestrian ramps
- Evaluate feasibility to reduce curb radii and reduce crosswalk distance on the north leg
- Extend northbound left turn storage lane length (reduce SB left turn storage at Third Avenue)
- Extend westbound left turn storage lane length
- Integrate adjacent signals to the east and west of Broadway St/Third Avenue for cross-coordination
- Identified intersection as a medium priority for flashing yellow arrow operation

While the project did include pedestrian focused updates to align with MnMUTCD standards, it otherwise did not prioritize pedestrian considerations. Instead, the project measured success in terms of reduced motorist delay and associated savings in the monetary value associated with less congestion, lower fuel consumption, and fewer emissions. While these factors and reduced automobile crashes have tangential benefits for pedestrians, it is worth noting that the focus of this study was not to improve pedestrian comfort along this portion of Highway 29.

[1] Study conditions represented non-summer weekday volumes. An LOS of B represents stable flow – speeds restricted by travel conditions and minor delays. An LOS of C represents stable flow – speeds and maneuverability closely controlled due to higher volumes.

City of Alexandria Comprehensive Plan

City of Alexandria, WSB (2020)

Alexandria's Comprehensive Plan focuses on coordinating new growth and development while preserving the surrounding natural environment. One of the City's goals is to maintain the physical and cultural characteristics that reflect its small-town spirit as areas of growth redevelop into high-quality living environments.

The Plan outlines existing transportation infrastructure in the City, including the highest concentration of sidewalks in downtown. Bicycle travel in Alexandria largely occurs along the roadway and is designated with bicycle routes. Currently there are no striped bicycle lanes within the city. A more complete non-motorized network will encourage more pedestrian and bicycling activity and there is one regional multi-use trail (the Central Lakes Trail) located in the City of Alexandria, about one block north of the study area.

Development patterns in many areas of the city are well-suited to bicycling and walking, due to a largely regular street grid, relatively short blocks, and convenient connections to regional and local trails, parks, and schools. There are also commercial destinations throughout Alexandria that are within walking or biking distance of many city residents, including the Highway 29 (Broadway Street) corridor and several smaller areas such as Third Avenue. As such, the City supports a complete streets approach to roadway design, relying on (among other resources) MnDOT's Complete Streets Implementation Resource Guide for Minnesota Local Agencies. While Highway 29 is a state road under MnDOT's jurisdiction, it will be important to incorporate the City's complete streets approach where the study corridor intersects with City right-of-way.

Appendix B. Public Engagement Summary

To: Mary Safgren, Planning Director, MnDOT District 4

From: Alta Planning + Design

Date: December 15, 2022

Re: Trunk Highway 29 Pedestrian Study Public Engagement Memorandum

Introduction

Starting in September of 2022, MnDOT and the consultant team hosted a number of in-person engagement events and provided virtual opportunities for stakeholder input. Project staff attended the following events:

- Walk audit along the project corridor (September 12, 2022)
- Focus group for residents who walk or bike often (October 27, 2022)
- Focus group for residents who work with youth or elderly (October 27, 2022)
- Public open house, including project presentation and discussion (October 27, 2022)
- Focus group / meeting of the Douglas County Towards Zero Death Coalition (November 30, 2022)

In addition to these in-person events in Alexandria, the project team shared study information on the project website at www.dot.state.mn.us/d4/projects/hwy293rdave. This included an online Metroquest interactive map and survey platform that collected stakeholder feedback through the fall. The online survey and map were open from mid-October through early December 2022.

The following sections detail the main themes that arose across the various forms of public input.

Figure 1. Images from the Public Open House in Alexandria on October 27, 2022

Figure 2. Participants of the Walk Audit Discussing the Project Corridor on September 12, 2022

Online Survey and Map

Design

The online survey prompted stakeholders with five questions and an opportunity to provide general feedback. Questions focused on destinations along the corridor, how it feels to walk or roll along and across Third Avenue, driver behavior along the corridor, and how vulnerable pedestrians may feel in the area.

The interactive map provided markers for issues and opportunities that stakeholders could place along the corridor. Markers provided categories for bicycle and pedestrian safety concerns, vehicle safety concerns, issues and new needs.

Survey Feedback

The survey received over 80 responses from residents and people who use the project the corridor, with key takeaways shown in Figure 3 and Figure 4. Most survey concerns regarding vehicle safety focused on traffic speed and volume. Additional feedback showed concern around distracted drivers, drivers who ignore turn restrictions (such as the eastbound left-turn prohibition at Kenwood Street), and confused drivers during seasonal summer traffic. Most survey concerns regarding bicycle and pedestrian safety focused on dangerous intersections. Comments related to specific locations are discussed under Map Feedback.

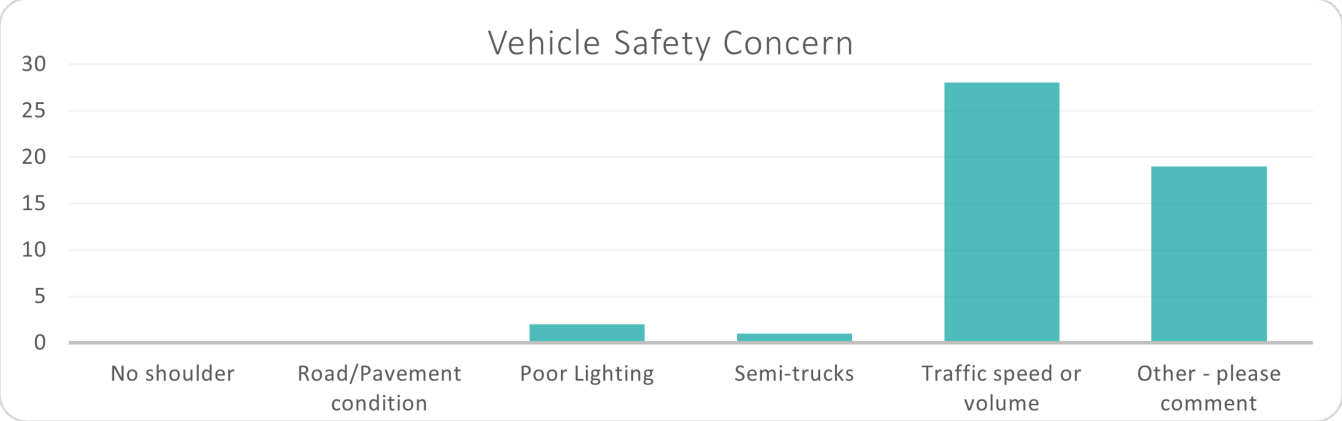

Figure 3. Vehicle Safety Concerns from the Online Survey

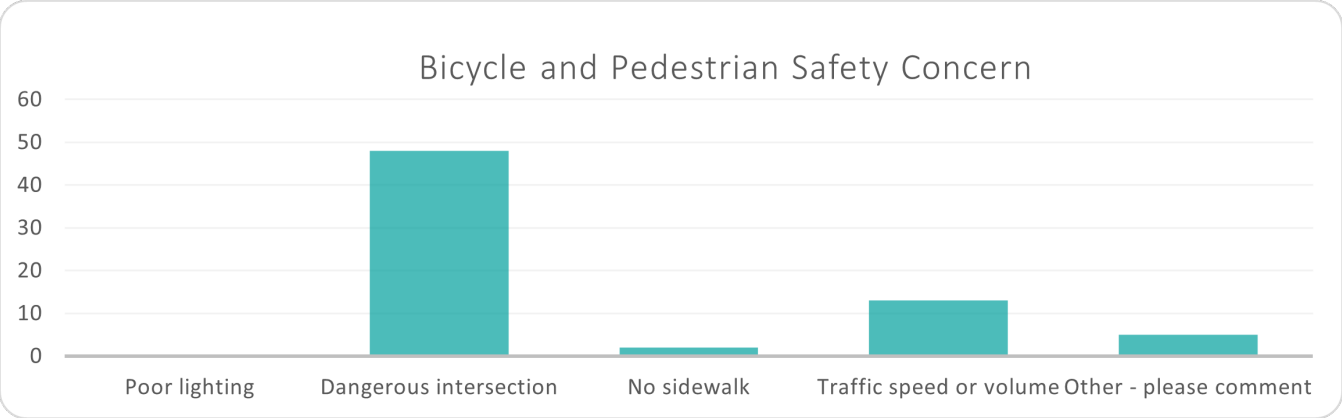

Figure 4. Bicycle and Pedestrian Safety Concerns from the Online Survey

Map Feedback

Commenters left 212 points on the interactive map, with the geographic concentration of comment types throughout the corridor shown in Table 1. A number of locations stuck out for particular themes, such as issues or vehicle safety concerns.

For example, intersection areas around Third Avenue and both Broadway and Nokomis Streets received a number of bicycle and pedestrian safety concerns. In both of these locations people noted drivers moving quickly through the free rights and not yielding to people walking or biking. People also noted that driver confusion around whether they need to merge and drivers merging to move north/south along Highway 29 result in distracted drivers, who are not looking out for people walking and biking at these locations or adjacent downstream blocks; such as Hawthorne Street, which also shows many bicycle and pedestrian safety concerns.

Respondents also highlighted bicycle and pedestrian safety concerns at Kenwood Street, where there is currently a crossing island and marked crosswalk across Third Avenue on the west leg of the intersection. Comments on these markers show significant concern about double threat crossings (where one person in a car stops and other people

driving may not know a person is crossing and fail to yield). These dangerous situations occur when a vehicle in the outside of two traffic lanes stops for a pedestrian to cross, but a driver on the inside lane does not see the pedestrian, and proceeds through the intersection (sometimes swerving around the stopped vehicle), posing a safety risk to the pedestrian.

The intersection areas at Third Avenue and both Maple Street and Jefferson Street had the most issue points identified on the map. Of these, most identified issues at Jefferson included a reference to visibility concerns and poor driver behavior around the Holiday gas station at this location. According to survey comments, many drivers make risky turns at this location to enter/exit Third Avenue at the Holiday. Additionally, the building to the west of Holiday is built right up to the back of the sidewalk, and makes it challenging for pedestrians and drivers to see each other entering and exiting at the Holiday driveway. At Maple Street, issues unanimously included access to Elden's grocery store, and the effect of congested traffic on driver behavior getting on and off of Third Avenue here.

Vehicle safety concerns followed similar trends as the other categories of concern. People noted confusion around free rights at Broadway Street and Nokomis that results in unpredictable driving, visibility issues at the Holiday gas station, and rear-end concerns at Kenwood Street when eastbound drivers ignore the left-turn prohibition.

Comments regarding new needs focused on flashing lights at Kenwood Street. Whether pedestrian or passively activated, respondents noted that something more was needed beyond the existing infrastructure to make a crossing at Kenwood more comfortable.

Table 1. Map Comments (Where Related to an Intersection Area)

	Broadway Street	Hawthorne Street	Irving Street	Jefferson Street	Kenwood Street	Lake Street	Maple Street	Nokomis Street	Total
Bicycle/Pedestrian Safety Concern	13	12	4	10	15	5	5	13	85
Issue	1	2	2	6	0	3	6	3	25
New Need			1		2	1			7
Vehicle Safety Concern	10	5	2	9	5	2	6	20	70
Other*									8

**Other comments refer to corridor-related comments, not associated with one specific intersection.*

Key Themes

In all forms of feedback the project team gathered similar themes, organized into the main categories below:

- Crossing considerations
- Destinations
- Driver behavior
- Concerns
- Suggestions

Crossing Considerations

The following themes address both how people approach crossing Third Avenue along the project corridor, as well as locations that are particularly challenging to cross at. Suggestions for more comfortable crossings are listed under the "Suggestions" theme.

- The majority of survey respondents said they would not feel comfortable walking here with a child, or someone in a wheelchair.
- People expressed a preference for crossing at a signal, but are still nervous about turning/fast/distracted traffic acknowledging them in the crosswalk.
- As a pedestrian, you sometimes have to wait minutes for a break to cross Third Avenue.
- Stakeholders shared a number of crossing locations that they find uncomfortable along and across Third Avenue:
    - Broadway Street - Several instances of near-misses with cars moving and turning quickly through the intersection
    - Kenwood Street
        - *"The added pedestrian safety measures for street crossing have done little to have drivers slow down or allow for safe crossings"*
    - Nokomis – specifically the northwest quadrant crossing the free right with fast traffic and visibility challenges from the utility box.
    - Hawthorne Street – especially with development coming and existing visibility challenges from the slope and morning sun in drivers' eyes; people are already starting to merge here and not watching for pedestrians.
        - *"I'm probably going to start driving to the bike trail" [to avoid crossing at Hawthorne Street].*

Destinations

Survey respondents and focus group participants noted a number of common destinations along the project corridor that add to vehicle traffic, challenging turning movements, and non-motorized crossing demand:

- Eldens as the main destination (with a challenging east entrance out of the parking lot)
- Schools (St. Mary's, Zion)
- Goodwill (and electric vehicle charging station)
- Casey's
- Holiday gas station
- Thrifty White
- Wells Fargo
- Senior center

Driver Behavior

The project team heard a considerable amount about driver behavior, with the most common themes around driver speed and distracted driving. More detail is provided below, along with specific locations where driver behavior is a concern.

- Drivers drive over the posted speed limit of 30 mph.
    - So many drivers move too quickly, it is uncomfortable as a driver to go the speed limit or slightly under.
    - Traffic on Third Avenue is either congested or people are speeding.
    - Drivers maintain high speeds moving through the free rights on either end of the corridor.
        - *"Often the speed is higher than posted. Borders on reckless, although I don't think it is on purpose."*

- Drivers seem distracted to both people walking and biking and people driving, whether they are on their cell phones or changing lanes to continue north/south on Highway 29.
    - *"It is a hard road to drive in because it's so busy, so it's hard to additionally pay attention to potential PEDs."*
- Drivers are concerned about double threat situations – worried that if they stop for a pedestrian trying to cross at Kenwood Street that they will cause a double threat risk for them.
    - Drivers are also concerned about stopping because of the risk of getting rear-ended.
- People don't know how to merge through this corridor, they slow down or stop after turning onto Third Avenue not realizing that there is a dedicated lane.
- Driver behavior is worse in the summer when seasonal traffic (especially on Fridays) moves through the corridor.
- Drivers ignore turn restrictions, especially at Kenwood Street.
    - *"People always try and turn where signs clearly say no turn."*
- People end up driving out of their way to avoid movements that feel hazardous:
    - It can be challenging to turn as a driver due to the speed and volume of traffic on Third Avenue – many drivers plan routes to avoid left turns.
        - *"I never try to drive across 3rd Ave, I will go a few blocks out of my way to get on to 3rd and be able to turn off 3rd to where I'm going."*
- Many people noted concerns about the east Elden's driveway connecting to Nokomis Street just north of Third Avenue. People exit to the east and cross the median double lines to turn left on northbound Highway 29. People on Nokomis going south signal a right hand turn to continue west onto Third Avenue, while people waiting to exit Elden's think the driver is turning into Elden's, so the waiting vehicle pulls out in front of them.

Concerns

Of all the concerns that people voiced throughout the engagement process, the largest theme is that it is uncomfortable (and sometimes feels unsafe) to walk or bike along this stretch of Third Avenue. People of all ages and abilities, those who frequently walk, and those who only cross the corridor when they have to, all shared elements of the environment that feel uncomfortable. People who drive shared similar comments about the discomfort driving along this busy, fast stretch.

- The walking environment is very uncomfortable for pedestrians.
    - There is way too much traffic, driving too close to the sidewalk.
    - There is no green space along the corridor.
    - There are lots of sign posts impeding the sidewalk.
    - The sidewalk feels narrow, with pinch points along the corridor that push pedestrians even closer to traffic.
    - Sidewalk quality makes it challenging for people in wheelchairs and other mobility devices to navigate.
- People in all focus groups, the open house, and online engagement tools described the double threat as one of their most significant concerns – based on personal crossing experience, or watching another (sometimes vulnerable pedestrian) have a near-miss.
    - The median at Kenwood Street helped, but many still feel vulnerable, and would not let kids cross alone.
- Many people have had one or two challenging crossing experiences are not interested in crossing the corridor again.

- Law enforcement officers are uncomfortable using Third, even to enforce speed.
- Locals avoid driving and walking along Third because of the volume and speed of traffic.
- Signal crossing times at either end of the corridor are challenging for many people, not providing enough time to cross safely, to the point of deterring people with physical disabilities from using the corridor.
- Drivers are so uncomfortable using Third that they will plan routes to minimize challenging turning movements.
    - Some drivers will go to the lights on either end of the corridor, rather than getting onto Third in the middle of this stretch.
- There is a mentality of rush hour on 3rd with recent increases in local population and employment.
- The City is not monitoring sidewalk clearance, and some businesses encroach into pedestrian space.
- Drivers move so quickly along the corridor, it is challenging to anticipate their actions.
- Third Avenue is a state highway coming through downtown, with big vehicles and lots of traffic.
    - Is it feasible for 18,000 vehicles a day and pedestrians to coexist on this corridor?
- Many people drive because biking and walking do not feel safe.

Suggestions

People offered a range of suggestions for the corridor based on what they have seen work elsewhere and what they think is feasible to improve conditions along Third Avenue.

- Support for simplifying the corridor – for example, physically removing turning opportunities to increase driver predictability.
- Improve pedestrian infrastructure by creating wider sidewalks, adding a green space buffer between vehicle traffic and the sidewalk, removing signs and other obstructions from the walkway, keep crosswalk lines painted, and clean sidewalks.
- Direct local traffic to use alternatives to Third Avenue to reach local businesses, such as Second Avenue. (Important in tandem with adding a median or restricting turns off of Third Avenue.)
- Passthrough seasonal traffic is not familiar with the corridor, and does not have the same learning curve as residents. Any new design or direction for drivers will need to be clear and obvious.
- Enhance the existing crossing at Kenwood Street with flashing lights (RRFBs), especially if they automatically light up when a person walking or biking is present. A full signal would also help improve the crossing.
    - *"Having stop lights activated only by a pedestrian or bicyclist would be a good option."*
- Educate and enforce at Third Avenue and Kenwood Street around left-turn prohibition.
- Emulate Broadway Street to the south on Highway 29 – noted as having some positive changes, such as on-street parking that slows drivers down.
- People brought up roundabouts as both a potential efficiency improvement and as a nuisance.
- Some people indicated a desire for an overpass or tunnel for people walking and biking across Third Avenue. Others worried that it would not be used if people had to go out of their way, based on existing observations about where people cross Third Avenue.
- If Kenwood Street is meant to be the main crossing for people biking from downtown and neighborhoods to the Central Lakes Trail, what can be done to make it a better crossing?
- Could there be a clear alternative for people passing through town to avoid this segment of road? Could there be a bypass for people coming from the south side of town to get north, and better wayfinding to strengthen local connections once in the project area?
    - *"Why are the highway 29 folks not routed around the city? Tiny sign by the airport- need a huge overhead sign like they use by Willmar. I think that would help some."*

- Enhance local streets for people walking – close lanes to vehicles to offer a neighborhood greenway or bicycle and pedestrian only route. There is specifically support for this idea around schools, enhancing existing temporary closures on Lake Street by Zion Lutheran school and church, for example.
- Set up a speed feedback sign for drivers.
- Improve accessibility at the existing pedestrian crossings at signals by adding pedestrian push buttons and audio.

Conclusion

These thoughts have helped the project team solidify the issues the community wants to see fixed, and the existing physical and psychological barriers to overcome in a new design. The main themes to carry forward into design are listed below:

- The pedestrian environment is uncomfortable and feels dangerous to many users, especially those with children or mobility devices.
- Drivers regularly drive over the speed limit.
- People walking, biking, and driving along the corridor worry about poor driver behavior, including distracted driving and ignoring turn prohibitions.
- There are key destinations along the corridor, but many people are open to limiting some turning/through movements to simplify the corridor and make it safer for all users.