



Northern Virginia Stream Restoration Bank Reston Status and Wiehle South Final Plan

September 18, 2012

Presented by Kelly Petrey

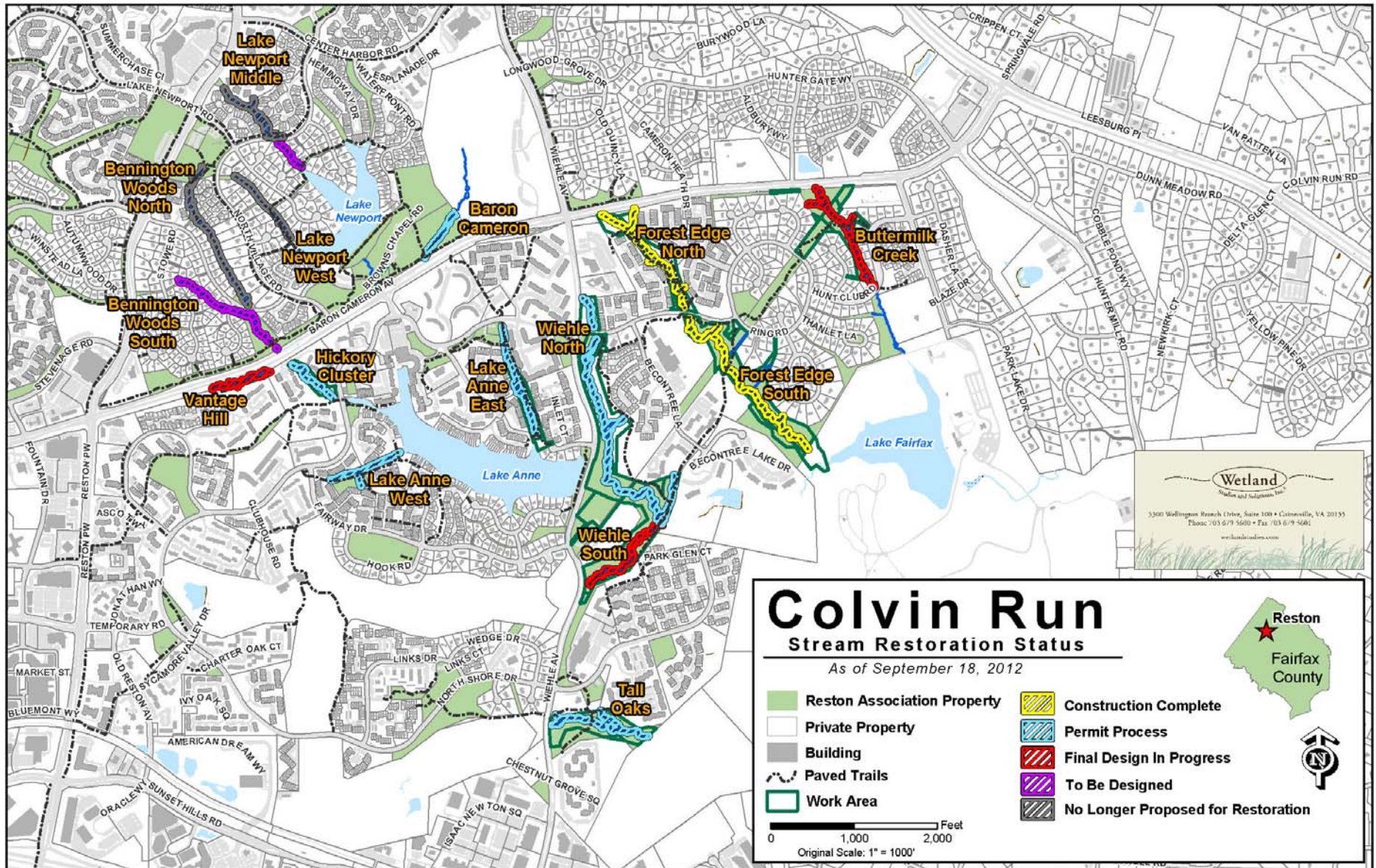
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Reston Status



L:\200000\200100\15\RestorationProgress\Colvin_RestorationProgress_20120918.mxd

Lake Anne West

Waterview and Sunderbriar Clusters

September 8, 2012 Storm Damage



Wiehle South Final Plan



Wiehle South – Final Plan

Preliminary Plan approved – February 2012
No changes from the Preliminary Plan

Community Events:

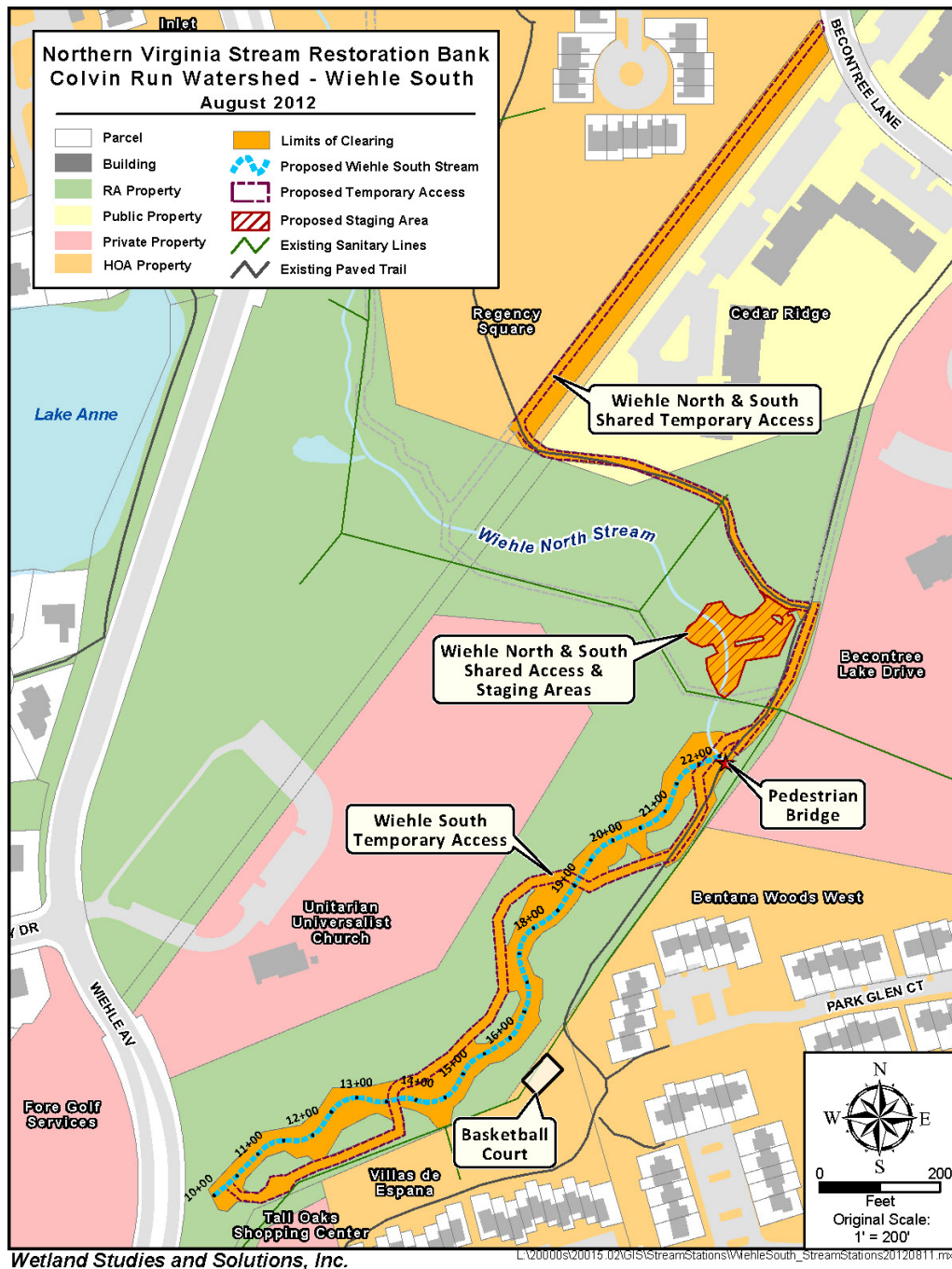
- Community Stream Walk
August 11, 2012

Proposed Construction Access & Staging:

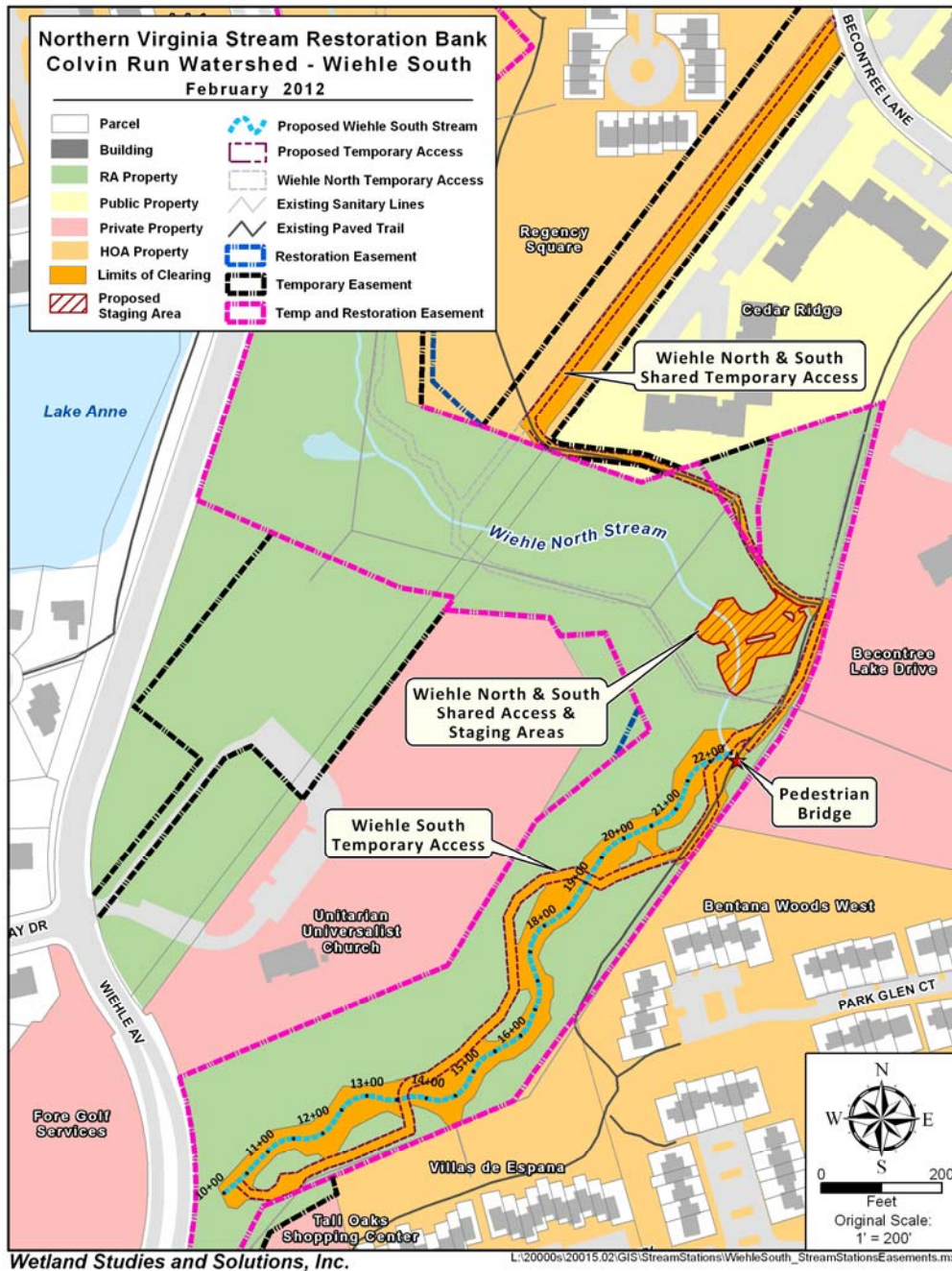
- Access from Becontree Lane through Gas Easement and paved trail
- Staging Area shared with Wiehle South Stream Project
- Access crosses stream twice to limit tree removal

Channel Length & Dimensions:

- Bankfull Width = 22'
- Bankfull Depth = 1.7'
- Restored Length = 1,238'



Wiehle South – Easements

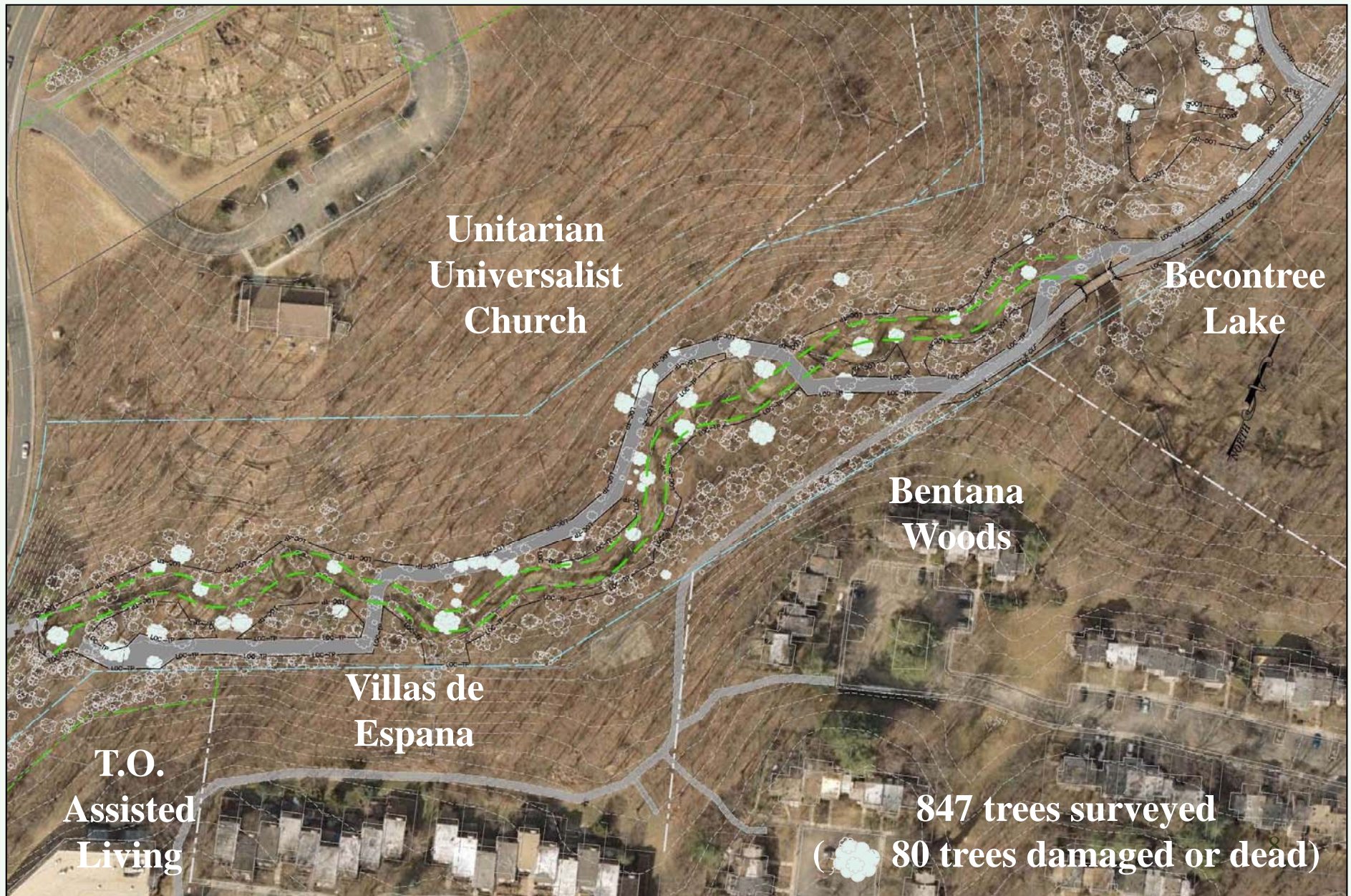


1. Shared access and staging with Wiehle North Restoration Project (reduces land disturbance and tree removal)
2. Easements for access - all recorded:
 - Regency Square Cluster (gas line)
 - Cedar Ridge - Paved trail from gas easement
3. Easements for staging and proposed stream restoration – all recorded:
 - Reston Association property only

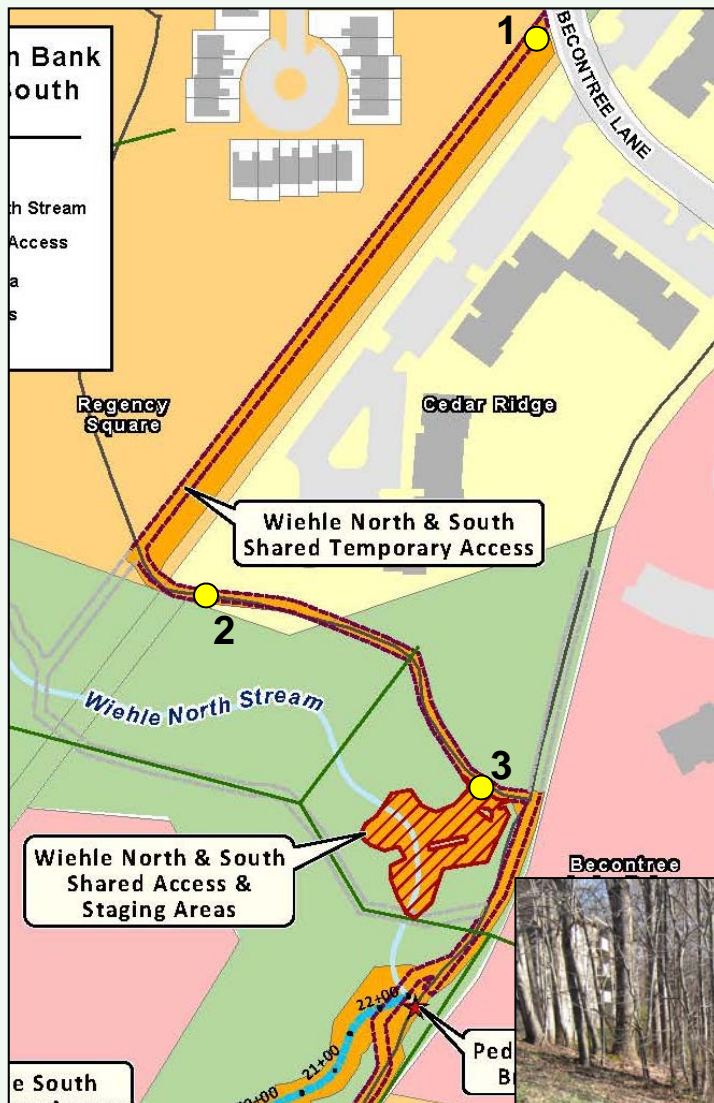


F0 Tornado Damage (April 2011)

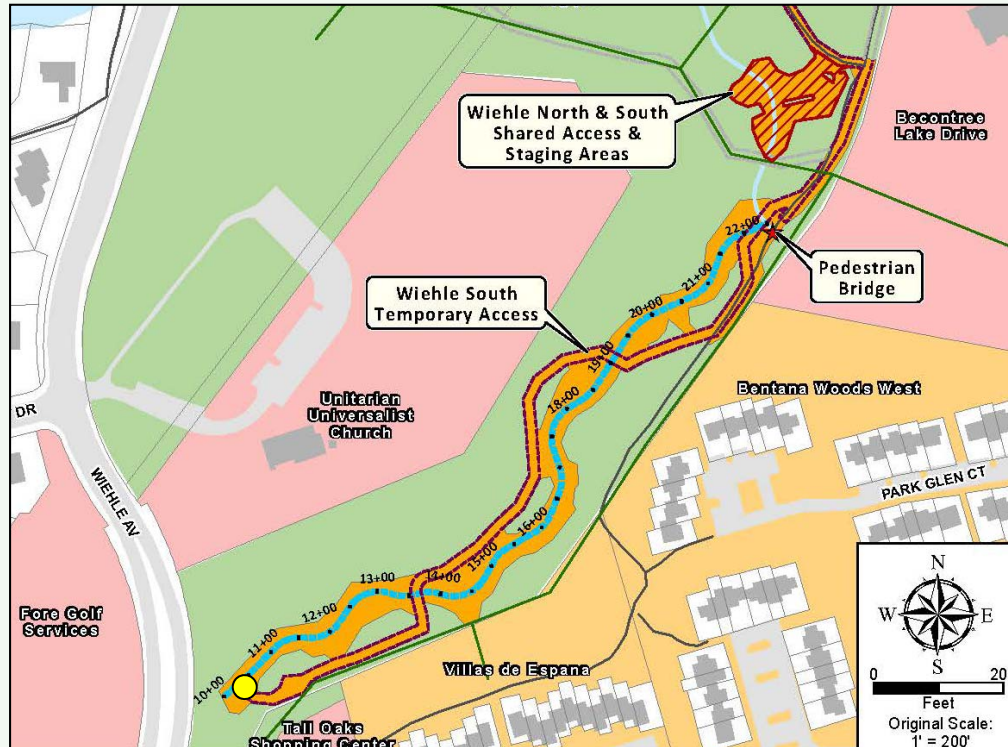
Wiehle South – Tree Survey



Wiehle South – Access & Staging



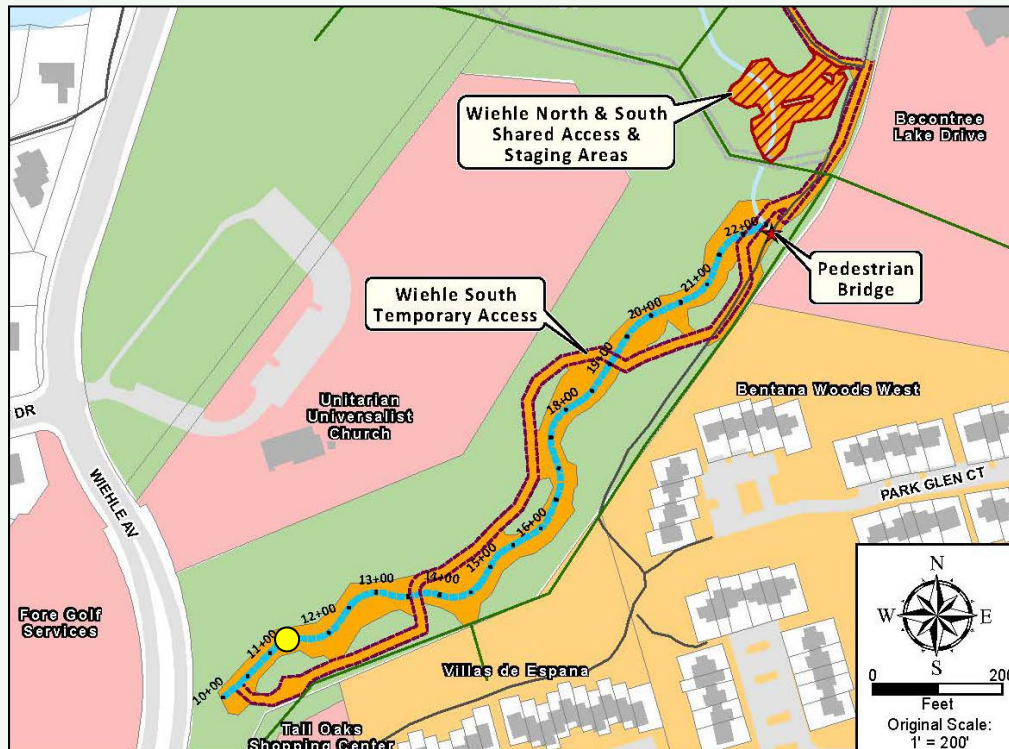
Wiehle South – Existing Conditions



- All trees are down in the small island immediately downstream of the culvert.
- Large drop at concrete trickle ditch.



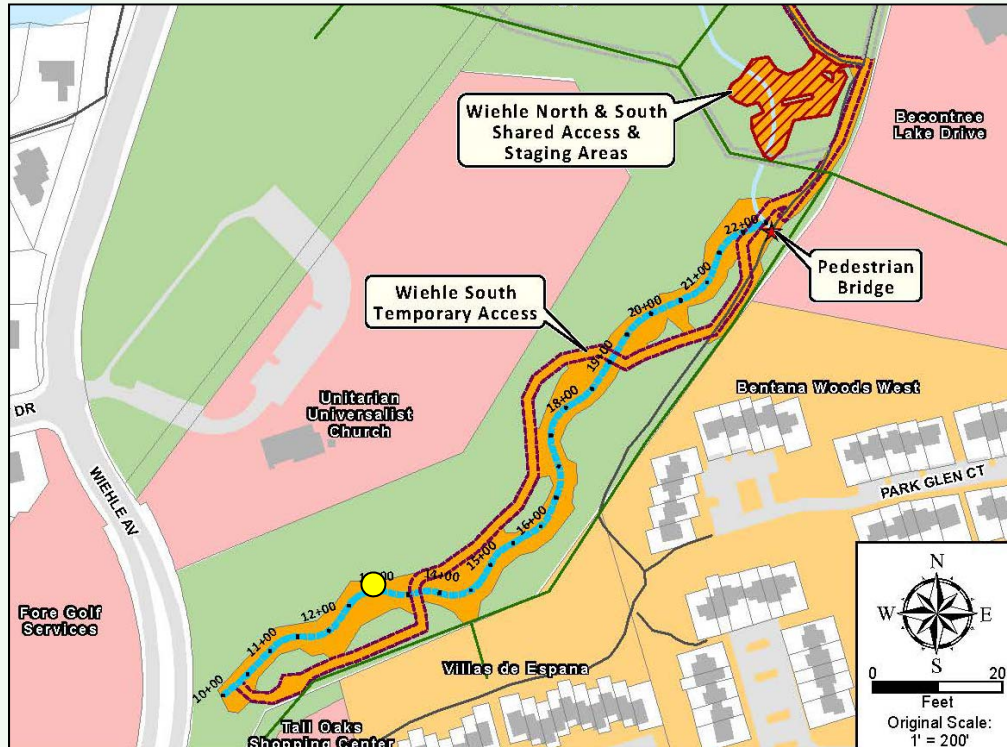
Wiehle South – Existing Conditions



- Vertical banks typical throughout reach.
- Eroded bank at meander – debris jam accumulated since tornado damage.



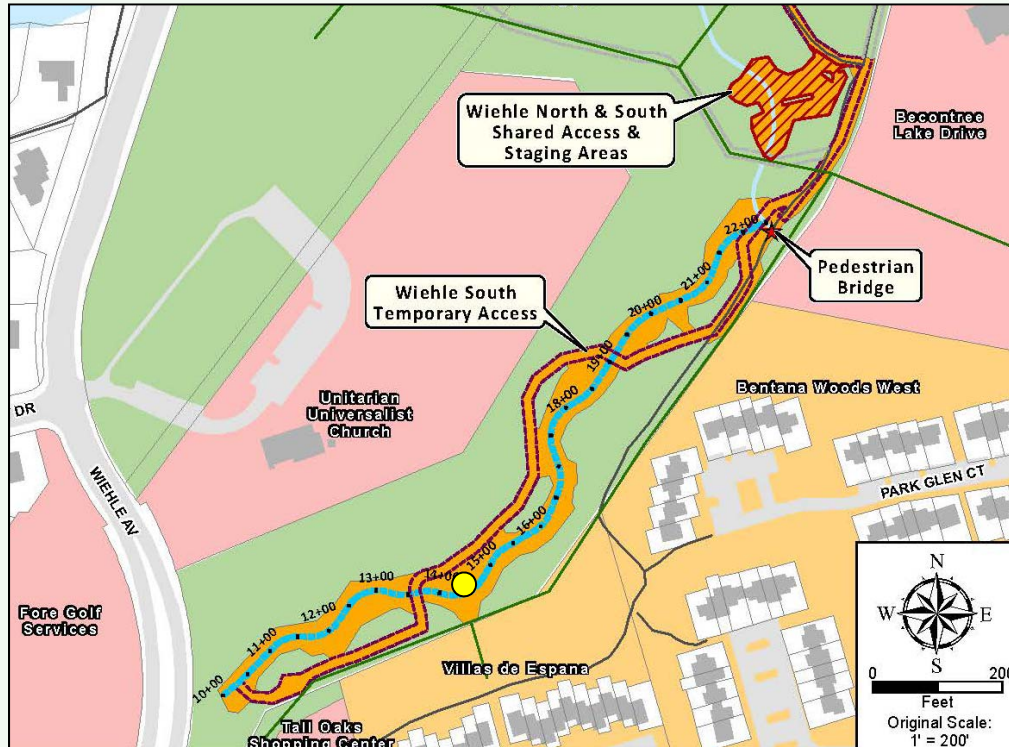
Wiehle South – Existing Conditions



- Very tight meander and another tall, eroded bank.



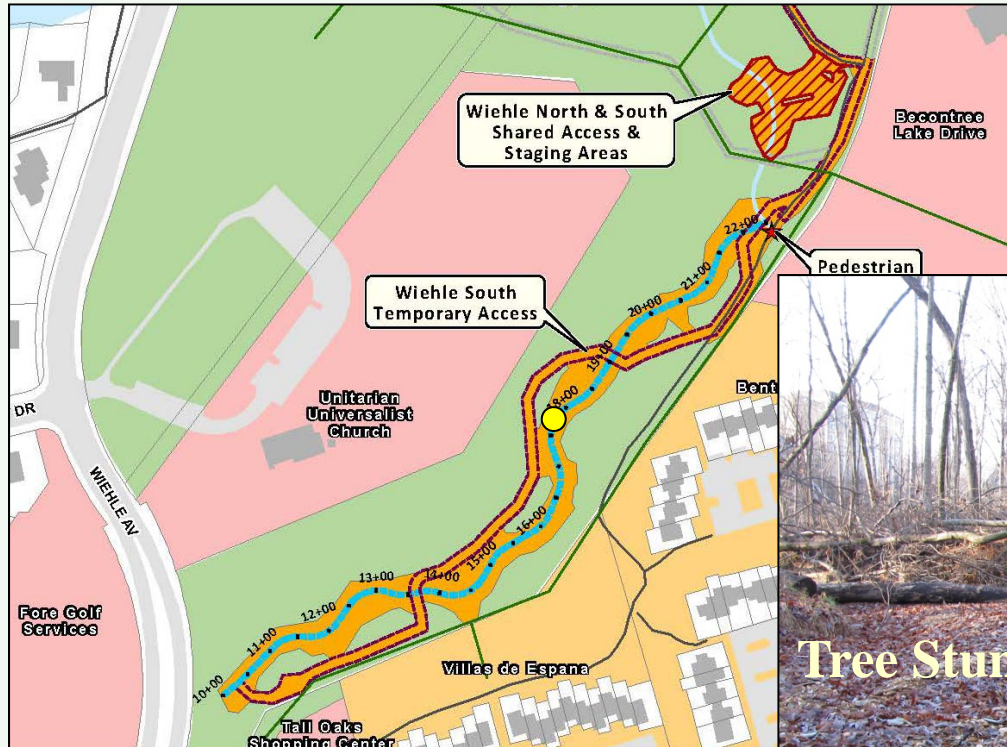
Wiehle South – Existing Conditions



- Tree fall (left bank) at disconnected culvert outfall on the right bank.



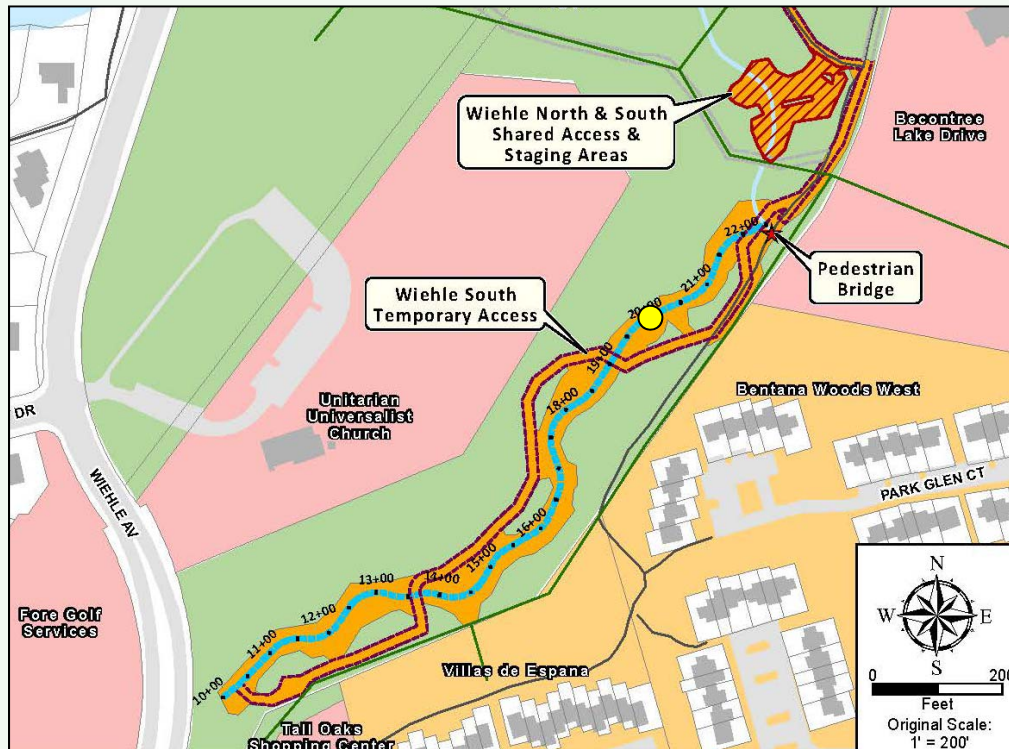
Wiehle South – Existing Conditions



- 10' eroded bank
- Channel shifting & widening



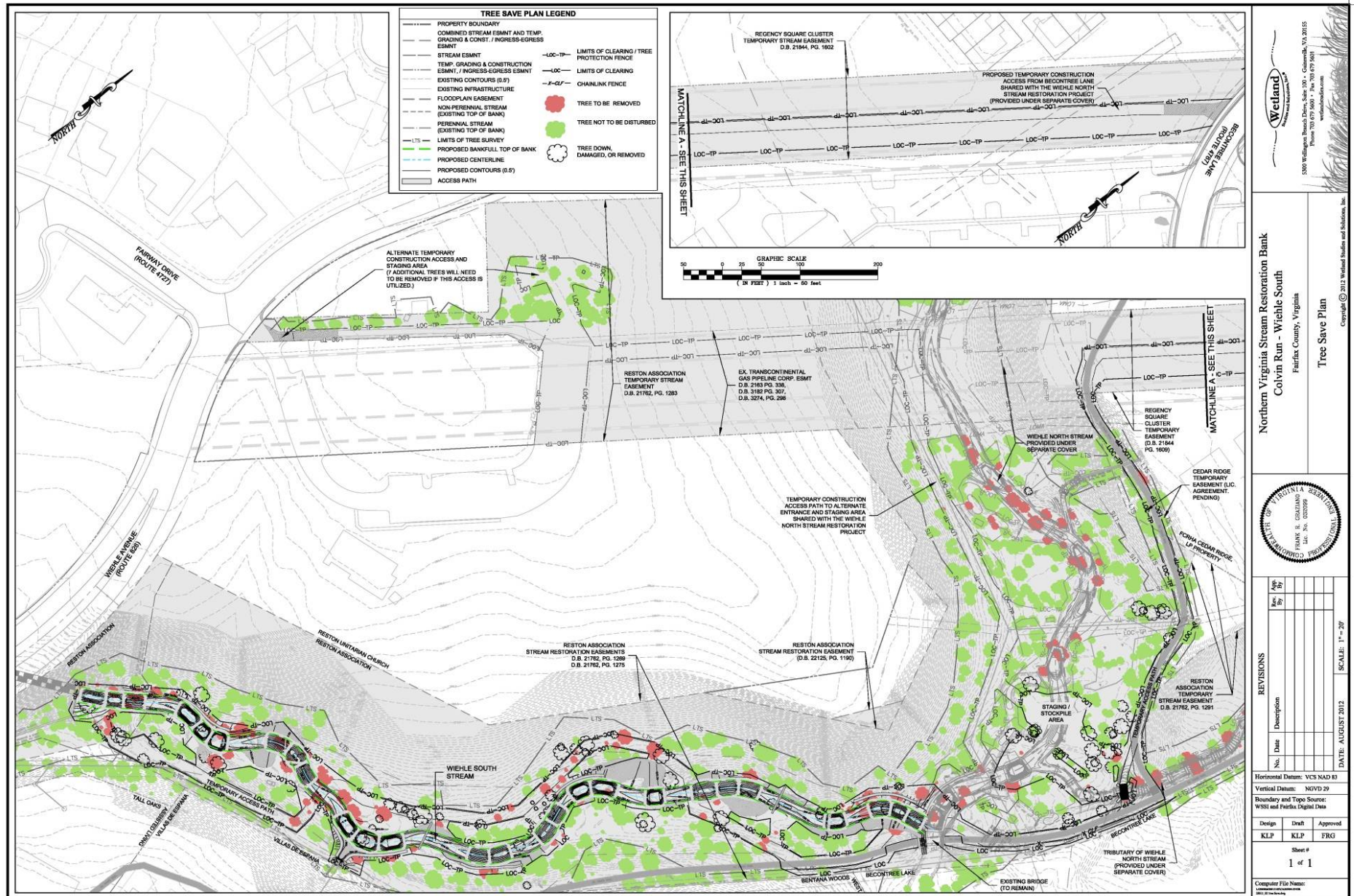
Wiehle South – Existing Conditions



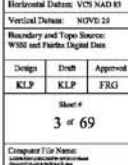
- Abrupt tie-in with Wiehle North at metal bridge.
- Bridge will not be replaced.



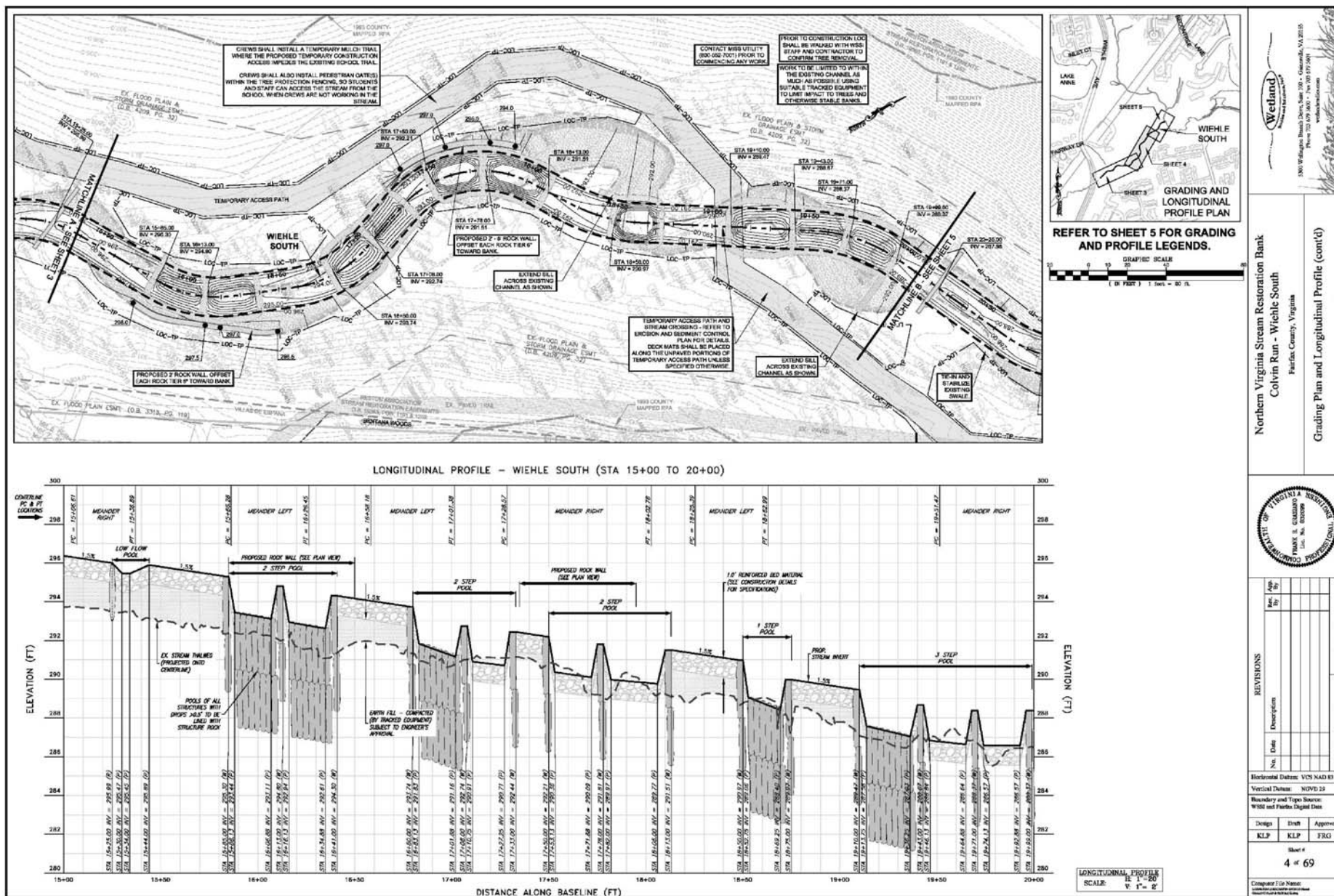
Wiehle South – Tree Save Plan



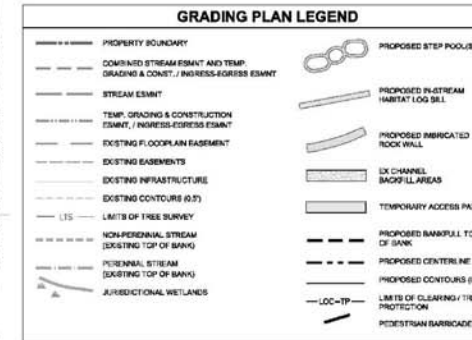
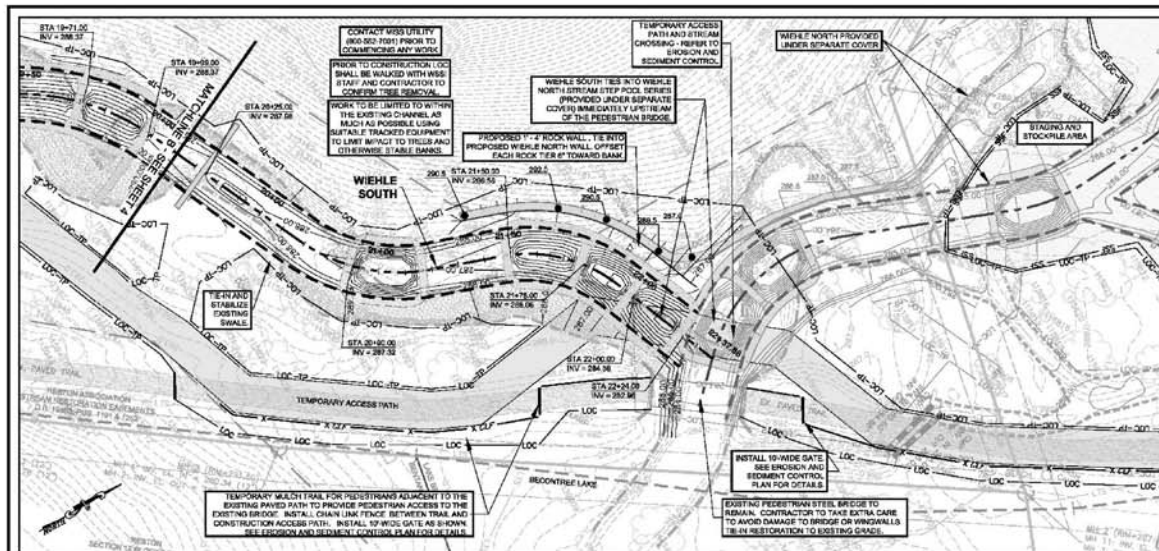
1. Keep school loop trail open; and,
2. Install gates for students and teachers to access stream



Wiehle South – Grading / Profile

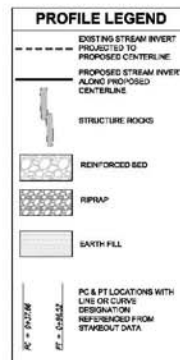
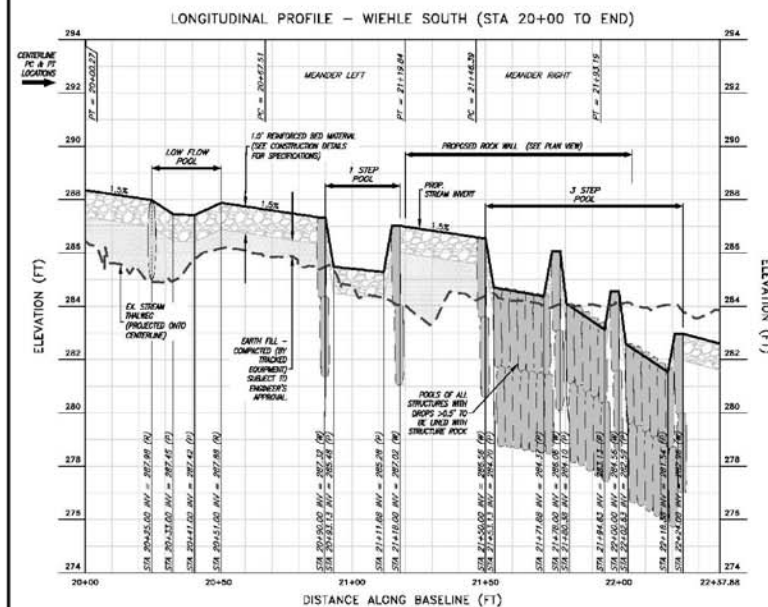


Wiehle South – Grading / Profile

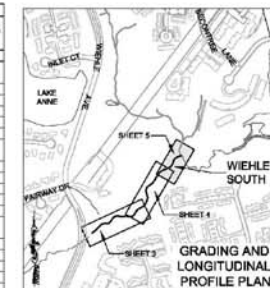


GRADING NOTE:

1. PROPOSED CONTOURS ARE INTENDED TO DETECT OVERALL GRADING CONCEPT, NOT TO REPRESENTATION OF ROCK BENCHES, CONTOUR DETECTING POOL, GRADING WITH STRUCTURES AND APPROXIMATE SPECIFICATIONS FOR GRADING. THE CONTRACTOR SHALL BE REQUIRED TO OBTAIN THE NECESSARY PERMITS AND APPROVALS FOR THE SPECIFICATIONS IN THE CONSTRUCTION DETAILS TAKE PRECEDENCE OVER THE CONTOURS DETECTED ON THE GRADING PLAN.
2. TREE PROTECTION FENCING SHALL BE PLACED AROUND ALL AREAS OF TREES TO BE PRESERVED ADJACENT TO THE LIMITS OF GRADING AND GRADING.
3. IF IT IS ASSUMED THAT NO TREES WITHIN THE LIMITS OF CLEARING SHALL NOT BE REMOVED. PRIOR TO CONSTRUCTION OF THE DRAINAGE, THE WORK SHALL BE HALTED BY RED STOP STAKES TO CORRECT THE SITUATION. IF THE CONTRACTOR BELIEVES A TREE WITHIN THE LOC COULD BE SAVED, THE CONTRACTOR SHALL CONTACT WISH AND HAVE THE PROPOSED ALTERNATE METHOD IF THE TREE SHOULD BE SAVED OR REMOVED.
4. REFER TO THE GEOTECHNICAL PLAN FOR TRAPPIRE (LOCATIONS AND ELEVATIONS).
5. ALL STREAM BEDS SHOULD BE 18" OF FRESH-GROUND BED MATERIAL. FOR CLARITY IT IS NOT SHOWN IN STREAM BEDS AND GRADING STRUCTURES.



WEHLE SOUTH		
SUMMARY OF STREAM RESTORATION FEATURES ALONG BASELINE		
FEATURE LOCATION (FROM 100' TO 300')	FEET TO CONSTRUCTIVE DETAIL	CONSTRUCTIVE DETAIL DESCRIPTION AND TYPE
FROM	TO	STREAM RESTORATION FEATURE
100+0.0	100+0.0	CONTRACT FILL
100+1.0	100+3.0	CONTRACT FILL
100+3.0	100+7.0	CONTRACT FILL
111+25.0	111+11.0	TYPICAL DETAIL, STEP POOL
111+11.0	111+05.0	CONTRACT FILL
111+05.0	111+00.0	TYPICAL DETAIL, STEP POOL
111+00.0	110+50.0	CONTRACT FILL
110+50.0	110+00.0	TYPICAL DETAIL, STEP POOL
110+00.0	109+55.0	CONTRACT FILL
109+55.0	109+45.0	TYPICAL DETAIL, STEP POOL
109+45.0	109+35.0	CONTRACT FILL
109+35.0	109+25.0	TYPICAL DETAIL, STEP POOL
109+25.0	109+15.0	CONTRACT FILL
109+15.0	109+05.0	TYPICAL DETAIL, STEP POOL
109+05.0	108+55.0	CONTRACT FILL
108+55.0	108+45.0	TYPICAL DETAIL, STEP POOL
108+45.0	108+35.0	CONTRACT FILL
108+35.0	108+25.0	TYPICAL DETAIL, STEP POOL
108+25.0	108+15.0	CONTRACT FILL
108+15.0	108+05.0	TYPICAL DETAIL, STEP POOL
108+05.0	107+55.0	CONTRACT FILL
107+55.0	107+45.0	TYPICAL DETAIL, STEP POOL
107+45.0	107+35.0	CONTRACT FILL
107+35.0	107+25.0	TYPICAL DETAIL, STEP POOL
107+25.0	107+15.0	CONTRACT FILL
107+15.0	107+05.0	TYPICAL DETAIL, STEP POOL
107+05.0	106+55.0	CONTRACT FILL
106+55.0	106+45.0	TYPICAL DETAIL, STEP POOL
106+45.0	106+35.0	CONTRACT FILL
106+35.0	106+25.0	TYPICAL DETAIL, STEP POOL
106+25.0	106+15.0	CONTRACT FILL
106+15.0	106+05.0	TYPICAL DETAIL, STEP POOL
106+05.0	105+55.0	CONTRACT FILL
105+55.0	105+45.0	TYPICAL DETAIL, STEP POOL
105+45.0	105+35.0	CONTRACT FILL
105+35.0	105+25.0	TYPICAL DETAIL, STEP POOL
105+25.0	105+15.0	CONTRACT FILL
105+15.0	105+05.0	TYPICAL DETAIL, STEP POOL
105+05.0	104+55.0	CONTRACT FILL
104+55.0	104+45.0	TYPICAL DETAIL, STEP POOL
104+45.0	104+35.0	CONTRACT FILL
104+35.0	104+25.0	TYPICAL DETAIL, STEP POOL
104+25.0	104+15.0	CONTRACT FILL
104+15.0	104+05.0	TYPICAL DETAIL, STEP POOL
104+05.0	103+55.0	CONTRACT FILL
103+55.0	103+45.0	TYPICAL DETAIL, STEP POOL
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103+35.0	103+25.0	TYPICAL DETAIL, STEP POOL
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103+15.0	103+05.0	TYPICAL DETAIL, STEP POOL
103+05.0	102+55.0	CONTRACT FILL
102+55.0	102+45.0	TYPICAL DETAIL, STEP POOL
102+45.0	102+35.0	CONTRACT FILL
102+35.0	102+25.0	TYPICAL DETAIL, STEP POOL
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102+15.0	102+05.0	TYPICAL DETAIL, STEP POOL
102+05.0	101+55.0	CONTRACT FILL
101+55.0	101+45.0	TYPICAL DETAIL, STEP POOL
101+45.0	101+35.0	CONTRACT FILL
101+35.0	101+25.0	TYPICAL DETAIL, STEP POOL
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100+55.0	100+45.0	TYPICAL DETAIL, STEP POOL
100+45.0	100+35.0	CONTRACT FILL
100+35.0	100+25.0	TYPICAL DETAIL, STEP POOL
100+25.0	100+15.0	CONTRACT FILL
100+15.0	100+05.0	TYPICAL DETAIL, STEP POOL
100+05.0	100+00.0	CONTRACT FILL



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Northern Virginia Stream Restoration Bank
Colvin Run - Wichele South
Fairfax County, Virginia

Grading Plan and Longitudinal Profile (cont'd)
Legends, and Summary of Stream Cross Sections



REVISIONS					
	In.	Date	Description	Rev. by	Agn by
DATE: AUGUST 2012			SCALE: 1" = 20'		

Horizontal Distance: VCS MAD 0.1

Statistical Software: NCMS 2.0

Boundary and Topic Sentence

WSSD and Fairfax Digital Data

Design	Draft	Approval
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KLP	KLP	ERG
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RES	RES	TRG

Sheet 8
2 of 22

5 of 69

Component File Name:

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 Journal of Internal Medicine 262: 105–114 (2007)
 DOI: 10.1111/j.1365-2796.2007.01931.x

Wiehle South's Tree Inventory

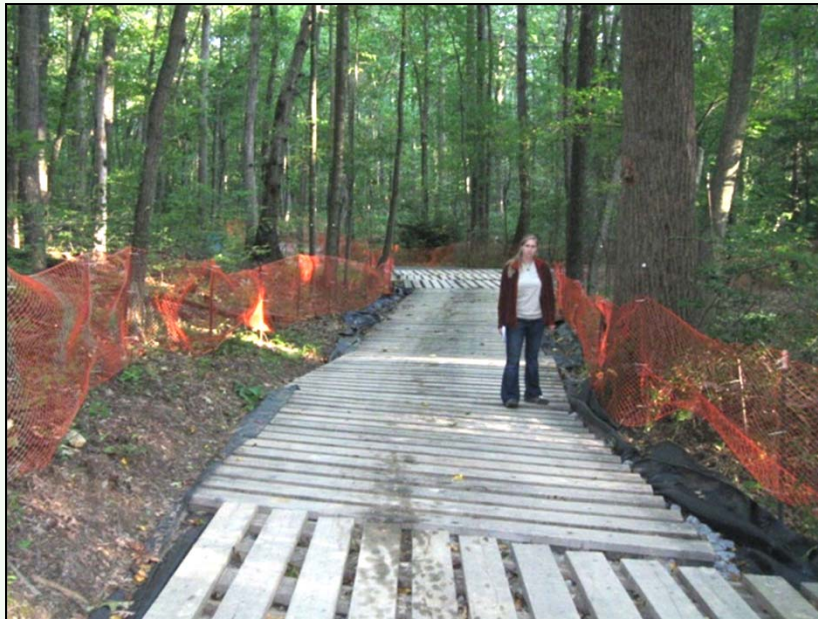
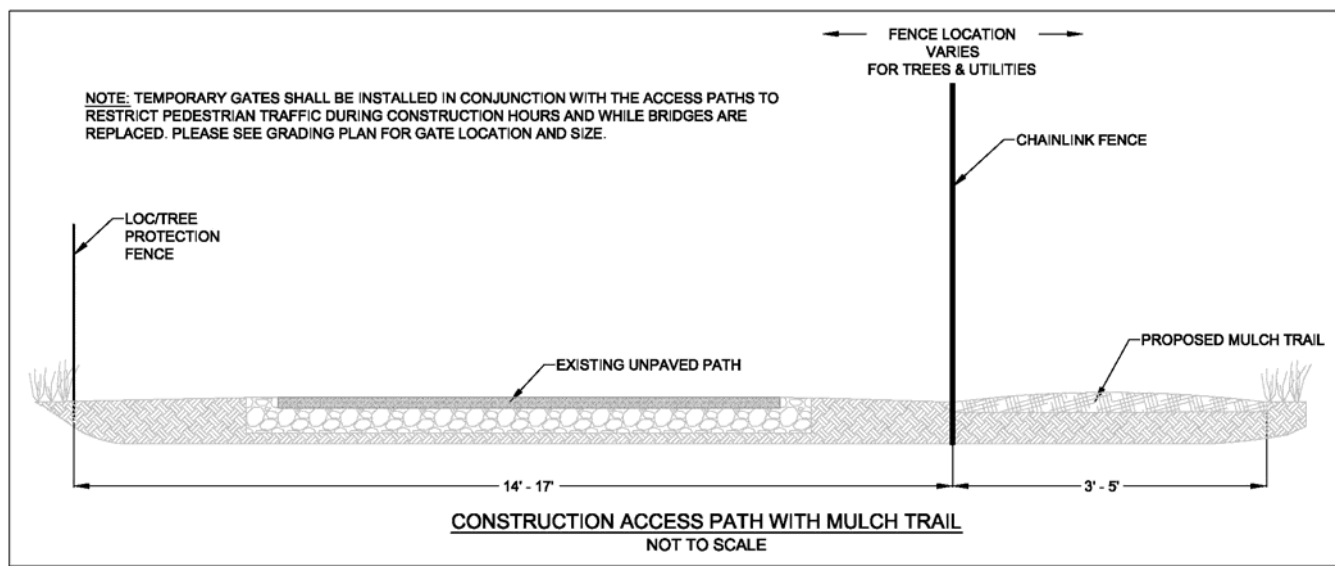
- No changes from Preliminary Plan -

TREE INVENTORY SUMMARY COLVIN RUN - WIEHLE SOUTH					
DIAMETER	STATUS				
	TBR ¹			DND ²	TST ³
(INCHES)	(LIVE)	(DEAD / FALLEN)	(WIEHLE NORTH) ⁴		
4-5" (Sapling)	27	8	10	163	208
6-9" (Pole)	36	12	11	208	267
10-17" (Small)	16	16	8	164	204
18-29" (Medium)	17	12	8	114	151
30"+ (Large)	0	2	0	15	17
	96	50	37		
TOTAL	146		37	664	847

¹ TBR means to be removed. (183)
² DND means do not disturb.
³ TST means total surveyed trees.
⁴ Trees under TBR-WIEHLE NORTH were previously proposed for removal under the *Northern Virginia Stream Restoration Bank - Colvin Run Wiehle North Stream Restoration Plan* (provided under separate cover). These trees are included herein as the Wiehle South plan proposes to use the Wiehle North lower staging area (see plan for details). 11 of the 37 trees are either dead or fallen.

Compiled 01/10/2012

Access Road Deck Mat



Questions

