

Construction of the Proposed George Snyder Trail Will Cause Substantial Destruction to Fairfax City's Urban Forest

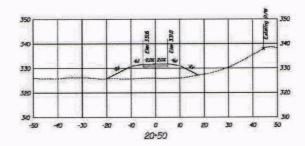
"They paved Paradise, put up a parking lot." Joni Mitchell, Big Yellow Taxi.

Construction of the George Snyder Trail will turn a natural path that follows the existing terrain into an artificial, manufactured surface that is hugely destructive to the ecosystem of the surrounding urban forest. The following analysis is based on Stantec's <u>George Snyder Trail Plans</u>, found on the City of Fairfax's website at

https://www.fairfaxva.gov/home/showpublisheddocument/16817/637407781166570000.

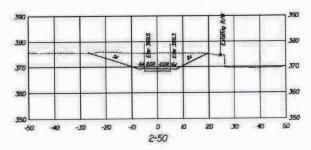
The modified portion of the trail is approximately 7460 feet long. 1075 feet of the trail will not be affected by construction. Only 2425 feet, or 33% of the project, follows the existing grade or deviates only slightly from it. About 380 feet of the trail is on boardwalks and another 535 feet is on bridges. The remainder – 4120 feet, or 55% of the project, is on as much as 11feet of fill dirt or excavated as much as 7 feet below grade. Sixty-seven percent of the project will be constructed above grade on fill dirt, excavated below grade, or on boardwalks and bridges.

In addition, to create a slope between the portion of the trail on fill dirt with the lower terrain on either side of the trail, it will be necessary to add fill dirt perpendicular to the trail in a swath 25 to 50 feet wide perpendicular to the trail.



Stantec, Sheet XS-17

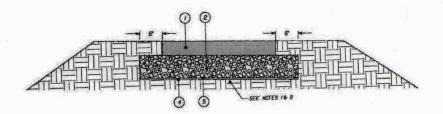
Where the trail is excavated below grade, it will be necessary to excavate soil in a swath up to 50 feet wide perpendicular to the trail to create a slope to the surrounding terrain.



Stantec, Sheet XS-02

Construction of the trail will also require the installation of about 900 feet of retaining walls. Some of the walls will be only 2 feet high, but others will be as high as 11feet above the level of the trail. To stabilize the walls, they will be dug in as much as 6 feet below the level of the trail.

Construction will disrupt the existing terrain along the entire trail except the portions on boardwalks or bridges. Sheet DT-01 shows that the trail will consist of 2 inches of asphalt concrete and 6 inches of aggregate. That means that even on the 2425 feet of the trail that follows the existing grade, soil will be removed 8 inches deep for the 10-foot width of the trail plus an additional foot-wide base of aggregate to stabilize the pavement.



Stantec, Sheet DT-01

The construction of the trail will cause damage to trees and soil for the entire length of the trail that will not be rectified in the lifetime of anyone currently alive. Most tree roots are within 18 inches of the surface of the soil. Even if trees escape being cut down to accommodate the trail or associated construction activity, the excavation to install the pavement and aggregate, the excavation to place the trail below grade, and the 30-to 50-foot wide excavation to integrate it into the surrounding terrain will cut the trees' roots, destabilize them, and likely kill them. The addition of fill dirt around trees to integrate the portions of the trail that are above grade with the surrounding terrain will cover the root flare, which must be kept above grade, or the tree will suffocate due to lack of oxygen or die as its bark and outer layer of living wood rot.

We engage all Northern Virginia communities in enjoying, conserving, and restoring nature for the benefit of birds, other wildlife, and people.

It takes between 500 years for an inch of topsoil to form naturally. Construction will destroy or cover the topsoil for the entire portion of the trail that will be constructed above or below grade. That will cause substantial and long-term damage to the ecosystem of the forest, since macroinvertebrates live in or rely on the topsoil, contribute to decomposition and feed the larger animals in the food chain, including birds, reptiles and mammals.

Both native weeds and invasive plants thrive in disturbed soil and where there is patchy sunlight. Removal of the trees in a corridor that will be up to 50 feet wide will provide a prime breeding ground for plants such as the Japanese Stiltgrass that already lines many of the City's more open natural trails and allow other invasive plants such as the incredibly destructive porcelain berry to grow and swallow the trees that are left.

"Don't it always seem to go, that you don't know what you've got till it's gone?" Joni Mitchell, Big Yellow Taxi.

Respectfully submitted,

Tom Blackburn Advocacy Chair

Audubon Society of Northern Virginia

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Portions of the George Snyder Trail at Grade and at Changed Grade

The diagrams referenced below begin with "PL-01," a 600-foot segment of the trail starting at Chain Bridge Road and ends with "PL-13," which terminates at Fairfax Boulevard.

	At-Grade Locations	(feet)	Changed-Grade Locations	(feet)	Boardwalk Locations	(feet)	Bridge Locations	(feet)
PL-01	000-150	(150)	150-400	(250)				
	400-600	(200)						
PL-02	600-750	(150)	750-1075	(325)				
	1075-1200	(125)						
PL-03	1200-1400	(200)	1400-1425	(25)				
			300.0-300.2	(20)			300.2-301.1	(90)
					301.1-303.1	(200)		
			303.1-303.5	(40)				
	303.5-304.5	(100)						
PL-04			1425-2080	(635)			2080-2100	(20)
PL05							2100-2200	(100)
			2200-2775	(575)				
PL05A			400.0-401.6	(160)				
PL-06			2775-2950	(175)				
	2950-3050	(100)	3050-34745	(425)				

	At- Grade Locations	(feet)	Change- Grade Locations	(feet)	Boardwalk Locations	(feet)	Bridge Locations	(feet)
PL-07			3475-3825	(350)				
	3825-3850	(25)						
			[3850 – 4125 will be un	changed from c	urrent configu	ration]		
PL-08	4125-4175	(50)						
	10000-10100	(100)	[10100-10600 will be u	nchanged from	current config	uration]		
PL-09			[10600-10900 will be u	nchanged from	current config	uration]		
	10900-11300	(400)						
PL-10	11300-11500	(200)	[No change at Stafford	Drive crossing]				
			11500-11625	(125)				
	11625-11875	(250)	11875-11950	(75)				
	11950-11975	(25)						
PL-11	11975-12055	(80)			12055-12145	(90)	12145-12195	(100)
					12195-12285	(90)		
			12285-12385	(100)				
PL-12			20000-20050	(50)				
	20050-20230	(180)	20230-20600	(370)				

Audubon Society of Northern Virginia Appendix A

		At- Grade Locations	(feet)	Change- Grade Locations	(feet)	Boardwalk Locations	(feet)	Bridge Locations	(feet)
	PL-13			20600-20725	(125)			20725-20800	(75)
				20800-21070	(270)				
		21070-21120	(50)					21125-21275	(150)
				21275-21300	(25)				
		21300-21340	(40)						
Total feet		eet	2425 (33%)		4120 (55%)		380 (5%)		535 (7%)
Grand total		total	7460 feet						

Percentage of project constructed above or below grade including bridges and boardwalks: 67%

Fill and Excavation Needed to Integrate the George Snyder Trail with the Terrain on Either Side of the Trail

Sheets XS-01 through XS-63, which are referenced below, depict cross sections of the trail showing the extent to which areas beside the trail will be raised with fill dirt or excavated to integrate the trail with the surrounding terrain or protected with retaining walls.

PL-01: Between 3 and 7 feet of soil will be removed along more than 350 feet of the 600-foot length of this section and smaller amounts of soil will be removed along most of the rest of the section. So that the trail isn't placed in a gully as much as 7 feet deep, up to 8 feet of soil will be removed in a swath between 35 and 50 feet wide perpendicular to the trail, to create a slope to the existing terrain. See the trail cross section at Sheet XS-02.

PL-02: Leveling the trail will require the addition of about 3 feet of fill dirt along about 200 feet of this section's 600-foot length. So that the trail is not on a pedestal above the rest of the forest, more fill dirt will be added in a swath up to 37 feet wide perpendicular to the trail. See Sheets XS-07 and 08.

PL-03: The trail crosses a tributary of Accotink Creek on a bridge and a boardwalk up to 8 feet above grade.

PL-04: 5 to 8 feet of fill dirt will be added along 150 feet of the trail, and 2-3 feet of fill dirt will be added along another 475 feet. To integrate the trail into the rest of the terrain, up to 7 feet of fill dirt will be added in a swath from 30 to 45 feet wide perpendicular to the trail to create a slope to the existing terrain. See Sheets XS-12 to XS-17.

PL-05: The trail crosses another tributary of Accotink Creek, requiring the construction of a bridge 120 feet long as much as 11 feet above grade. In addition, 5-7 feet of fill dirt will be added along 100 feet of the trail plus about 3 feet of fill along another 250 feet of the trail. To create a slope to the rest of the terrain, up to 5 feet of fill dirt will be added in a swath 25 to 40 feet wide, perpendicular to the trail. See Sheets XS-17 to XS-23.

PL-05A: This side trail of 200 feet will require up to 6 feet of fill dirt.

PL-06: Construction of the trail will require the removal of about 3 feet of soil along 150 feet of trail. To integrate create a slope to the existing the terrain, up to 6 feet of soil will be removed in a swath 30 to 40 feet wide perpendicular to the trail. Construction also will require the addition of up to 11 feet of fill dirt along 200 feet of the trail and as much as 11 feet of fill dirt will be added in a swath 30 to 40 feet wide, perpendicular to the trail, to create a slope between the trail and the surrounding terrain. Also, retaining walls up to 11 feet high will be constructed along 300 feet of the trail and retaining walls will be constructed on both sides of another 25 feet of the trail. See Sheet XS-24 to XS-30.

PL-07: Retaining walls up to 13 feet high will be placed on both sides of 75 feet of the trail and on one side along 350 feet of trail. See Sheets XS-31 to XS-34.

PL-09: Most of this section of the trail is at grade but up to 6 feet of fill will be added in a swath as large as 25 wide to integrate the trail into the side slope. See Sheets XS-34 through XS-40.

- **PL-10:** Construction of the trail will require removal of up to 7 feet of soil along 100 feet of the trail. To integrate the trail into the rest of the terrain, up to 10 feet of soil will be removed in a swath 30 to 40 feet wide perpendicular to the trail to create a slope between the trail and the existing terrain. Retaining walls up to 10 feet tall will be constructed along about 275 feet of trail. See Sheets XS-40 to XS-46.
- **PL-11:** Construction of the trail will require the addition of 2.5 to 5 feet of fill dirt along 100 feet of the trail. To integrate the trail into the rest of the terrain, 2 to 4 feet of fill dirt will be added in a swath up to 30 feet wide perpendicular to the trail. This section also includes two boardwalks, each 90 feet long, and a 50 foot bridge. The boardwalks and bridge are up to 10 feet above grade. See Sheets XS-46 to XS-50.
- **PL-12:** Construction of the trail will require the addition of 2 to 3 feet of fill dirt along 200 feet of the trail. To create a slope between the trail and the rest of the terrain, up to 3 feet of fill dirt will be added lin a swath up to 40 feet wide perpendicular to the trail. See Sheets XS-51 through XS-56.
- **PL-13:** Construction of the trail will require the addition of up to 8 feet of fill dirt along the trail. To create a slope between the trail and the rest of the terrain, up to 8 feet of fill dirt will be added in a swath up to 50 wide perpendicular to the trail. The only portion of this segment of the trail that does not need fill dirt is a 150-foot bridge across a tributary of Accotink Creek that will be as much as 13 feet above grade. See Sheets XS-56 to XS-63.