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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
Project History and Purpose
City of Baxter
Municipal Project No.: 4121
BMI Project No. T42.120675

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 amending the feasibility report and public input process. During the discussion, project need, intent, and reasoning were re-evaluated. This memo's intent is to provide the project area history and background that will justify the need and purpose of this project.

HISTORY

A. General

The City of Baxter is unique as it contains two of the major interregional corridors within the State of Minnesota. Trunk Highway 371 is a superhighway that runs north and south while Trunk Highway 210 runs east and west making a connection between Fargo and Duluth. Maintaining and sustaining these major arterials through the heart of the City of Baxter is critical for the longevity of the city. The corridor's constant thru traffic provides exposure to businesses and yields accessibility and transportation convenience for all city residents.

With these Trunk Highway corridors continuing to trend towards increased Average Daily Traffic (ADT) volumes, it becomes crucial that local traffic have alternative routes on the local system. With increased traffic volumes comes increased travel times which leads to MnDOT seeking for solutions to improve their roadway system.

A certain technique MnDOT tends to use first is Access Management. Access Management can consist of limiting access points by combining multiple driveways or city/county streets into one focused area. Other approaches are installing $\frac{3}{4}$ intersections, auxiliary lanes, or alternative intersection types. If all Access Management techniques have been exhausted, the final solution is for grade separation which can have the impact of limiting access and on-and-off capabilities of the free-flowing roadway making it crucial that the local system is adaptable and effective.

In certain examples throughout the state, if a corridor becomes too congested and MnDOT is looking to grade separate or expand the roadway, some municipalities frown upon the idea of

limiting access and/or major impacts to their local businesses by full acquisitions or redirecting traffic elsewhere. When discussions between MnDOT and the local entity come to a halt, the alternative can be a devastating realignment (bypass) of the entire Trunk Highway around them, removing that frequent passer-by traffic that businesses rely on. Avoidance of this situation has and should continue to be a goal for the City of Baxter.

It is imminent this situation will happen in 20 years plus. MnDOT will eventually want grade separations and make TH 371 a free-flowing roadway. Today MnDOT has already implemented Access Management techniques with focused entry areas and $\frac{3}{4}$ intersections. We are currently seeing it on TH 210 with MnDOT's active corridor study. This study is pushing for alternative intersection types throughout the corridor. If the City continues to prepare for this in the coming years, infrastructure and the local circulation will already be in-place to adapt to any changes of the adjacent Trunk Highway systems.

B. Reliever Roadway Planning

The solution to adapt to any possible changes of the Trunk Highway system is to provide parallel routes on each side of these principal arterials of TH 210 and TH 371. This provides local traffic the ability to move in a majority of directions without needing to utilize the Trunk Highway to get to their destinations. Having roadway connections for the minor direction of traffic to develop circulation is another key aspect. In the City of Baxter, having that ability to circulate around the commercial business district should be a major focus.

The City has designated the east of TH 371 reliever route as Cypress Drive. Recent improvements and two planned future projects will connect CSAH 48 (Highland Scenic Road) with Wolda Road via Cypress Drive will allow that roadway to function as an eastside reliever in response to situations that may happen on TH 371. The west of TH 371 reliever route is a little less conventional with Perch Lake being a natural barrier to work around. Per the Isle Drive/Elder Drive Transportation Study (2013), the west reliever roadway was defined as Inglewood Drive and Isle Drive. See **Appendix 1** for more information of the parallel reliever routes and assumed circulatory patterns that have been assumed to date within the City of Baxter.

C. Planning Study History

Previous transportation studies have been completed and incorporated into the City of Baxter's long range planning efforts. These studies developed the idea of local roadway circulation and recommended improving the local roadway system around these two interregional corridors which includes installment of parallel reliever routes. A summary of sequential list of these studies is below:

- City of Baxter Long Range Transportation Plan (2000) (City Comprehensive Plan)
- Benschopf & Associates, Inc. – MnDOT HAC & RAC – TH 210 Corridor Management Plan (2002) (MnDOT)
- Traffic Study for Excelsior Rd, Knollwood Drive, and Inglewood Drive (2010) (Wenck) (City of Baxter)
- Isle Drive/Elder Drive Transportation Study (2013) (WSB) (City of Baxter)
- City Railroad Crossing Assessment Analysis (2015) (SEH) (City of Baxter)
- Excelsior Road Area Transportation Study (2015) (WSB) (City of Baxter)

- Inglewood Drive Railway Crossing & Associated Roadway Improvements Feasibility Report (2018) (WSN) (City of Baxter)
- Highway 371 Bike/Pedestrian Crossing Study (2019) (SRF/Toole Design Group) (City of Baxter)
- (In Progress) - MnDOT District 3 TH 210 Corridor Study (2021) (Bolton and Menk) (MnDOT/City of Baxter/Crow Wing County)

D. Project History

With the recommendations of the traffic studies, the city has invested significant time and funding, slowly implementing this idea of reliever roadways and circulatory patterns. The following is a timeline of projects that have happened within the project area in the last 20+ years. **Appendix 2** displays them visually in a plan view.

1. Forthun Rd Construction and Utilities (1999) (WSN) (City of Baxter)
2. TH 210 City Street, Sanitary and Watermain Construction on Local Roads (2000) (WSN) (City of Baxter)
3. Knollwood and Parkwood Area Improvements (2001) (WSN) (City of Baxter)
4. TH 210 Expansion and Frontage Road System (2001) (MnDOT)
5. Isle Drive Extension Project (2004) (WSN) (City of Baxter)
6. The View at Rush Lake (2004) (Westwood) (City of Baxter)
7. Forthun Rd Construction and Utilities Extension (2005) (WSN) (City of Baxter)
8. Fairview Trail and Crossing Improvements Project (2007) (WSN) (City of Baxter)
9. Inglewood Drive Reconstruction (2016) (WSN) (City of Baxter/MnDOT)
10. Fairview Road Improvements (2016) (SEH) (City of Baxter)
11. Lift Station No. 3 Sanitary Re-Route [No Roadway Improvements] (2017) (Bolton and Menk) (City of Baxter)
12. Cypress Drive Improvements (East Side Reliever) (2018) (SEH) (City of Baxter)
13. Excelsior Road/Edgewood Dr Roundabout Project (2018) (WSB) (City of Baxter)

II. ADDITIONAL PURPOSES OF THE 2022 INGLEWOOD DRIVE PROJECT

A. Planning and Maintenance Reasons

- **Crossing and full access to TH 210 located closer to Commercial Development -** MnDOT has closed the northbound egress to westbound TH 210 traffic flow at Elder Drive. The closing of that intersection forced exiting traffic attempting to head west on TH 210, to either backtrack southerly to the Glory Road / TH 371 intersection, or head west on Foley Road (south frontage road) for 1.2 miles to the Knollwood Drive intersection and access to TH 210.
- **Improves pedestrian safety and routing –** Inglewood Drive has been designated as a regional corridor for pedestrians and bicyclists. A recent project installed a bituminous ped/bike trail along the west side of Inglewood Drive, north of TH 210.

That trail currently runs into TH 210 with the only way for pedestrians to cross TH 210 is at Knollwood Drive. This forces pedestrians and bicyclists to back track on the frontage road of Fairview Road that does not have any roadway separated facilities. In addition, the commercial development to the east tends to be the destination of these pedestrians and bicyclist so locating the TH 210 crossing at Inglewood aligns their traveled way to be more favorable toward a linear path. The relocation of the intersection will allow for better spacing for pedestrian trail crossings of TH 210. Currently there are no crossings between Knollwood Drive and Cypress Drive.

- **Foley Road has hit its life expectancy** – Foley Road was constructed in 2001, 20 years ago, which is a typical design life for a roadway. Today the pavement condition is fair to bad and visually needs repair. In addition, the existing trail located immediately behind the back of curb is substandard for today's bituminous trail standards. The MNDOT Bike Manual recommends at least a 5-foot-wide buffer from the roadway curb for signs, lighting, safety, etc. In addition, driveway crossings of this existing trail do not meet today's American with Disabilities Act (ADA) standards.
- **Better intersection spacing for TH 210** - The spacing of the existing signalized intersections do not meet MnDOT recommended distances and are not equally spaced to promote uniform traffic flow. The Knollwood Drive intersection is located approximately 1.4 miles west of TH 371 and the CSAH 48 intersection is located approximately 0.7 miles west of the Knollwood Drive intersection. This project would split the difference of that spacing in equal portions.

B. Establishing the West Reliever Roadway for TH 371

Midway through this idea of developing reliever and circulatory patterns, the city completed a planning study called Isle Drive/Elder Drive Transportation Study (2013). This study ultimately initiated the alignment of this west reliever roadway of TH 371. See **Appendix 3** for a visual. The City of Baxter has used this as a guide to formulate and establish the reliever roadway. Projects such as the Excelsior Road/Edgewood Dr Roundabout Project (2018) have begun the implementation process of this plan.

Most recently, the city composed the Inglewood Drive Railway Crossing & Associated Roadway Improvements Feasibility Report (2018) that recommended the design and construction of the 2022 Inglewood Drive project. See **Appendix 4** for those figures. It again built off the idea of the west reliever route alignment and analyzes how this project would be beneficial to all residents.

III. SUMMARY

Pending some probable additional implementations such as improvements to the Isle Drive/Glory Road intersection as described in a supporting memo by Bolton and Menk, going through and constructing the 2022 Inglewood Drive project would be the last puzzle piece to the west reliever road of TH 371. This project will not only support the needs of the City of Baxter for 20+ years on the local system, but it will also provide capacity and accommodations if MnDOT proceeds with any major changes of the interregional corridors of TH 210 and TH 371.

Name: 2022 Inglewood Drive Project History and Purpose

Date: 4/29/2021

Page: 5

BOLTON & MENK RECOMMENDATIONS

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

COUNCIL ACTION REQUESTED

Consensus of City Council to proceed with the proposed layout of the 2022 Inglewood Drive Project.

Appendices

Appendix 1– Reliver Routes for Trunk Highway 371

Appendix 2 – Area Project History and Timeline

Appendix 3 – Isle and Elder Drive Transportation Study Reliver Road Layout

Appendix 4 - Feasibility Study Layout of Foley Road and Inglewood Drive



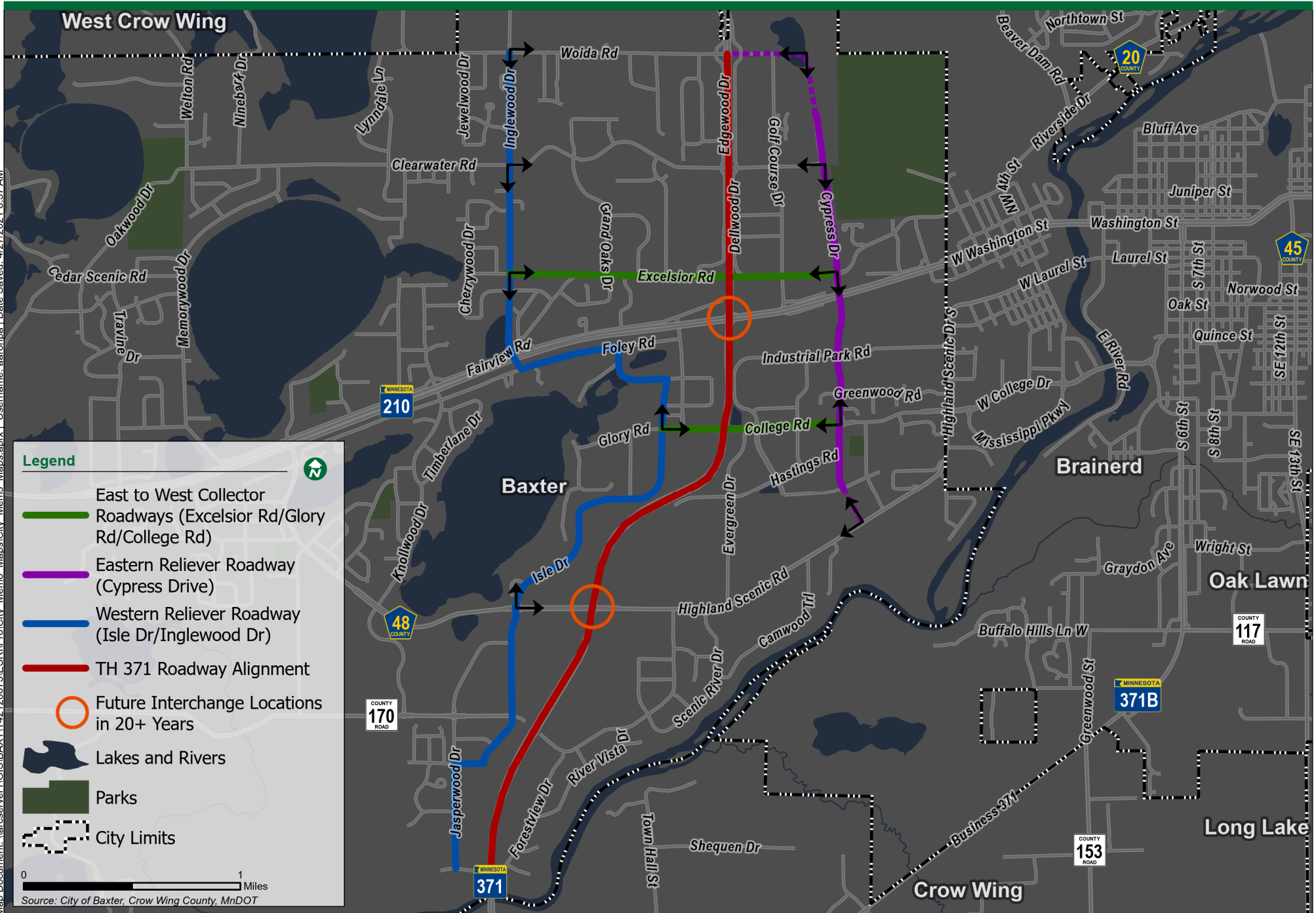
APPENDIX 1

2022 Inglewood Drive Railway Crossing & Road Improvements

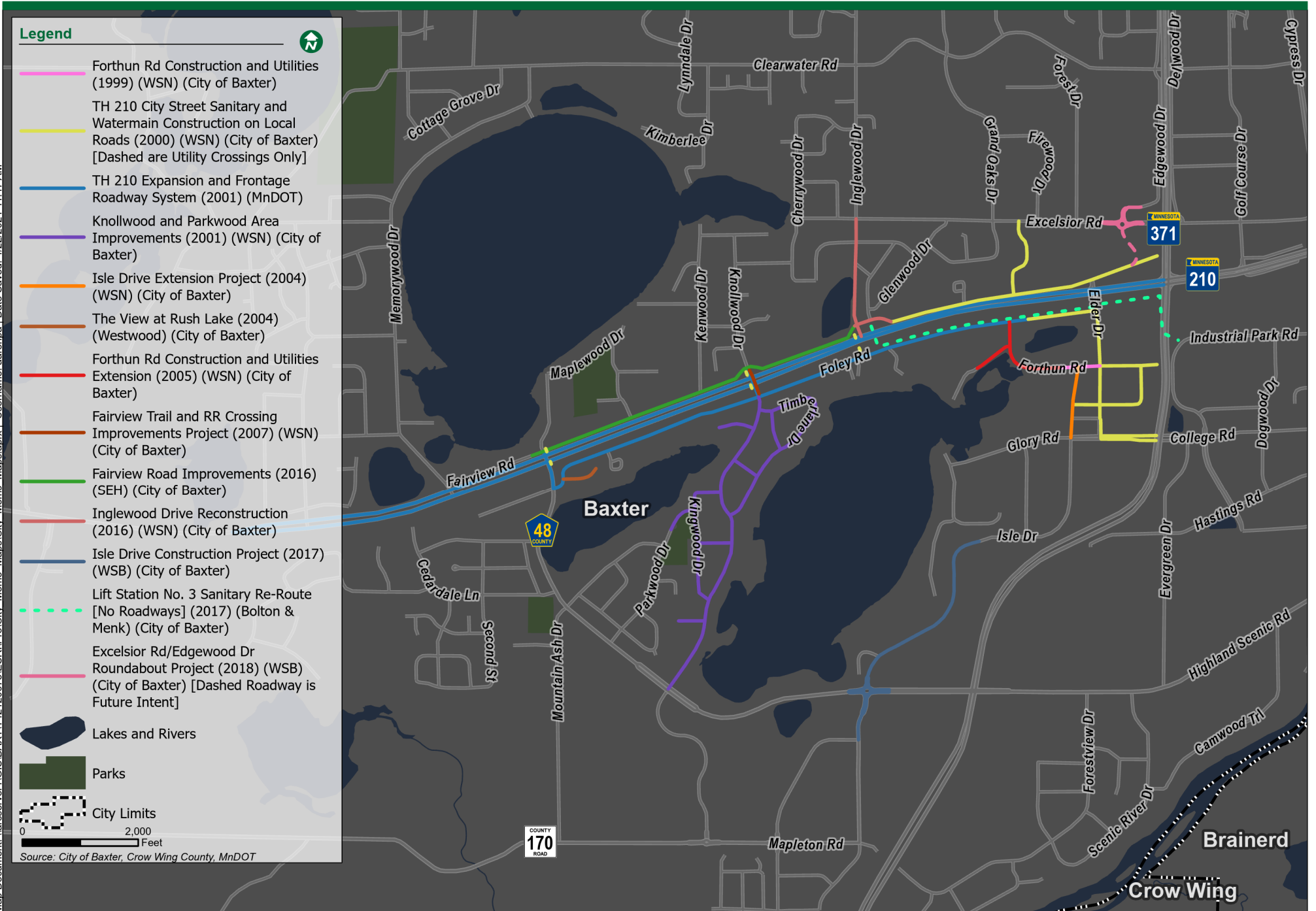
City of Baxter, Minnesota

Reliever Roadway Plan of TH 371

April 2021



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APPENDIX 3

Date Printed: 3/14/2013
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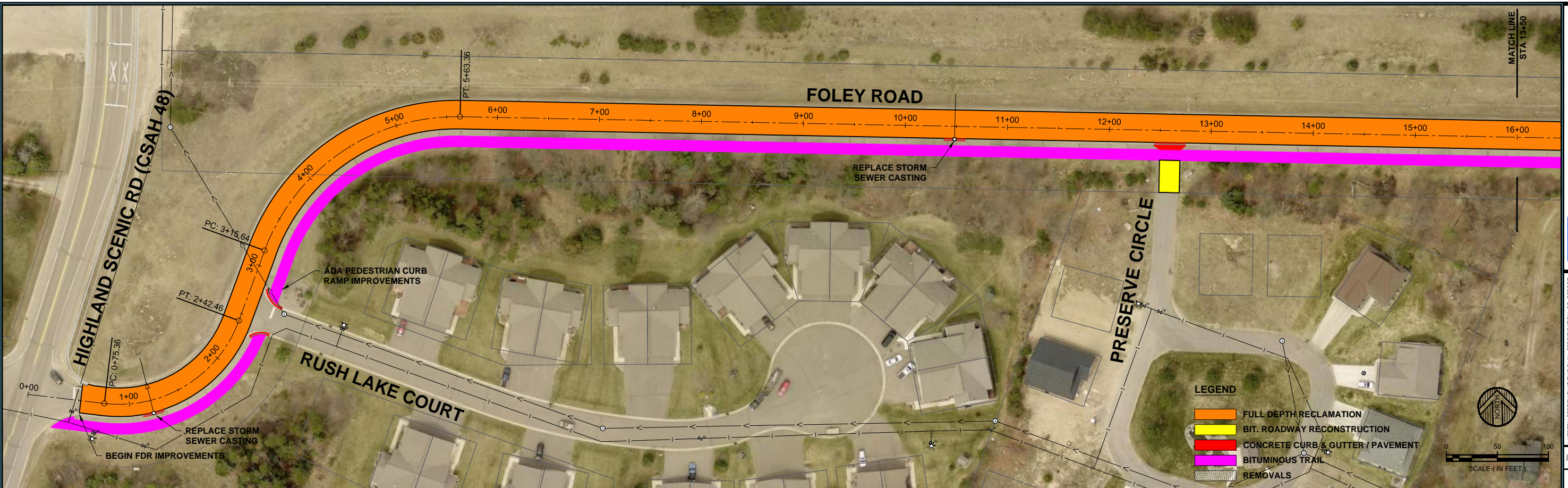
Elder Drive / Isle Drive Alternative Study

City of Baxter, Minnesota

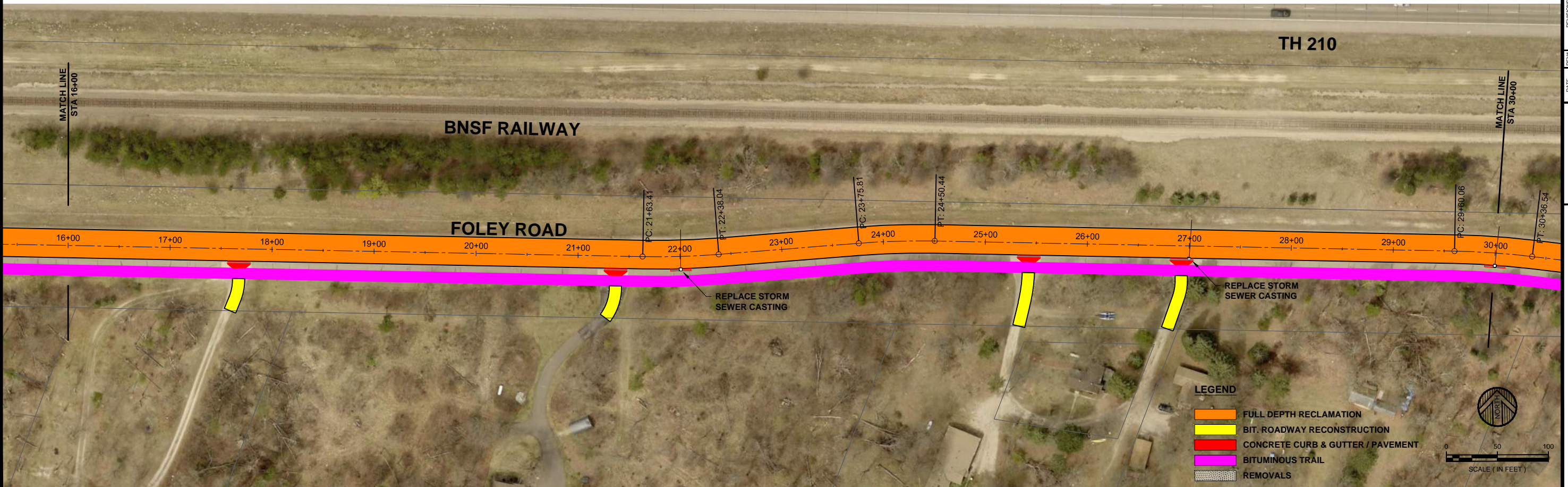
Alignment Concept 1

Figure 9

March 14, 2013



FOLEY ROAD STA 0+00 - 16+00



FOLEY ROAD STA 16+00 - 30+00

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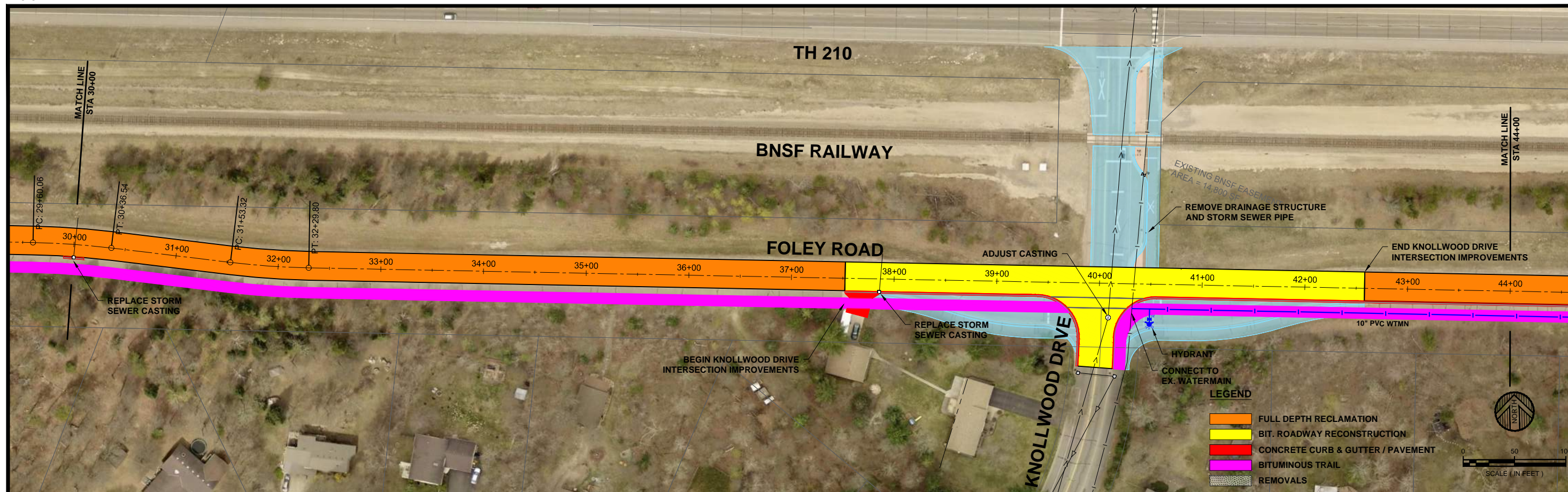


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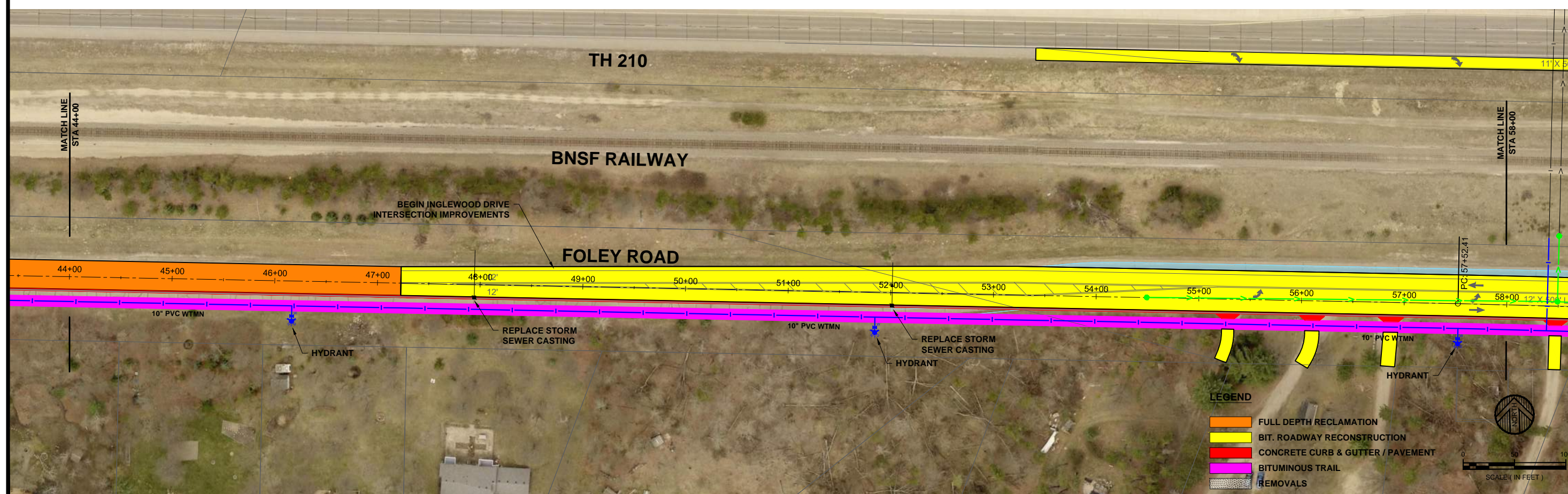
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INGLEWOOD DR RAILWAY CROSSING & FOLEY RD IMPROVEMENTS
 CITY OF BAXTER
 BAXTER, MINNESOTA



FOLEY ROAD STA 30+00 - 44+00



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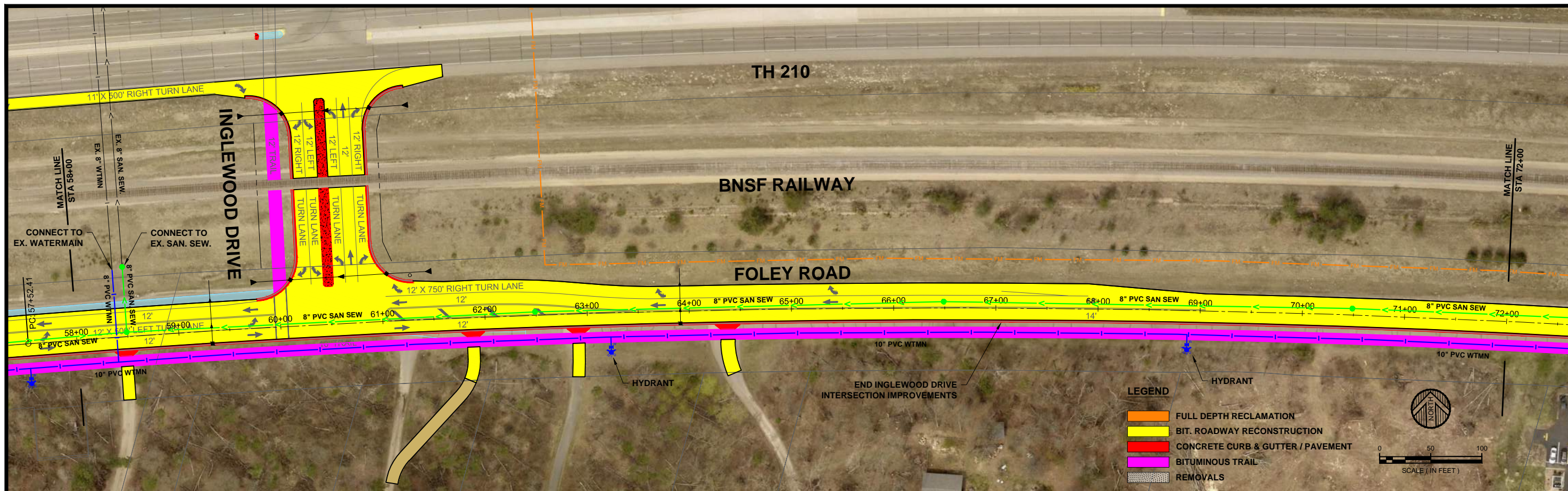
FIGURE 9 - PROPOSED IMPROVEMENTS - FOLEY ROAD

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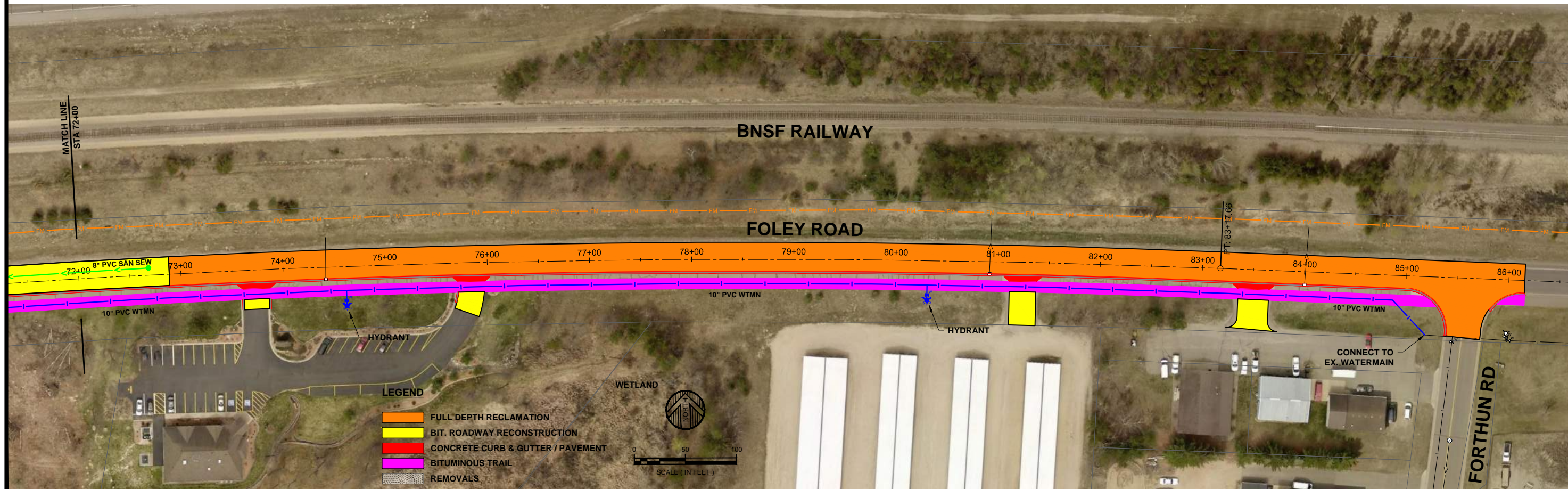
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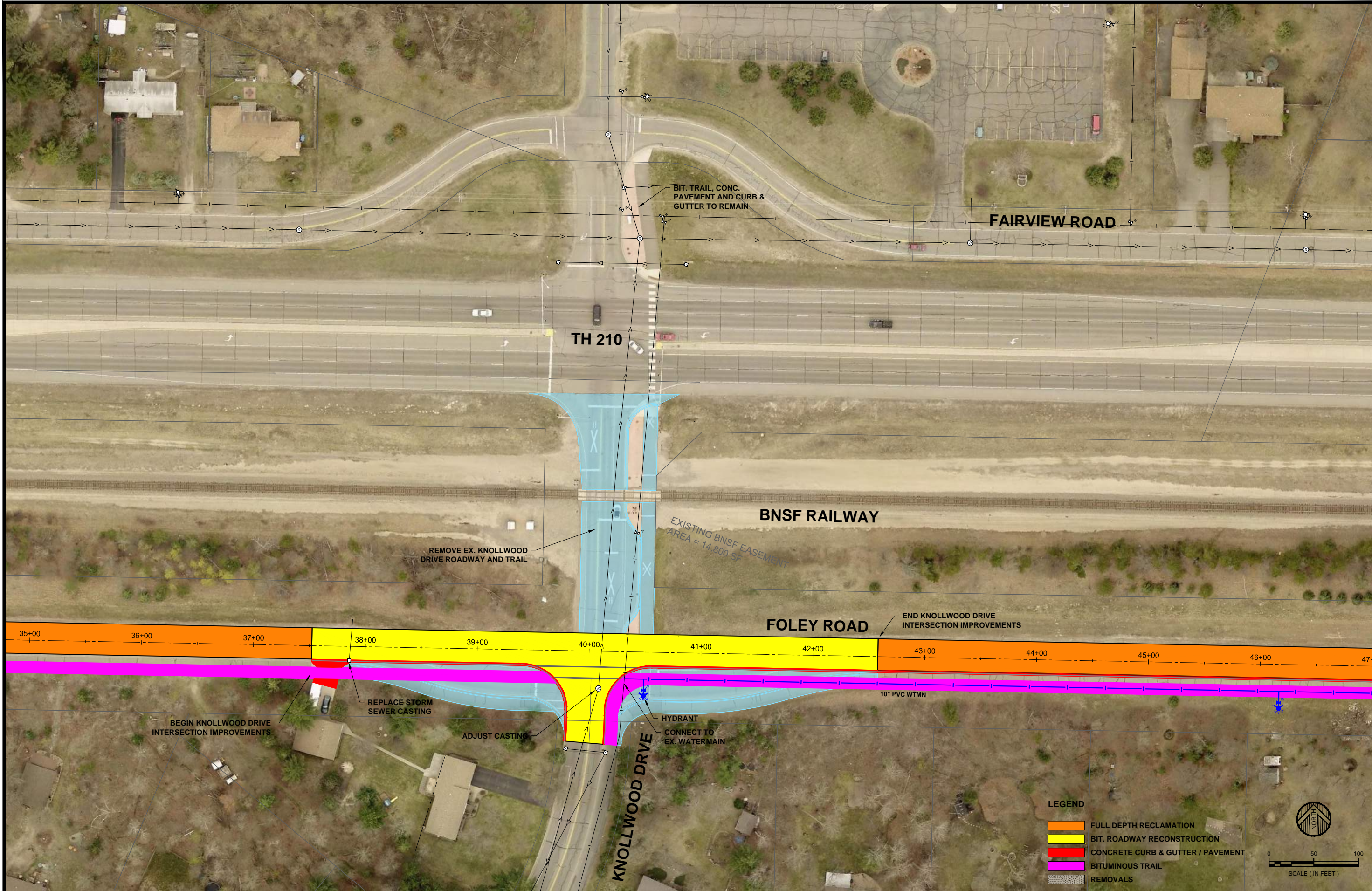
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FIGURE 10 - PROPOSED IMPROVEMENTS - FOLEY ROAD

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KNOLLWOOD DRIVE INTERSECTION DETAIL

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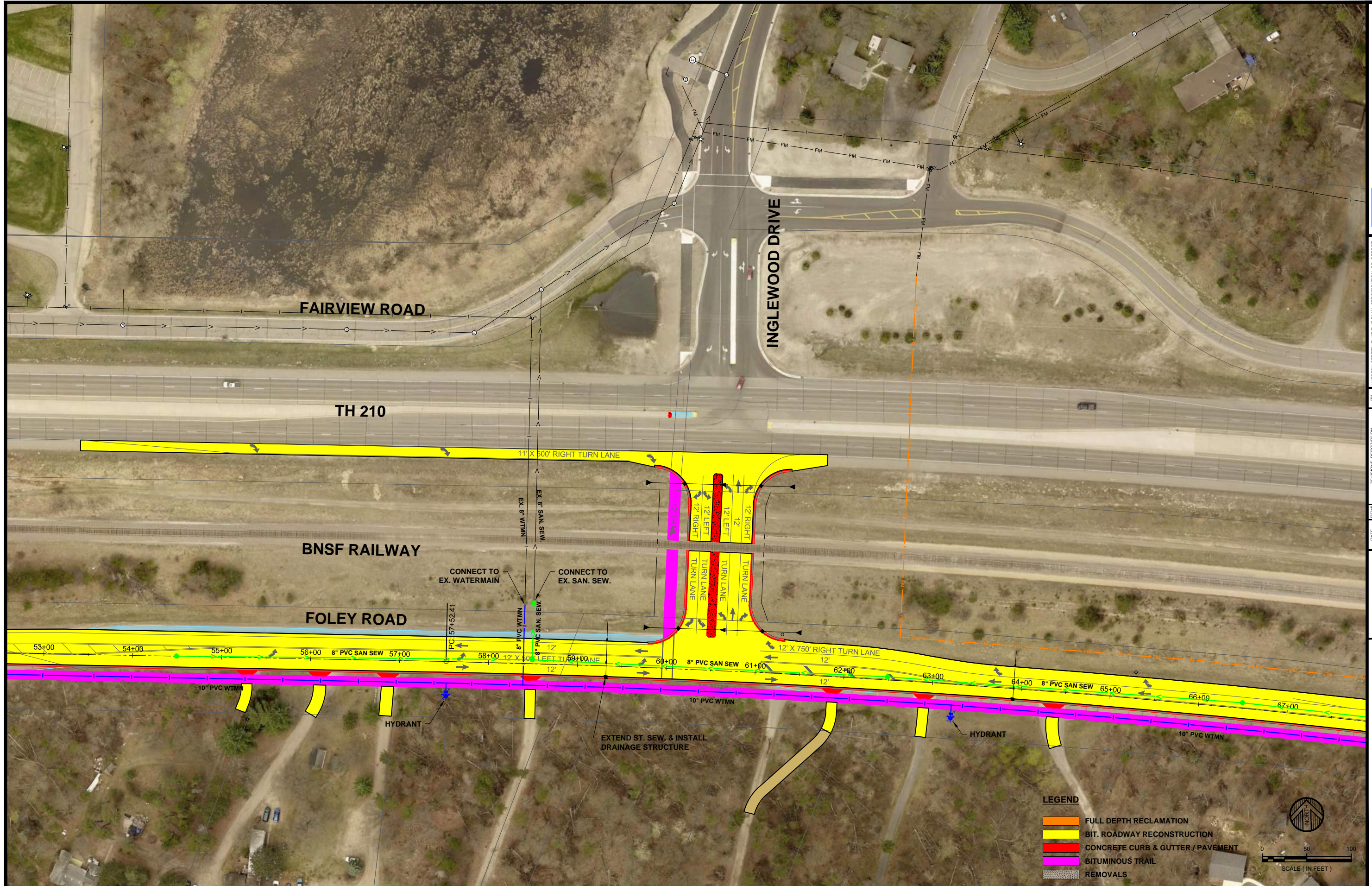


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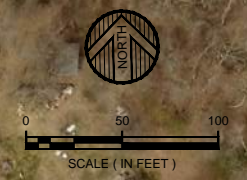
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INGLEWOOD DR RAILWAY CROSSING & FOLEY RD IMPROVEMENTS
 CITY OF BAXTER
 BAXTER, MINNESOTA
FIGURE 11 - PROPOSED IMPROVEMENTS - KNOLLWOOD DRIVE



LEGEND

- FULL DEPTH RECLAMATION
- BIT. ROADWAY RECONSTRUCTION
- CONCRETE CURB & GUTTER / PAVEMENT
- BITUMINOUS TRAIL
- REMOVALS



INGLEWOOD DRIVE INTERSECTION DETAIL

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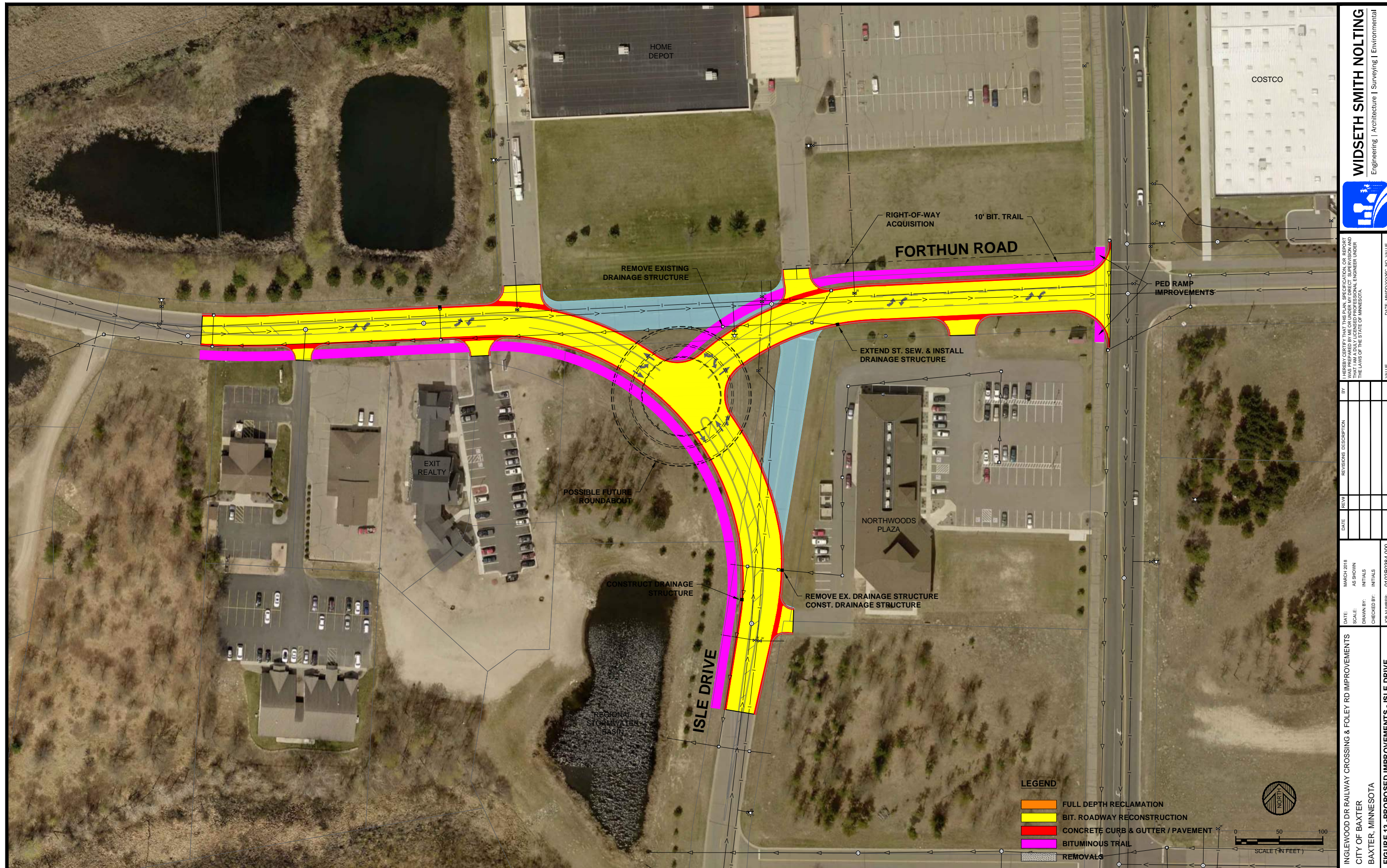
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FIGURE 12 - PROPOSED IMPROVEMENTS - INGLEWOOD DRIVE

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FORTHUN ROAD AND ISLE DRIVE INTERSECTION IMPROVEMENTS

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INGLEWOOD DR RAILWAY CROSSING & FOLEY RD IMPROVEMENTS
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FIGURE 13 - PROPOSED IMPROVEMENTS - ISLE DRIVE

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