

Park Hills Drainageway Improvements

Second Public Meeting

March 3, 2021



Introductions

1) Township Staff

- Ron Seybert, PE, – Township Engineer
- David Modricker, PE, – Public Works Director

2) NTM Engineering – Prime Consultant and Project Lead

- Scott Brown, PE, - Senior Project Manager

3) Biohabitats

- Brett Long, PE, - Water Resource Engineer

Format and Ground Rules

Format: Presentation with opportunity for questions and discussion at key points in the presentation.

GROUND RULES

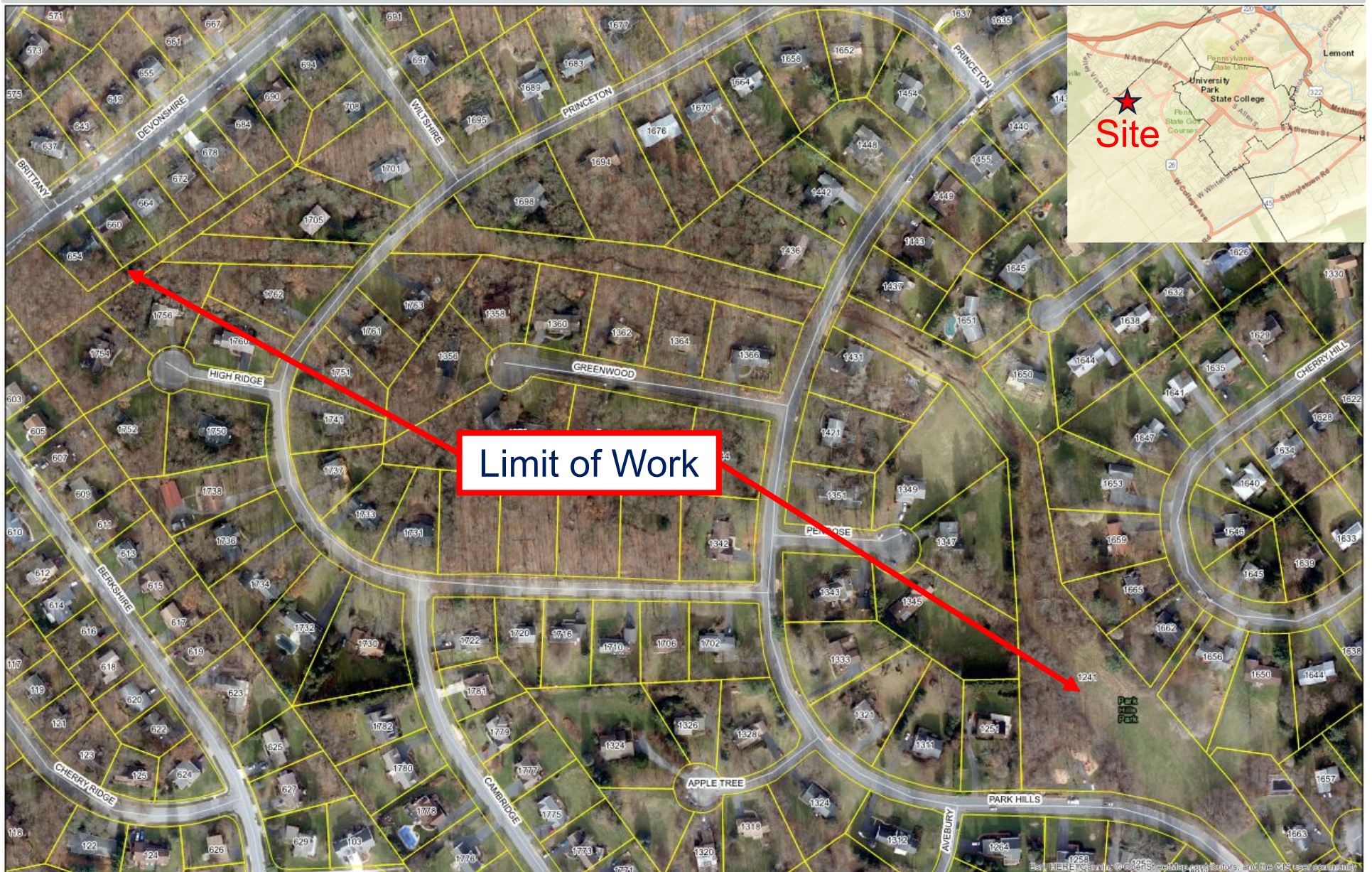


- 1) Enter your name and address in the chat box to note your attendance.
- 2) Questions at end of each agenda item.
- 3) Use Zoom "raise" hand option or chat to get my attention.
- 4) Please keep yourself muted until called on.

Meeting Agenda

- 1) Project Status Update (RS)
- 2) Design Overview (SB/BL)
 - a) Challenges
 - b) Design Concept w/Examples
- 3) Floodplain Modifications (SB)
- 4) Easements (SB/RS)
- 5) Construction Access (SB)
- 6) Schedule (RS)
- 7) Final Q&A (ALL)

Project Location



Project Goals

THEY HAVE NOT CHANGED

- 1) Maintain stormwater on Township property or within easements
- 2) Eliminate erosion and sediment deposits in the drainageway
- 3) Coordinate improvements with utilities in the drainageway

1. Project Update

Since we last met.....

- 1) Previous Public Meeting was held January 9, 2019
 - April 22, 2019 Update
 - December 5, 2019 Update
 - January 27, 2021 Update
- 2) Conceptual Design Refinement – Two Iterations
 - Tree Preservation
 - Utility Impacts/Coordination
 - Floodplain Impacts/Permitting
 - Construction Accessibility

1. Project Update

3) Project Cost Review and Capital Budgeting

- 2019 Capital Improvement Plan (design, utilities, construction)
- 2020 Operating Budget (design)
- 2020 Capital Improvement Plan (design, utilities, construction)
- 2021 Operating Budget (design, utilities)

4) Pursued Grant Funding Opportunities (1 for 3 so far)

5) Utility Coordination (Elec, Phone, Cable, Sewer)

6) Initiated Final Design

2. Design Overview

- a) Project Challenges
- b) Design Concept
- c) Design Concept applied to the Park Hills Drainageway
- d) Examples

2. a) Project Challenges

1) Site Physical Characteristics

- Steepness
- Tree protection



2) Utilities

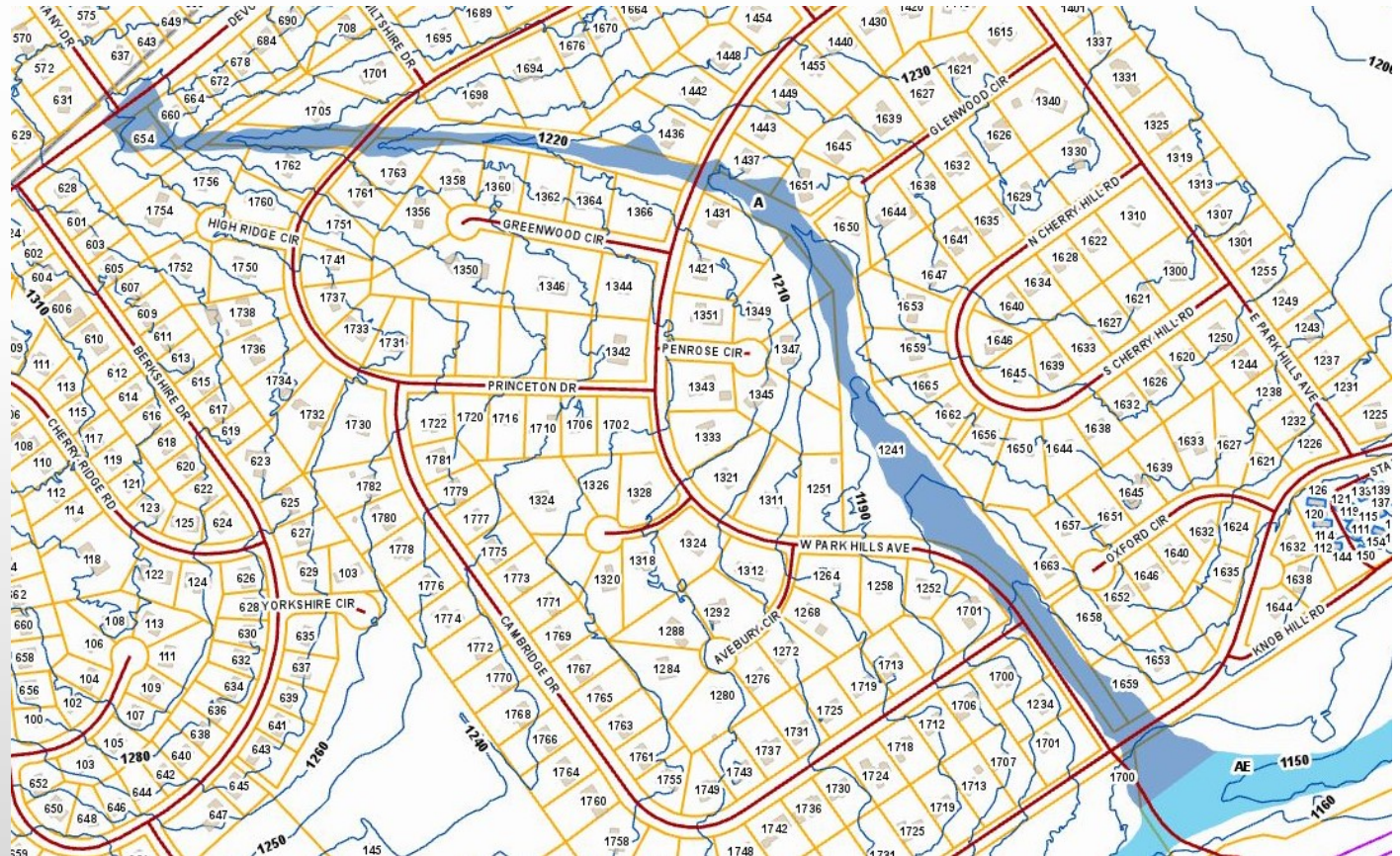
- Sanitary Sewer
- Power
- Cable
- Phone



2. a) Project Challenges

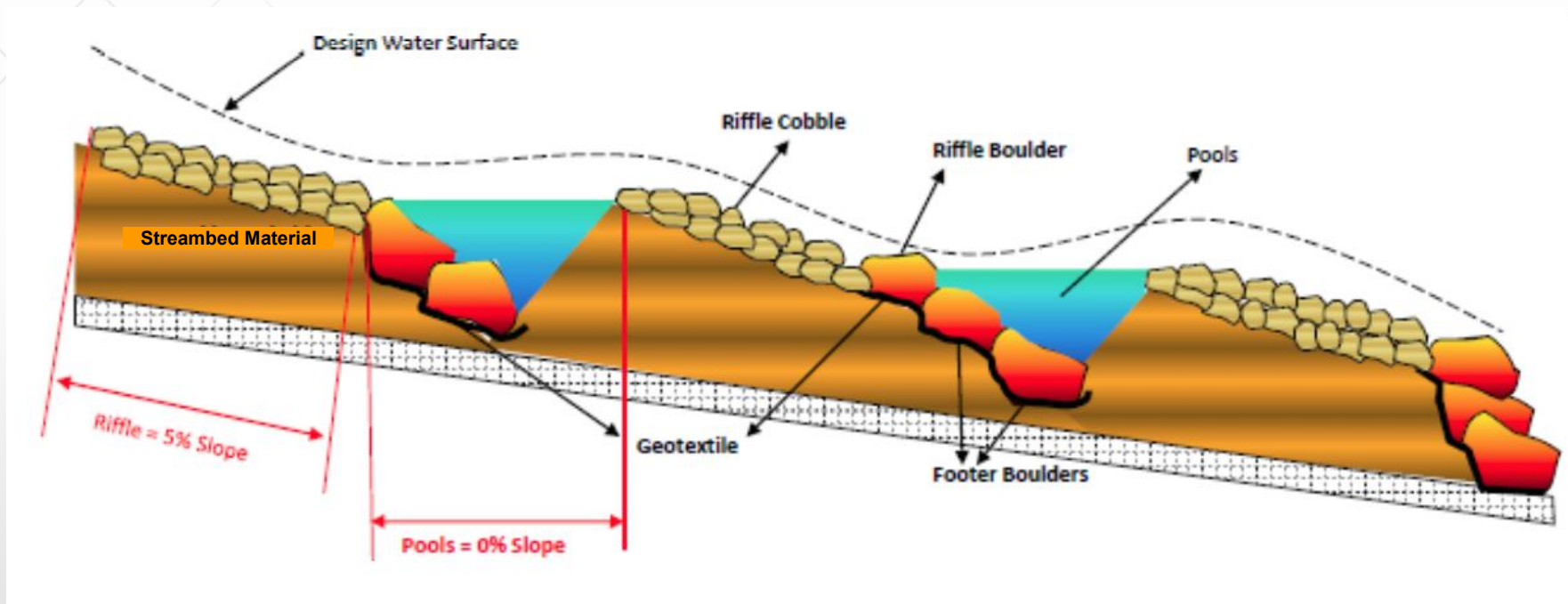
3) Site Access for Construction

4) Floodplain



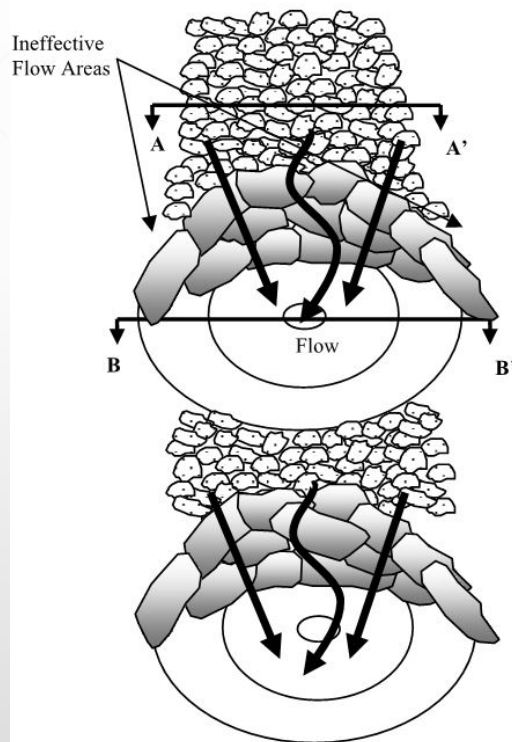
2. b) Design Concept

Step Pool Sequence - Stormwater Conveyance

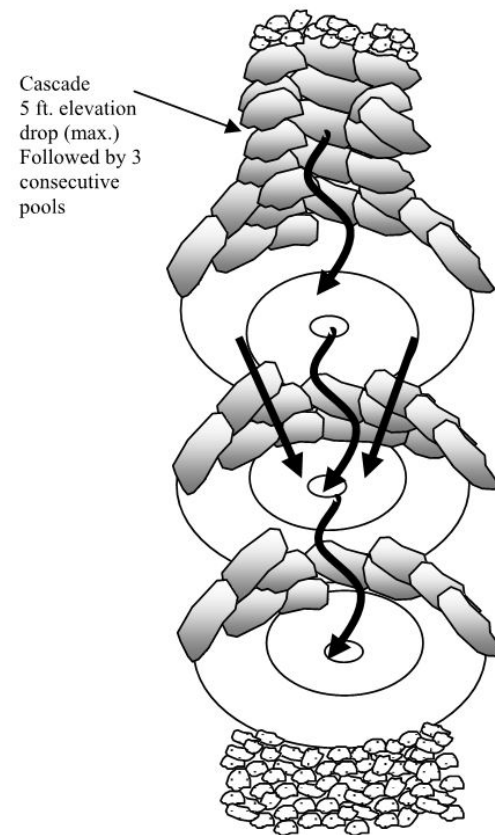


2. b) Design Concept

Step Pool Sequence - Stormwater Conveyance



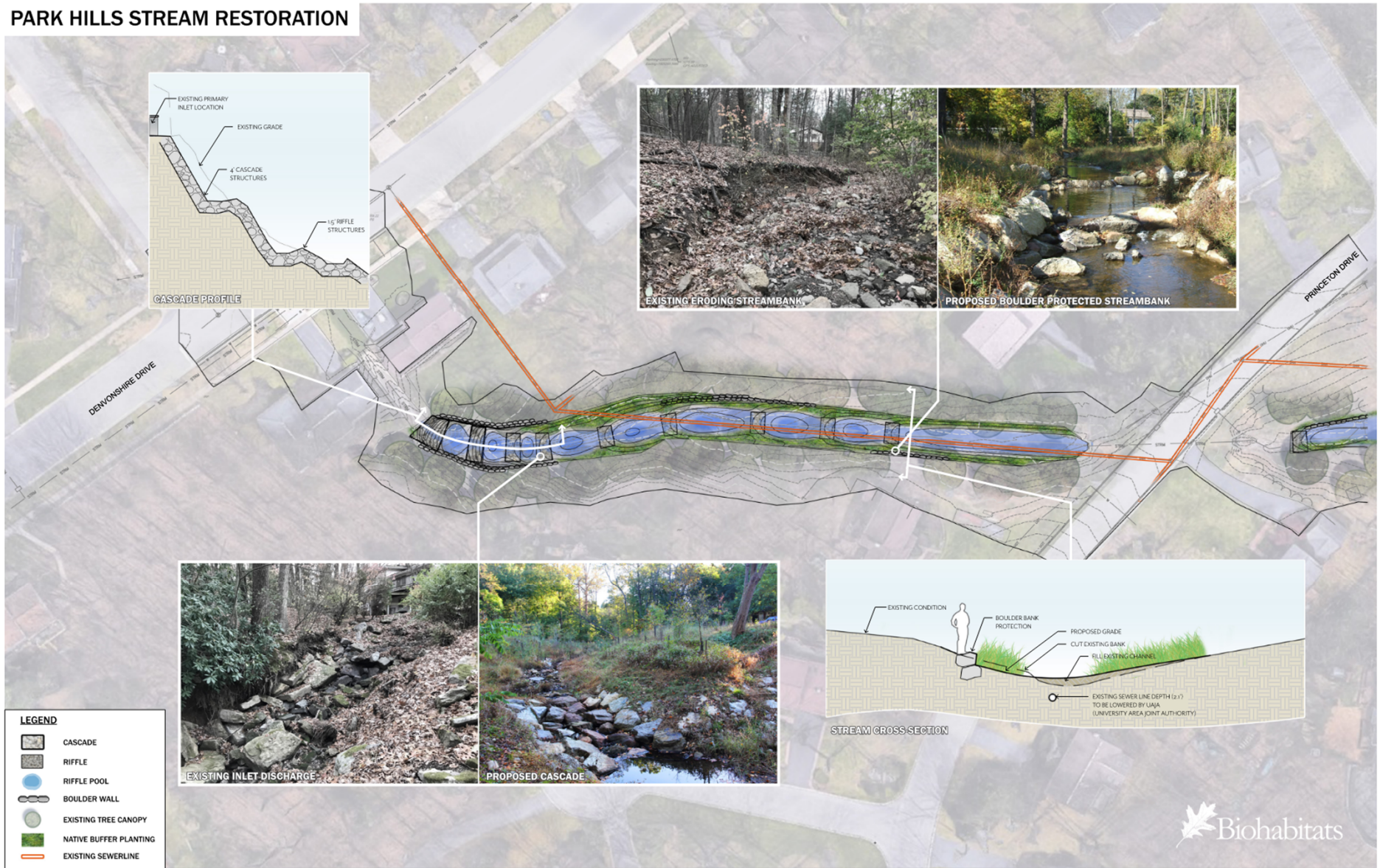
Riffle - Pool Sequence (Typical)



Cascade Sequence

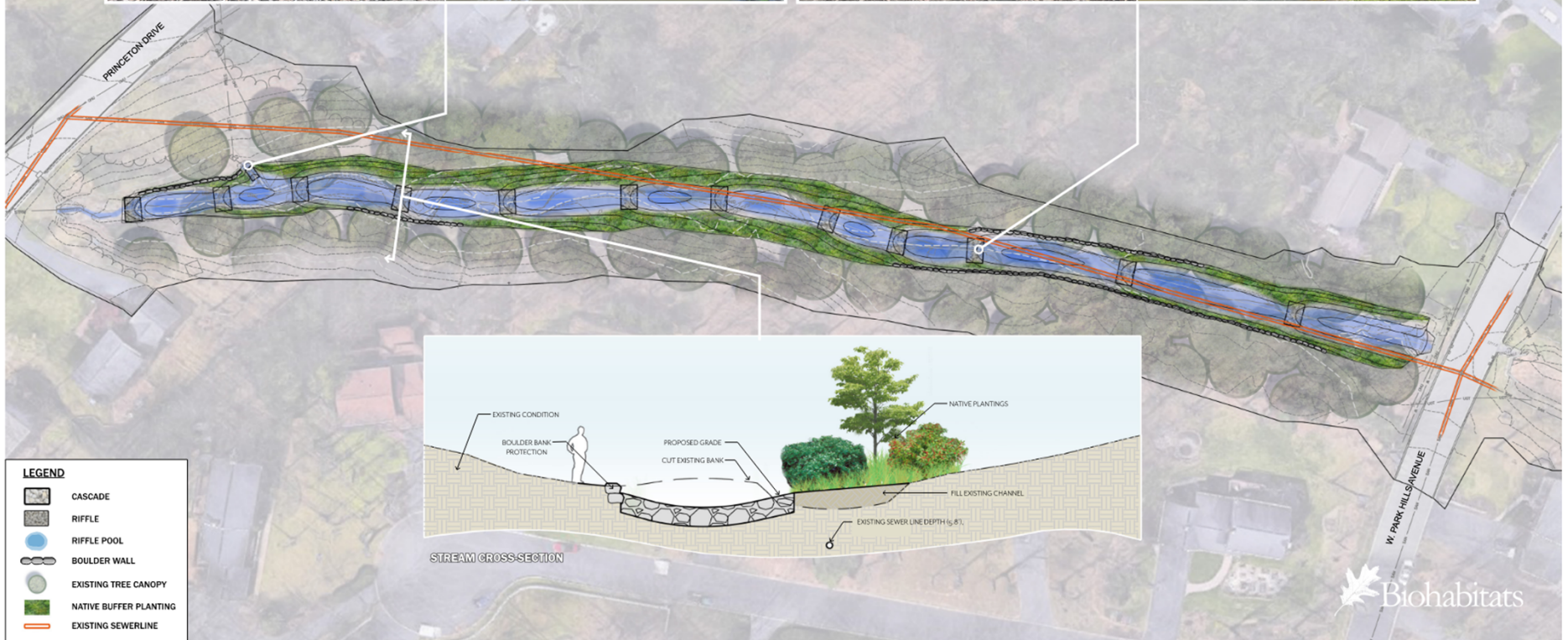
2. c) Concept Applied to Park Hills Drainageway

PARK HILLS STREAM RESTORATION



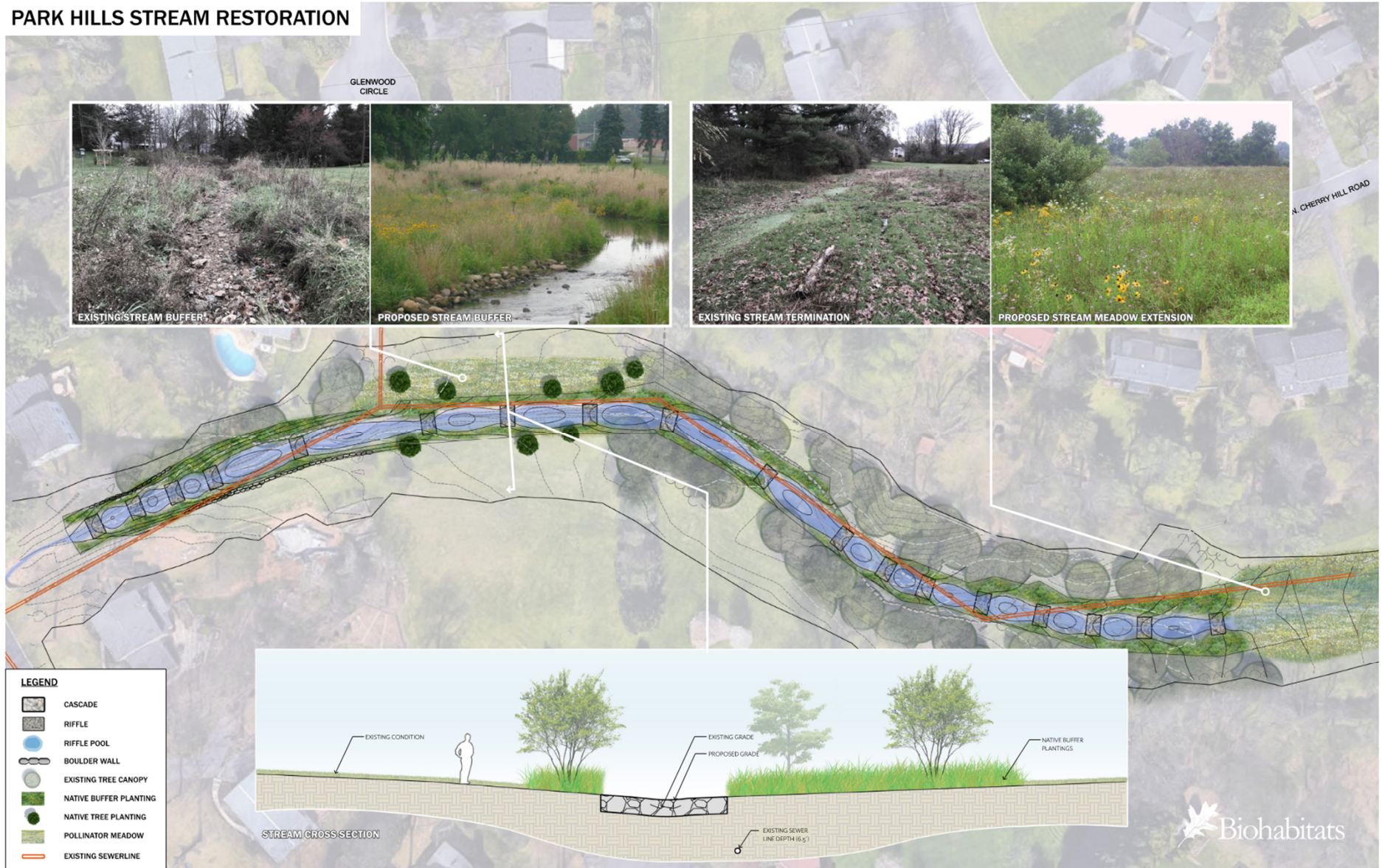
2. c) Concept Applied to Park Hills Drainageway

PARK HILLS STREAM RESTORATION



2. c) Concept Applied to Park Hills Drainageway

PARK HILLS STREAM RESTORATION



2. d) Example

Cascade Section – Annapolis, Maryland



Carriage Hills RSC - After

2. d) Example

Cascade Section – Washington D.C.

Park Drive RSC
- After

Series of
Cascades



2. d) Example

Ripple/Pool Sequence - Rockville, Maryland



Breewood
Tributary RSC – After (½ Year Later)



2. d) Example

Ripple/Pool Sequence - Annapolis, Maryland



Crofton Tributary RSC - After



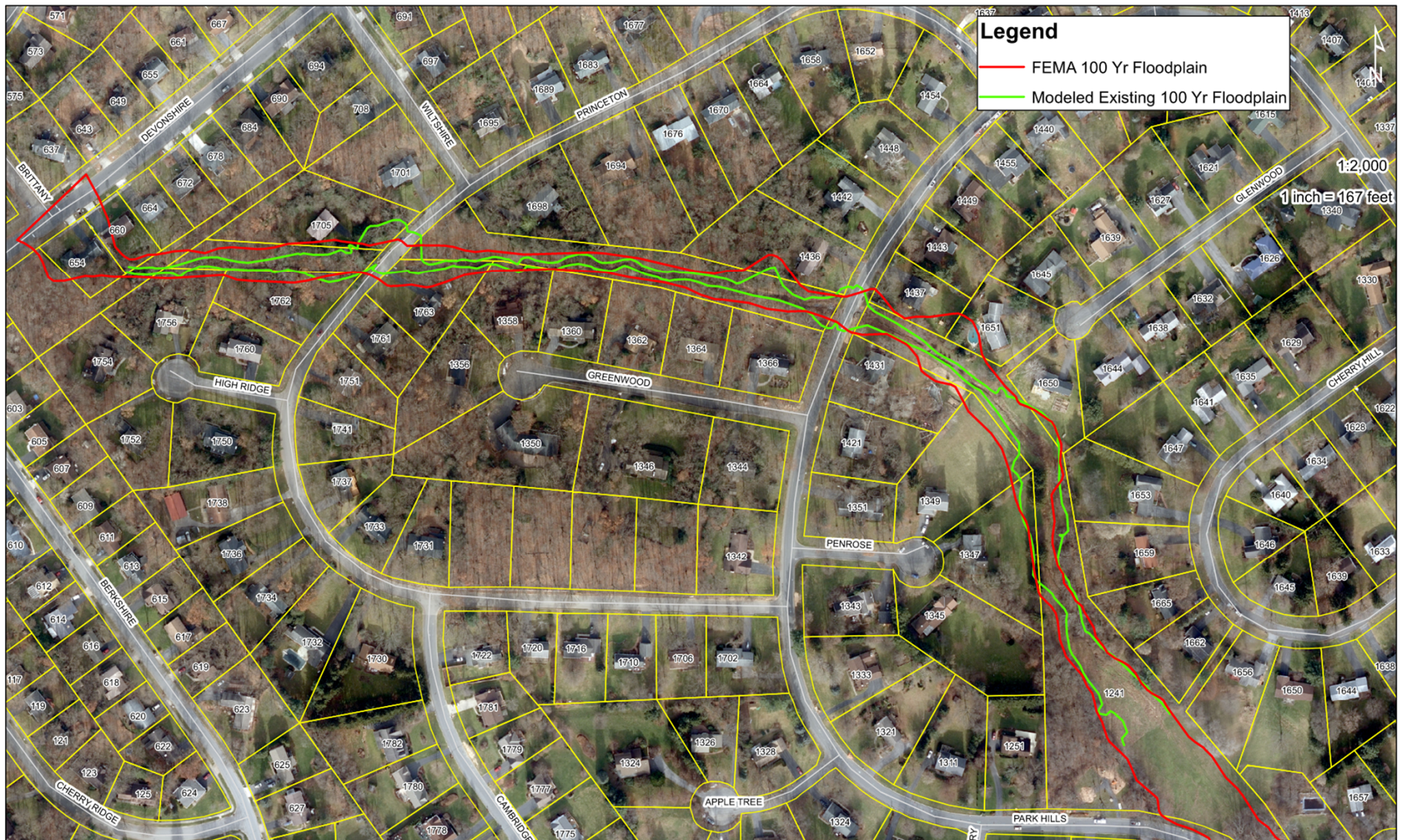
2. d) Example

Toe and Boulder Walls (Various Locations)



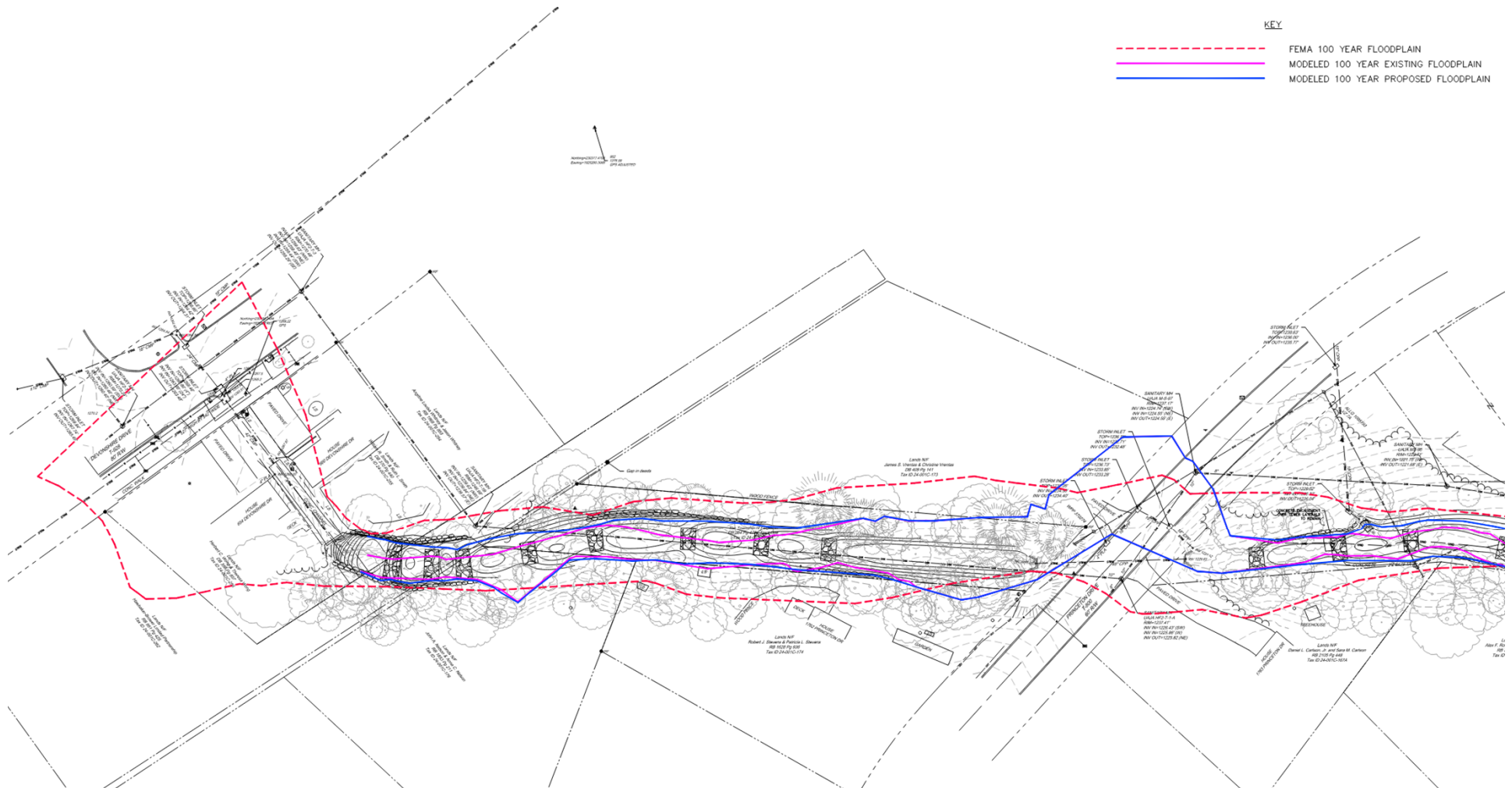
3. Floodplain Modifications

Existing FEMA Approximate 100-year Flood Limit Vs. Modeled Existing 100-year Flood Limit



3. Floodplain Modifications

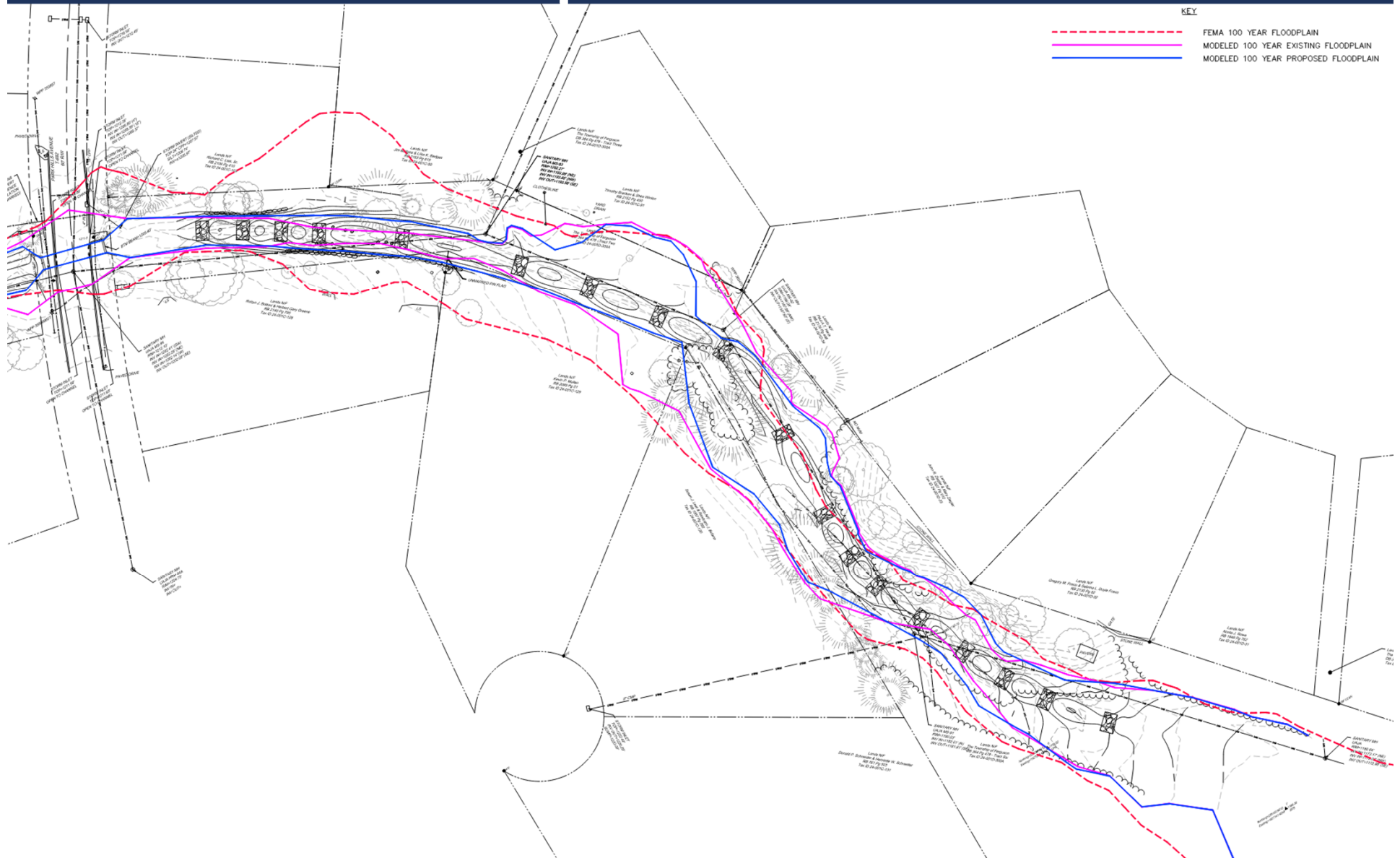
Existing FEMA Approximate 100-year Flood Limit Vs. Modeled Ex & Prop 100-year Flood Limit



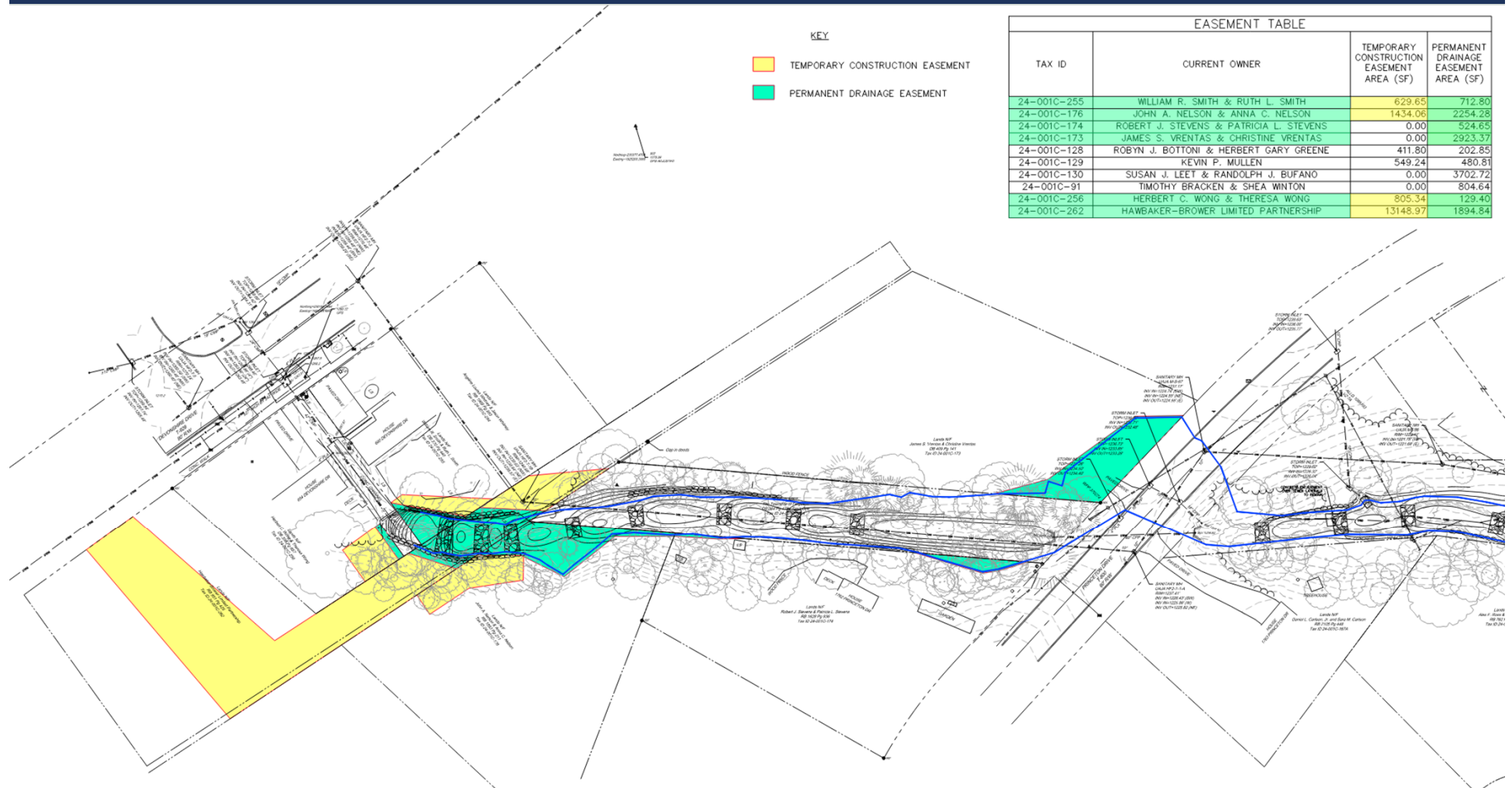
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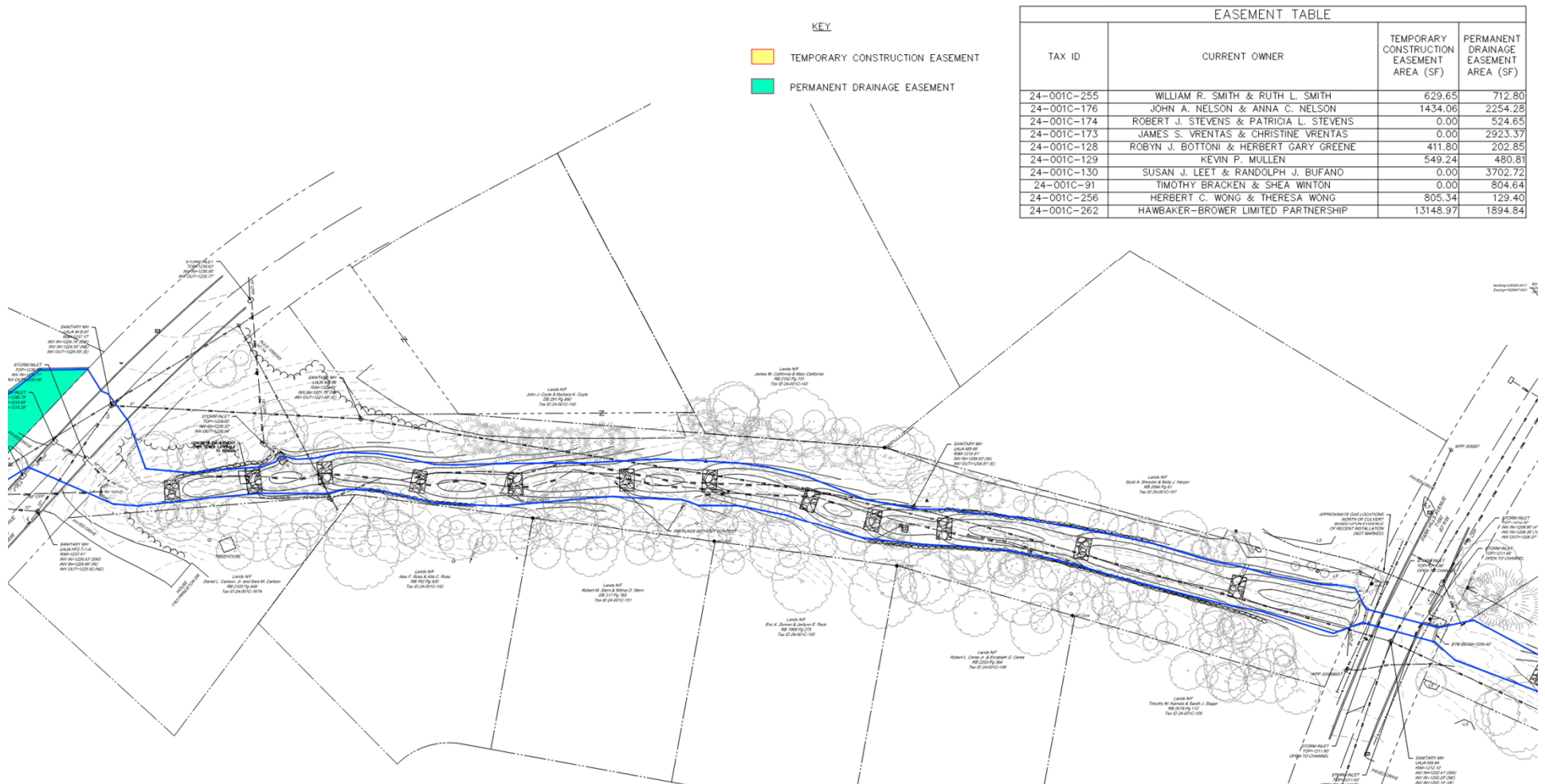
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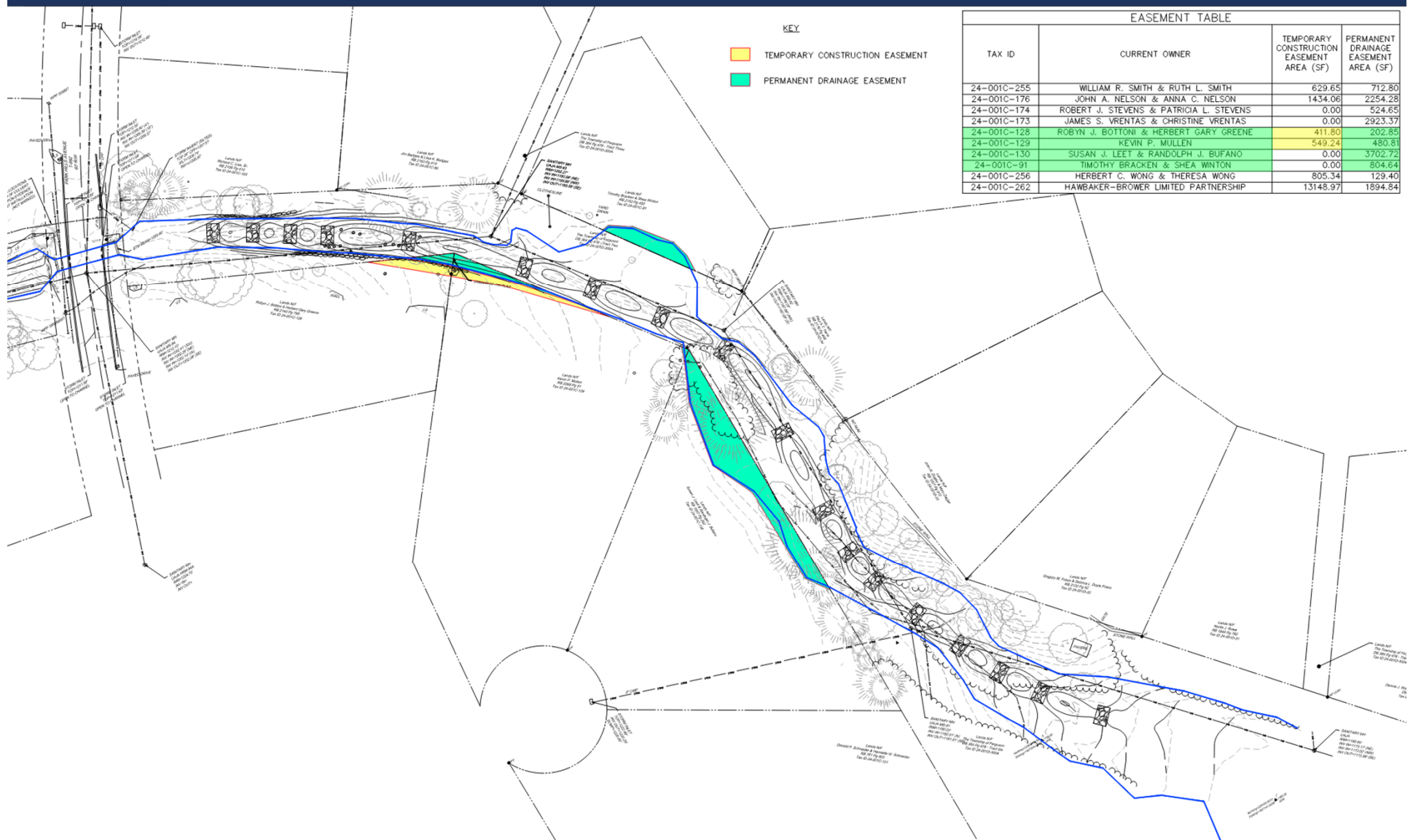
4. Easements – Construction & Drainage



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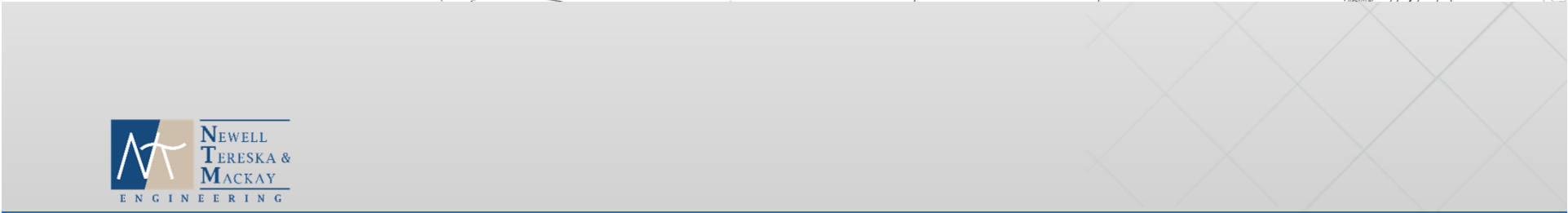
4. Easements – Construction & Drainage



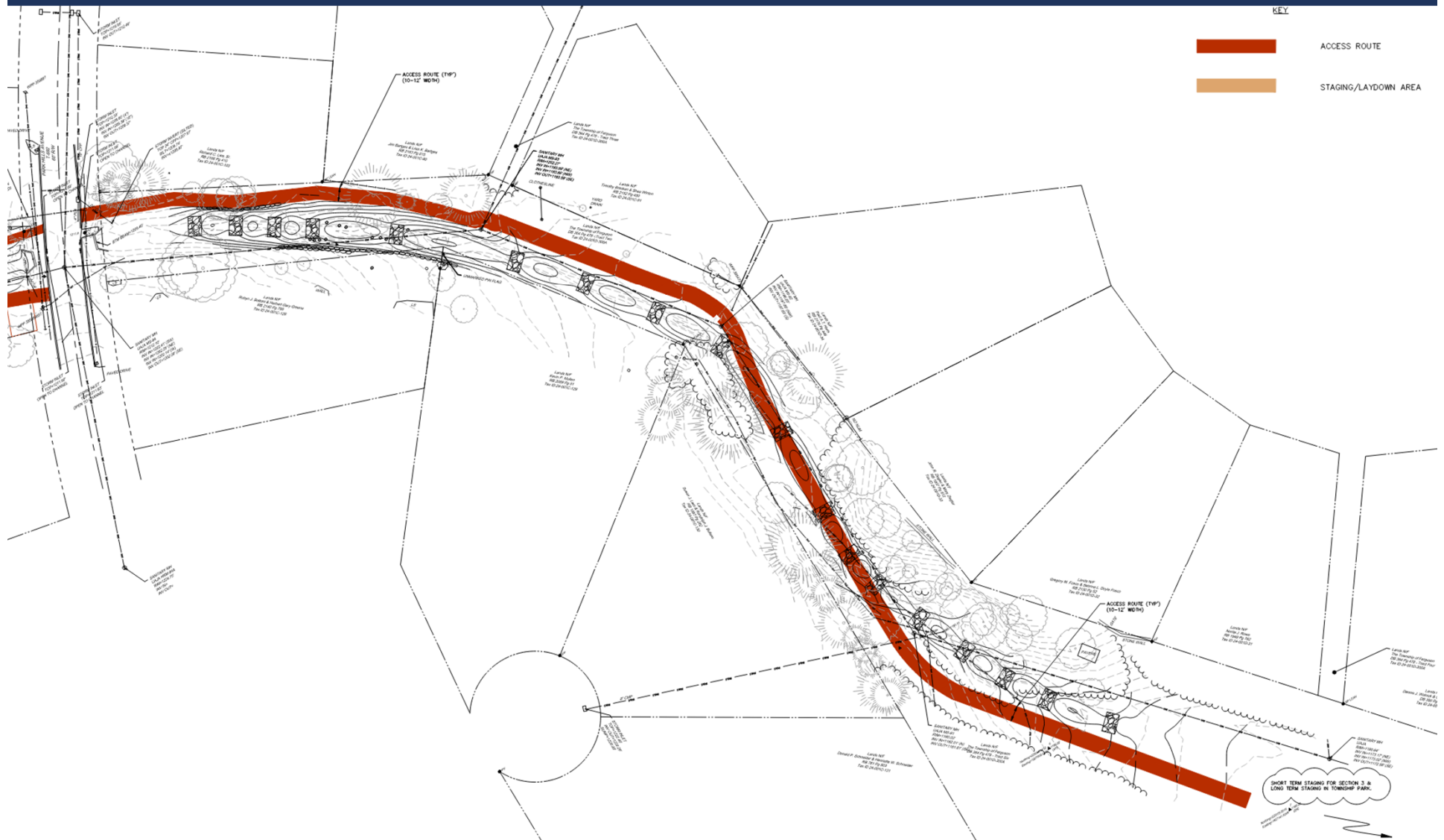
4. Easements – Utility Relocation







5. Construction Access



6. Schedule

Park Hills Drainageway Design & Construction Schedule

Activity		2021												2022												2023				
		Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May		
Construction Documents & Permits	Second Public Meetitng	X																												
	CLOMR prep																													
	FEMA Review																													
	Construction Plans - to 90%																													
	Waterway Waver 16																													
	DEP review/Approval																													
	Finalize Construction Docs																													
Easements	Drainage Easement Documents																													
	Drainage Easement Acquisition																													
	Utility Easement Acquisition																													
Construction	Wired Utility Relocation																													
	UAJA Sewer Work																													
	Bid Period																													
	Construction																													

7. Final Q & A



Ron Seybert email: rseybert@twp.ferguson.pa.us or 814-238-4651