# Johnson Creek Intercounty Drain Habitat Restoration Design

60% Design Progress Update

Hosted by the Johnson Creek Intercounty Drain Board

Project funded by:

# Welcome & Overview

- Format of tonight's event
  - 1 Hour in length
  - 30-minute presentation by the project team
  - 30-minute question and answer time
    - We respectfully ask everyone to hold their questions until the end of the 30-minute presentation
    - Questions from the Zoom audience will be received via the question function in Zoom and moderated by the project team
      - Questions can be submitted with your name at any time during the presentation but will not be addressed until after the presentation

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# Panelists

- Harry Sheehan
  - Washtenaw County Water Resource Commission
  - Johnson Creek Intercounty Drainage Board
- Pat Cullen
  - Wayne County Drain Commission
  - Johnson Creek Intercounty Drainage Board
- Bob Belair – Northville Township Engineer
- Marty Boote – Project Manager, ECT
- Rob Myllyoja – Designer, ECT

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# Project Sponsor & Funding

- Johnson Creek Intercounty Drain Board
  - Washtenaw County Water Resources Commission, Wayne County Drain Commission, and State of Michigan
    - Evan Pratt, Drain Commissioner and Harry Sheehan, Chief Deputy Drain Commissioner
    - Elmeka Steele, Drain Commissioner and Pat Cullen, Deputy Drain Commissioner
    - Braden Harrington, Michigan Department of Agriculture and Rural Development
- Great Lakes Restoration Initiative funding awarded by the Environmental Protection Agency
  - $400,000 for habitat restoration design within the designated drain corridor
  - Engineer: Environmental Consulting & Technology, Inc.

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# Purpose & Outcomes

- Rouge River is designated an Area of Concern under the Great Lakes Water Quality Agreement
- Purpose is to address three Beneficial Use Impairments (BUIs) by improving habitat
  - Loss of Fish and Wildlife Habitat
  - Degradation of Fish and Wildlife Populations
  - Degradation of Benthos
- Targeted outcomes
  - 6 acres of riparian habitat enhancements
  - 2 miles of improved, connected stream habitat

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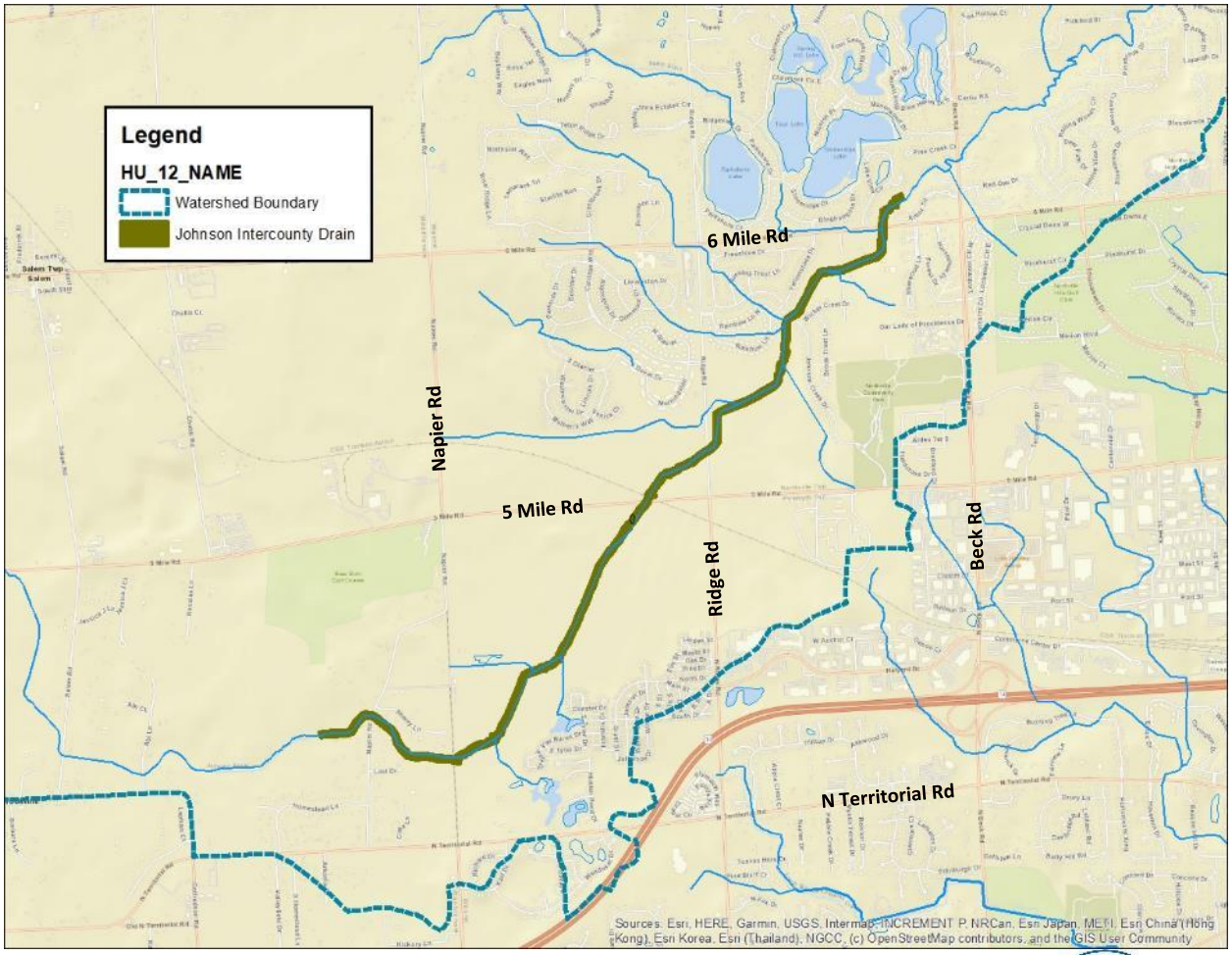
# Project Location Map

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# Project Update

- 60% design has been completed
- Currently in the 90% design phase
  - Planning access and staging
  - Dealing with site constraints
  - Finalizing restoration dimensions, pattern, profile, details, and structure locations
  - Developing a preliminary construction cost estimate

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# Look Ahead

- 90% design completed by February 2022
- Permitting March through June 2022
- Project completion June 2022
- Implementation funding has not been awarded

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# Access and Adjacent Properties

- Access from major public roads
- Linear access within the 99-foot wide drain easement
- All work currently proposed within the drain easement
- Washtenaw and Wayne County are meeting with individual property owners as necessary to discuss the project and potential access and staging arrangements

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# Adjacent Properties Map


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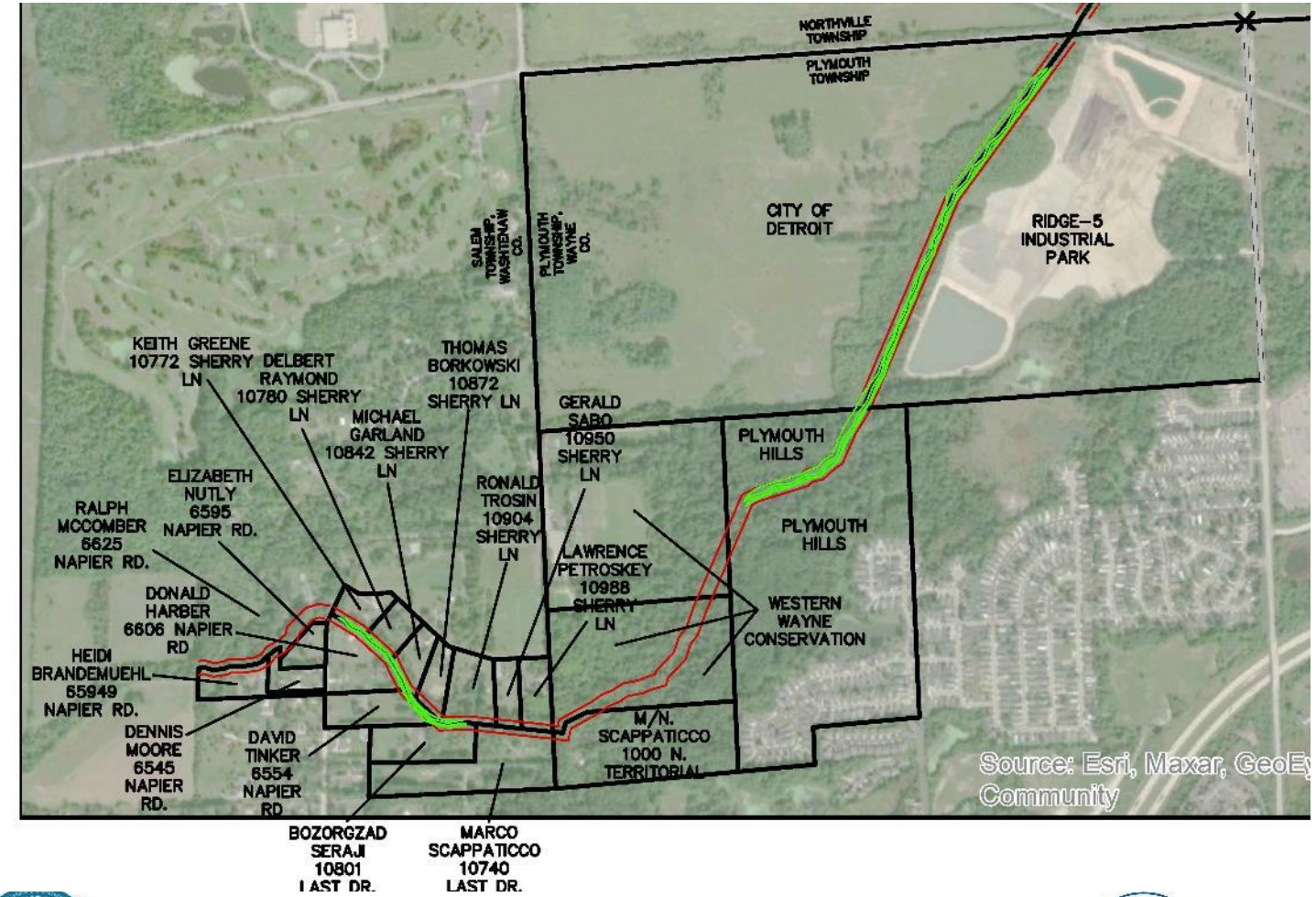
# Adjacent Properties Map - South

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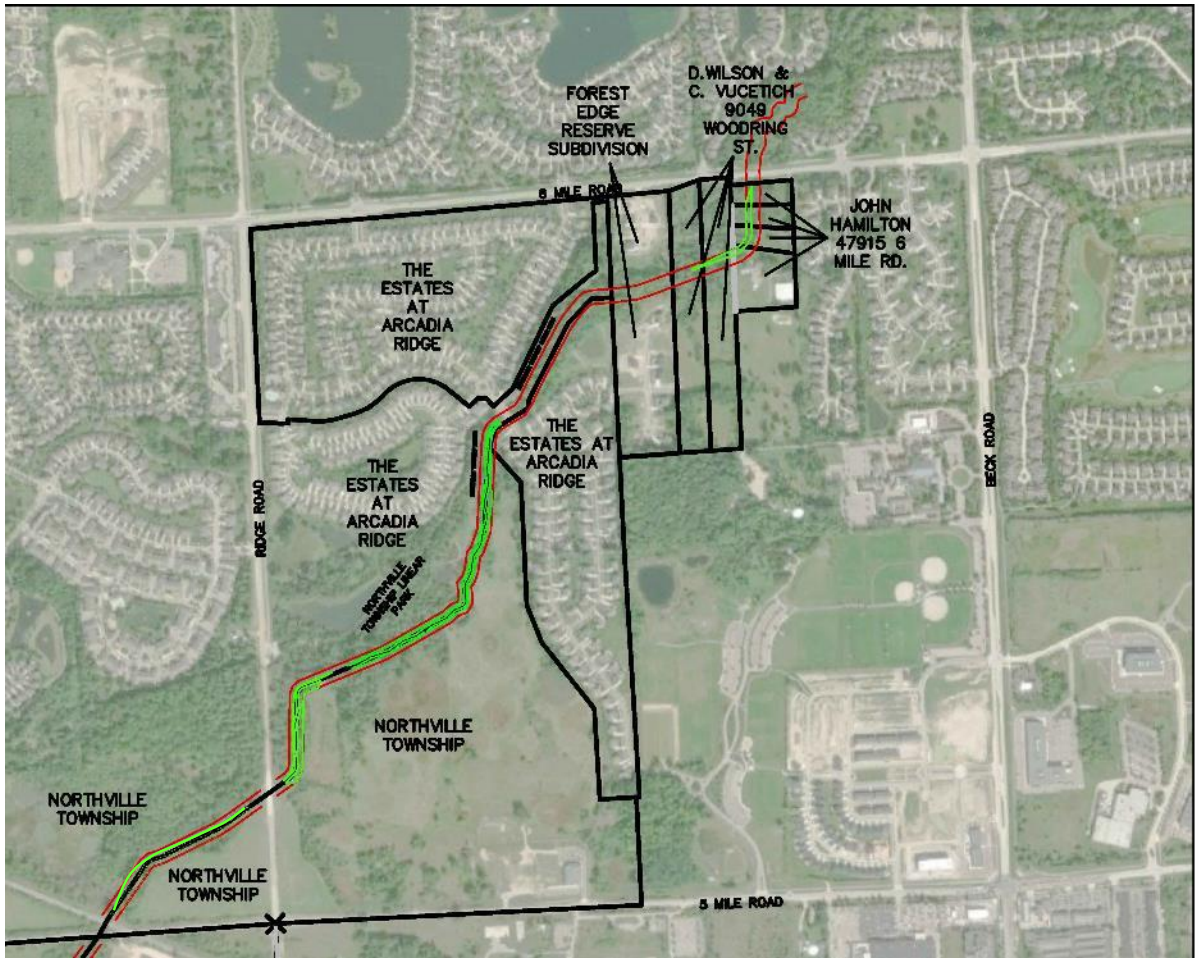
# Adjacent Properties Map - North

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# 60% Design Concepts

- Flood benches with riparian and wetland habitat
- Native riparian vegetation planting
- Soil bioengineering
- Riffle-pool sequences
- Channel size modifications
- Instream habitat features
  - Glide, riffle, run, pool sequences
  - Large woody material; log vanes
  - Brush toe; brush-packed runs

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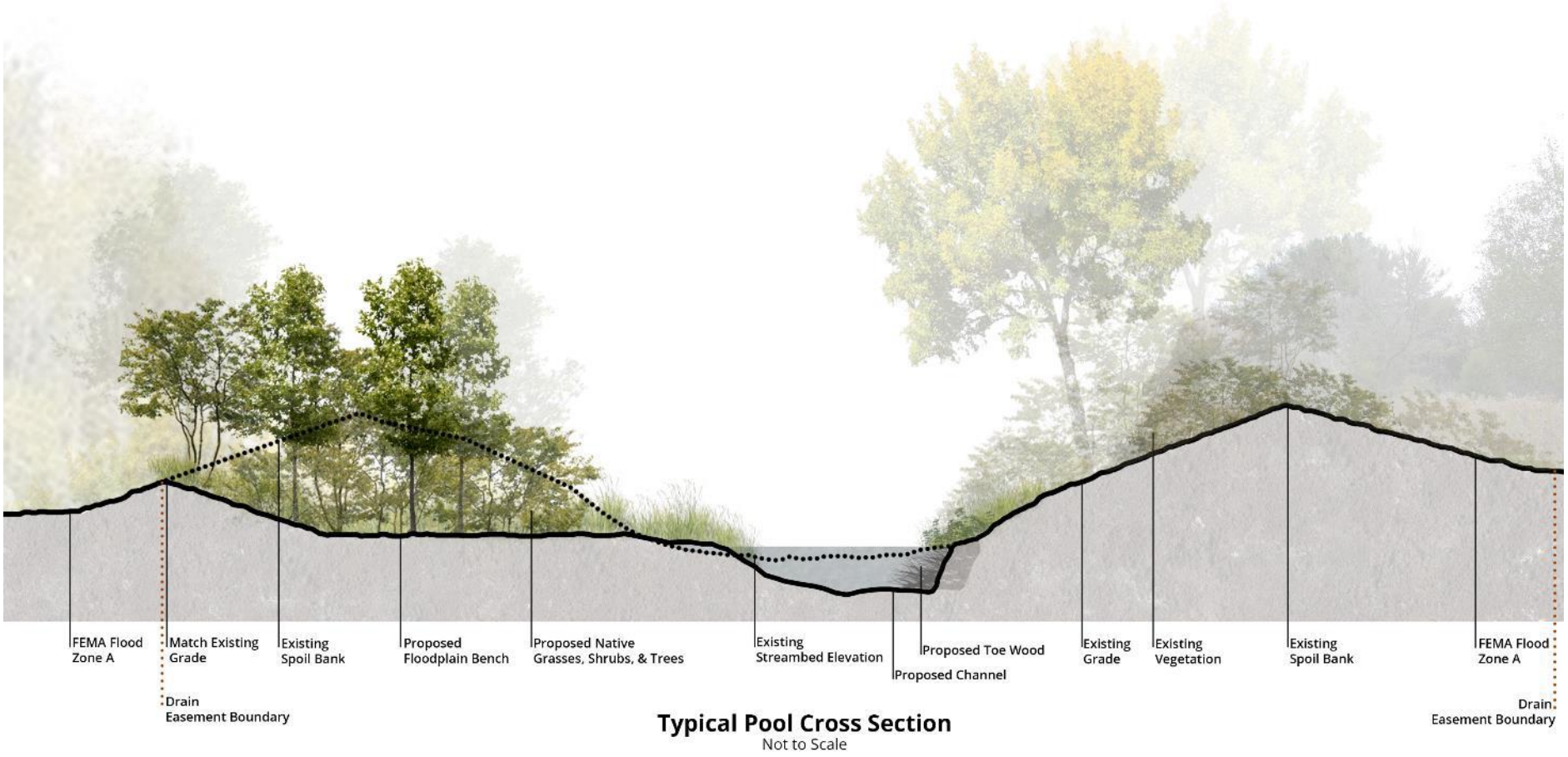
# Typical Pool Rendering




**Typical Pool Cross Section**
Not to Scale

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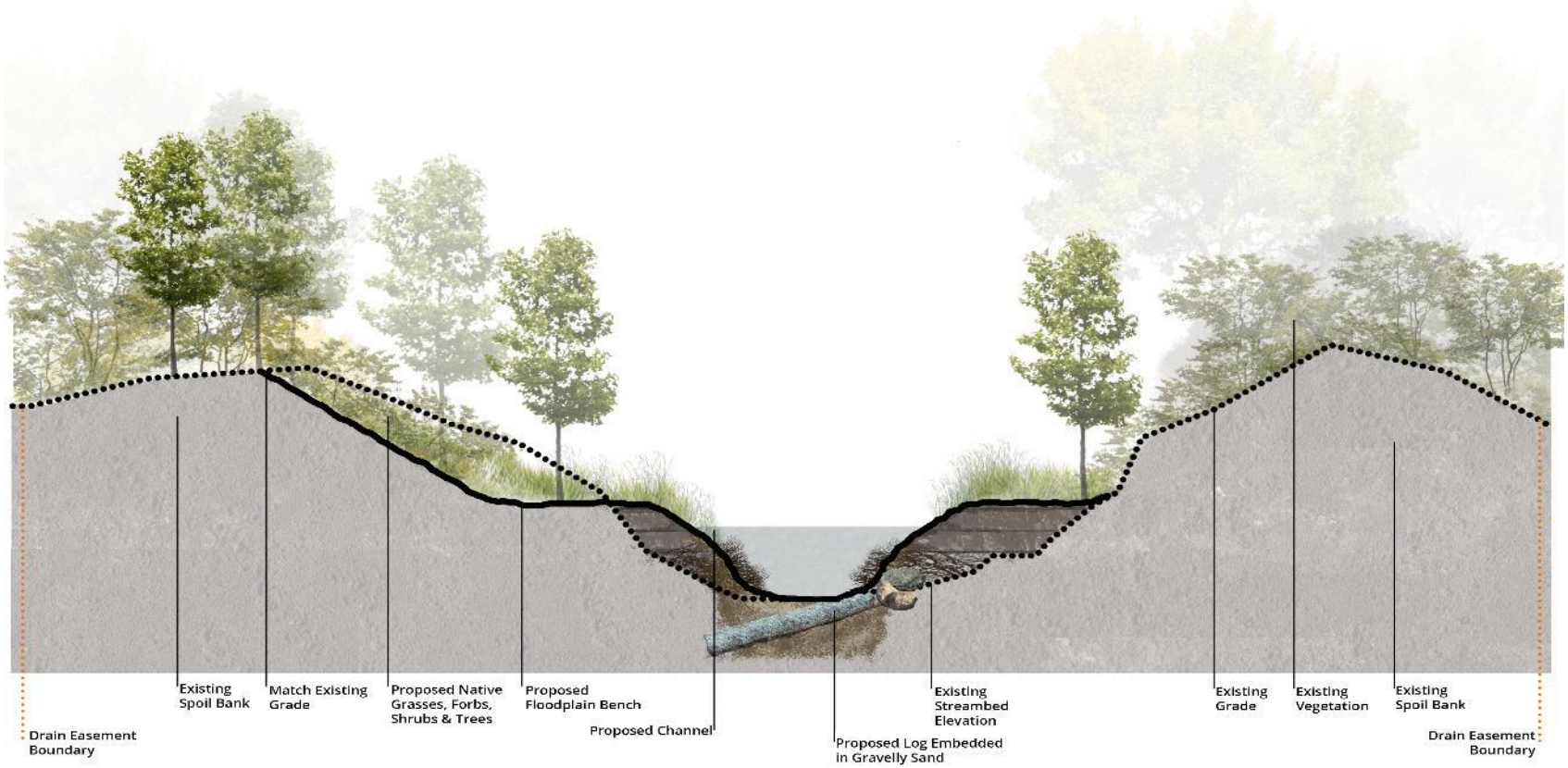
# Typical Riffle Rendering




**Typical Riffle Cross Section**
Not to Scale

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# In-Stream Habitat Restoration

Log Riffle

Gravel (Alluvial) Riffle

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# Riparian Habitat Restoration

Brush-Packed Run

Brush growing over toewood

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# Brush Toe with Native Sod Transplants


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# Rootwad/J-Hook/Log Vane

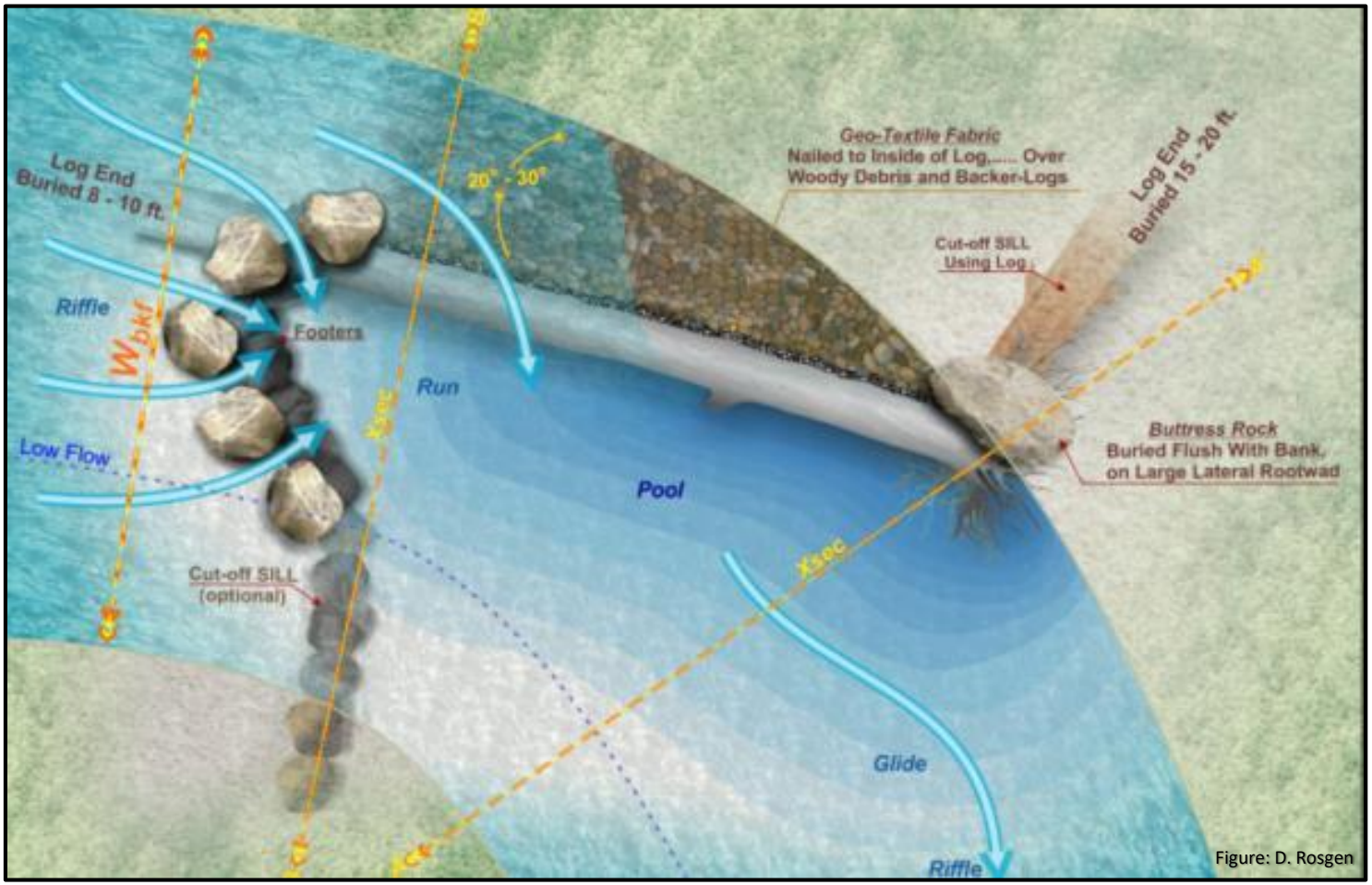


Figure: D. Rosgen

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# 60% Design Drawings

- Review 60% Design Drawing Plan Sheets

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# Questions & Answers

- In-person attendees wishing to ask a question can come to the podium and introduce themselves by name.
- Zoom attendees should type their question into the Question function along with their name. The project team moderator will read the question aloud.

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