

Branch of the Upper McClellan Drain

Board of Determination

Richland Township Hall

December 3rd, 2015

7:00 p.m.



Brian J. Wendling

Saginaw County Public Works Commissioner

Meeting Agenda

- I. Introduction
- II. Outline of the Board of Determination Procedures
- III. Opening of Board of Determination Meeting
- IV. Project History
- V. Engineering Presentation
- VI. Public testimony (3 minutes per person)
- VII. Vote of Board of Determination
- VIII. Appeal procedures and closing comments
- IX. Next Steps (if determined necessary)
- X. Adjournment

Role of the B.O.D.

- The Board of Determination's role is to make the following decisions:
 - ▣ Whether a maintenance/improvement project is necessary
 - ▣ Whether a portion of the cost is to be assessed at-large to the municipalities

Role of B.O.D. (cont.)

- The Board of Determination DOES NOT decide:
 - ▣ The scope of the project
 - ▣ The cost of the project
 - ▣ How much property owners and municipalities are assessed for the project

Information on these topics will be made available at a later date. Please see a member of the Public Works Commissioner's staff after the meeting if you have questions.

Public Comment

- Please form a line behind speaking area.
- The speaking order will be on a first come, first served basis.
- State your full name and address. Spell your last name for the court reporter.
- Limit comments to 3 minutes.

Public Comment (cont.)

- Remember to stay on topic! Comments for tonight's meeting are limited to the current petition for the Branch of the Upper McClellan Drain only.
- The Public Works Commissioner's staff will gladly speak with you on other topics after the conclusion of tonight's meeting.

Project History

- The Hemlock area has been experiencing chronic flooding including:
 - ▣ Surface Flooding
 - ▣ Basement Flooding
 - ▣ Sanitary Sewer backups during rain events
- The following entities have been working together to develop a series of projects on the existing drainage systems in Hemlock to resolve the problem
 - ▣ Richland Township
 - ▣ Saginaw County Public Works Commissioner
 - ▣ MDOT

Project History

- Hemlock No. 2 Tile Drain Petitioned – June 11, 2013
 - Numerous complaints/service requests received from homeowners in the Drainage District regarding surface and basement flooding
 - Video evidence tile is in poor condition
 - Found necessary to implement a drainage improvement project
- Preliminary Engineering Review – Fall 2013
 - Sanitary pump records suggest storm water in sanitary sewer
 - Recommendation identifying sources
 - Review of past studies suggest simple replacement of Hemlock No. 2 Tile not enough to address flooding problems

Project History

- Richland Township had Sanitary Sewer Analysis
 - Public Information meeting July 21, 2014
 - Completed analysis Summer 2014
 - Presented to Township November 11, 2014
 - Sent survey mailer to sanitary customers
 - Flow metering
 - Smoke testing
 - Analysis concluded that storm water was entering sanitary system in locations outside of the Hemlock No. 2 Tile Drainage District
 - Also concluded system wide storm drain improvements needed to reduce storm water in sanitary sewer and reduce surface flooding throughout town

Project History

- Storm Sewer Inventory Completed – Spring 2015
 - ▣ Inventoried existing storm sewer structures and pipe networks throughout Hemlock
 - ▣ Identified over 10 county drains impacting the Hemlock area
- Presented Findings to Richland Township Board – May 8, 2015
 - ▣ Following the presentation, petitions were signed by the Township to consolidate several county drains into the Hemlock Tile Drain Drainage District. Project was found necessary by Board of Determination on July 29, 2015
 - ▣ At the same time a petition was also filed for the Branch of the Upper McClellan

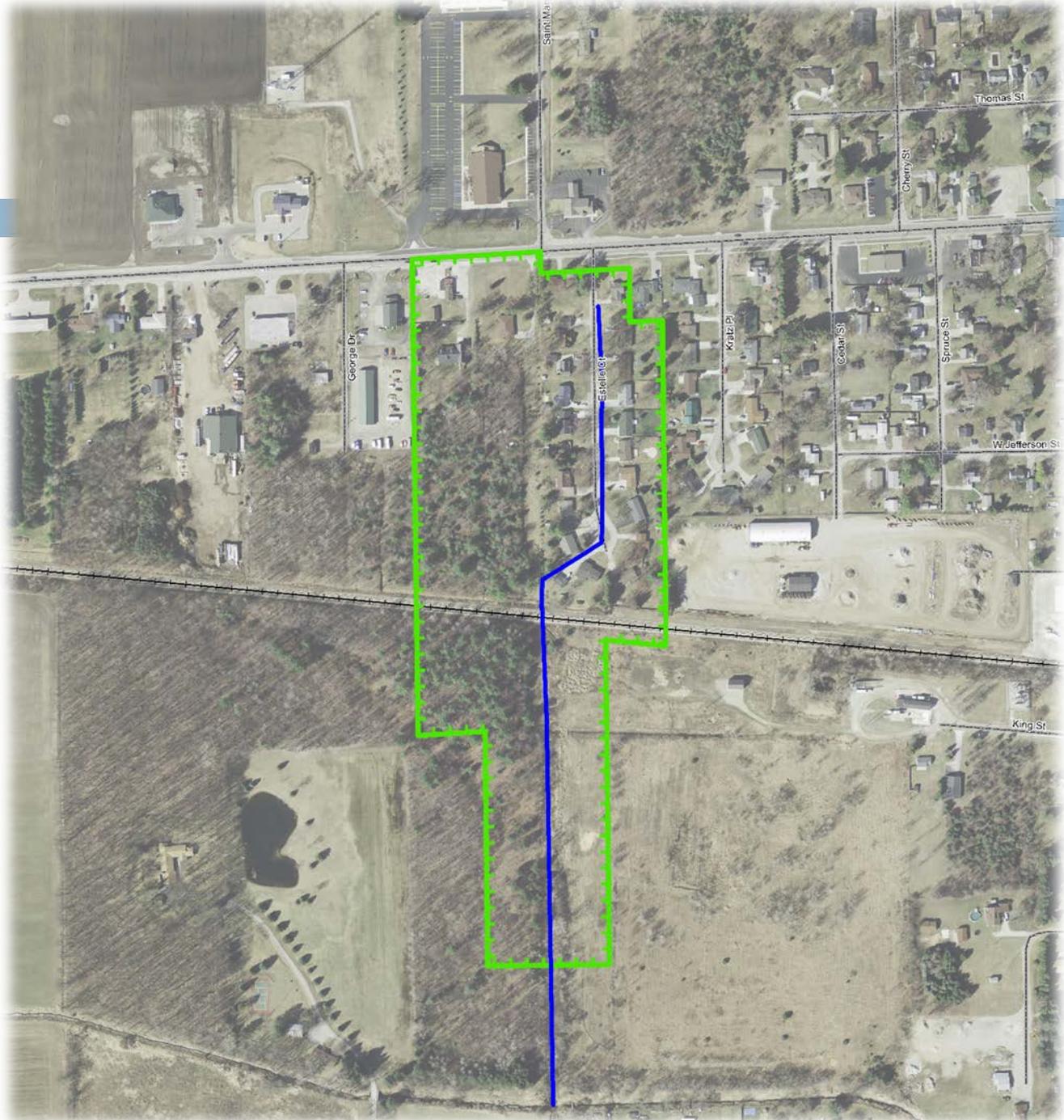
Project History

□ MDOT Project on M-46

- While the Township and the County have been working on improving county drains in the Hemlock area, MDOT has been working on a project to improve M-46 which includes drainage improvements along the highway.
- MDOT and the Saginaw County Public Works Commissioner have been working together to put together the most cost effective project by coordinating efforts to improve drainage.
- MDOT is evaluating providing funds to assist with extending the Branch of the Upper McClellan Drain to M-46.

Engineering Presentation

- Drain Background
- Sanitary Sewer Study
- Drain Inventory
- Observed Problems
- Drainage District Delineation





Sanitary Sewer Study

- Preliminary engineering on Hemlock No. 2 Drain concluded storm water was entering the sanitary sewer system
- Township completed sanitary sewer study which included
 - Questionnaire sent to customers
 - Smoke Testing
 - Flow Metering



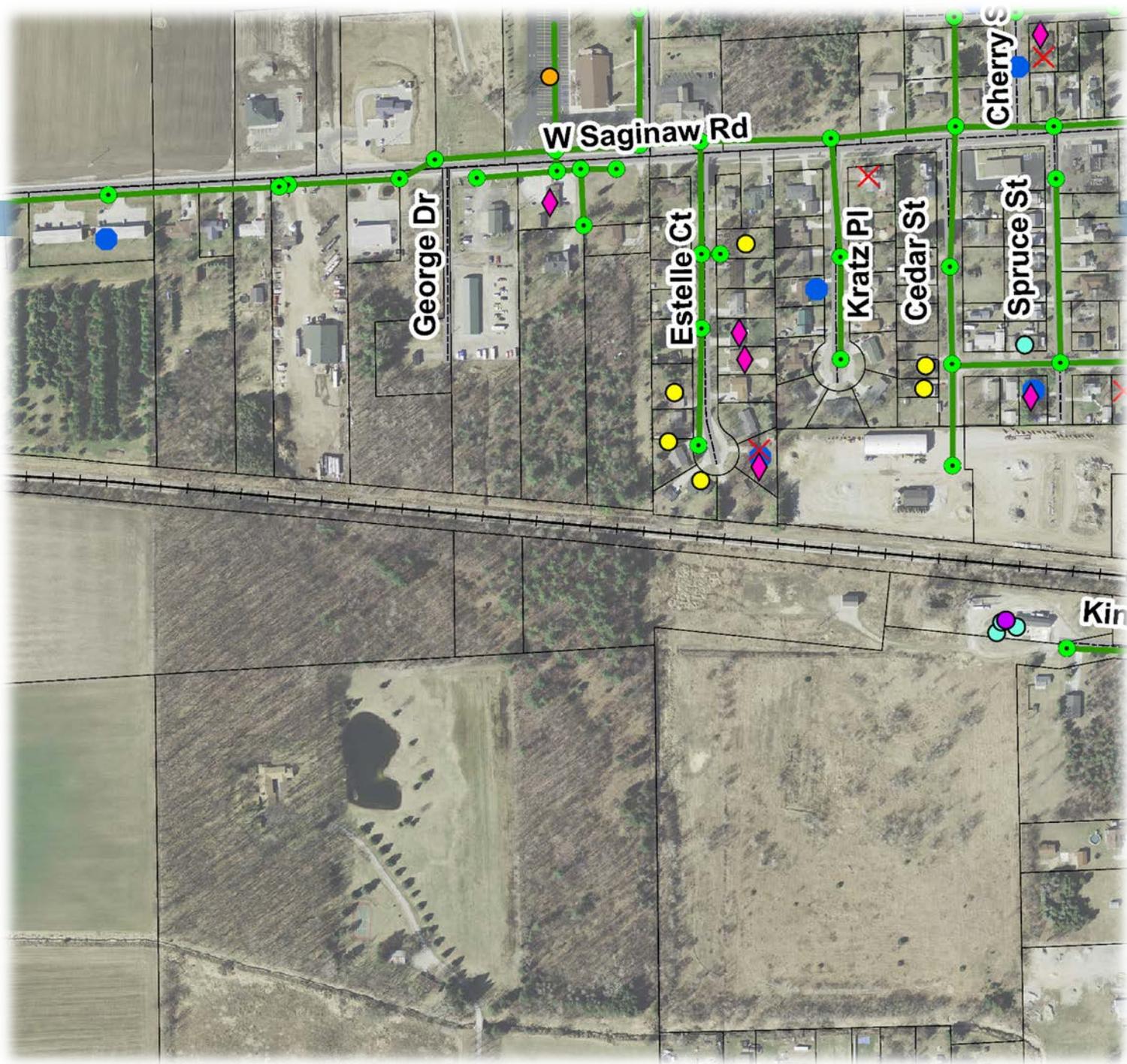
Sanitary Sewer System

- Township operates and maintains
 - 10 miles of pipe
 - 3 pump stations
 - Lagoon treatment system – 3 ponds
 - 534 customers
- Includes the Branch of the Upper McClellan Drainage District



Sanitary Sewer Study

- Questionnaire was distributed to 534 sanitary sewer customers in July 2014
- 95 customers responded
 - ▣ 53% experienced or observed surface flooding
 - ▣ 40% have experienced basement flooding consisting of either sanitary or storm water
 - ▣ 65% have sumps pumps





Sanitary Sewer Study

□ Smoke Testing

- ▣ Smoke testing was performed over a five day period which began September 1, 2014
- ▣ Direct storm water inflow observed at:
 - Old Meat Packing Site
 - Church Parking Lot

□ Flow Metering

- ▣ Storm water from within Br. Of the Upper McClellan was measured in the sanitary sewers and determined to contribute sanitary sewer backups.



Drainage Infrastructure Inventory

- Inspected manholes and catch basins
- Measured pipe sizes and depths
- Assess condition of storm sewers based on observation at manholes
- Assess condition of open drain based on observations



Photos of Drain of Br. Of Upper McClellan



Standing Water at Storm Sewer Outlet



Damaged Outlet Pipe Under RR Tracks

Photos of Drain



Outlet to Open Ditch Portion of Drain



Open Drain Near Outlet into Upper
McClellan Drain



Observed Problems

- ❑ Obstructed Outlet Pipe Under RR Tracks
- ❑ Surface Flooding Near Railroad, Road Commission Yard, and Rear Lots Adjacent to Railroad
- ❑ Trees, Deadfall, and Debris Obstructing Open Channel Portion of Drain
- ❑ Surface Flooding on M-46 and Adjacent Area



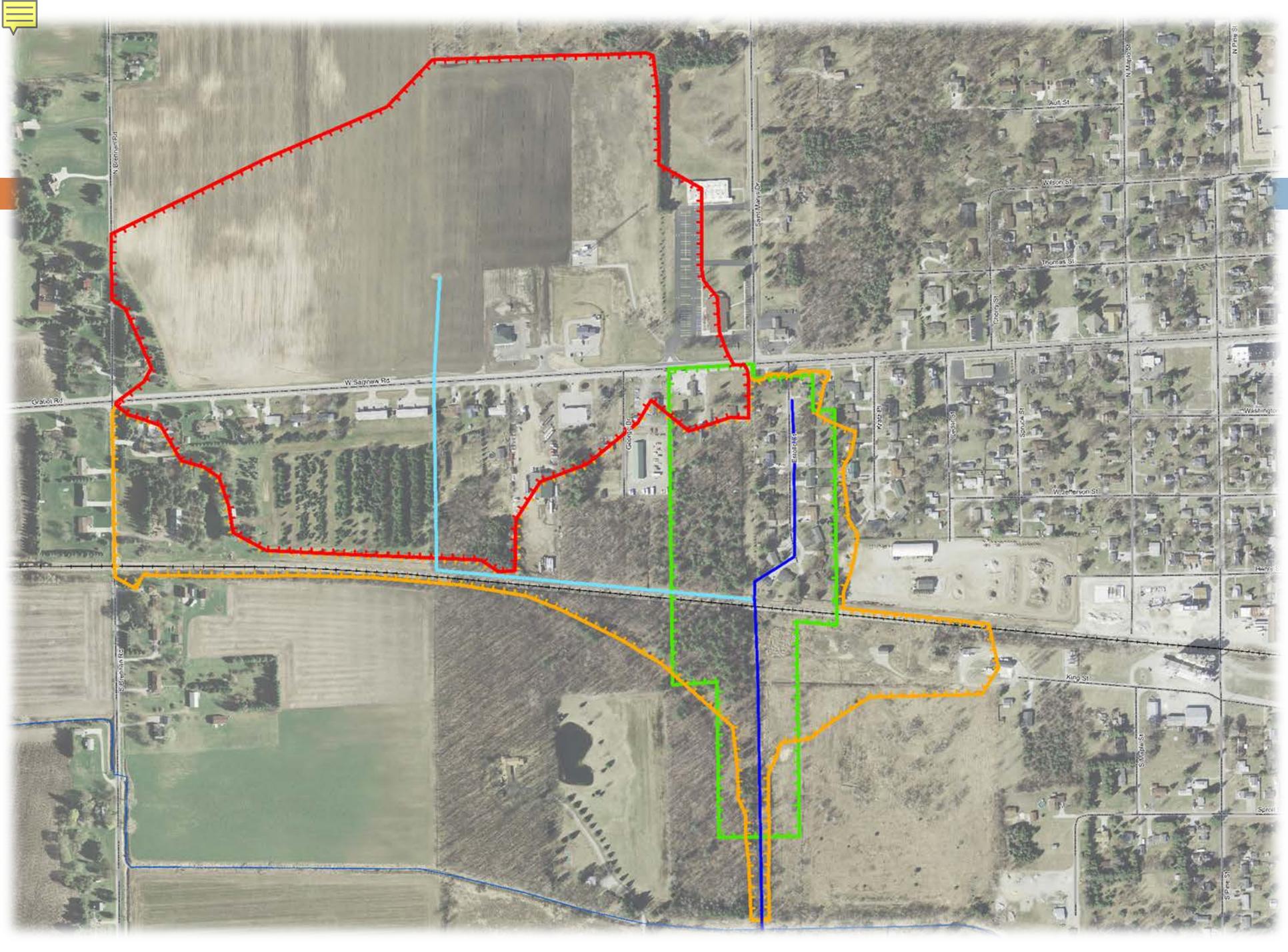
Observed Flooding





Preliminary Drainage District

- What is the drainage district?
 - ▣ Lands that contributes storm water to drain
 - ▣ Drainage District serves as the special assessment district
 - ▣ Branch of the Upper McClellan Drain Drainage District includes:
 - Saginaw County
 - Richland Township
 - Railroad
 - Michigan Department of Transportation
 - Landowners – Approximately 65 parcels
 - Approximately 135 Acres



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Next Steps

(if determined necessary)

- Video and clean storm sewer considered to remain
- Easement coordination
- Topographical survey
- Final scope determination
- Utility coordination
- Coordinate MDOT, Road Commission and Railroad
- Public Meeting
- Schedule for construction completion late 2016

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