

Little Eagle Creek Drain

Public Informational Meeting

Lakefield Township Hall

April 19, 2023

6:00 PM



Brian J. Wendling

Saginaw County Public Works Commissioner

Purpose of Meeting

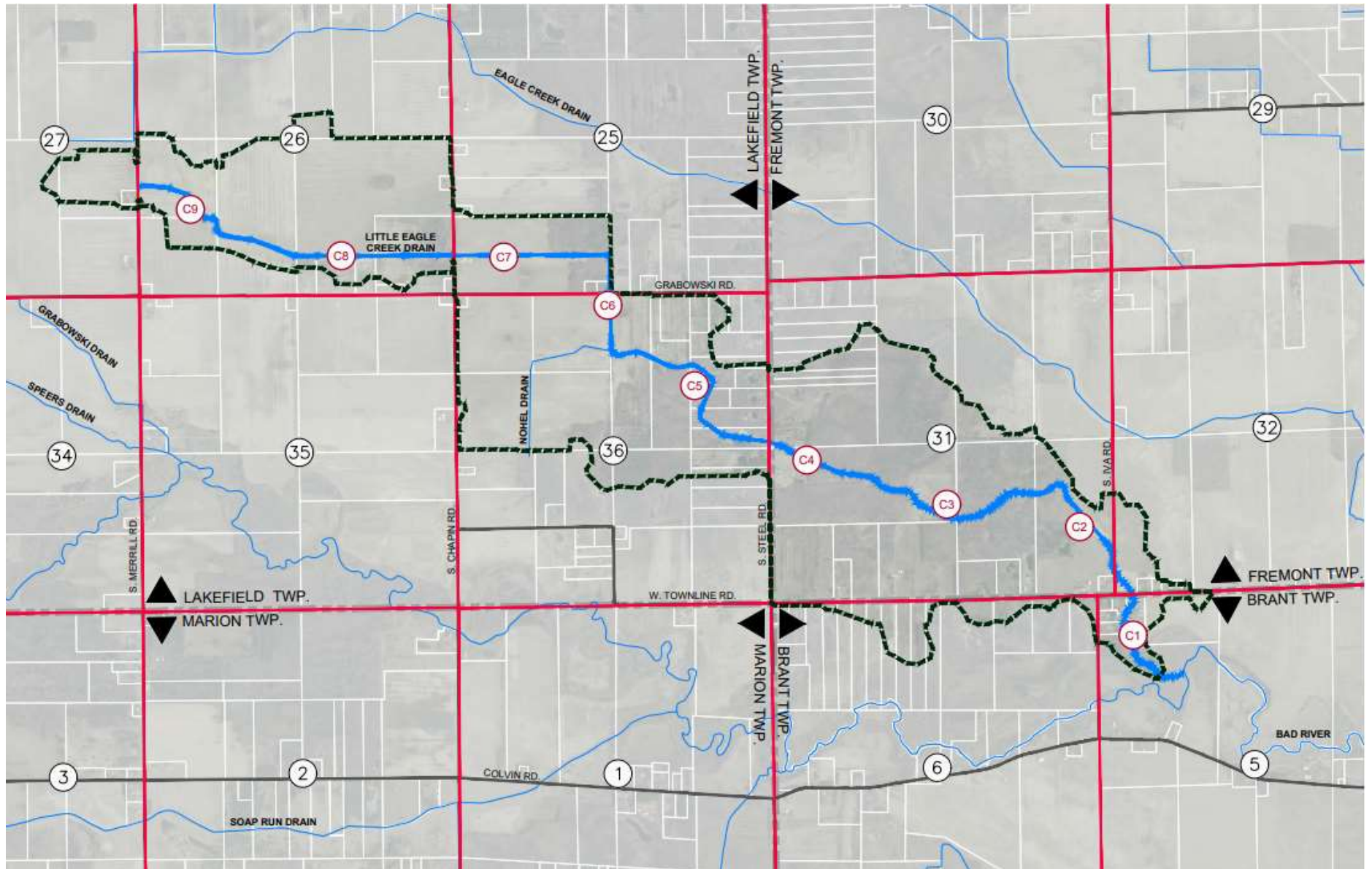
- ✓ Inform landowners adjacent to drain of proposed improvements
- ✓ Public Works Commissioner to receive input and comments from landowners on the proposed plan

Presentation Agenda

- Drain Background
- Drainage District
- Survey and Design
- Open Channel Improvements
- Drain Crossing Improvements
- Cleanup and Restoration
- Tentative Project Schedule
- Preliminary Estimate of Cost
- Questions and Comments

Drain Background

- **Established in 1910**
- **Location of the Little Eagle Creek Drain**
 - Outlet is at the Bad River, approximately 1,345 feet south of W. Townline Rd.
 - Upper end of drain is located at the S. Merrill Rd. culvert outlet
 - Total length of approximately 4.56 miles

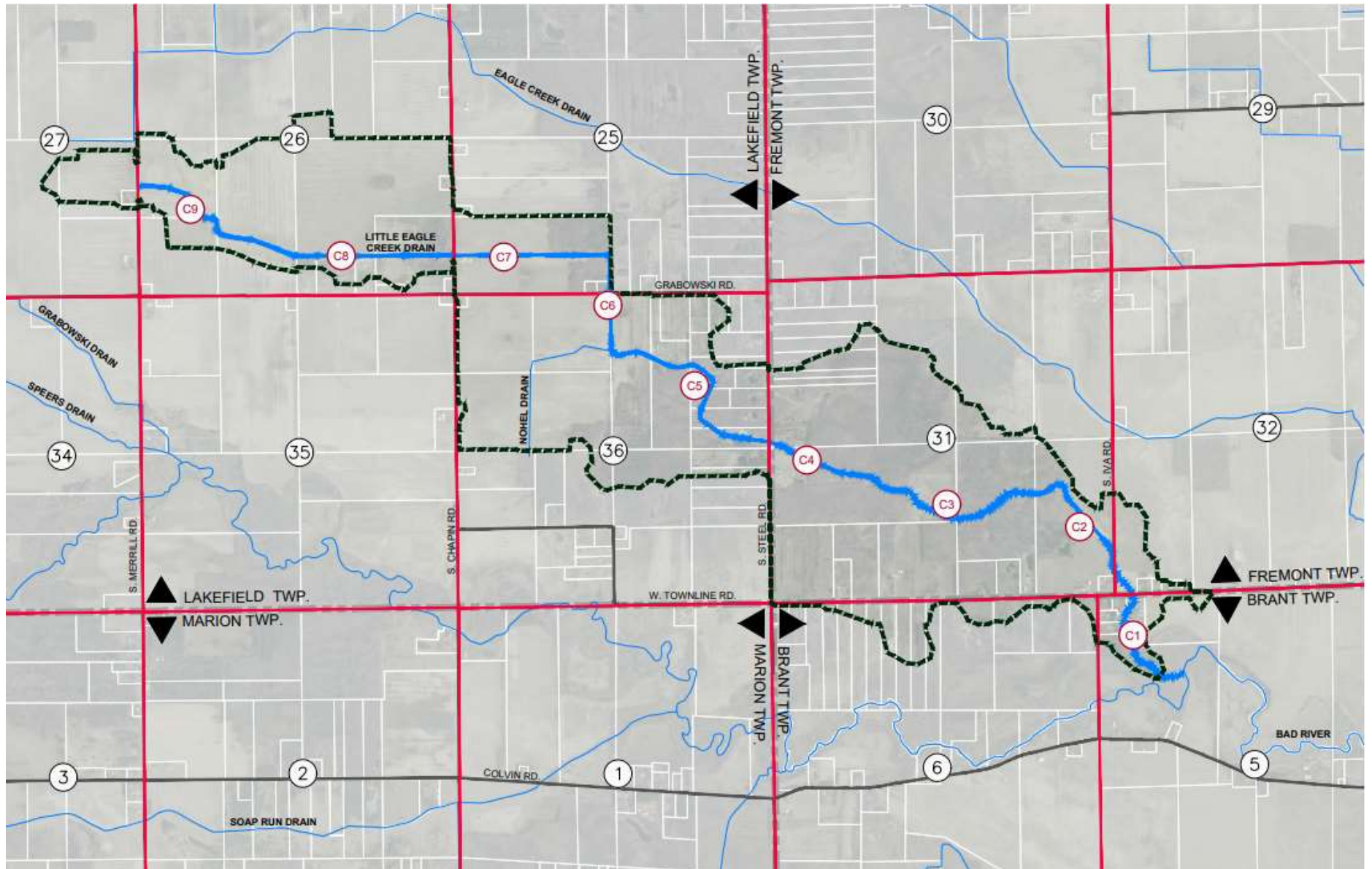


Drain Background

- **Current Landowner Petition**
 - Dated January 12, 2022
- **Landowner Testimony – Board of Determination Meeting held April 12, 2022**
 - Stagnant water
 - Excessive sediment buildup
 - Buried tile outlets
 - Woody debris / obstructions

Drainage District

- **What is a drainage district?**
 - Lands contributing storm water to a drain
 - The drainage district serves as the special assessment district
 - Little Eagle Creek Drain Drainage District includes:
 - Fremont, Brant & Lakefield Townships
 - Saginaw County
 - Landowners – Approximately 85 parcels
 - 1,232 Acres



Survey, Engineering & Design

- Survey of drain
- Draft survey onto plans
- Engineering field review
- Existing utility research
- Hydrology and hydraulic calculations
- Analyze alternatives
- Final design of plans

Survey

- **Surveyed approximately 4.56 miles of open drain**
 - Collected flowline elevations every 250 feet
 - Collected cross sections at minimum every 500 feet
 - Collected topography within 50 feet of the drain centerline
 - Collected elevations of all culvert crossings

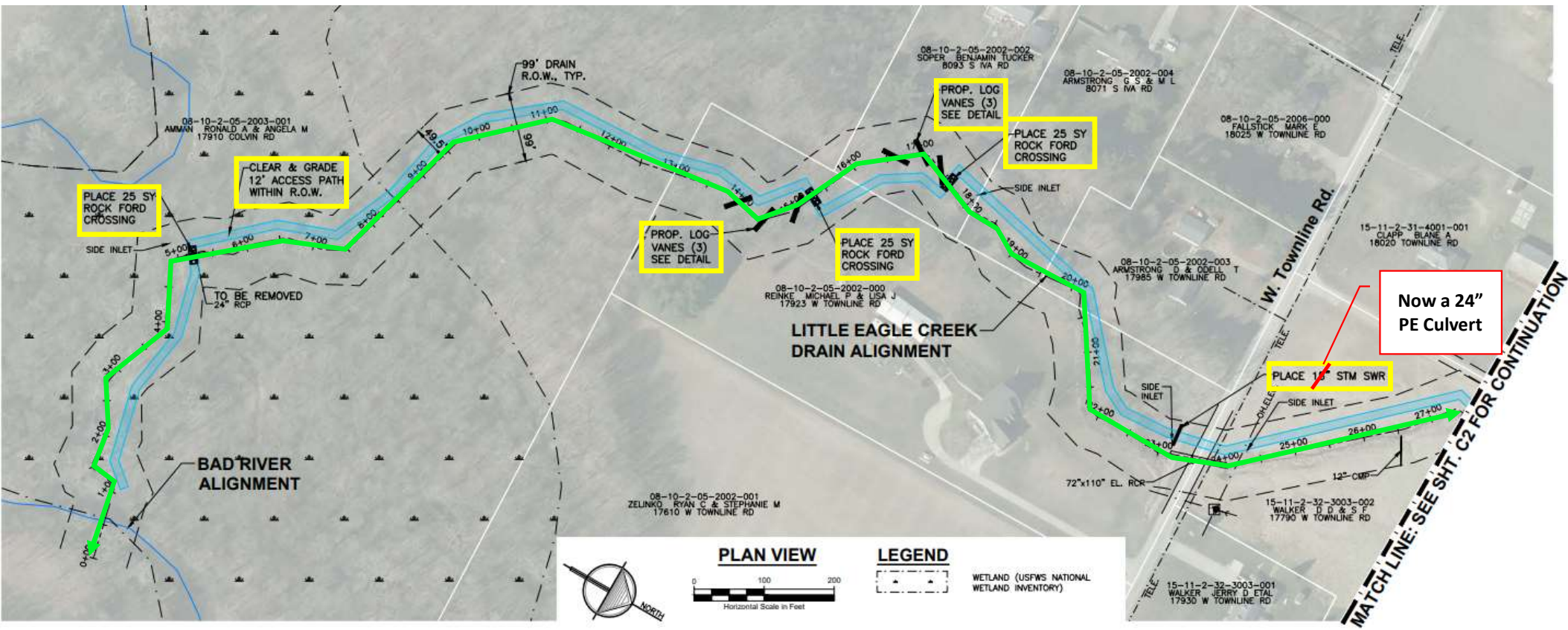
Design

- **10-Year Design Storm**
 - Saginaw County Standard Level of Service
 - 1.43 Inches of rain in 1 hour
 - 3.05 Inches of rain in 24 hours

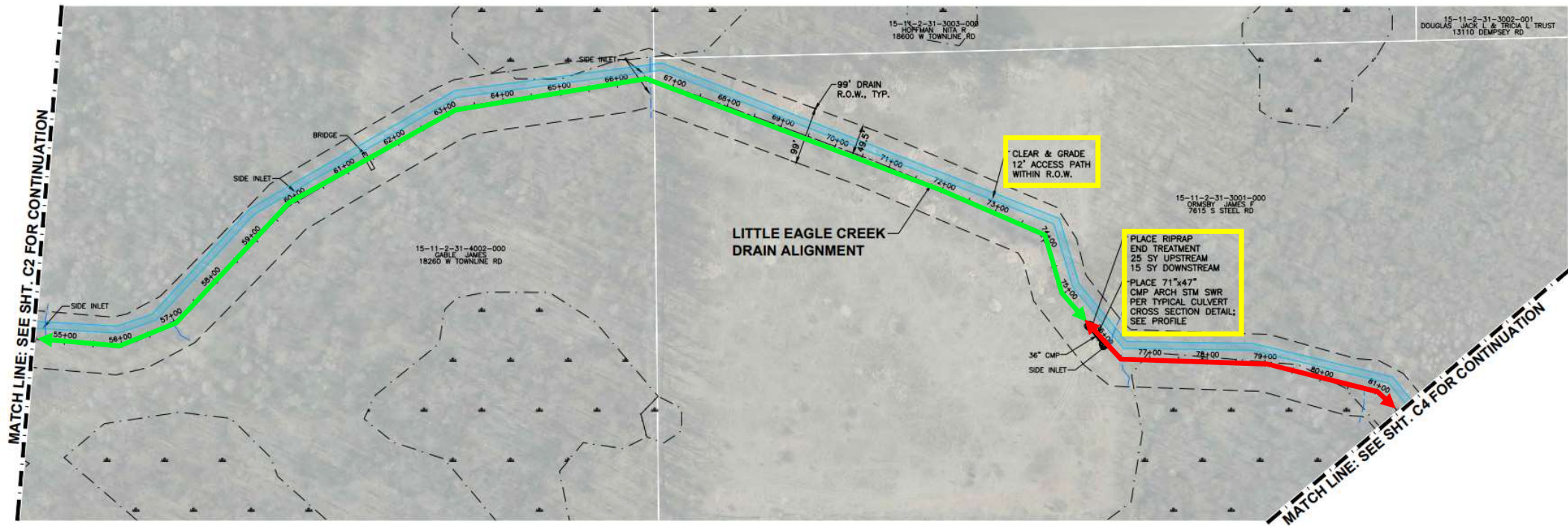
Channel Improvements

- **Drain Restoration**
 - Vegetation management
 - Sediment removal
 - Erosion repair & prevention
- **Channel Excavation**
 - Sediment removal from bottom
 - One or both side slopes are regraded to stabilize

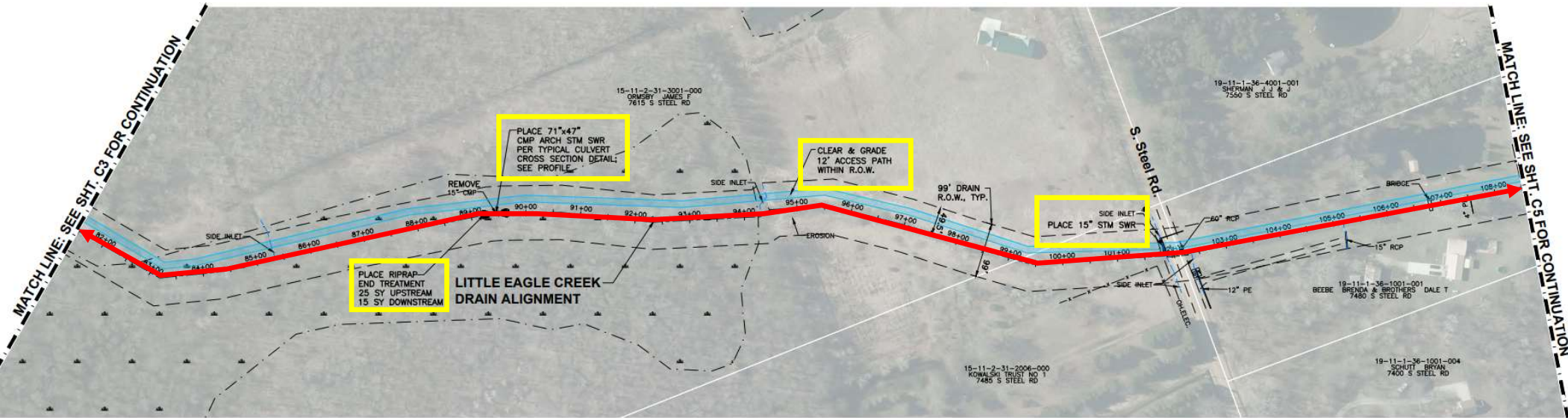
Clearing, Grubbing & Snagging



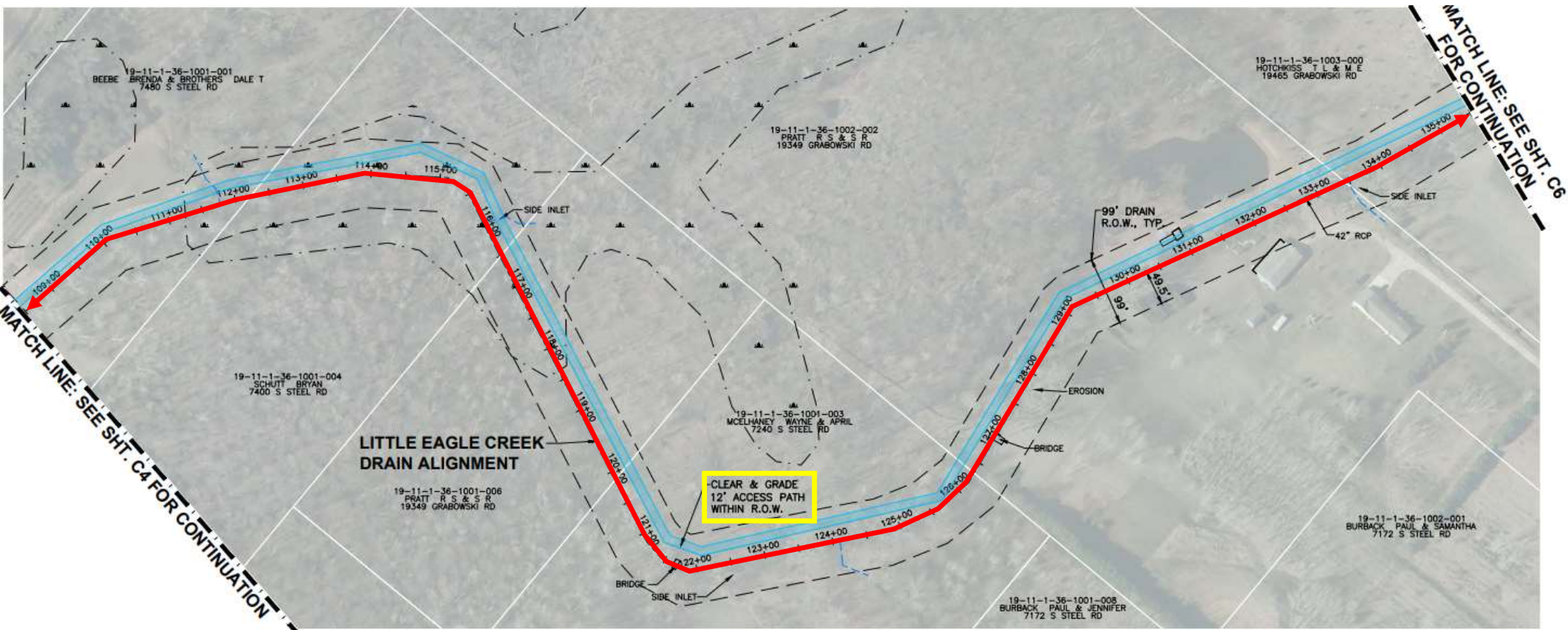
Clearing, Grubbing & Snagging
Open Channel Excavation



Open Channel Excavation

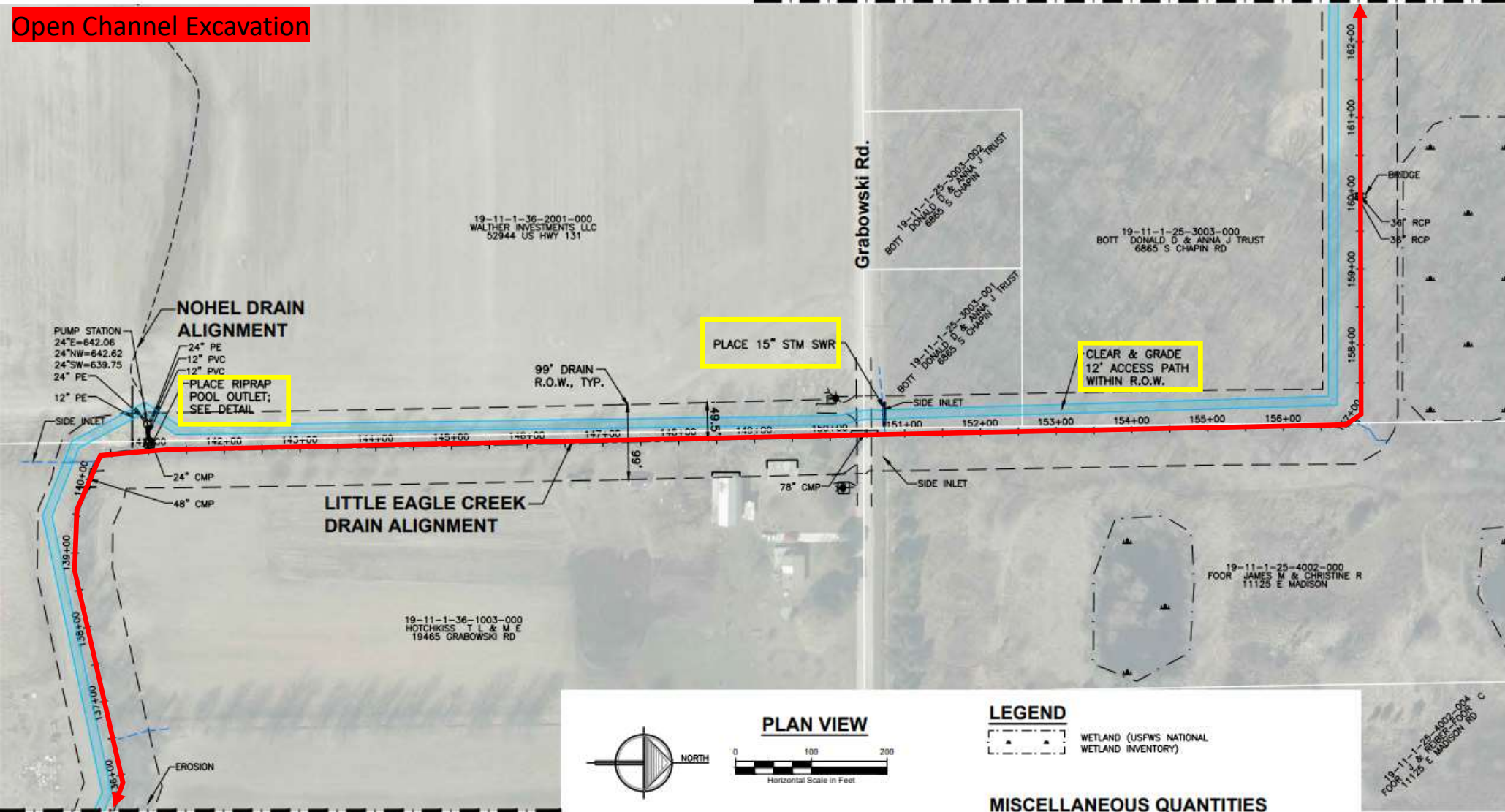


Open Channel Excavation



Open Channel Excavation

MATCH LINE: SEE SH. C7 FOR CONTINUATION



MATCH LINE: SEE SH. C5 FOR CONTINUATION

LEGEND

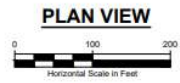
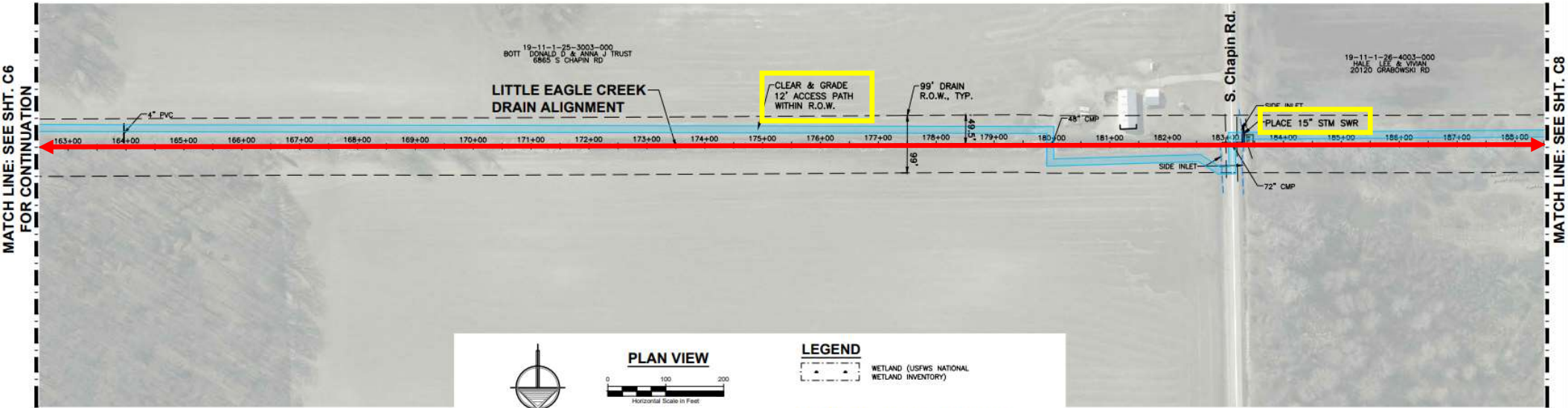
WETLAND (USFWS NATIONAL WETLAND INVENTORY)

MISCELLANEOUS QUANTITIES

OPEN CHANNEL SEEDING	2,700 LF
RIPRAP (CONTINGENCY)	10 SY

19-11-1-25-4002-000
FOOR JAMES M & CHRISTINE R
11125 E MADISON RD

Open Channel Excavation



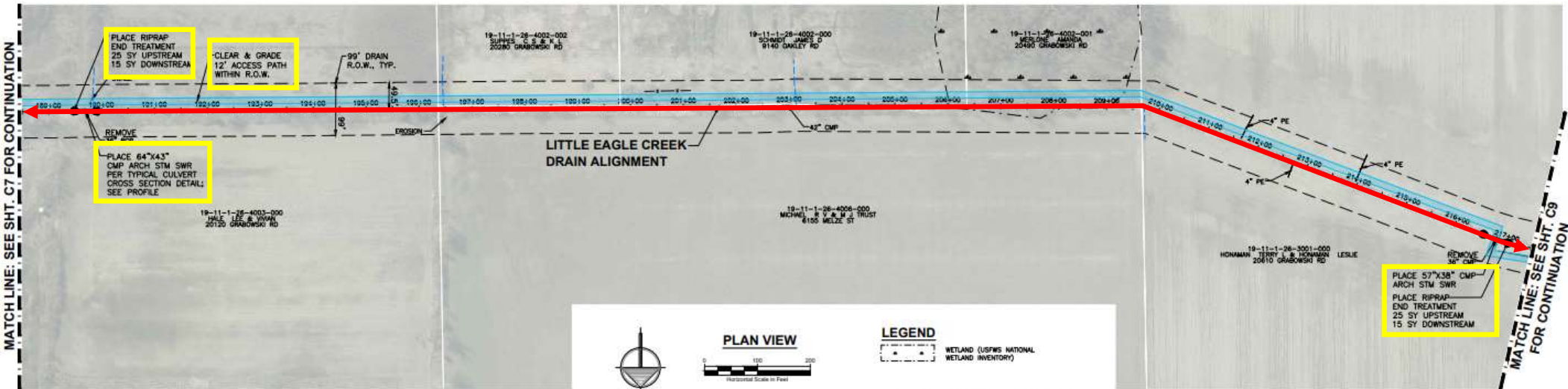
LEGEND

WETLAND (USFWS NATIONAL WETLAND INVENTORY)

MISCELLANEOUS QUANTITIES

OPEN CHANNEL SEEDING	2,600 LF
RIPRAP (CONTINGENCY)	10 SY

Open Channel Excavation



MATCH LINE: SEE SHT. C7 FOR CONTINUATION

MATCH LINE: SEE SHT. C9 FOR CONTINUATION



PLAN VIEW



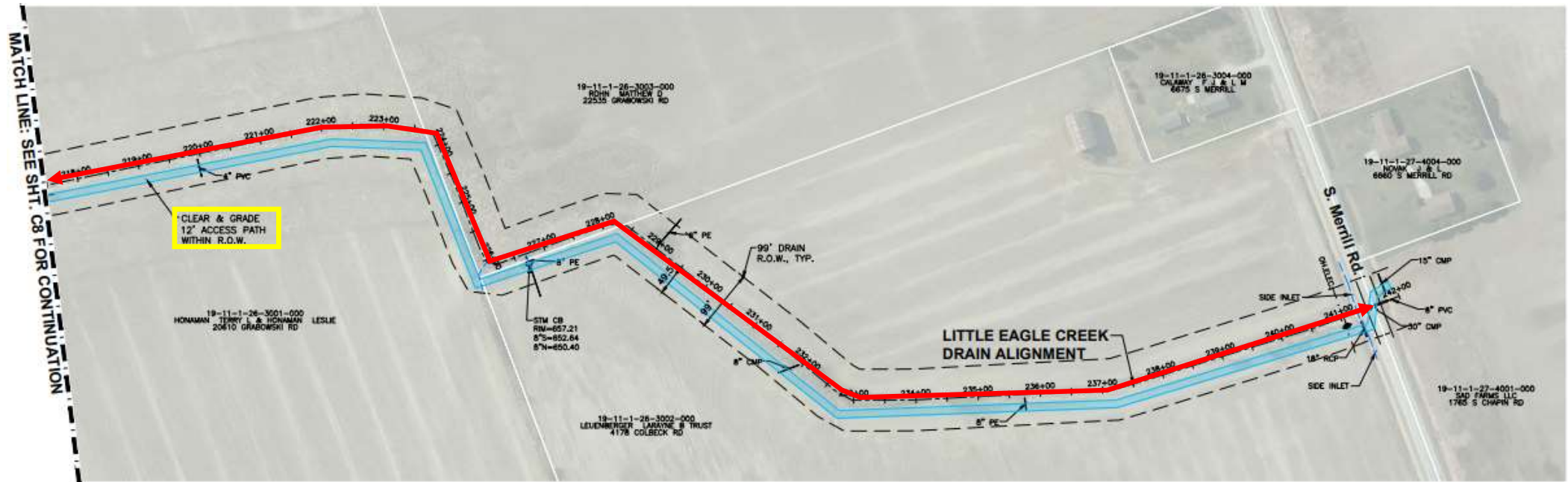
LEGEND

WETLAND (USFWS NATIONAL WETLAND INVENTORY)

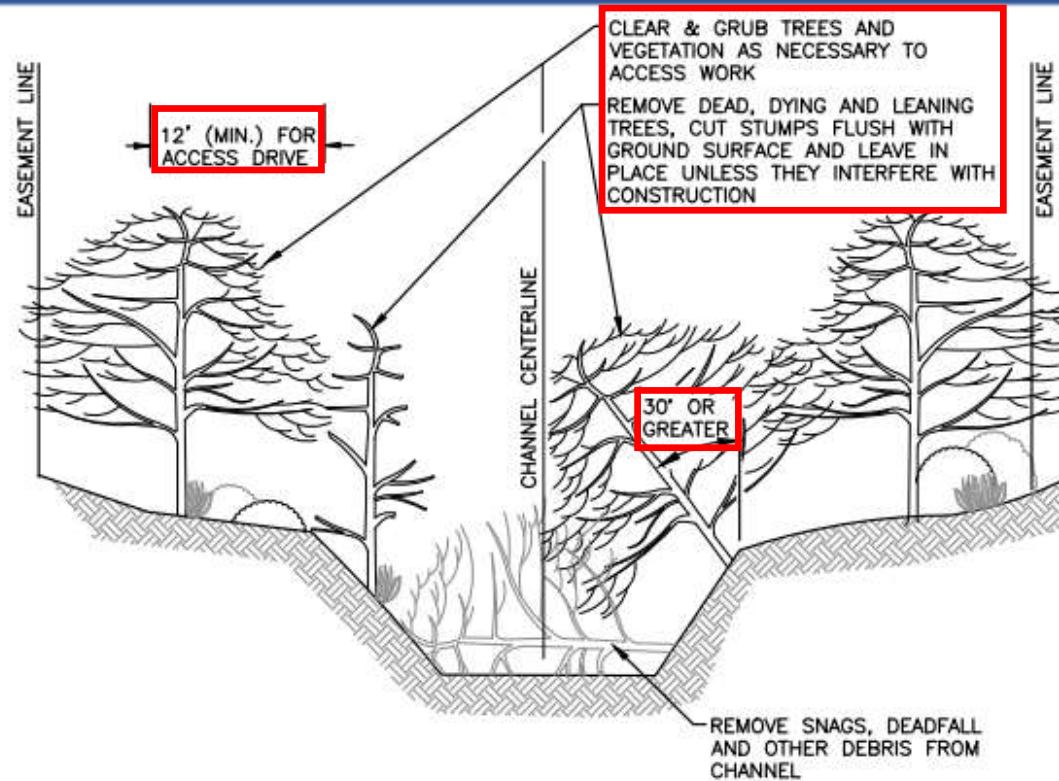
MISCELLANEOUS QUANTITIES

OPEN CHANNEL SEEDING	2,900 LF
RIPRAP (CONTINGENCY)	10 SY

Open Channel Excavation



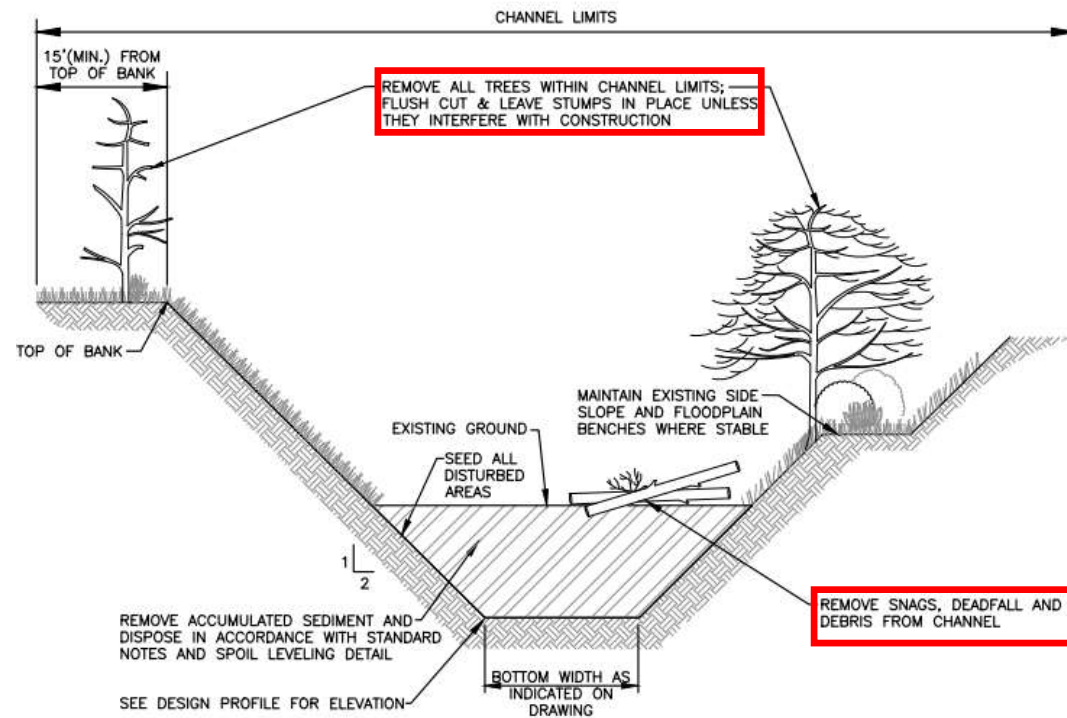
Typical Clearing, Grubbing & Snagging Detail



A **9** **SELECTIVE CLEARING, GRUBBING & SNAGGING DETAIL**

NOT TO SCALE

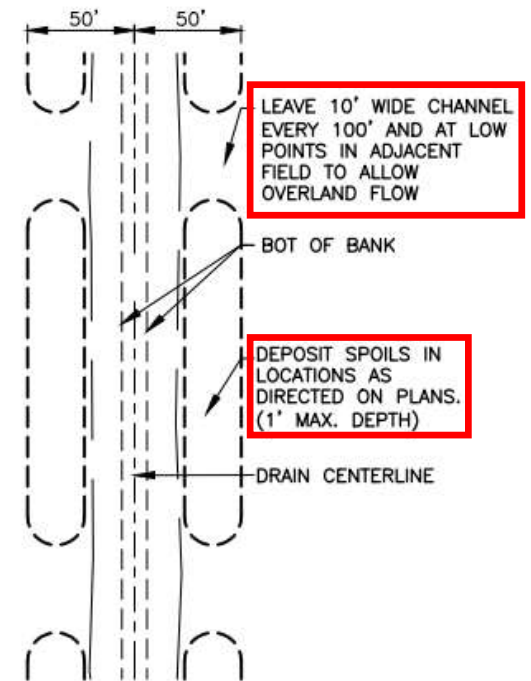
Typical Channel Excavation Detail & Spoil Leveling



A B OPEN CHANNEL EXCAVATION DETAIL

NOT TO SCALE

1

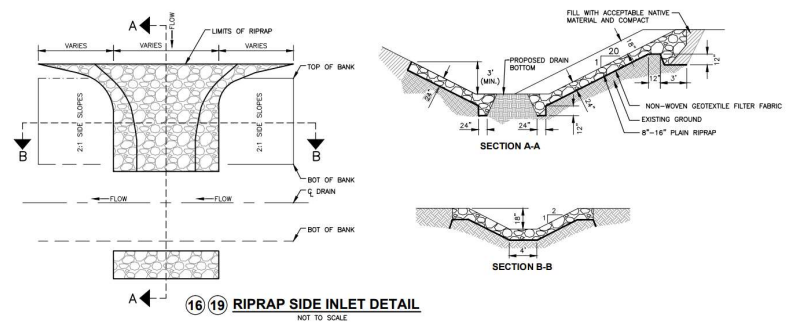
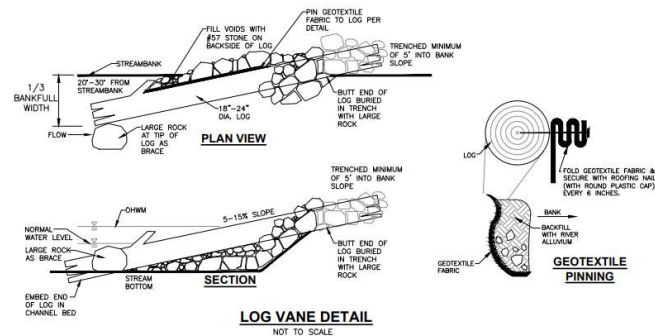


B SPOILS LEVELING DETAIL

NOT TO SCALE

Other Channel Improvements

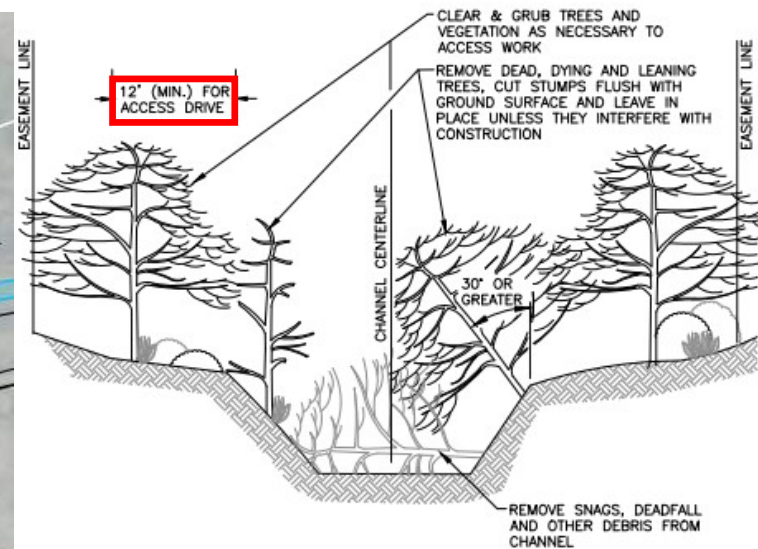
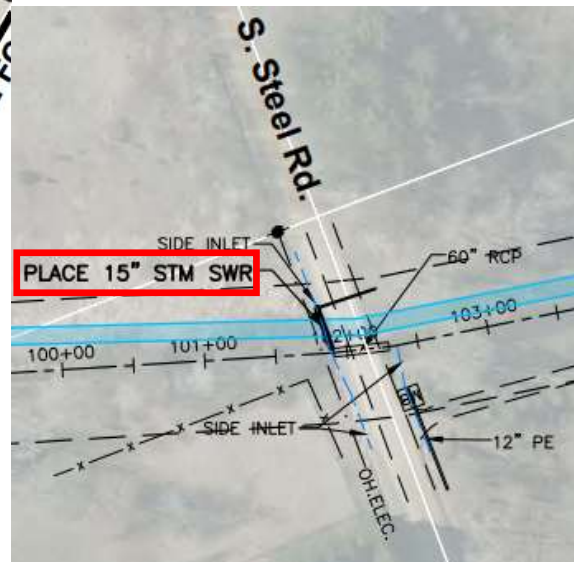
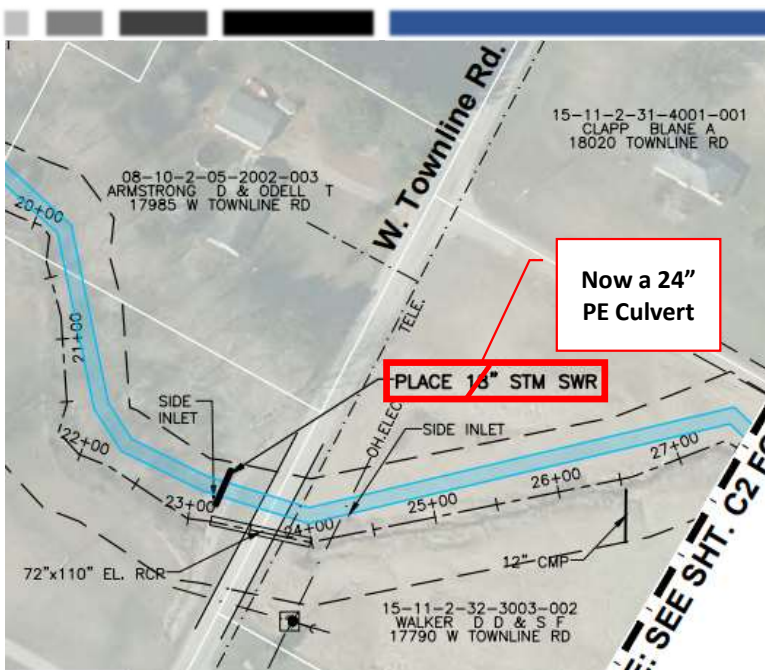
- **Erosion Control & Prevention**
 - Side Inlets – grassed / riprap spillway or culvert installation
 - Log Vanes
 - Seeding and mulching
- **Tile Outlets**
 - Riprap - splash pads / outlet pools
 - Repair outlet if in poor condition
 - Maintain outlet if in good condition



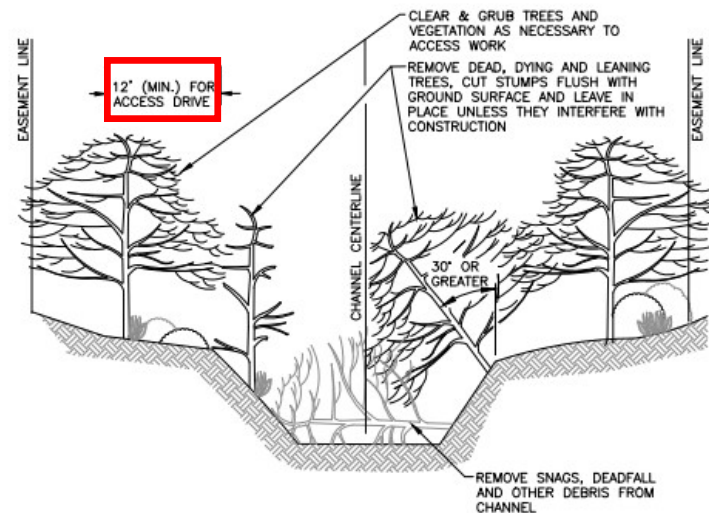
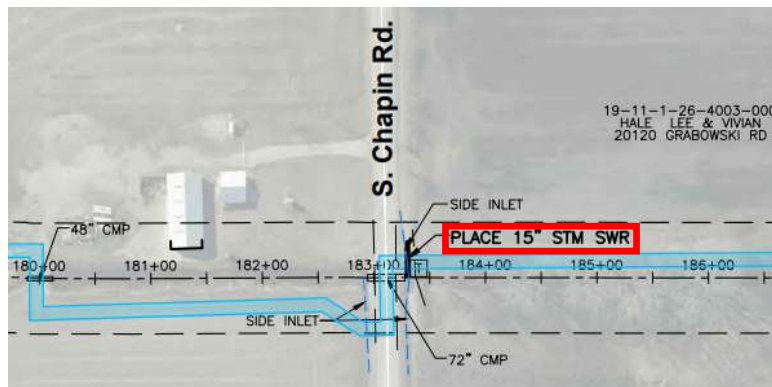
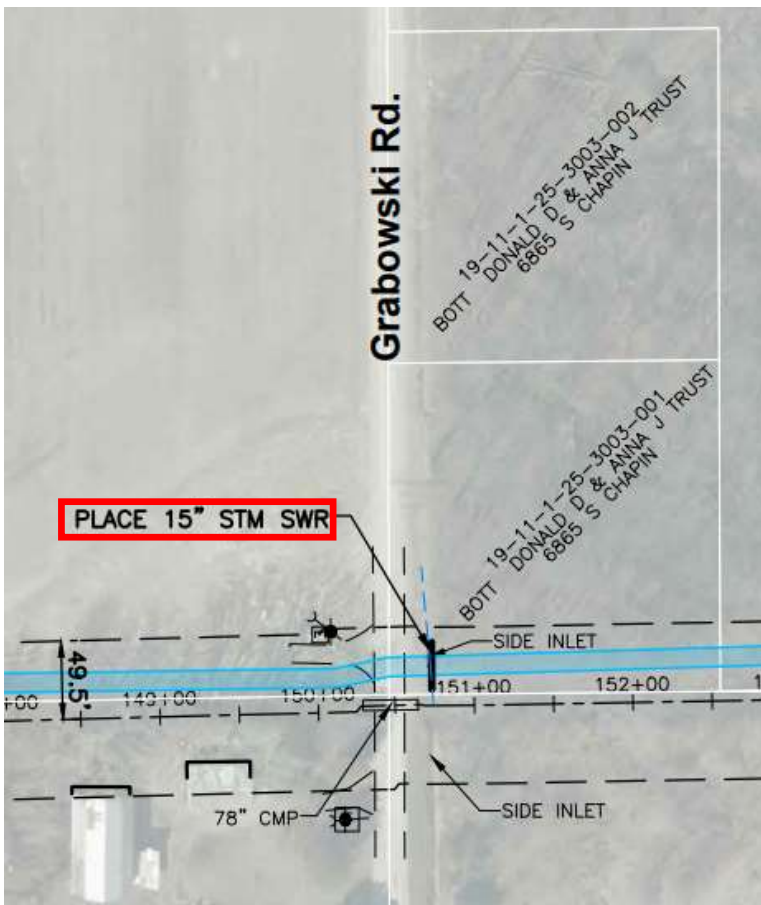
Maintenance Access Improvements

- **Maintenance Path Construction**
 - 12 feet wide
 - Constructed on top-of-bank within right-of-way
- **Fences, Sheds, Hunting Blinds/Stands, and Other items in Right-of-Way**
 - Landowners to remove all fences, landscaping, or other items within the drain right-of-way in advance of construction
 - Any items left within the drain right-of-way will be removed and stockpiled to allow clearance for construction operations
 - Reinstallation of removed fencing and landscaping only allowed outside of the drain right-of-way and is the responsibility of the landowner

Maintenance Access Improvements



Maintenance Access Improvements



Drain Crossings

- **Total of 23 Drain Crossings**
 - **17 Private Crossings**
 - Farm access drives
 - Recreational crossings
 - **6 Road Crossings**
 - W. Townline Road
 - S. Iva Road
 - S. Steel Road
 - Grabowski Road
 - S. Chapin Road
 - S. Merrill Road

Drain Crossings

- **Measured Length, Elevation and Size**
- **Assessed Condition of Crossings**
- **Replacement Criteria**
 - Inadequately sized
 - Crossing set too high in the drain, impounding water upstream

Drain Crossings

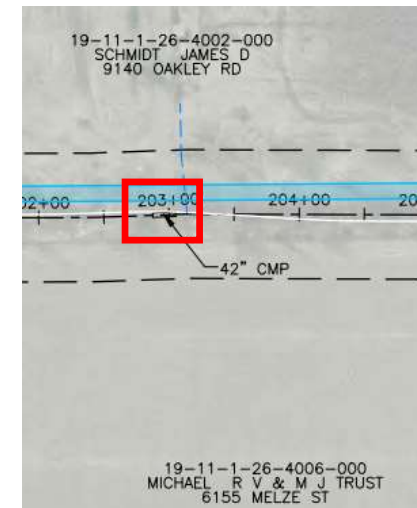
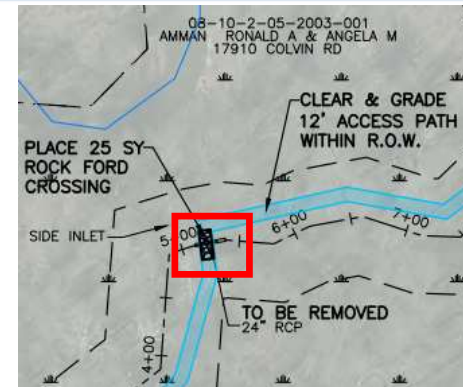
- The following slides are a general listing of the work being completed at each of the drain crossings.
- If you would like details on your individual crossing(s) such as size, length, or material; please speak to us at the end of the meeting.

Drain Crossings

- **Crossings - Replaced w/ New Culvert**
 - **Based on 10-yr flow design standard and/or improper grade or invert elevation**
 - No. 8 – Ormsby, J.
 - No. 9 – Ormsby, J.
 - No. 20 – Hale, L. & V.
 - No. 22 – Honaman, T. & L.
- **Crossings - Cleaned Out**
 - All crossings will be cleaned out
 - If not slated for replacement, culvert cleanout will coincide with open channel excavation

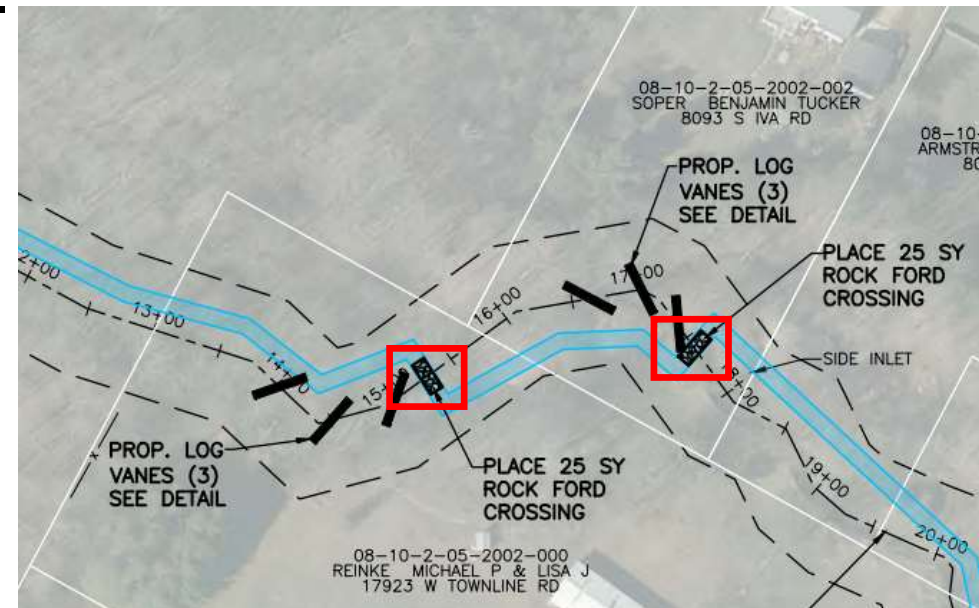
Drain Crossings

- **Crossings - Replaced w/ Rock Ford**
 - No. 1 – Amman, R. & A.
- **Crossings – Removed**
 - No. 21 – Schmidt, J. / Michael R. V. & M. J. Trust
 - property line splits culvert



Drain Crossings

- **Crossings – Rock Fords Added**
 - Sta. 15+25 – Reinke, M. & L.
 - Sta. 17+60 – Soper, B.



Drain Crossings

- **Maintenance Path Crossings - Culverts Added**

- (1) roadside drainage culvert west of drain, south of W. Townline Road
- (1) roadside drainage culvert south of drain, east of S. Steel Road
- (1) roadside drainage culvert west of drain, north of Grabowski Road
- (1) roadside drainage culvert south of drain, west of S. Chapin Road

- **Crossings - No Proposed Work**

- All clear span bridges downstream from Sta. 76+00 (approx. 4,700 ft. upstream of Iva Rd.)
- S. Iva Road and W. Townline Road Culverts

Cleanup & Restoration

- All spoils will spread according to design plans in wooded natural areas and agricultural fields.
- All trees removed from the work area will be processed and disposed of unless the landowner requests to keep the wood.
- Stumps from cut trees will be cut flush with ground and treated with herbicide.

Cleanup & Restoration

- All driveways and county roads shall be restored in kind
- Local traffic shall be maintained at all times

Tentative Project Schedule

- Bid Project – May 15th, 2023
- Contractor Notice to Proceed – August/September 2023 (crops off)
- Completion – June 15th, 2024 (possible extension to September)

Project Cost

- Estimated Cost: \$ 500,000
 - Includes:
 - Open channel improvements
 - Crossing repairs and replacements
 - Erosion control
 - Cleanup and restoration
 - Utility coordination
 - Engineering, survey and design
 - Permitting fees
 - Financing fees
 - Construction staking and inspection
 - Final project cost determined by Contractor's bid

Little Eagle Creek Drain

Questions or Comments?

