

Synergistic D/B/M Team: Foundation to Transformative Restoration

BRANCH AVE PARK STREAM RESTORATION



PROJECT DESCRIPTION



Client Defined Goals

Improve	erosive forces from stormwater
Provide	higher quantity and quality habitat
Achieve	functional uplift: hydrologic, hydraulic geomorphic and physiochemical
Preserve	mature trees and forest
Provide	safe walking trail
Remove & Control	invasive plant species

i.e., Fill this cracked pot, Cinderella!

2018: EXISTING CONDITIONS

The Good

- Salvageable native ferns
- Salvageable stream and material
- Mature trees for shade, seed, root system
- Spring fed seep



2018: EXISTING CONDITIONS

The Bad



16-ft V shaped channel

*The
“canyon”
and the
gully*



Actively eroding gully

2018: EXISTING CONDITIONS

The Ugly



*"That is the most
depressing pipe in all of
DC."*

Josh Burch, DOEE



2019: COHESIVE DESIGN APPROACH

What does success look like for *US*?

- Support from the community
- Vertically stable
- Improve the extent of water on the landscape
- Provide “floodplain functions”
- Create a vegetation gradient
- No sewage



2019: COHESIVE DESIGN APPROACH

What is successfully constructable?

➤ what's possible at this site with 6% to 25% slopes?



2020: SURGICAL CONSTRUCTION APPROACH



Regular reviews to
assess viability and
cost



Construction access



Use the channel as
primary access to
protect mature trees

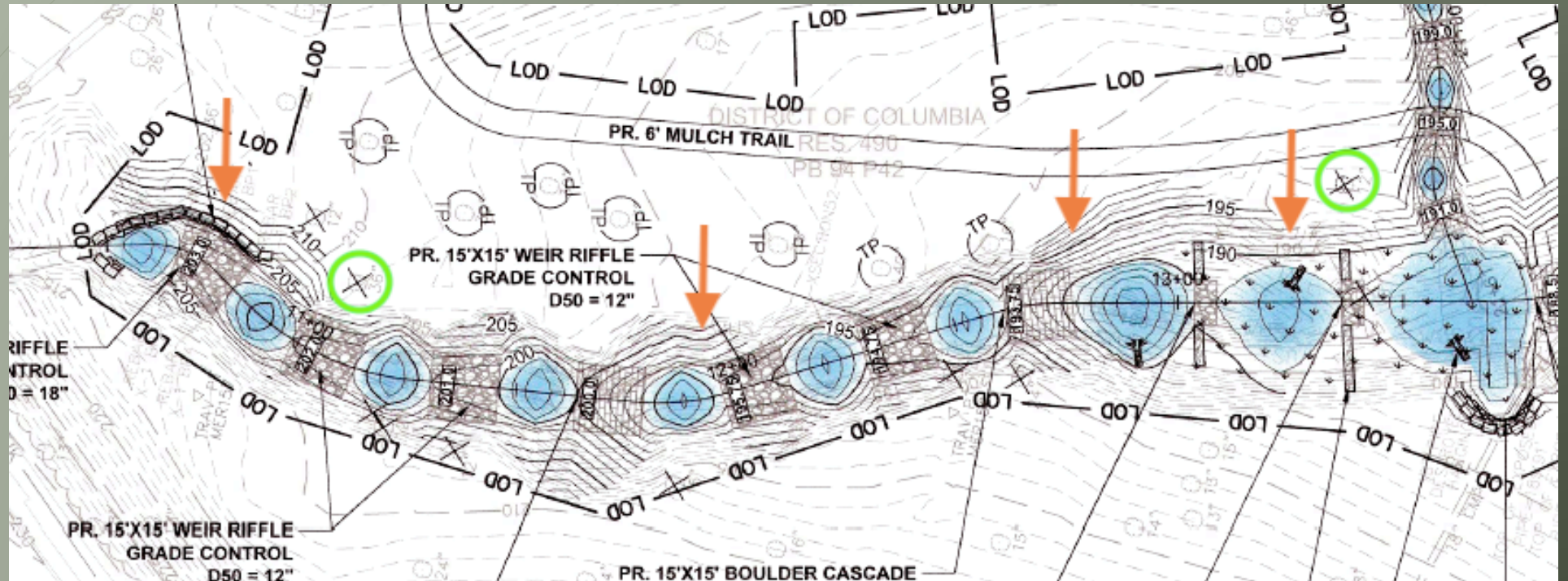


Work around trees

https://dnr.maryland.gov/ccs/Documents/RSC_Training/RSC-Guidance.pdf



Laparoscopic Surgery



- ▶ Trail alignment used as access road to minimize tree removal.
- ▶ Strategic access to stream to save trees permitted for removal (5).
- ▶ Protect soils, avoid compaction

Pre-Op

- ▶ Salvage native plants
- ▶ Relocate saplings and shrubs
- ▶ Take vitals - Observe site during storm events prior to mobilizing and during E&S installation



Constraints

- Tight LOD (limit incisions)
- Steep slopes 6-25" (sutures)
- Large trees to protect (organs)
- 2.5 outfalls Extremely flashy (hemopheliac)

*Methodical planning, execution and adaptation **WITH CREW** to actively minimize disturbance at every stage.*



Holistic Care

Take time to observe,
prescribe and treat
CAUSE

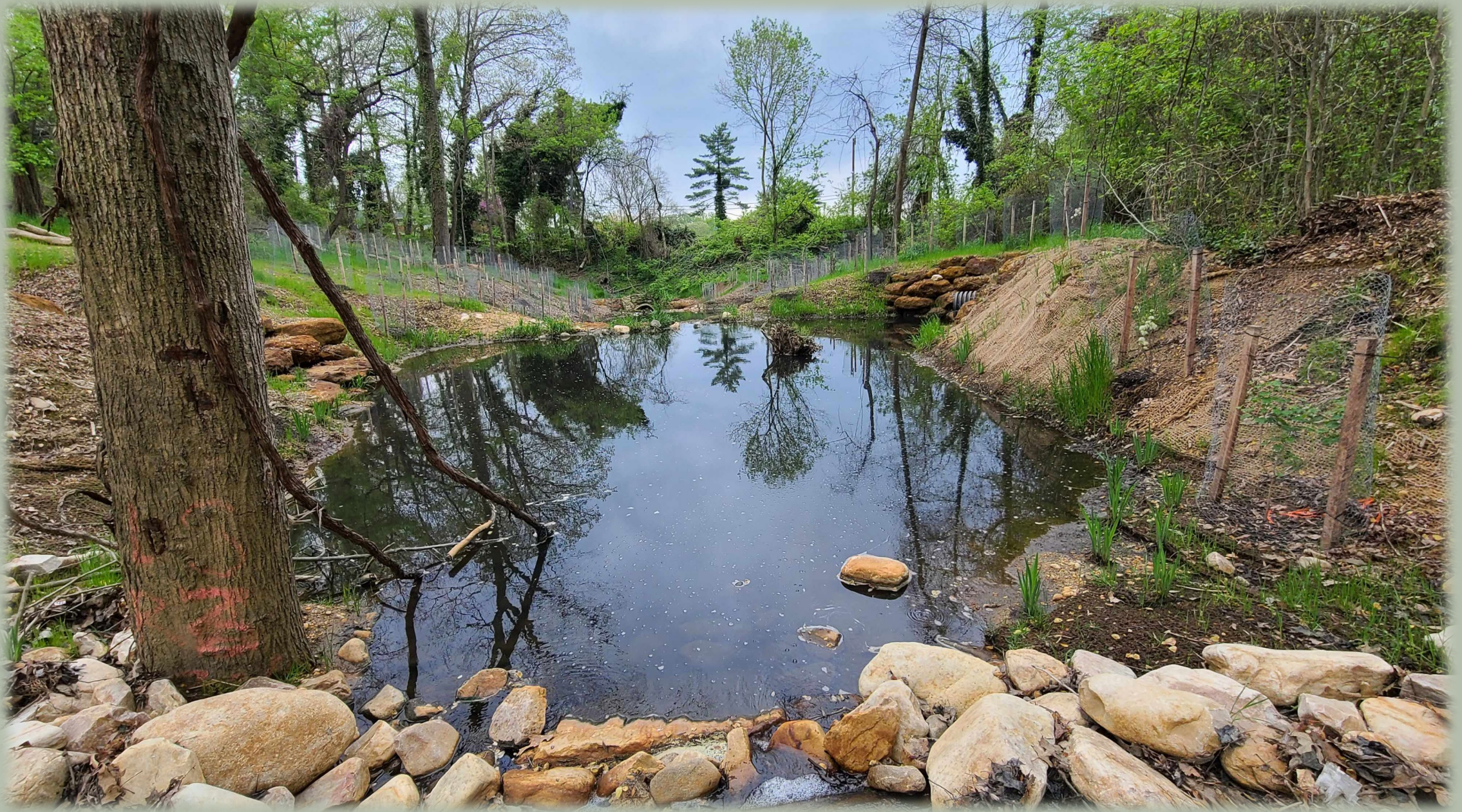
Code Blue: respond to
unexpected events

“Specialists” on call:
Designer and Client





December 2020
(Demobilization Week)



June 2021
First Growing Season



June 2021
First Growing Season

2020-2022: MAINTENANCE



Continuity and Vigilance



Same Contractor for B/M

- Knowledge of site-specific needs
- Preventive maintenance
- Ownership and accountability

High ROI

- Upfront investment in time and material
- Reduced repair and maintenance needs
- Greater assurance for long term success

2021



REGENERATING STREAM

2022



REGENERATING STREAM

2023



'NUFF SAID!

RESULTS

Success looks like this!



RESULTS

Success looks like this!

- ✓ Support from the community – Use of trail, voluntary trash pick up and update texts
- ✓ Vertically stable – ACEC Award in 2021 for a functioning design
- ✓ Improve the extent of water on the landscape – baseflow during extended dry periods
- ✓ Provide “floodplain functions” – energy dissipation and groundwater recharge
- ✓ Create a vegetation gradient – aquatic to upland species thriving including mature trees
- ✓ No sewage – no more leaking sewer within project site
- ✓ *Create the possibility for aquatic life!*
 - Multiple species of dragonflies during and post construction visiting finished pools
 - Tadpoles / frogs in all lower and SPSC pools first Spring post construction
 - Stocked fish present over time

RESULTS





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