The Mannik & Smith Group

Attendance Sheet

Date: JANUARY 18, 2011

Event:

Location: JUDSON MANOR, CLEVELAND OH

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Doan Brook Enhancement Project

Pre-Design Meeting

January 18, 2011

Northeast Ohio Regional Sewer District

Previous Doan Brook Restoration Project History

- **April 2001**: *Ohio EPA Findings and Orders*
  - ✓ Issued to City of Cleveland, Department of Port Control for impacts to Abrams Creek
  - ✓ Stipulates $5.5M Restoration Project
- **September 2001**: *Design Commenced on "Restoration Project"*
- **April 2002**: *Design Halted at 60% Complete*
- **May 2002**: *Section 106 Process Commenced*
- **May 2004**: *Section 106 Process Completed*

Previous Doan Brook Restoration Project History

- **<u>April 2005</u>:** *Doan Brook/Rockefeller Park Memorandum of Agreement (MOA)*
  - ✓ Consulting Parties: FAA/USACE, Advisory Council on Historic Preservation, Ohio Historic Preservation Office, Ohio EPA and City of Cleveland
- **<u>January 2005</u>**: *Design Completed on "Restoration Project"*
- **<u>May 2005</u>:** *Rockefeller Park Listed -National Register of Historic Places*
- **<u>June 2005</u>:** *First Construction Bid*
  - ✓ *$7.4 M*
- **<u>November 2005</u>:** *Second Construction Bid*
  - ✓ *$13.9 M*

Current Doan Brook Enhancement Project

- **May 2009:** *New Ohio EPA Findings and Orders*
  - ✓ Issued to City of Cleveland, Department of Port Control
  - ✓ $2.5M investment in ecological enhancement of Doan Brook.
- **November 2009:** *Memorandum of Understanding*
  - ✓ NEORSD to act as City's agent in overseeing revised Doan Brook project planning, design, and construction.
- **November 2009:** *Doan Brook Enhancement Project Conceptual Plan Submitted to Ohio EPA*
- **January 2010:** *Conceptual Plan Approved by Ohio EPA*
- **June 2010**: *Section 106 Consultant Hired*
- **October 2010:** *Design Consultant Hired*

Doan Brook Enhancement Project Responsibility

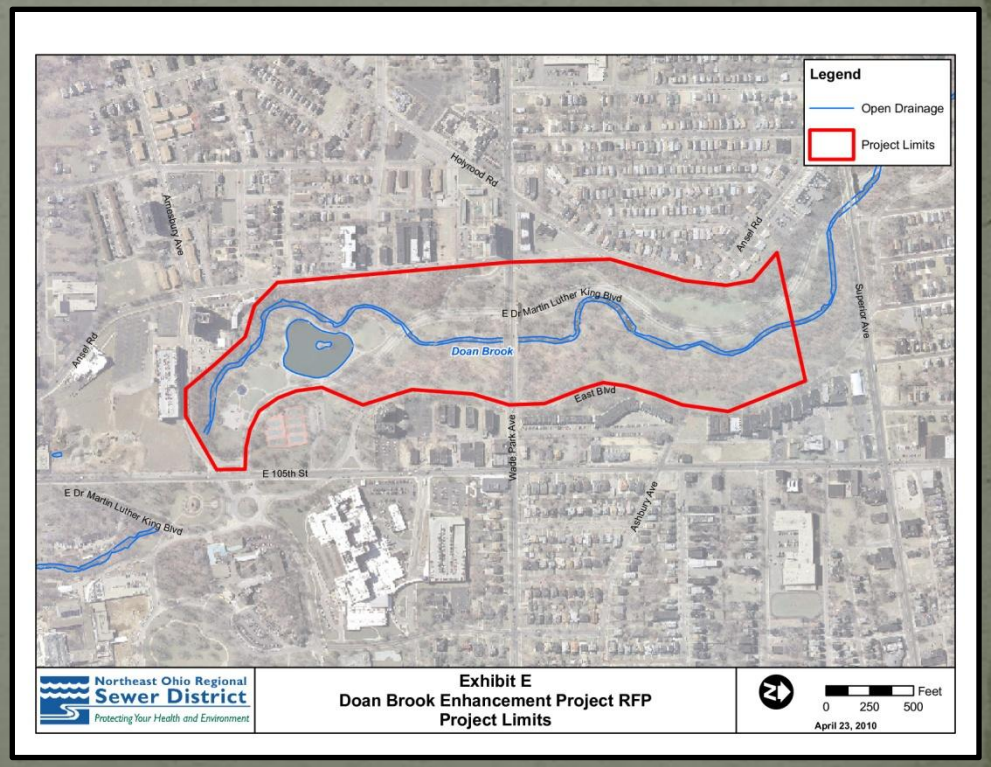
- City of Cleveland is project owner
- NEORSD will manage the project design and construction process
- The FAA will be the lead Federal Agency for the Section 106 process

Comparison of Doan Brook Projects

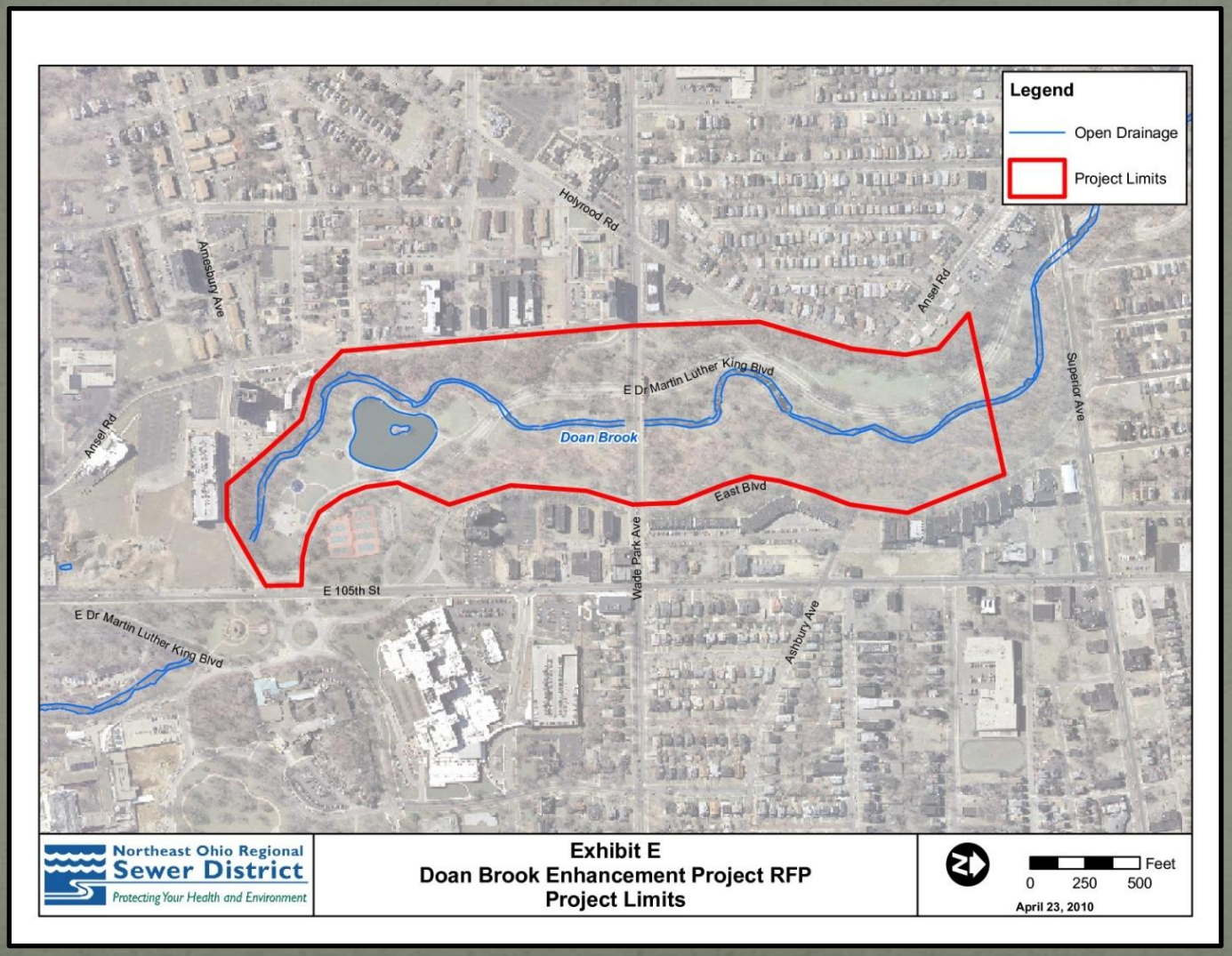
Design Concepts	Original Doan Project (2005)	Revised Project (2010)
Approximate Restoration Length:	12,400 Lineal feet	~2,000 Lineal Feet
Approximate Construction Cost:	$12,000,000	$2,000,000
Flood Plain Treatments:	Natural un-manicured vegetation, not in keeping with the character of Rockefeller Park	Terraced flood plains, re-using wall materials; plantings that fit the park setting
Stream Bank Stabilization:	Drastic modification of alignment; root wads; rock boulder walls; live branch layering, etc.	Maintain current stream alignment (bankfull); re-use of rock walls
Habitat Improvements:	Riparian root wads; stable pools and riffle; boulder J-vanes; hook vanes	Stable pools and riffles; creation of low-flow channel and thalweg
Hydraulic Improvements:	Dramatic modification of alignment to lengthen stream; removal of 50% of rock walls to increase flood plain	Reconstruct a stable stream channel with the proper dimension, pattern, and profile that can handle local flows

Doan Brook Enhancement Project Goals

- Improve aquatic habitat in restored areas
- Provide for better control of stream flows
- Provide for some floodplain relief where possible
- Improve and enhance riparian vegetative cover
- Provide limited removal of invasive plant species
- Provide for some limited access to the brook
- Satisfy Ohio EPA Findings & Orders



Doan Brook Enhancement Project Limits



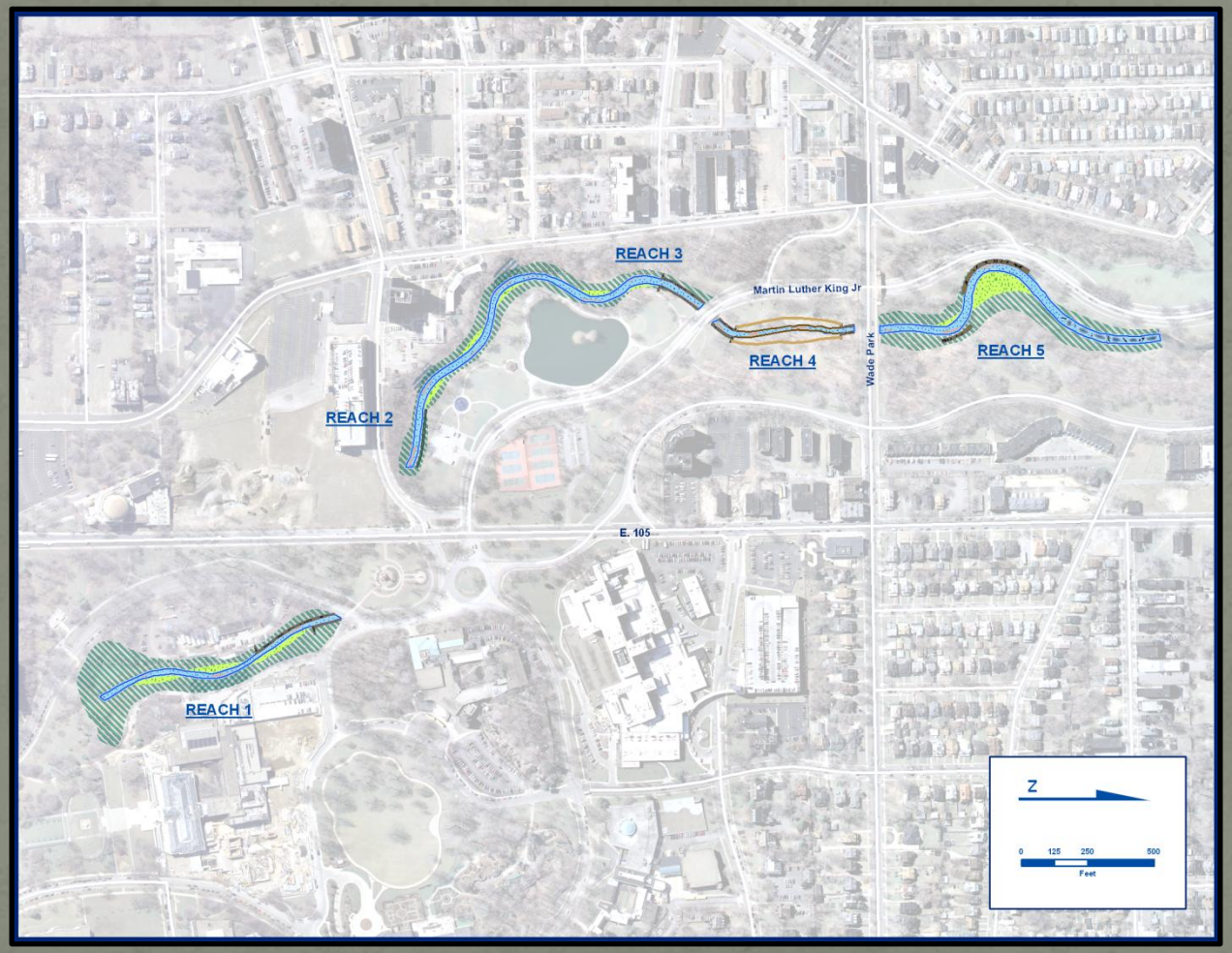
Doan Brook Enhancement Project Design Objectives:

- Minimize impacts to the historic Cultural Gardens;
- Provide enhanced riparian zone native plant community;
- Maintain manicured and picturesque open areas of the park;
- Protect contributing trees;
- Protect historic resources including stone walls.

Doan Brook Enhancement Project Budget & Funding

Task	Cost
Preliminary Planning	$150,000
Professional Services	$350,000
Section 106 Process	$25,000
Site Restoration	$300,000
5-Year Monitoring	$100,000
Construction Project	$2,075,000

Doan Brook Enhancement Project Design Reaches (Reaches 2-5)

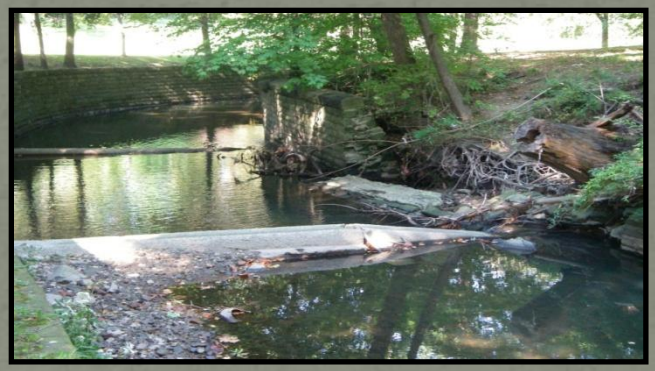


Doan Brook Enhancement Project Overview

Stream through this area is:

- Heavily eroded
- Lacking from any form of channel dimension & pattern
- Has very limited aquatic in-stream habitat

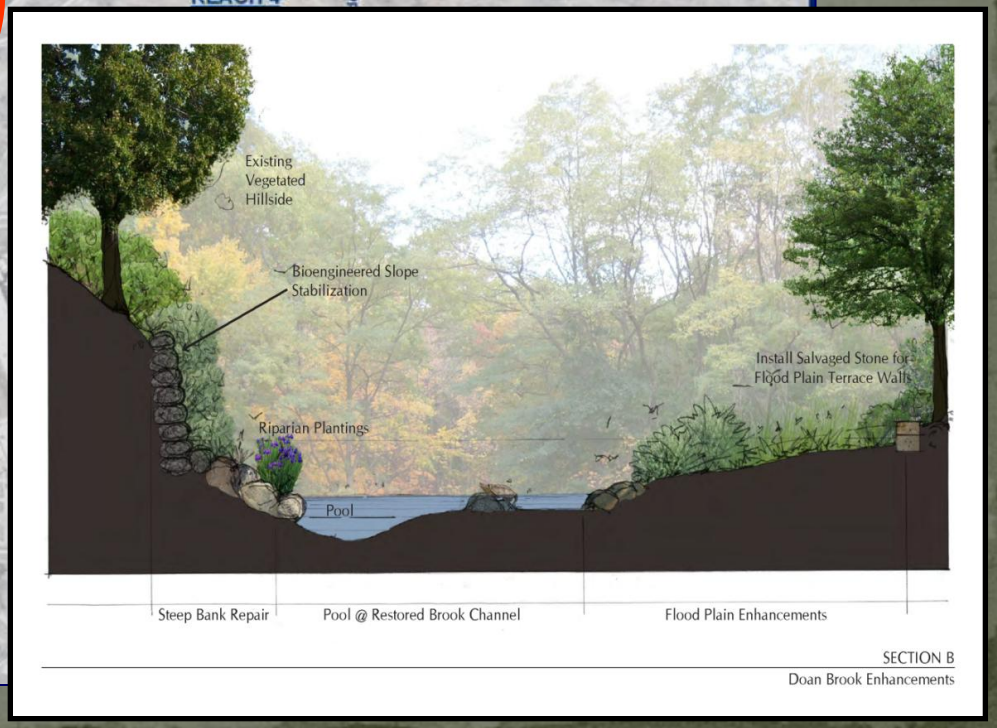
Bank Erosion



Failing Wall with Eroded Foundation

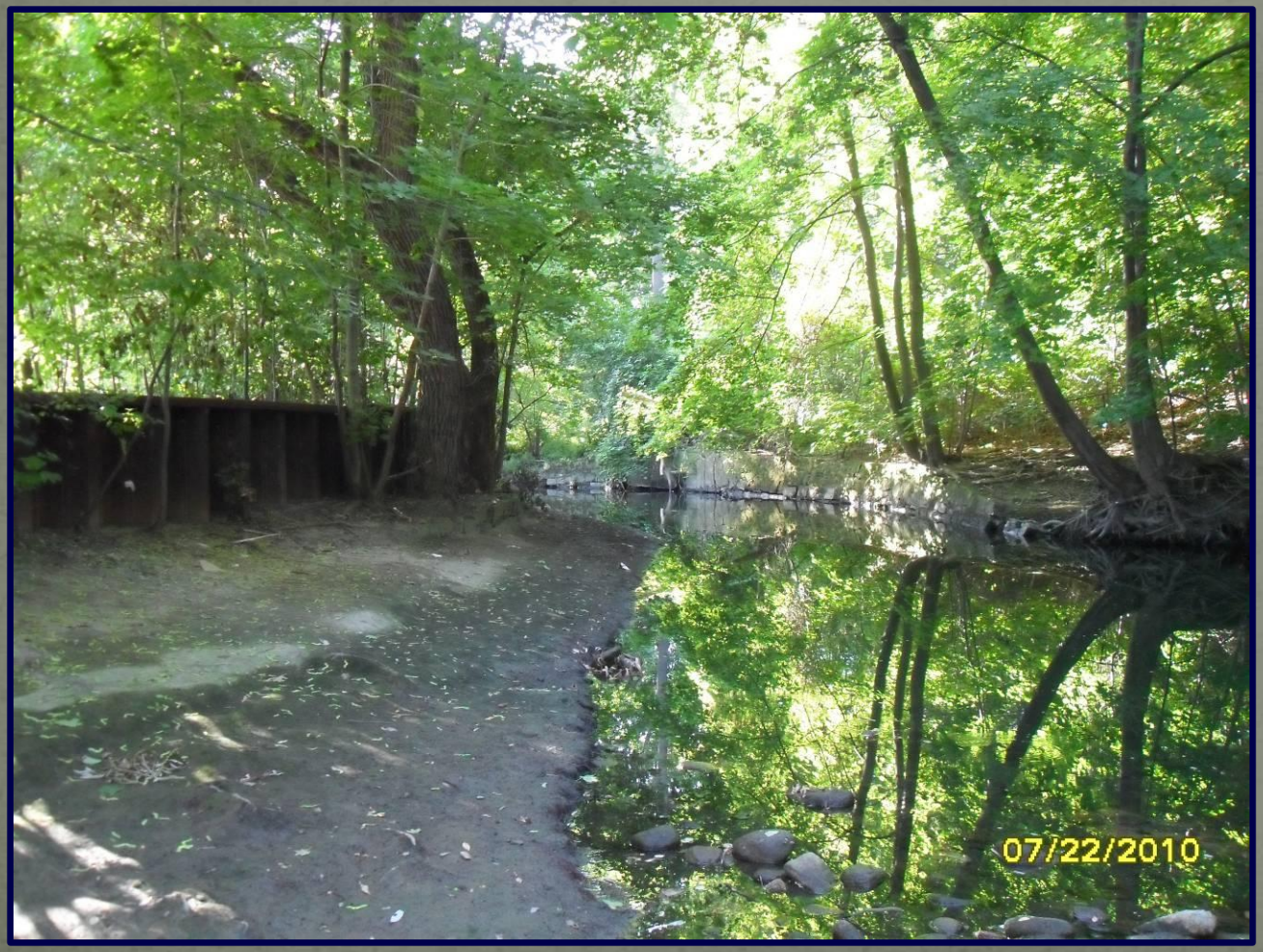
Concrete Check Dams

Reach 2 – East 105th Street Culvert to Rockefeller Park Lagoon



Reach 2 – East 105th Street Culvert to Rockefeller Park Lagoon

- Existing Stream Conditions



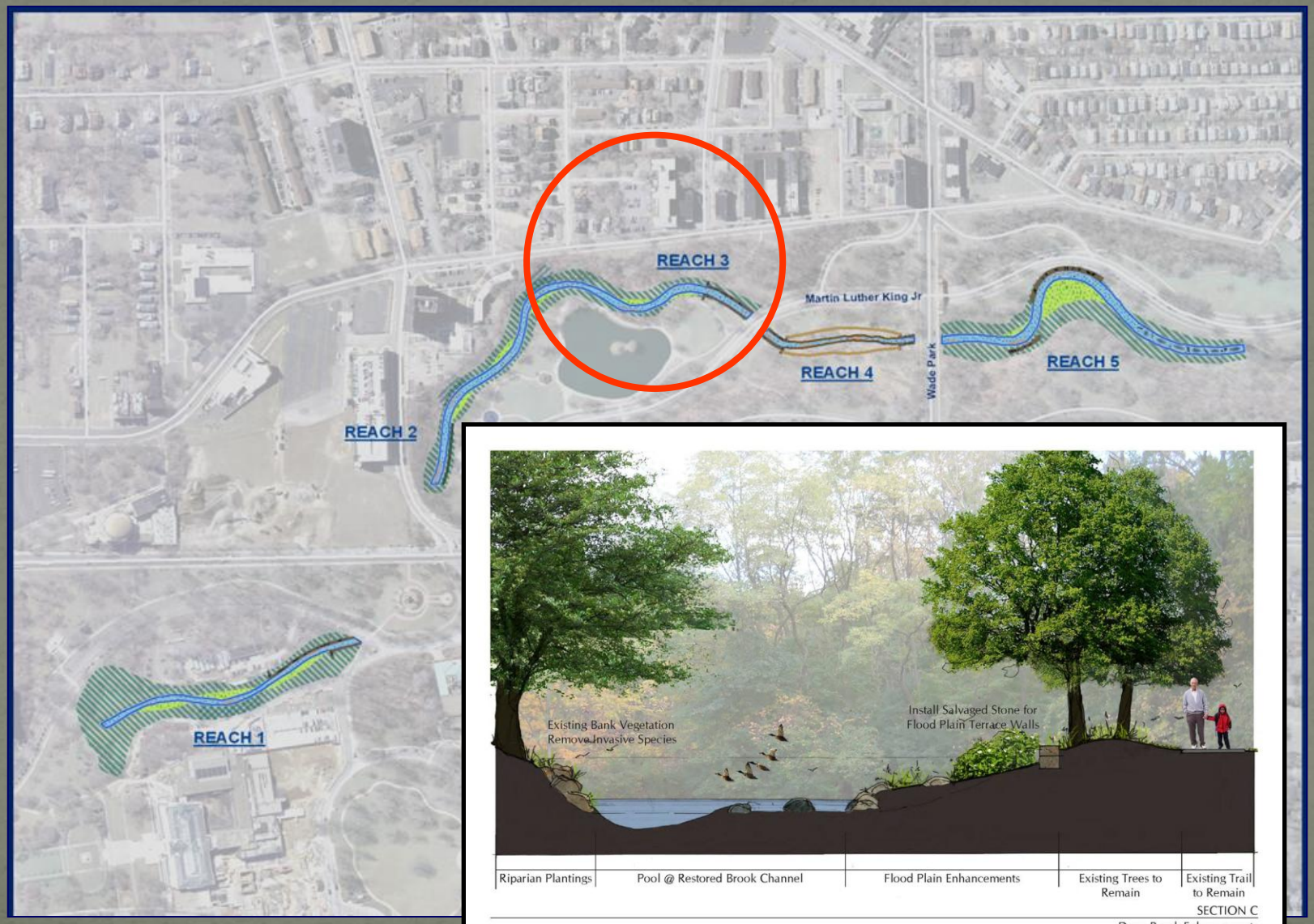
This sheet pile wall along the east bank and stone masonry wall along the west bank of Doan Brook adjacent to the Rockefeller Park Lagoon Area is representative of the mix of existing walls within the project area.

Reach 2 – East 105th Street Culvert to Rockefeller Park Lagoon

- Existing Stream Conditions

This area shows a severe slope failure along the west bank of Doan Brook adjacent to the Rockefeller Park Lagoon Area.

Reach 3 - Rockefeller Park Lagoon to Martin Luther King, Jr. Boulevard Culvert



Reach 3 - Rockefeller Park Lagoon to Martin Luther King, Jr. Boulevard Culvert

- Existing Stream Conditions

This concrete retaining wall along the west bank of Doan Brook is representative of failures in the existing wall/walls adjacent to the Rockefeller Park Lagoon Area.

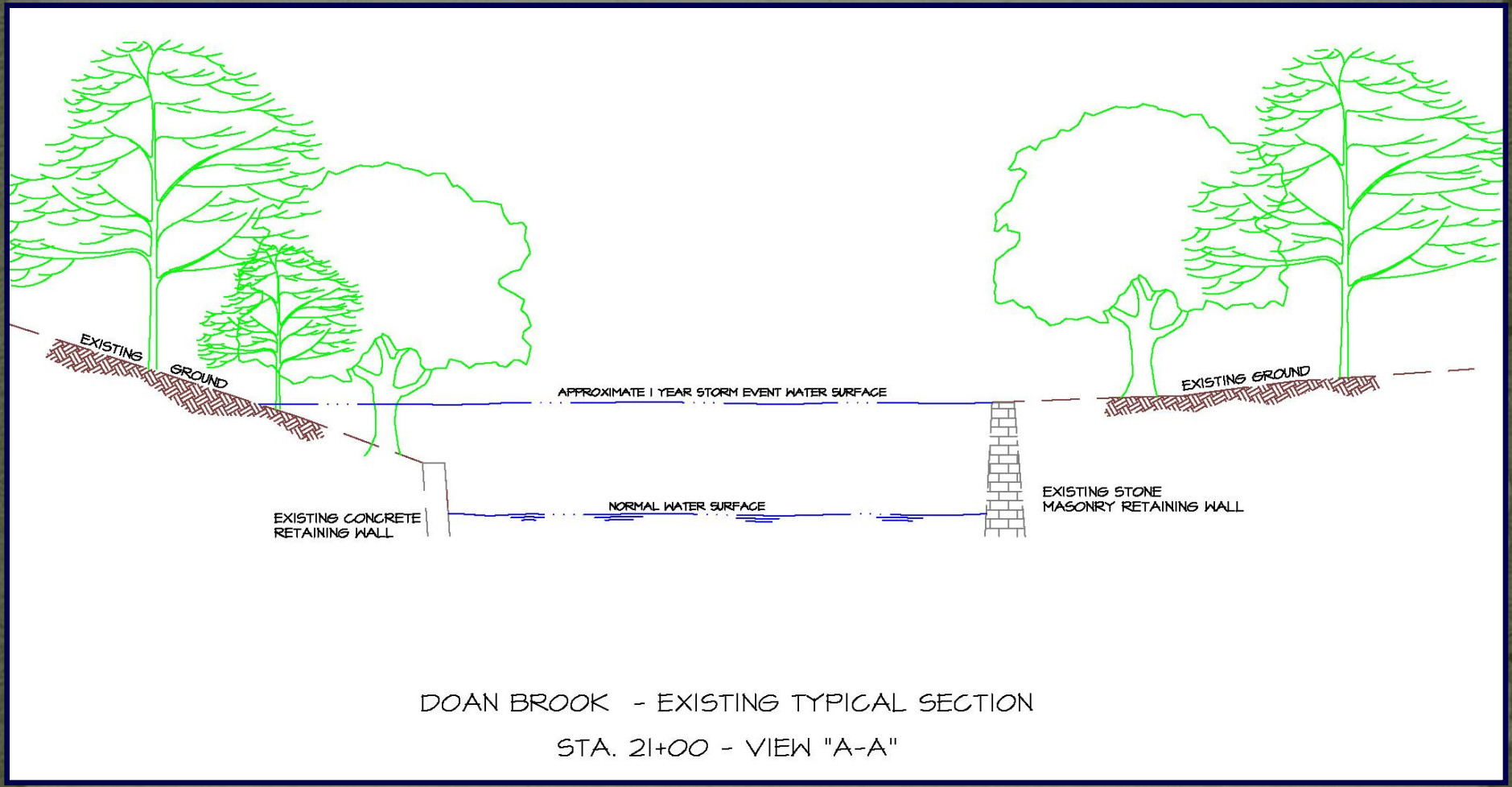
Reach 3 - Rockefeller Park Lagoon to Martin Luther King, Jr. Boulevard Culvert

- Existing Stream Conditions

The east bank opposite the concrete retaining wall also shows a stone masonry wall that is severely damaged, leaning and near failure adjacent to the Rockefeller Park Lagoon Area

Reach 3 - Rockefeller Park Lagoon to Martin Luther King, Jr. Boulevard Culvert

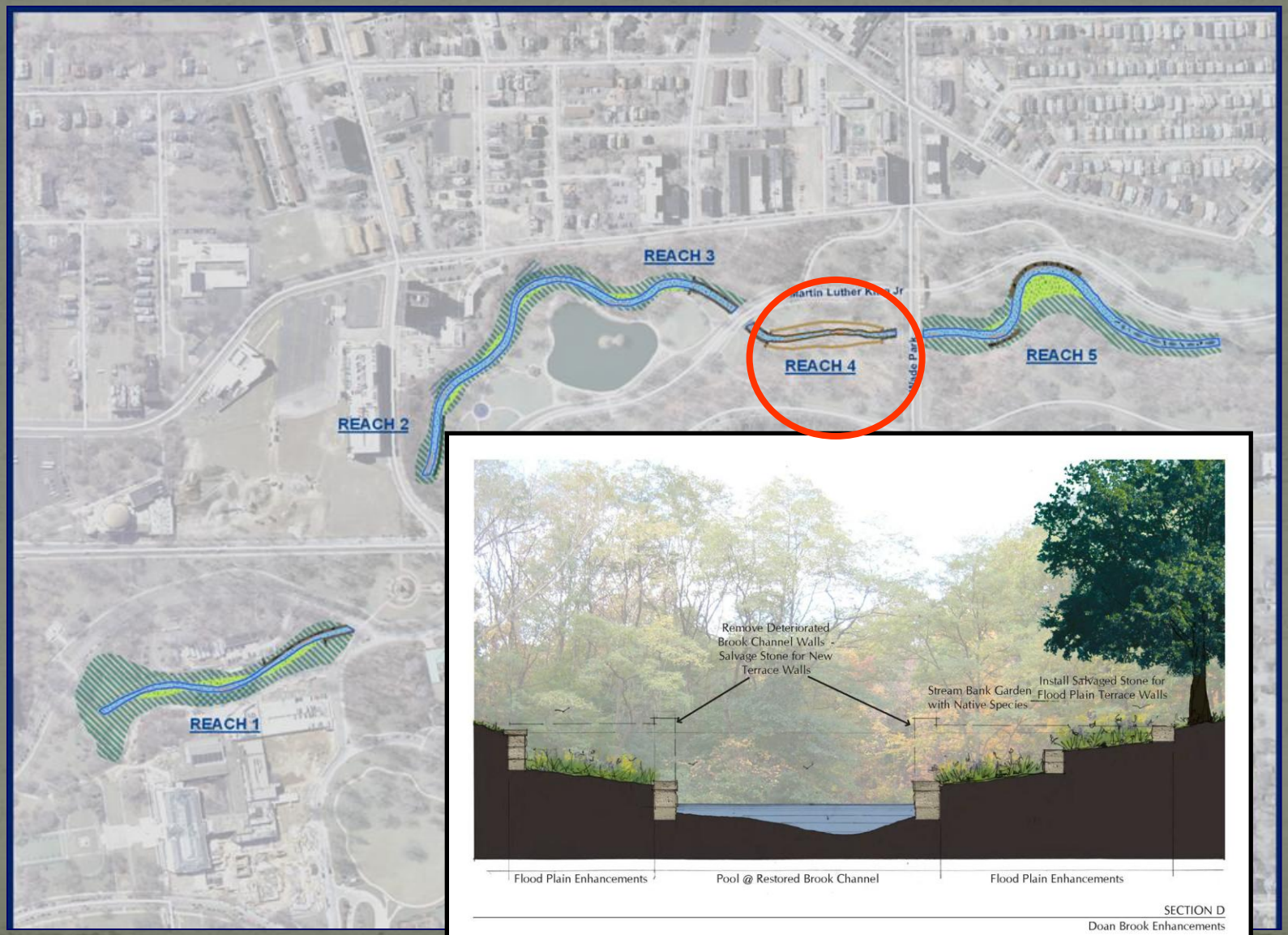
- Existing Stream Conditions



DOAN BROOK - EXISTING TYPICAL SECTION

STA. 21+00 - VIEW "A-A"

Reach 4 - Martin Luther King, Jr. Boulevard Culvert to Wade Park Boulevard Culvert



Reach 4 - Martin Luther King, Jr. Boulevard Culvert to Wade Park Boulevard Culvert

- Existing Stream Conditions

This shows a section of wall along the east side of Doan Brook that is being undermined just to the north of the Martin Luther King Jr. Boulevard culvert over Doan Brook south of Wade Park Avenue. This may have been a result of the flow diversions not being properly placed within the brook.

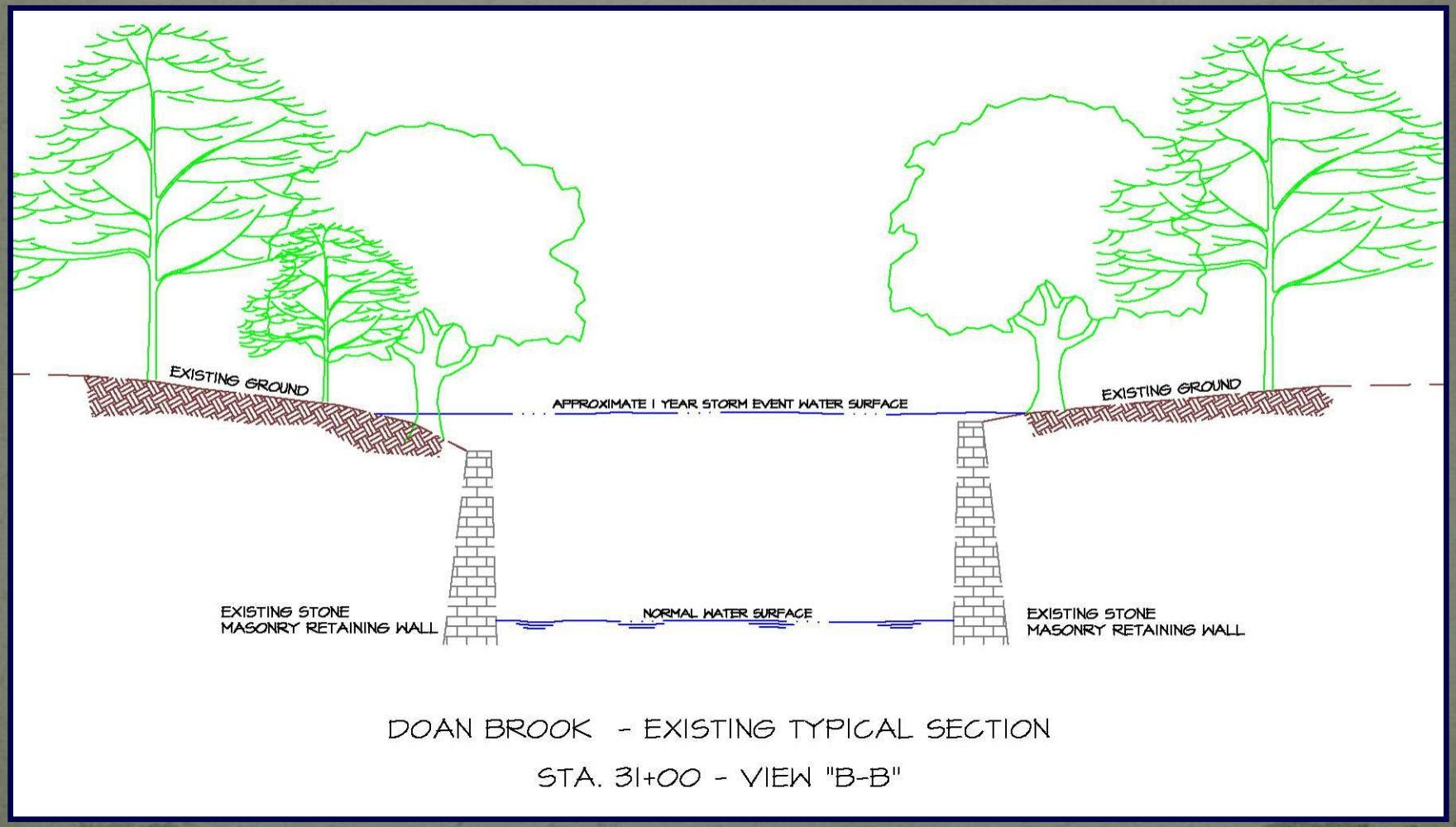
Reach 4 - Martin Luther King, Jr. Boulevard Culvert to Wade Park Boulevard Culvert

- Existing Stream Conditions

This shows a section of wall along the east side of Doan Brook just south of Wade Park Avenue that has lost a considerable portion of concrete mortar interlocking the stone wall. This wall is susceptible to crumbling and future structural failures.

Reach 4 - Martin Luther King, Jr. Boulevard Culvert to Wade Park Boulevard Culvert

- Existing Stream Conditions



Reach 5 - Wade Park Boulevard Culvert to Old Bridge Abutment

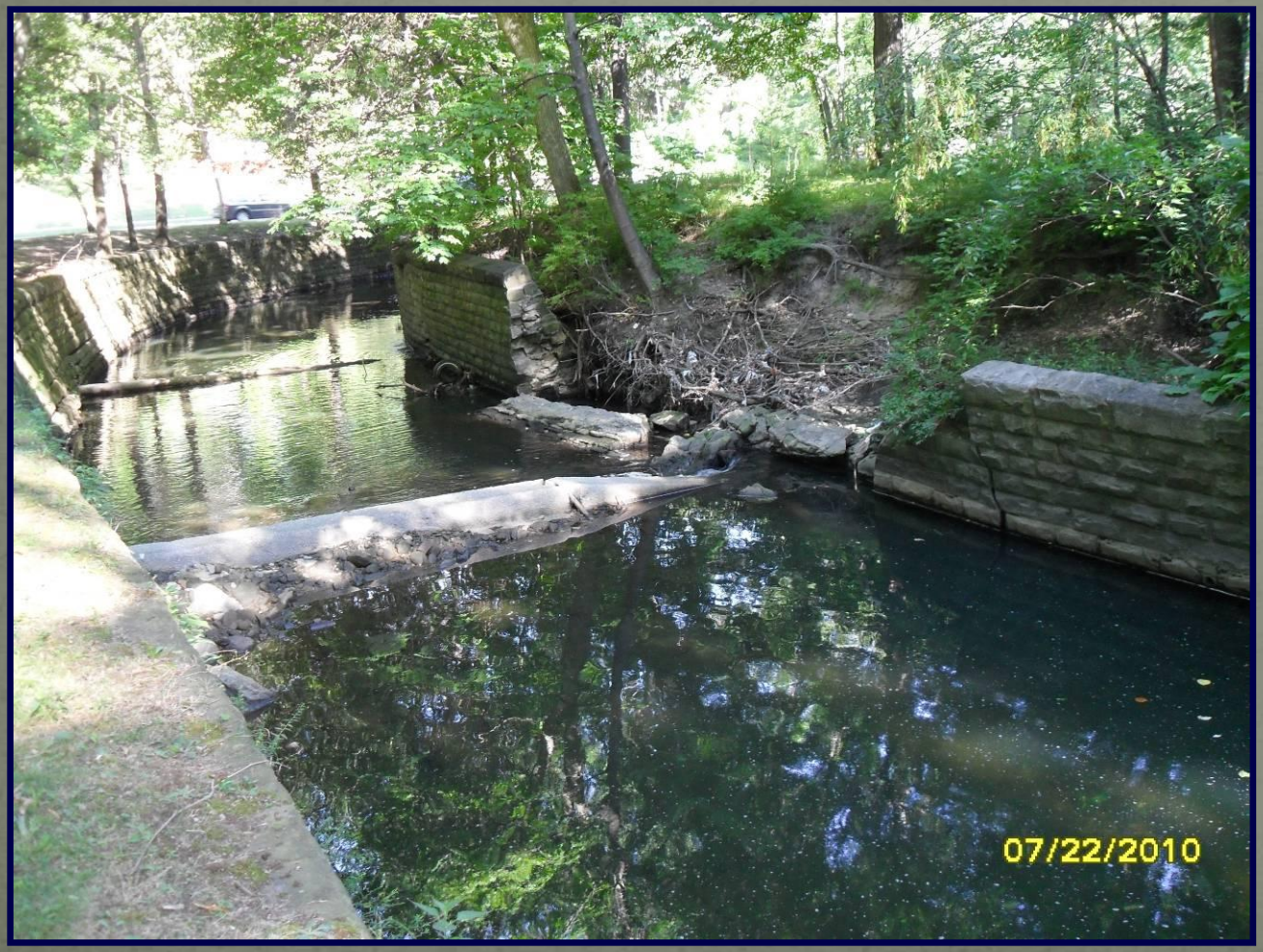
Reach 5 - Wade Park Boulevard Culvert to Old Bridge Abutment

- Existing Stream Conditions

This shows a section of wall along the east side of Doan Brook to the north of Wade Park Avenue buckling and leaning toward the brook. This may be a result of the wall being undermined at this check dam area.

Reach 5 - Wade Park Boulevard Culvert to Old Bridge Abutment

- Existing Stream Conditions



This shows a section of wall along the east side of Doan Brook that is completely washed out between Wade Park Avenue and Superior Avenue. This may have been a result of the wall being undermined at this check dam area.

Reach 5 - Wade Park Boulevard Culvert to Old Bridge Abutment

- Existing Stream Conditions

This shows a series of check dams along Doan Brook between Wade Park Avenue and Superior Avenue. Doan Brook drops approximately 7 feet in elevation through this 600 foot section of the Brook. These check dams create sections of stagnant water and heavy sediment/material accumulation.

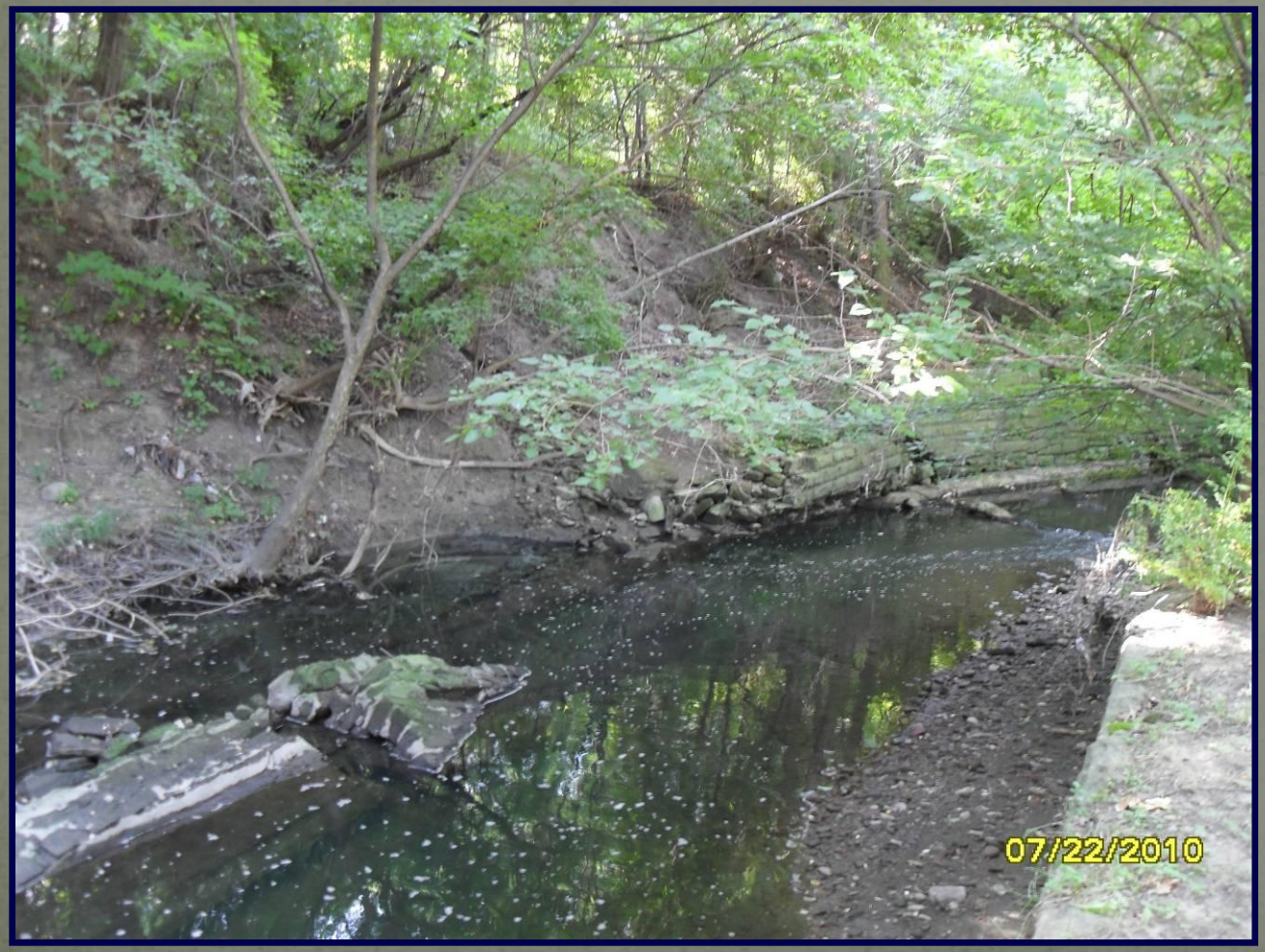
Reach 5 - Wade Park Boulevard Culvert to Old Bridge Abutment

- Existing Stream Conditions

This shows a section of wall along the west side of Doan Brook that has buckled with a potential to collapse. This area is very close to Martin Luther King Boulevard between Wade Park Avenue and Superior Avenue. This section of wall appears to be failing as a result of the check dam undermining the wall at this location. Note the pedestrian trail damage.

Reach 5 - Wade Park Boulevard Culvert to Old Bridge Abutment

- Existing Stream Conditions



This shows a section of wall along the east side of Doan Brook that is completely washed out south of Superior Avenue. This section of the brook is showing signs of severe bank erosion.

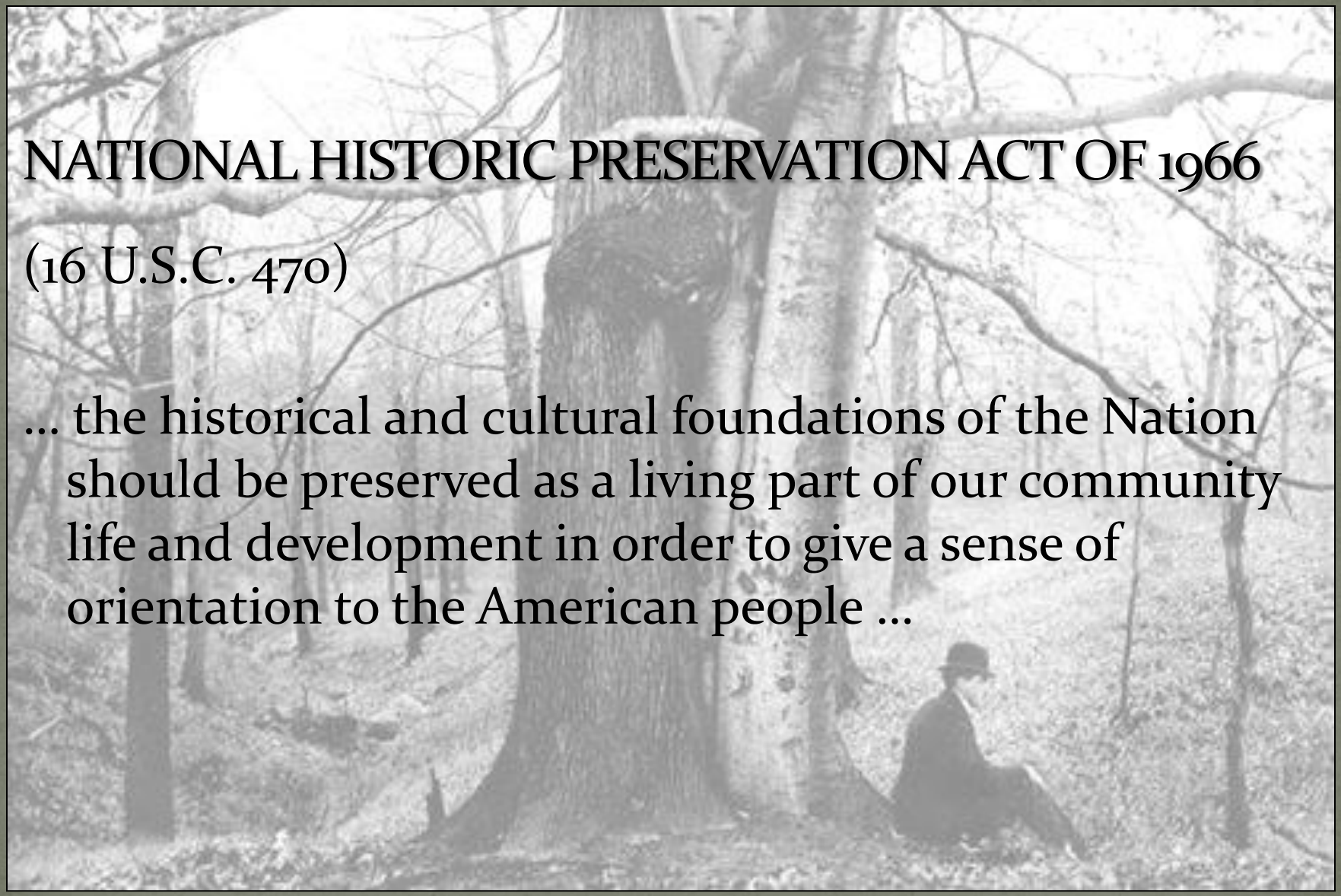
Reach 5 - Wade Park Boulevard Culvert to Old Bridge Abutment

- Existing Stream Conditions

This shows a concrete retaining wall section along the east side of Doan Brook at the Old Bridge Abutment. This section of the brook narrows to nearly one half of the typical width of Doan Brook, severely reducing the flow capacity of Doan Brook at this location south of Superior Avenue.

Project Benefits

- Aesthetic improvements
- Floodplain relief within the rock walls
- Improved aquatic habitat
- Improved riparian buffer
- Improved stream flows
- Provide access to the stream
- Reintroduction of native vegetation



NATIONAL HISTORIC PRESERVATION ACT OF 1966

(16 U.S.C. 470)

… the historical and cultural foundations of the Nation should be preserved as a living part of our community life and development in order to give a sense of orientation to the American people …

NATIONAL HISTORIC PRESERVATION ACT OF 1996, As Amended

(16 U.S.C. 470)

- National Register of Historic Places
- National Historic Landmarks
- State/Tribal Historic Preservation Programs
- Certified Local Governments
- National Center for Preservation Technology and Training and related programs
- Historic Preservation Fund
- Advisory Council on Historic Preservation
- Defined responsibilities of Federal agencies to promote preservation

Section 106 of the NHPA

(16 U.S.C. 470f)

"The head of any Federal agency having direct or indirect jurisdiction of a proposed Federal or federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register. The head of any such Federal agency shall afford the Advisory Council on Historic Preservation established under Title II of this Act a reasonable opportunity to comment with regard to such undertaking."

Wetland Mitigation Required As a Condition of USACE 404 Permit for Airport Expansion

- Columbia Station site next to the West Branch Rocky River, Lorain County
- LaGrange Township site next to the East Branch Black River
- Abram Creek conservation easement next to Rocky River Reservation
- Elk Creek, Lorain County Metroparks
- Spring Brook, Geauga Park District
- **Doan Brook from University Circle to I-90**
- Woodiebrook, Chagrin River Land Conservancy
- West Fork, East Branch of the Black River

THE SECTION 106 PROCESS

(36 CFR Part 800)

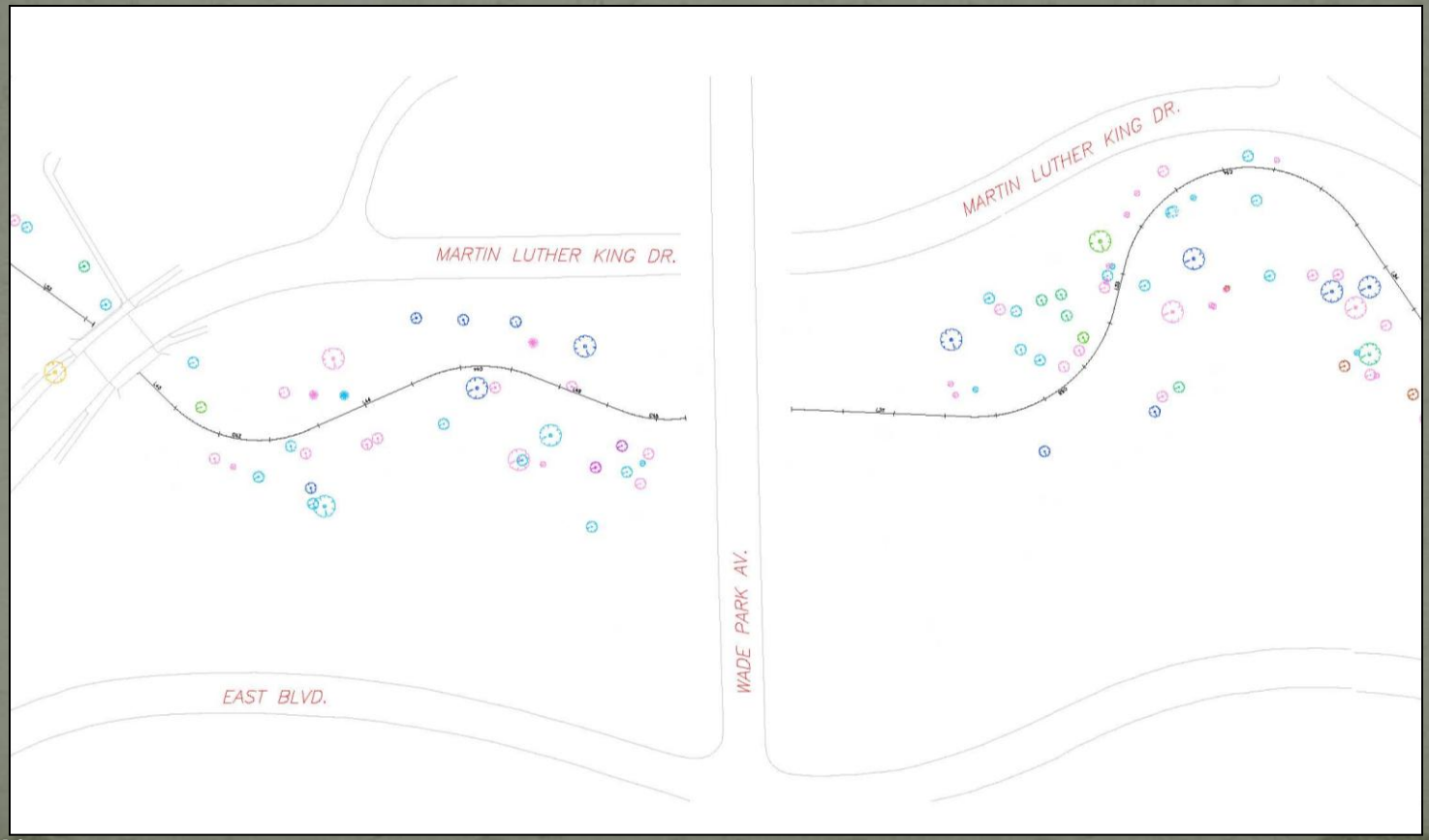
- Identify participants in the section 106 process
- Initiate the section 106 process
- Identify historic properties
- Assess adverse effects
- Resolve adverse effects
- Terminate consultation (if no resolution)
- ACHP review of section 106 compliance

Stipulations of the 2005 Memorandum of Agreement

1. National Register Nomination

Stipulations of the 2005 Memorandum of Agreement

2. TREATMENT OF CONTRIBUTING TREES
   - Identify contributing/non-contributing trees

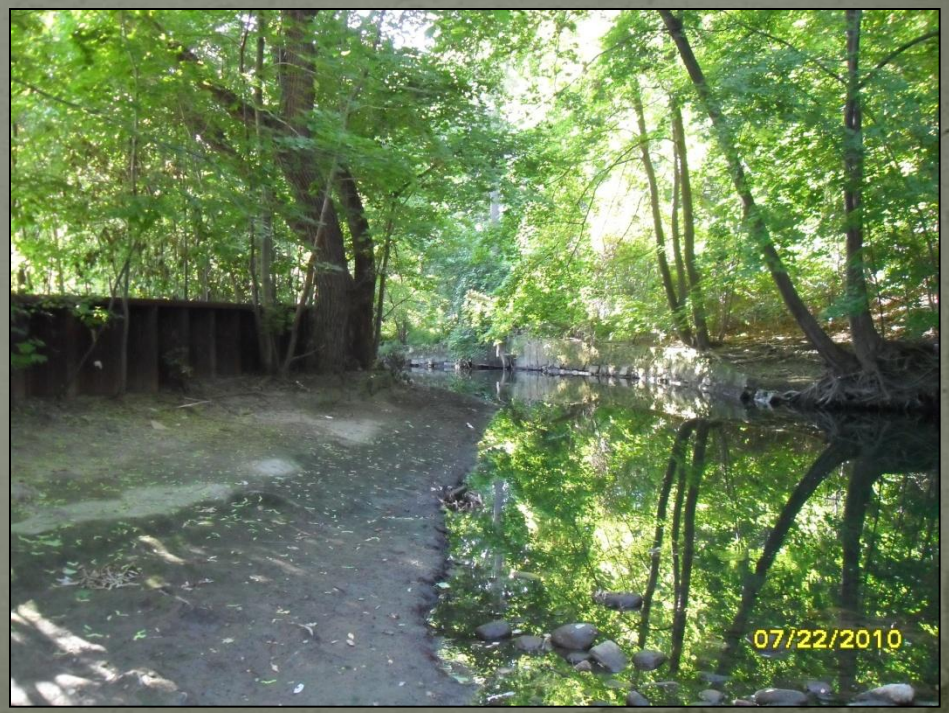


2. TREATMENT OF CONTRIBUTING TREES (Cont.)

- Provide protection of contributing trees, in accordance with 2003 best management practices
- Final construction plans subject to review by consulting parties
- Remove dead or invasive trees, especially if they impact stone walls
- Provide replacement trees

Stipulations of the 2005 Memorandum of Agreement

3. TREATMENT OF CONTRIBUTING STONE WALLS
   - Protect contributing walls during construction
   - Salvage native stonewall material slated for removal for reuse, at request of consulting parties
   - Build new walls of formed concrete, matching color, shape and texture

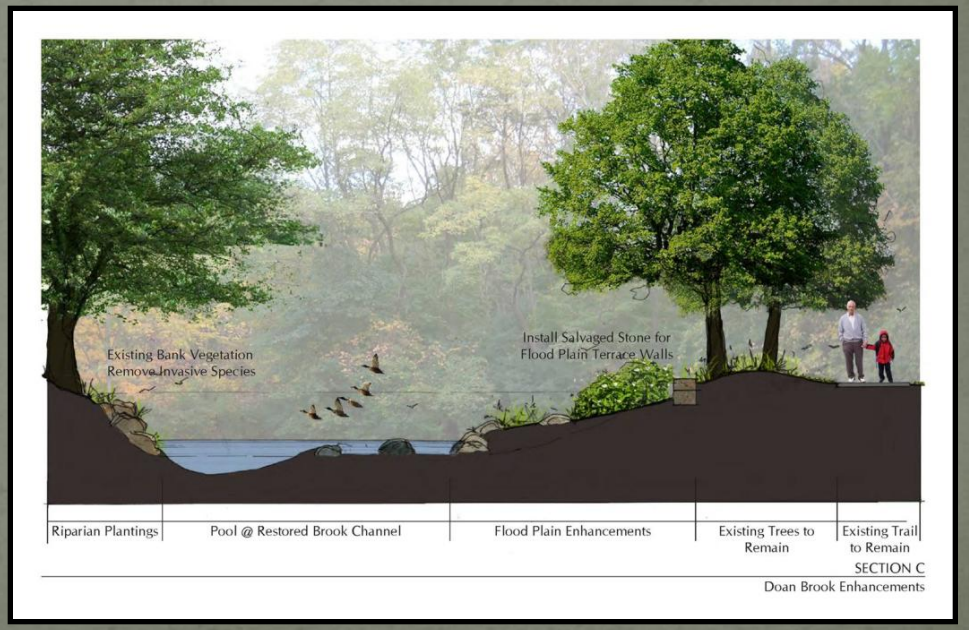


Stipulations of the 2005 Memorandum of Agreement

4. FINAL DESIGN PLAN
   - Involve consulting parties in developing 95% planting details
   - Limit grading within the cultural gardens
   - Present final design to consulting parties prior to 95% design public meeting
   - Require contractor experienced in urban stream restoration

Stipulations of the 2005 Memorandum of Agreement

5. DEVELOP ROCKEFELLER PARK MASTER PLAN
   The master plan seeks to establish a fusion of the "natural" with the "cultural".
   - Streamside Terrace Gardens
   - Neighborhood Edge Parks
   - Infrastructure Gardens
   - Sculptural Braided Paths

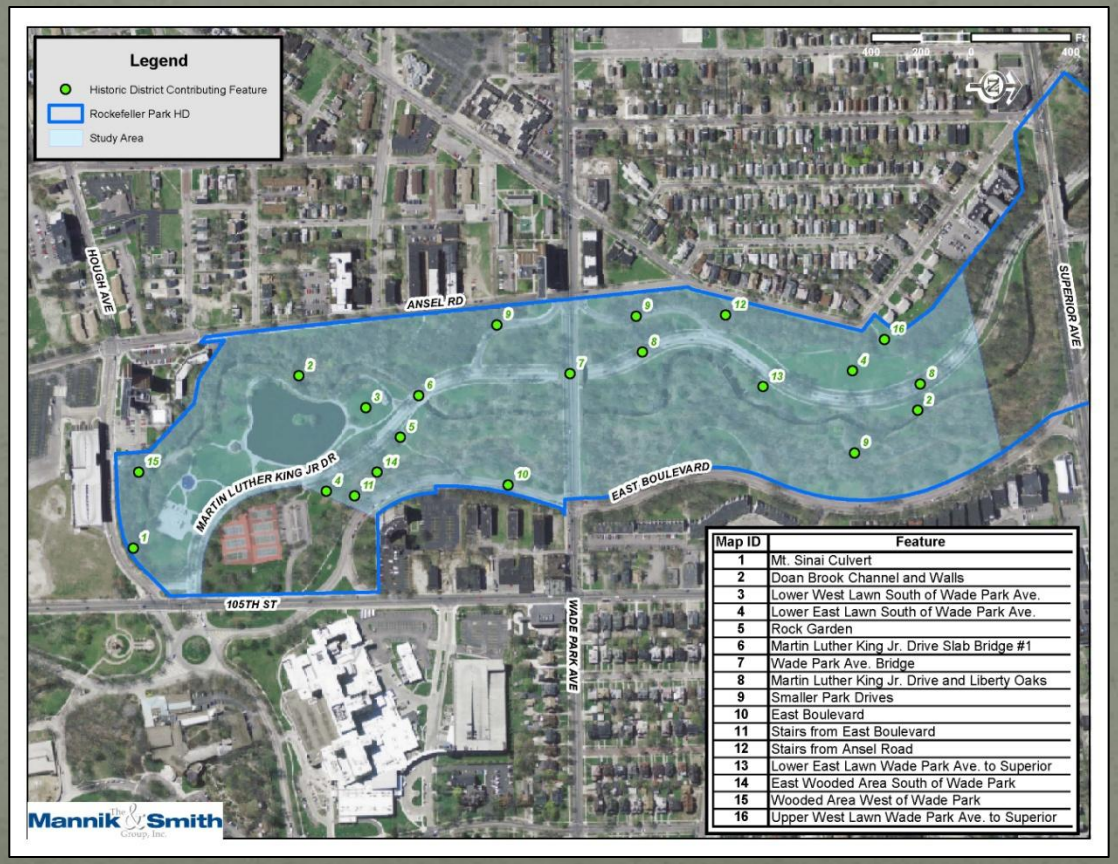


Stipulations of the 2005 Memorandum of Agreement

6. SIGNAGE
7. MONITORING AND REPORTING
8. DISCOVERY OF UNANTICIPATED EFFECTS
9. AMENDMENT
10. TERMINATION

Mannik & Smith Group Responsibilities

- Identify and document impacts to historic properties based on the revised project scope



Mannik & Smith Group Responsibilities (continued)

- Develop and execute an amendment to the existing MOA or develop a new MOA

- Develop a Stakeholder Involvement Plan to engage stakeholders throughout the project

Questions?

Doan Brook Enhancement Project

Stakeholders Meeting – Flip Chart Notes

January 18, 2010

Set One

- Last time we didn't understand the cost of what we were doing. Need to understand how/what we're spending money as we go.
- There was lack of confidence in technology, especially near and around historic features. An example of one that worked is Shaker CC stream restoration. Technology has evolved, there are more examples now.
- Want specifics, such as, how wide will the channel be? What are the appropriate dimensions? Are we making the channel big enough?
- Downstream there are important grade components that are fixed (bridges, etc.). What are the consequences? How are we planning around those?
- Even "enhancement" should result in improved QHEI scores.
- Last time there was a big fear of mosquitoes.
- Can you have more natural treatment (root weeds, etc.) in some place or on some sides where people can't access?
- Can we work storage areas in-stream? Will come out of its banks. Pooled areas.
- Original design (lots of dirt moving, trying to recreate sinuosity) did almost nothing to help flooding. Don't worry about it, stream will flood.
- Anti-walls: Assume we start out with all the walls gone, where do we need them?
- "Love" of the walls has made them a historical feature. Are they really a "contributing" feature?
- Different types of walls should be looked at. Concrete face over sheet pile, etc.
- Water quality: Do we want people in the stream?
- Visual access is good.
- Plan should be to improve water quality in future.
- Need to keep water moving. Check dams, create stagnant ponds.
- How are you dealing with "canyons" where is there is an 8 feet drop? Lower stretches (reaches 4 & 5) where walls are vertical.
- Walls and ecological restoration must exist together.
- *Look at areas where you can save one wall by removing the opposite wall. Same with tress, removing one side can save the other.
- When stream overflows into the lagoon, it creates a mess. Doesn't happen every year, fairly infrequent.
- Job is to save as many trees as possible but some will have to go.

Set Two

- Liberty trees replacement
- Contributing trees – level of protection. Did certified arborists conduct the inventory and assess health of trees?
- Stone walls – how much protection for contributing?
- Difficult to reclaim salvaged stone. Cost prohibitive. New stone cheaper than salvage.
- Make it as natural as possible. Traffic increase from highway.

- Hawk near greenhouse/ improve habitat
- Bike/ walk friendlier
- VA/ 105 traffic will increase
- Improve community access
- Neighbor-to-neighbor meetings: Every month, Ward 8. Mrs. Peck (Magnolia/ Ashbury). Talk to Dorothy about locations.
- Police station is moving, other things are changing in this neighborhood.
- Build/ demonstrate credibility for doing these types of projects to gain support from stakeholders.

Set Three - Parks & Open Space

- Design should not preclude future parking/ pull-offs
- Think about Rockefeller Park as a tourism draw, including birding at Dike 14, gardens, and urban stream restoration "learning" site.
- Outward Orientation to expend greenspace.
- Connection to commercial node at Superior to the east (connectivity)
- Movement/ access
- Park entries to Doan Brook
- Use the project to leverage investment
- Create trails throughout park so people can "touch & reach" the Brook
- *Create open access points
- Widen open areas for access
- Cycling and cross-country skiing
- Connect VA Hospital to the park
- Map libraries and the schools
- Could Ansel Road be a park entrance even though it's outside of the project area?
- Naturalize Rockefeller Lagoon
- Entrance across from VA
- Conservation easement on Asbury plots
- Inter-generational opportunity
- Security/ nighttime activities