

MEMORANDUM

Date: April 29, 2021
To: City of Baxter Council/City of Baxter Utility Commission
From: Derek Arens/Pete Lemke *pml*
Subject: 2022 Inglewood Drive Railway Crossing and Associated Roadway Improvements
Emergency Response
City of Baxter
Municipal Project No.: 4121
BMI Project No. T42.120675

Purpose & Background

On April 6, 2021, Bolton & Menk presented the proposed layout of the 2022 Inglewood Drive Railway Crossing and Associated Roadway Improvements project. The purpose of the presentation was to receive input from the council and consensus to proceed with the amending the feasibility report and begin the public input process. During the discussion, questions were brought up about emergency response times and how they would be impacted along the TH 210 corridor. This memo's intent is to analyze the proposed situation and address these questions and concerns.

Calculations of increased/decreased response times were completed using the posted speeds of the roadways where the emergency vehicles would be traveling. Intersection controls were ignored as the emergency vehicles would be given the right of way by the traveling traffic and all traffic signals have EVPs. Destinations were designated as 300' north and south of the Knollwood Drive/TH 210 intersection representing the neighborhoods north and south of TH 210 respectively. Starting points were the Baxter Police Department and the Brainard Fire Department buildings.

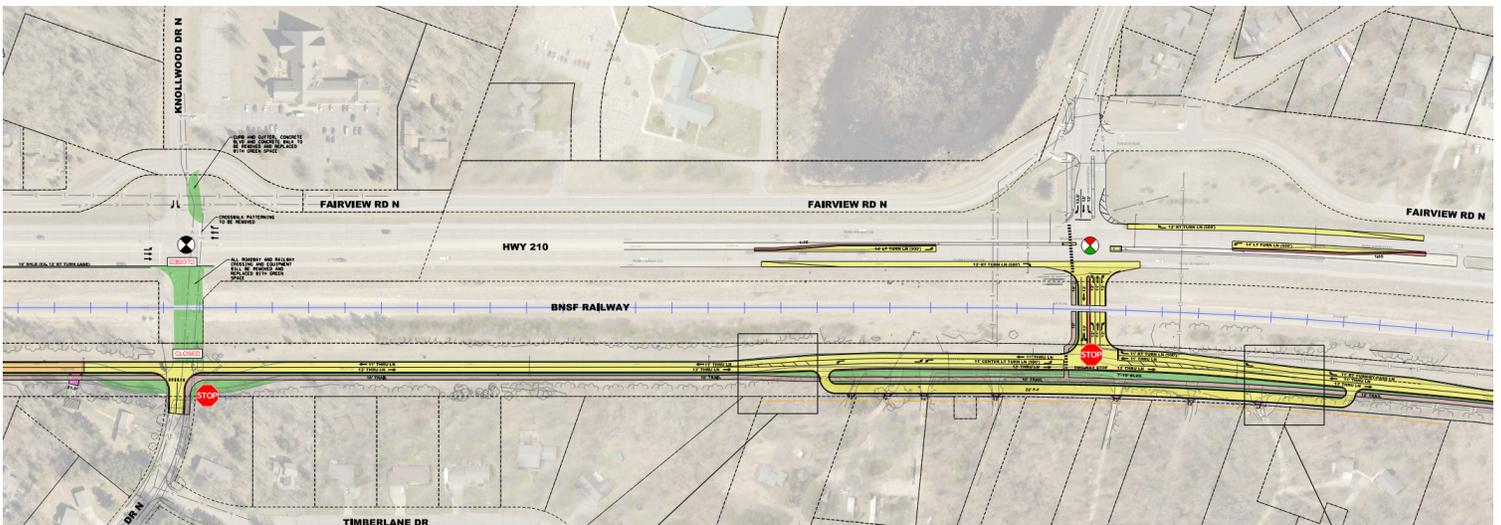


Figure 1: Plan View of Proposed Project. Closure of the South Leg on Knollwood Drive with a replacement at Inglewood Drive

Proposed Project

The 2022 Inglewood Drive project consists of flipping the intersection control types and lane configurations between the Knollwood Drive and Inglewood Drive along TH 210 (See Figure 1 on previous page). The project involves the removal of the existing signal, crossing of the BNSF railway and pedestrian accommodations at Knollwood Drive and maintaining it as a unsignalized full-access intersection with turn lanes identical to the current intersection at Inglewood Drive. At Inglewood Drive, a new traffic signal would be constructed at the road extended south to Foley Road along with pedestrian accommodations and a crossing of the BNSF railway between TH 210 and Foley Road.

This project aligns with past studies and implementation projects throughout the past 20 years in the City of Baxter all with the goal of implementing a west reliever roadway parallel TH 371. See additional memo from Bolton and Menk on more information about applying the reliver system for local residential traffic.

North Neighborhood

With the implementations of the 2022 Inglewood Project, the neighborhood north of TH 210 would not see any changes to the arriving emergency response times. All movements at those intersections will be maintained as they are today. The emergency routes for both police and fire can be utilized at Knollwood Drive and Inglewood Drive. See **Appendix A** and **Appendix B** for more information.

We anticipate that the Emergency Vehicle Preemption (EVP) system included with the new traffic signal at Inglewood Drive would support improved emergency response times. We also anticipate that with the revised Knollwood Drive intersection being unsignalized and free-flowing, traffic on TH 210 at the reconfigured TH 210 at Knollwood Drive intersection traffic could be caught off guard if an emergency vehicle would need to pass. Also, MnDOT is looking to implement a Reduced Conflict Intersection (RCI) on TH 210 at Knollwood Drive that would require southbound left turns to use the designated mainline U-turn to access eastbound TH 210. With all this, we anticipate the neighborhood north of TH 210 would see emergency response times similar or improved from what they are today.

South Neighborhood

Unlike the neighborhood north of TH 210, the neighborhood south of TH 210 will experience impacts to emergency response times. However, none of the emergency response times increase more than a minute using the fastest, most direct route. See **Appendix C** and **Appendix D** for assumed routes and calculated response times. In summary, estimated additional response time of the two routes that are possible in the proposed scenario in comparison to the existing conditions were:

Estimated Additional Response Time from Existing Conditions		
Proposed Condition Alternative Routes	Route 1	Route 2
Fire Response (Appendix C)	+26 Seconds	+2 Min., 24 Secs
Police Response (Appendix D)	+53 Seconds	+1 Min., 12 Secs

Table 1: Additional Emergency Response Time for Proposed Routes for Neighborhood South of TH 210

Local Response Feedback

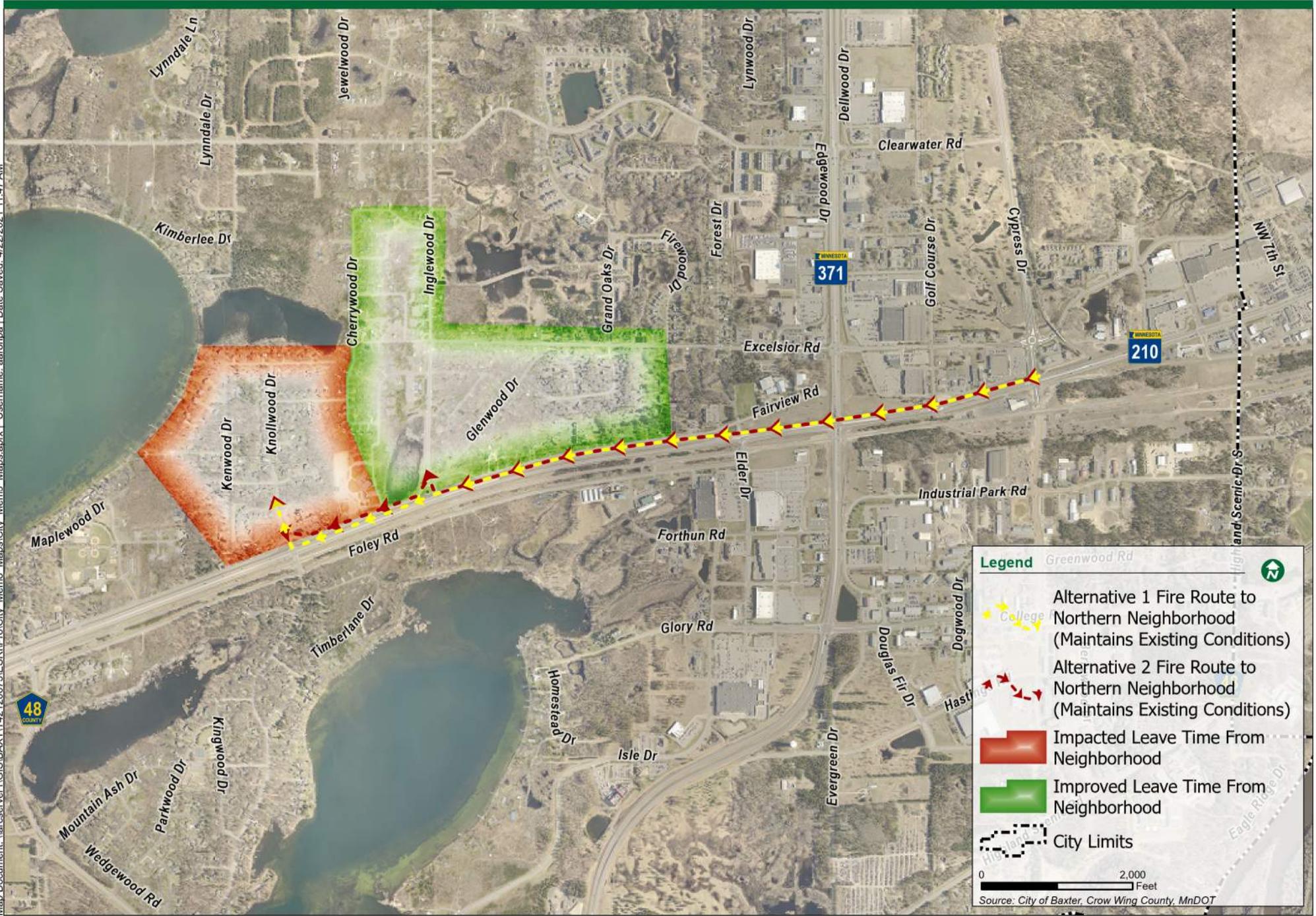
Bolton and Menk recently spoke with the Baxter Police Chief Jim Exsted to get the local and expert perspective on emergency response times. Chief Exsted mentioned that he discussed this item with Brainerd Fire Chief Tim Holmes and Kevin Lee from North Memorial Ambulance Services and neither of them had any concerns about this project's impact on emergency response times. Jim mentioned that North Ambulance has an operational goal to respond to emergencies in their service area within 10 minutes and that within the City of Baxter they meet that goal 100% of the time. We discussed the 2022 Inglewood Drive project and the proposed layout. We also discussed public safety and emergency response times. Like Chief Holmes and Mr. Lee, Chief Exsted did not have any concerns with any diminished emergency response times associated with this project.

BOLTON & MENK RECOMMENDATIONS

We recommend consensus of the City Council to accept the proposed layout of the 2022 Inglewood Drive Project. Next steps will be public involvement and completion of the project feasibility report.

Appendices

- Appendix A – Northern Neighborhood – Fire*
- Appendix B – Northern Neighborhood – Police*
- Appendix C – Southern Neighborhood – Fire*
- Appendix D – Southern Neighborhood - Police*

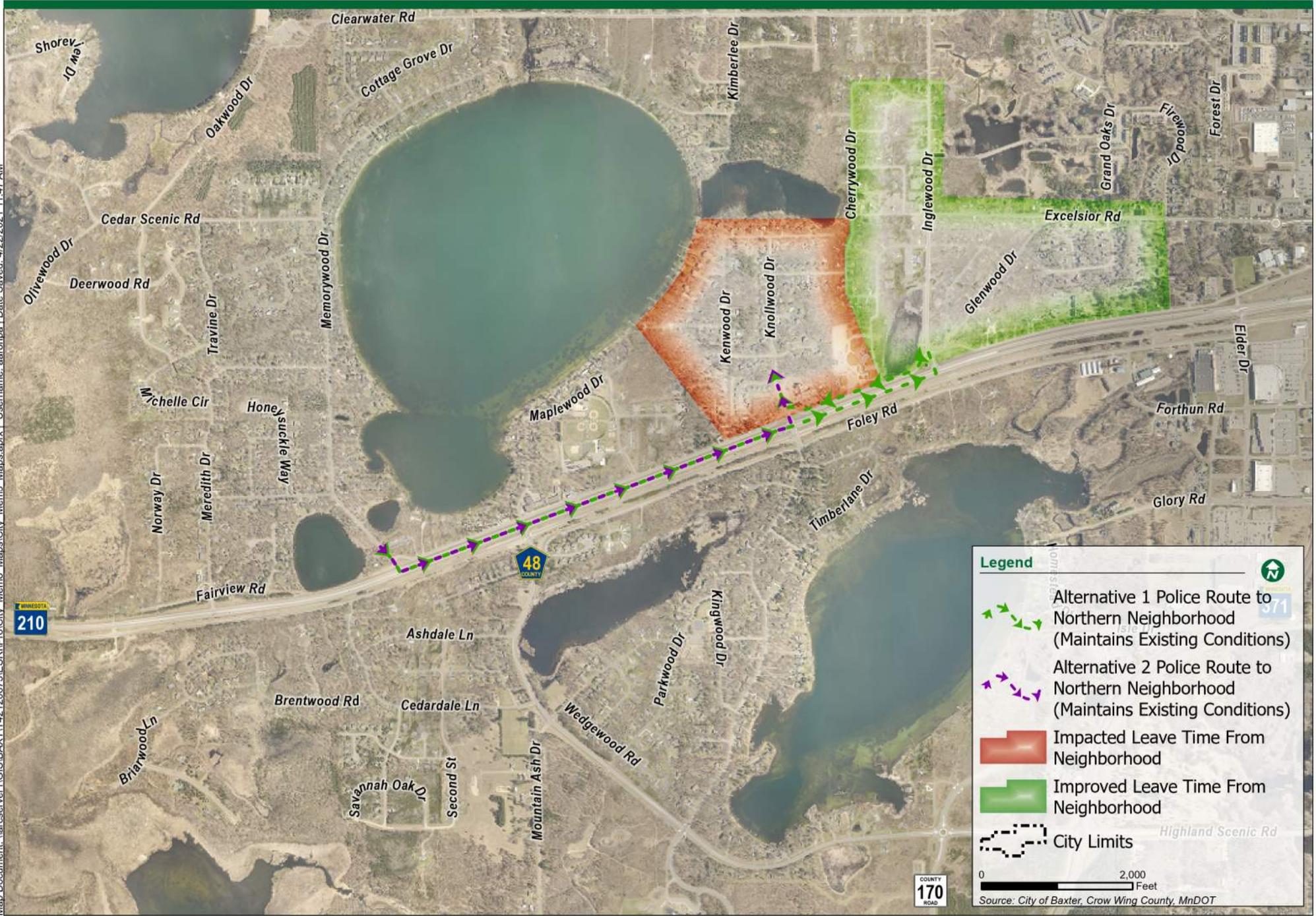


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Legend

- Alternative 1 Fire Route to Northern Neighborhood (Maintains Existing Conditions)
- Alternative 2 Fire Route to Northern Neighborhood (Maintains Existing Conditions)
- Impacted Leave Time From Neighborhood
- Improved Leave Time From Neighborhood
- City Limits

0 2,000 Feet
Source: City of Baxter, Crow Wing County, MnDOT



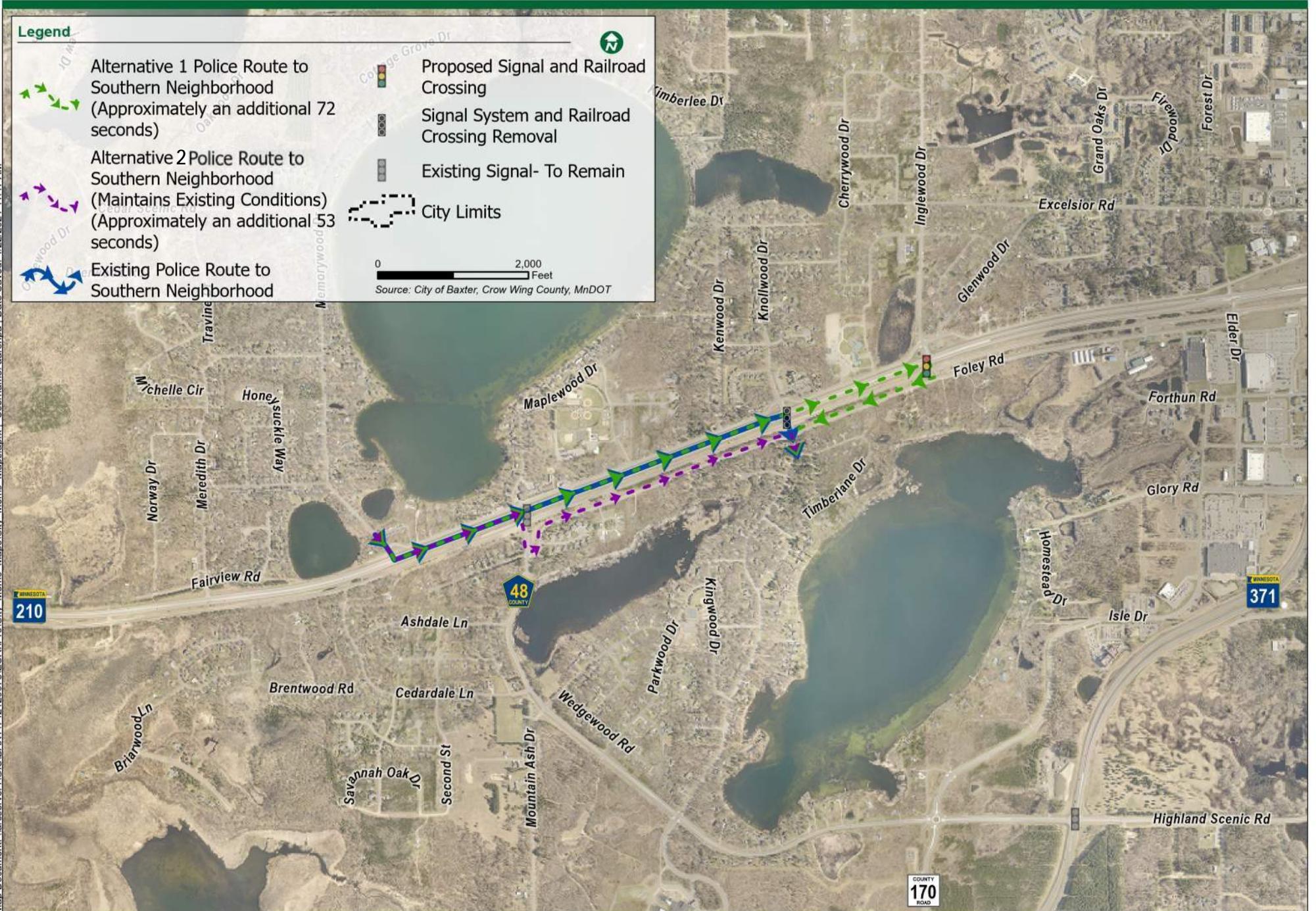
Legend

- Alternative 1 Police Route to Northern Neighborhood (Maintains Existing Conditions)
- Alternative 2 Police Route to Northern Neighborhood (Maintains Existing Conditions)
- Impacted Leave Time From Neighborhood
- Improved Leave Time From Neighborhood
- City Limits

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Source: City of Baxter, Crow Wing County, MnDOT

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