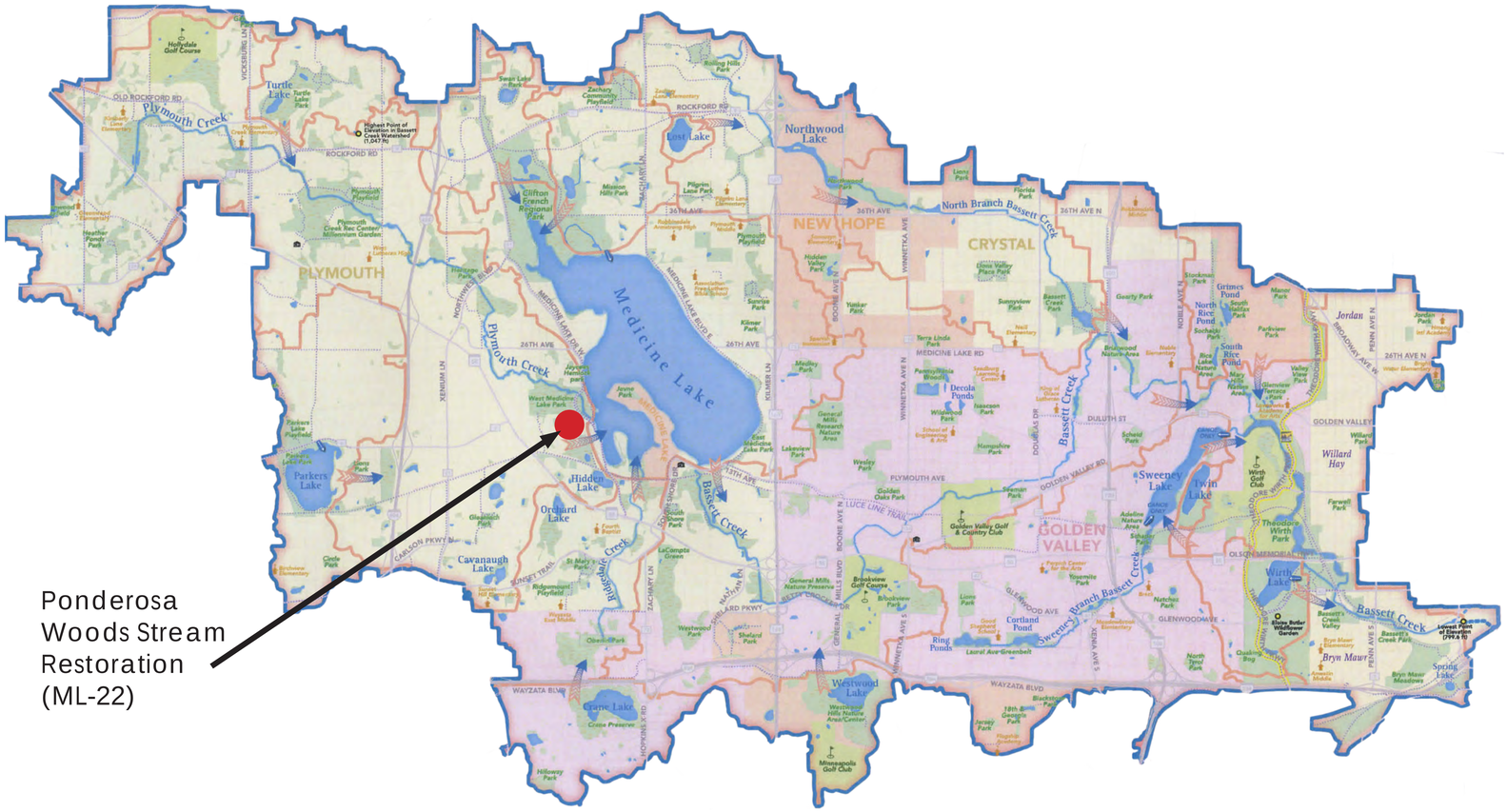
About the Bassett Creek Watershed Management Commission (BCWMC)

The vision: stewardship of water resources to protect and enhance our communities



About the BCWMC

- **Regional government organization** formed in 1969 to focus on flood control along Bassett Creek
- **Operates under 1982 Metropolitan Surface Water Management Act**
- **Focused on providing flood management and improving and protecting the water quality** of Bassett Creek and lakes/streams
- **Nine member cities:** Crystal, Golden Valley, Medicine Lake, Minneapolis, Minnetonka, New Hope, Plymouth, Robbinsdale, St. Louis Park,
- **Area:** approximately 40 square miles

Commission funding

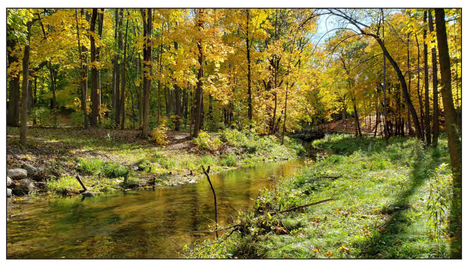
- Contributions from nine member cities (approximately $600,000 per year)
- Hennepin County tax levy for major projects (approximately $1.5–2 million per year)
- Grant funds and application fees (varies)

Commission activities

- Implements capital improvement projects that reduce flooding and improve lakes, streams, and wetlands throughout the watershed
- Monitors water quality, performs studies, maps resources
- Provides water resource education and watershed-wide coordination
- Reviews developments for compliance with standards and requirements

EXAMPLE BCWMC CIP PROJECTS

Wirth Lake outlet



Plymouth Creek restoration (before and after)

Ponderosa Woods Stream Restoration Project

Background: Ponderosa Woods Stream Restoration

Project timeline:

Fall 2022
Project kickoff and data collection

→

January 2023
Develop and evaluate concepts

→

February 2023
Present at public open house

→

April 2023
Draft feasibility report presented to BCWMC

→

May 2023
Final feasibility report presented to BCWMC, including recommendations

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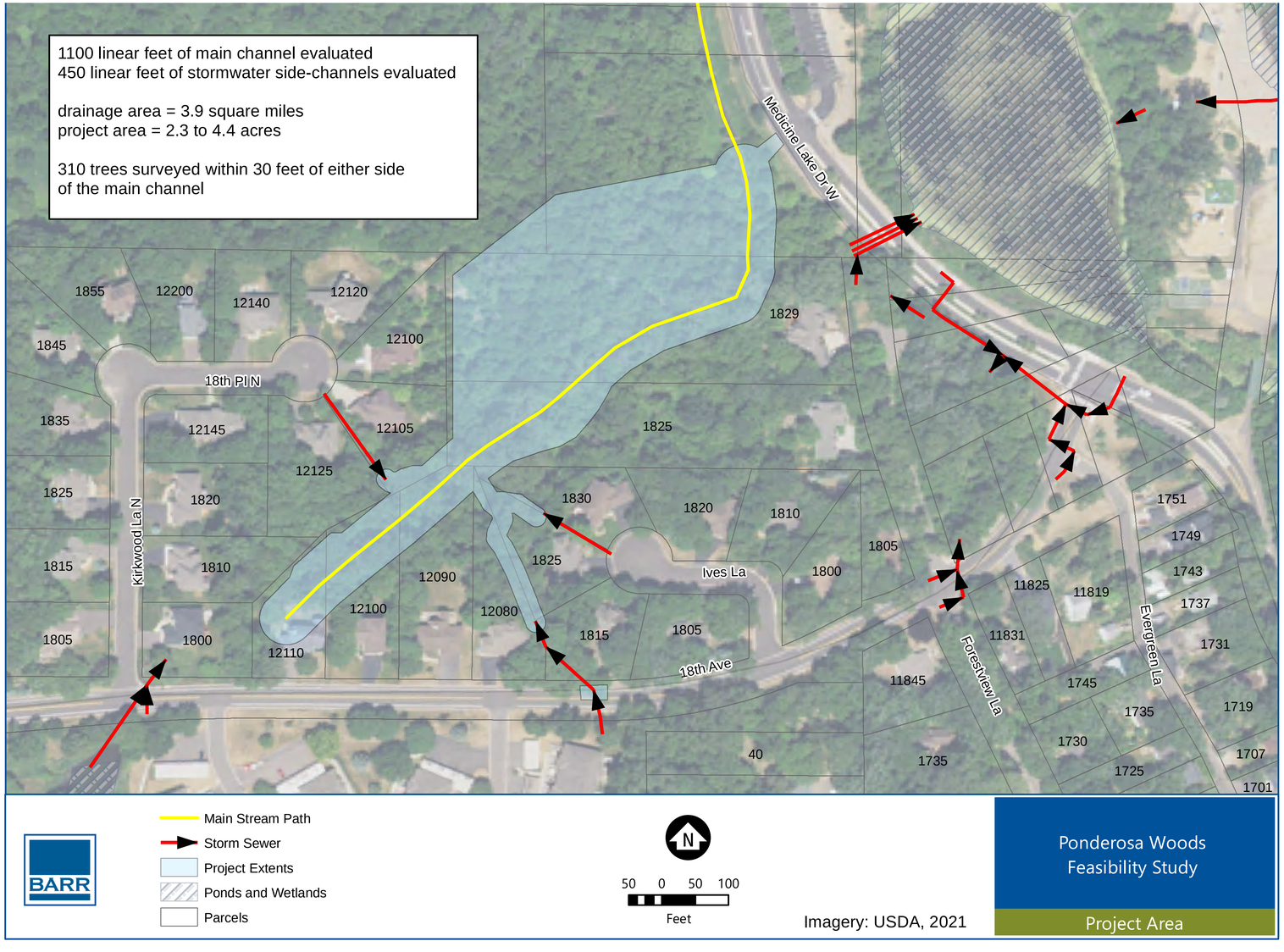
Late summer/fall 2023
If approved, BCWMC will authorize final design of projects

→

2023–2024
Final design and construction



Project goals:

- Stabilize stream banks to reduce erosion along existing stream
- Improve and restore in-stream and riparian habitat
- Improve water quality and reduce sediment and phosphorus entering Medicine Lake

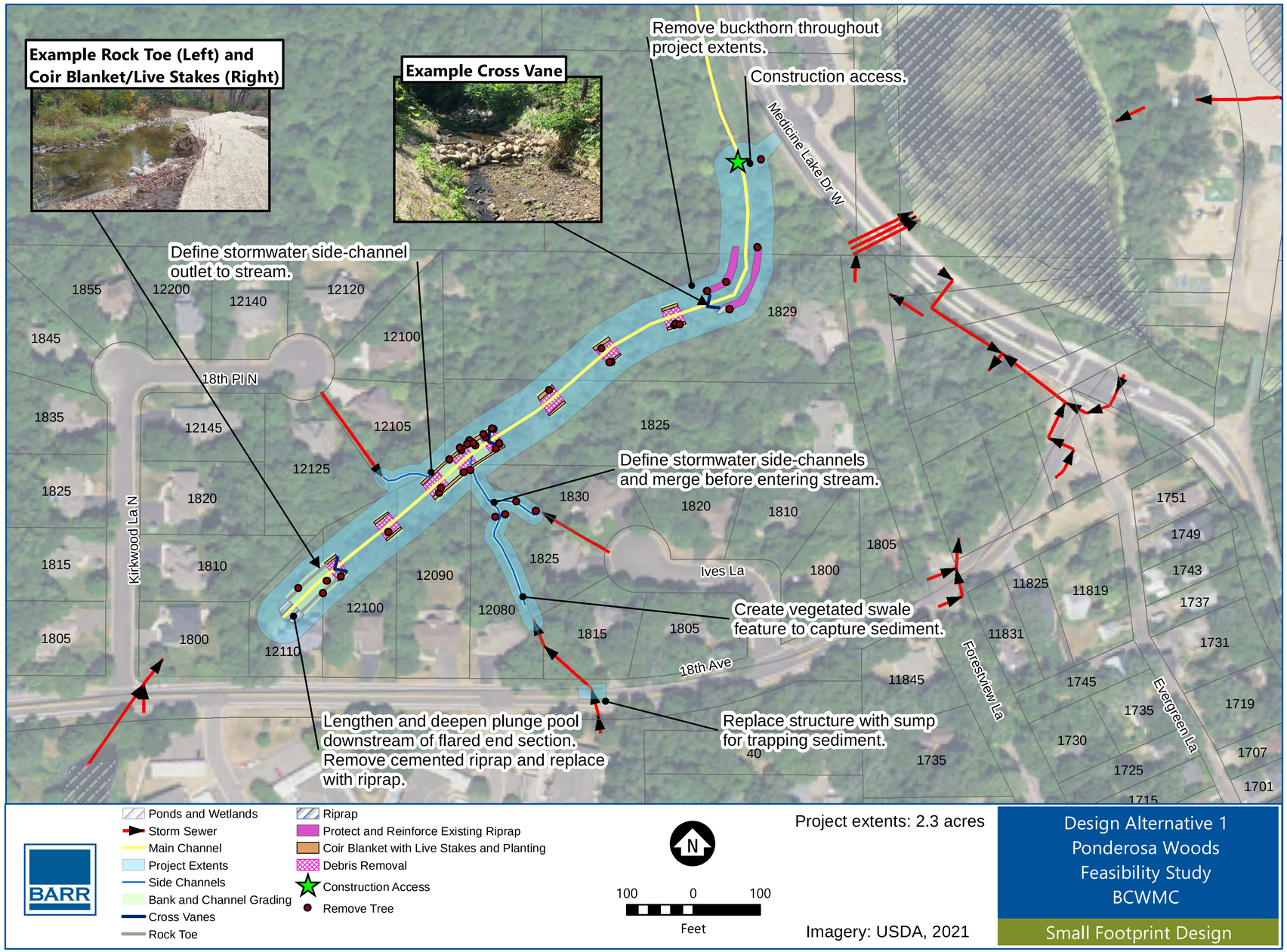
Significant field observations and site concerns:

- Tree debris in channel may cause scouring, bank destabilization, and flooding; also, in-channel debris will require removal for construction access
- Invasive, non-native buckthorn out-competes native plants, may increase erosion and bank destabilization, and negatively impact stream and riparian habitat
- Stream bank erosion at the upstream inlet to the stream may contribute to further erosion and destabilize the stream banks
- Sediment deposition from the stormwater outfall off of 18th Avenue degrades downstream water quality

Ponderosa Woods Stream Restoration Project

Alternative 1: Estimated Cost = $232,000

Cost uncertainty -20%/+30%; costs include engineering, design, and construction



Concept Summary

Alternative 1 (small-footprint design) is a bioengineering approach including:

- In-channel debris removal
- Minimal tree removal
- Minimal buckthorn removal
- Expanding and re-stabilizing the upstream plunge pool with riprap
- Stormwater side-channel management
- Targeted bank and channel stabilization (vegetated and stone)
- Some in-channel grade controls
- Reinforcing existing downstream riprap

Length of Stream Reach Restored:

470 linear feet of main channel

450 linear feet of stormwater side-channels

Total Suspended Solids Removed:

14,770 pounds/year

Phosphorus Removed:

7.4 pounds/year

Trees in Project Boundary:

310 trees surveyed within 30 feet of the stream path

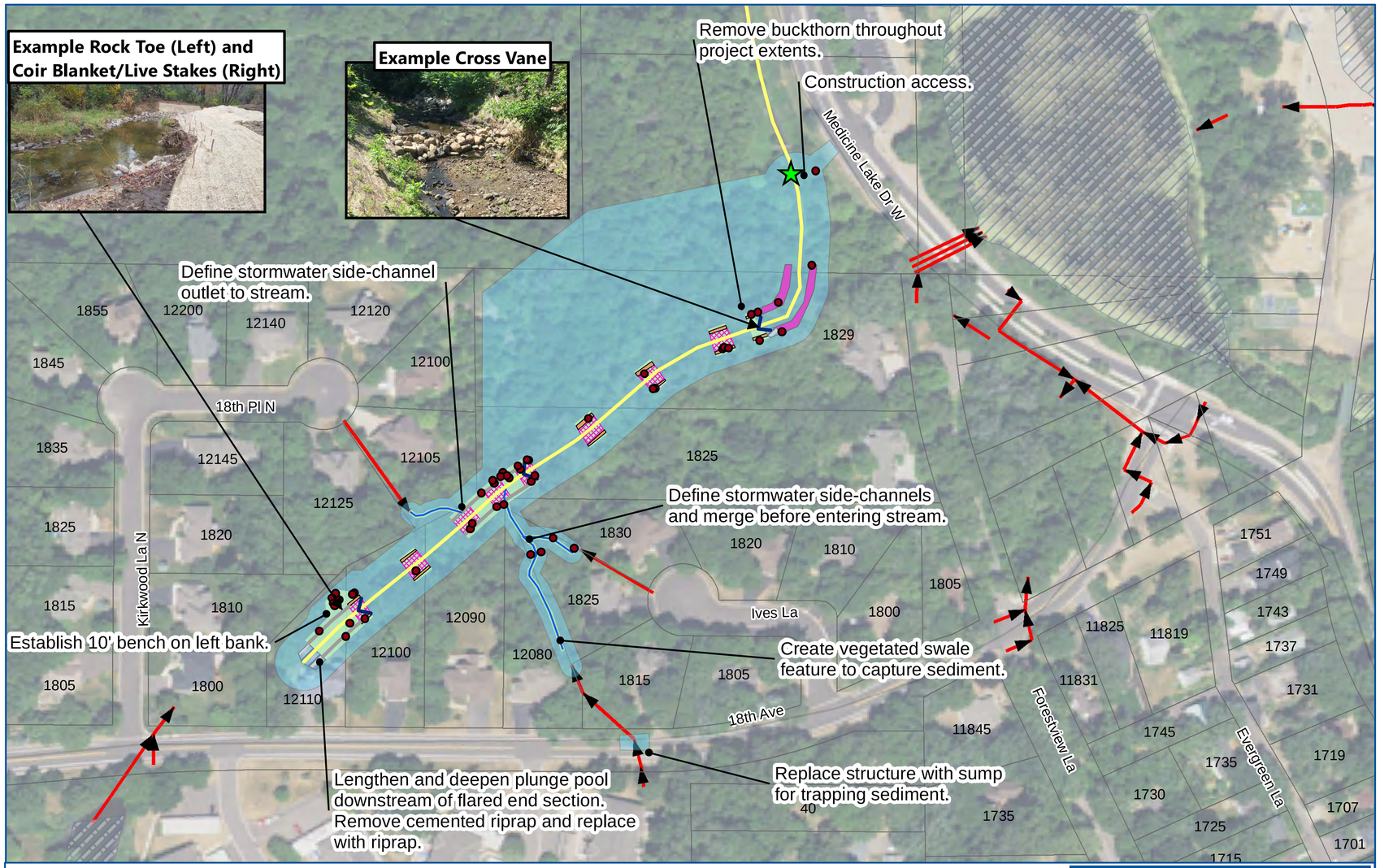
(27 healthy trees proposed to be removed)

Trees surveyed are 6 inches or larger in diameter

Ponderosa Woods Stream Restoration Project

Alternative 2: Estimated Cost = $387,000

Cost uncertainty -20%/+30%; costs include engineering, design, and construction



Ponds and Wetlands
Storm Sewer
Main Channel
Project Extents
Side Channels
Bank and Channel Grading
Cross Vanes
Rock Toe
Riprap
Protect and Reinforce Existing Riprap
Coir Blanket with Live Stakes and Planting
Debris Removal
Construction Access
Remove Tree

N

100 0 100
Feet

Project extents: 4.4 acres

Imagery: USDA, 2021

Design Alternative 2
Ponderosa Woods
Feasibility Study
BCWMC

Medium Footprint Design

Concept Summary

Alternative 2 (medium-footprint design) is similar to Alternative 1, except it also includes:

- Expanded buckthorn removal
- Expanded bank and channel stabilization (vegetation and stone)

Length of Stream Reach Restored:

470 linear feet of main channel

450 linear feet of stormwater side-channels

Total Suspended Solids Removed:

14,770 pounds/year

Phosphorus Removed:

7.4 pounds/year

Trees in Project Boundary:

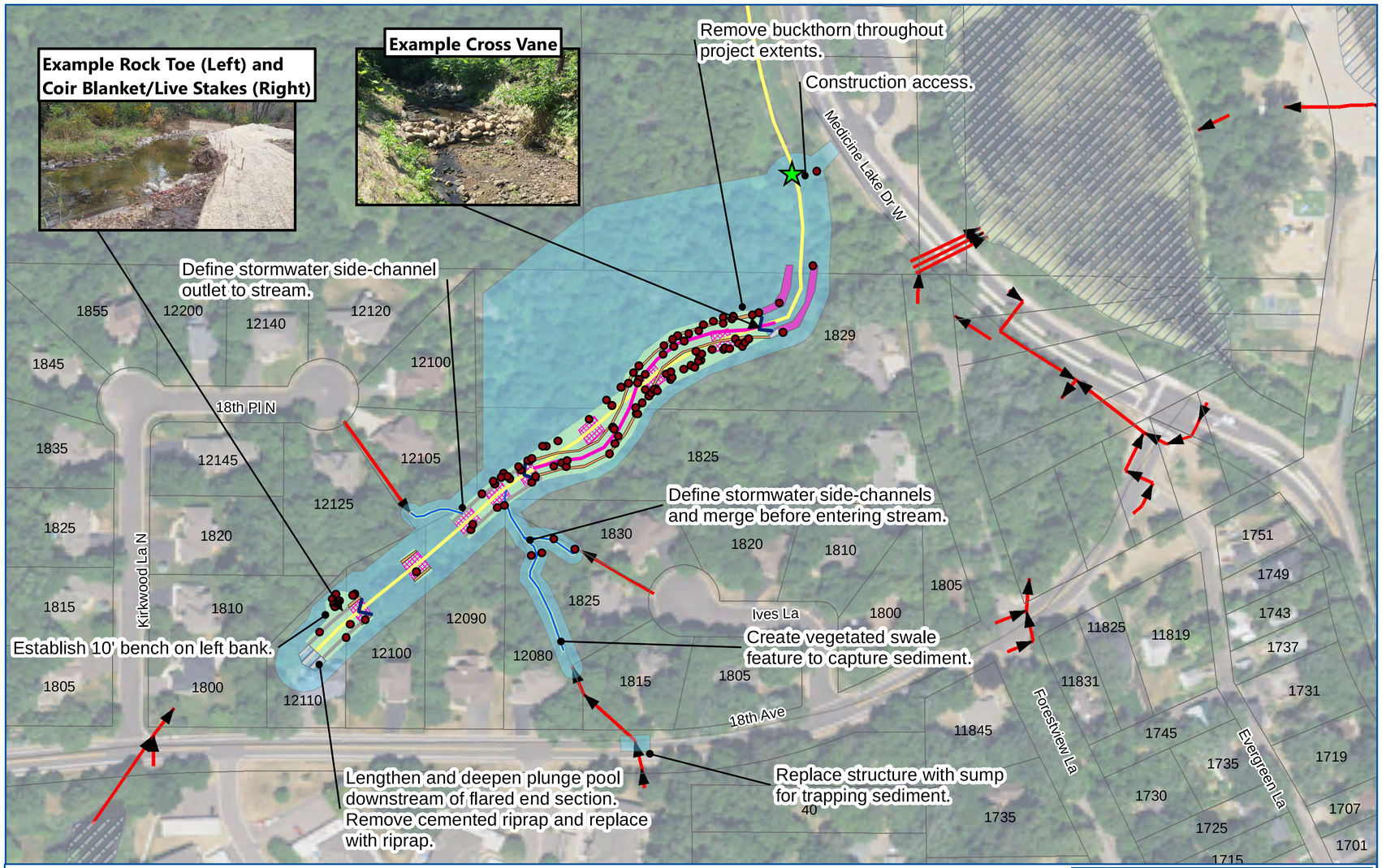
310 trees surveyed within 30 feet of the stream path
(34 healthy trees proposed to be removed)

Trees surveyed are 6 inches or larger in diameter

Ponderosa Woods Stream Restoration Project

Alternative 3: Estimated Cost = $470,000

Cost uncertainty -20%/+30%; costs include engineering, design, and construction



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Construction Access
Remove Tree

N

100 0 100

Feet

Project extents: 4.4 acres

Imagery: USDA, 2021

Design Alternative 3
Ponderosa Woods
Feasibility Study
BCWMC

Large Footprint Design

Concept Summary

Alternative 3 (large-footprint design) is similar to Alternative 2 except it also includes:

- Additional tree removal due to the re-meandering of the stream channel
- Re-meandering a section of the stream channel
- Expanded bank and channel stabilization (vegetated and stone) due to the re-meandering of the stream channel

Length of Stream Reach Restored:

805 linear feet of main channel

450 linear feet of stormwater side-channels

Total Suspended Solids Removed:

22,510 pounds/year

Phosphorus Removed:

11.3 pounds/year

Trees in Project Boundary:

310 trees surveyed within 30 feet of the stream path
(72 healthy trees proposed to be removed)

Trees surveyed are 6 inches or larger in diameter.