

119 Spruce St
PO Box 1589
Pulaski, VA 24301
Dec. 29, 2016

Dear Mayor and Pulaski Town Council,

There is no pleasure in writing negatively. I have seen the difficult work you do. Just sitting as an observer at Town Council meetings is an education that drives that point home.

I am confident that independently your neighbors and friends have already expressed the opinion that the two-bike-lane, two-car-lane STBG proposal for Route 99 is a disaster for cars. Consistent with our prior communications, I doubt it serves cyclists any better. In short, a grant proposal that benefits no one.

With two traffic lanes, cars on Rt 99 would move at the speed of the slowest vehicle without an opportunity to pass. Unless the two lane idea is quickly scrapped, I fear that for many years Town Council will be the target of derision and increasingly potent actions to kill the program. That course of action will divert use of time which can be better spent in useful work. It will be an aggravation for everyone.

It seems preferable to take another path. That sow's ear can be turned into a success story by dropping the plan and instead forging a Public-Private partnership with lasting rewards. To this end, I submit the following.

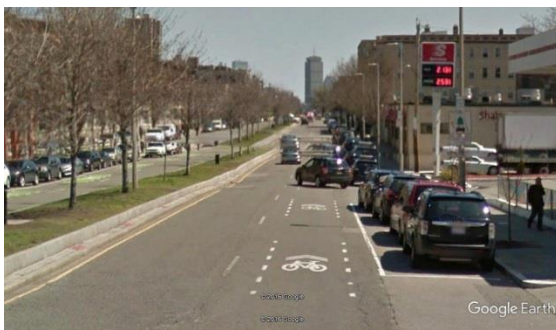
The inexpensive and unobtrusive sharrow alternative to Rt 99 bike lanes.

Please bear with me for a second. There are important distinctions to make.

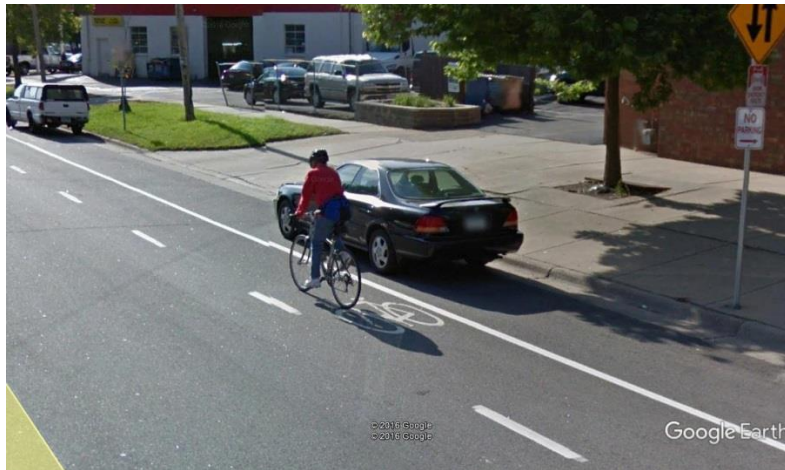
- 1) Bike lanes are for the exclusive use of bicycles.
- 2) Sharrows are sections of a shared road (bicycles & cars) where bicycles should travel. Typically in the United States, a sharrow is designated by a stencil mark on the road like this one:



- 3) [Sharrows with advisory markings](#) go a step further. Explicit markings are shown for the area to be used by bikes. When no bikes are present, cars travel there. On the left we see a sharrow with advisory markings on Brighton Avenue in the Allston section of Boston. The markings are effective because they are closely spaced 60 ft apart. Since bikes aren't in this photo, cars are using it. On the right, we see a cyclist on Longwood Ave in Brookline, MA.



The following is another style sharrow with advisory markings on E 14th St in the Elliot Park section of Minneapolis. The Boston and Brookline sharrow styles above are preferable because the dotted line advisory markings are easily distinguishable from conventional traffic lane markings.



Rt 99 in Pulaski is a better place for sharrows than any of these examples because Rt 99 does not have parked cars. Thus, Rt 99 sharrows can be to the extreme right of the road. Boston, Brookline, and Minneapolis needed to place their sharrows nearer to the middle of the lane to avoid the possibility of an open [car door striking a cyclist](#).

Why sharrows with advisory markings are better for Pulaski than bike lanes.

As reported in the Southwest Times, the renovation of Pulaski's Rt 99 is estimated to be a [\\$2 million project](#). By contrast for the cost of paint and labor, sharrows with advisory markings can easily be put in place on Rt 99 without any major modifications of the road. The price difference is plainly obvious: thousands rather than millions of dollars. Specifically, a five-mile sharrow can be installed now at a tiny fraction of Town's portion (\$71,000) of the proposed \$355,000 design study for the 1.2 miles of bike lanes. In short, instant results, better outcome, and far lower costs for the Town with none of the adverse blowback resulting from converting Rt 99 into a two lane road.

It is doubtful that there are a sufficient number of cyclists now on Rt 99 to justify bike lanes. Sharrows provide a means to assist cyclists when they choose to ride. When cyclists are not there, traffic proceeds normally. This is the most efficient use of the road. It is a flexible solution to adjust to sporadic cycling needs.

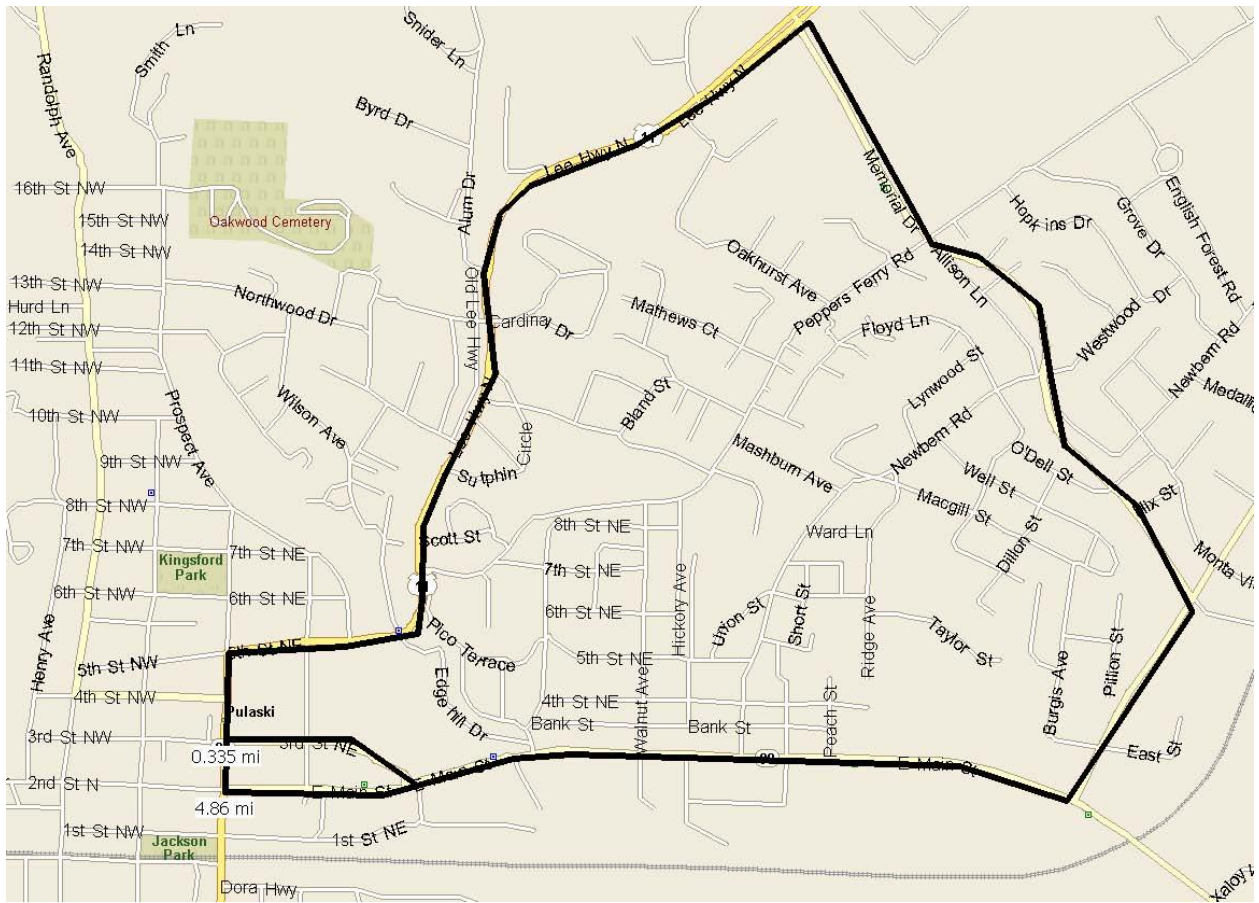
Sharrows with advisory markings will not impede traffic flow. Bike lanes will. Rt. 99 is the only direct artery between downtown Pulaski and Interstate 81. Shopping centers and businesses depend on it, as do citizens of Pulaski. Rt 99 is the second most travelled road in all of Pulaski. And when Interstate truck traffic is diverted because of an accident, lanes are filled to capacity. Rt 99's annual average weekday traffic is 10,000 vehicles per day. In the grant proposal bike lanes would reduce the number of lanes available to traffic. Sharrows would not. Traffic would move at its current pace. This will satisfy the primary objective of moving traffic smoothly, which is crucial to Pulaski business success.

For reasons I have already spoken and written to you about, bike lanes in this section of Rt 99 would be dangerous for cyclists. In sharp contrast to this, sharrows on this road are safer because a car making a right hand turn can pull in ahead of you (the cyclist) and travel in the same lane that you are in. In this position you can see what the car is doing and the danger of deathly sudden right hand car turns is reduced. This is not a theoretical point. At 3 min 25 seconds into the [video on this page](#) you can watch a woman cyclist *in a bike lane* being killed by a truck making a right hand turn.

A key deficiency of the STBG bike lane plan is that it accomplishes few, if any, useful objectives. Substantially it is a bike lane from nowhere to nowhere. It would stretch about 1.2 miles from Duncan Ave to Bob White in an area that is non-residential and primarily retail. A cyclist would have to ride a substantial distance from home to get there. Any purported benefit would exist only for a 1.2 mile reprieve. There are more useful options than this.

Town Council can extricate itself with a cheap and effective plan, for citizens, for visitors, and for business.

The shown sharrow loop with advisory markings is 5.27 miles long, with 0.335 miles on the one-way section of 3rd St and a 125 yard leg to Pulaski Bikes and linking to the Dora Bike trail (which in conjunction with the New River Trail runs 50+ miles to Galax). The loop is a unifier.



It connects to all of Pulaski's major retail centers. It is in close proximity to key residential areas. It links to bike visitors coming from the Dora Trail and invites them to see and shop throughout our town. Many of them will get the message that Pulaski is a very nice place. When we do it right, some will stay, perhaps permanently.

As for those of us who live here, we can commute to key businesses more easily. The increased respectability and availability of bike riding also increases the employment pool that businesses here can draw from. And, it works smoothly with the limited parking in downtown Pulaski. As many Pulaski cyclists already know, it is often possible to get to the door of the Post Office quicker by bike than the time it takes to drive and park a car.

Sharrows work when they are done right. They don't work when they are done sloppily or inattentively. The one I showed you on Brighton Avenue in the Allston section of Boston is 1.5 miles from Harvard University. Those folk are clever. They knew what they were doing. And they did it right.

The key items in the “Harvard Plan” that cannot be compromised are: 1) the dotted advisory markings must be identical to those shown, and 2) stencils cannot be placed further than 60 ft apart. Pulaski’s tremendous advantages are that roads on the loop are predominantly two lanes in each direction and there are few areas with parked cars. Thus, sharrows can mainly be on the far right hand side allowing plenty of passing space for cars. With these advantages, our circumstances allow us to do even a better job than the Harvard crowd did.

We can also be safer. By placing 16 of the following dual signs in each direction of travel on the loop, we get the message across that Pulaski takes cycling seriously. Vehicles are to take special care that cyclists are treated safely when they are travelling within their designated section of the road. The signs are also educational. By example, they introduce the public to the term “sharrow” and public discussion of sharrows becomes associated with the requirement to yield to cyclists.



By implementing this program, we set an example for other cities and towns that shows it is possible to do a superior job of accommodating cyclists without massive infrastructure expenses. It comes down to 32 dual signs, stencils, paint, and labor to get the job done.

Pedestrian safety in tandem with bicycles.

Although Pulaski’s present bicycle usage rates are low, every increase benefits the community. It is well to note that more pedestrians than cyclists are killed by cars. In the United States, 4,280 pedestrians and 620 bicyclists are killed annually. These deaths constitute about 14 percent of overall traffic fatalities. Studies show that for bicyclists and pedestrians there is safety in numbers. [The more bicyclists and walkers on the streets, the more attuned drivers are to their presence.](#) So even if you don’t bike, your streets are safer for you, your children, and your community when bicycles are there. With sharrows being right on the street sharing the road with cars, they are doing the yeoman’s work of making streets safer for you.

The above signs are intended to promote a frame of mind that benefits pedestrians as much as it does cyclists.

Blacksburg sharrows.

For all of their merits, [Blacksburg’s](#) and Virginia Tech recently added sharrows are inferior to the Pulaski Loop: 1) they are not the “Harvard Plan” (they lack the advisory markings and stencil markings are placed far apart, eg., 90 ft on Drillfield, 215 ft on Progress, 340 ft on Draper Road); 2) they do not have yield to bicycles in sharrow signs; 3) they are discontinuous sections, not a continuous five mile loop (eg. Progress Street, Giles Road, Draper Road, and Drillfield); and 4) they are on small roads, not on four lane roads leading to the majority of the town’s retail sector.

I believe you will find that when VT folks visit us they will be impressed and pass the word on about the good work done in Pulaski.

[Blacksburg sharrow video, Oct 2015](#)



The Blacksburg sharrows serve a different purpose than the Pulaski Loop. The Draper sharrow section, for example, is a tiny one-way residential road about a half mile long. Pedestrians and a Bicycle lane go northbound, and cars with a sharrow go southbound. The sharrow is near the center of the car lane. When passing space is not available, the expectation is that cars will slow to the speed of the bicycle. In this university setting it works. The sharrow markings being 340 ft apart here is ok because in this neighborhood enclave everyone understands that pedestrians, kids, and bicycles have high priority.

Draper Road, Blacksburg



Giles Road and Progress Street in Blacksburg illustrate yet another sharrow philosophy. Both these streets are narrow and widely used for commuting by cars and bicycles. Here the sharrow symbols are primarily used to give cyclists license to ride near the middle of the road. This is necessary because if cyclists held to the extreme right they would risk being run off the road or being car-doored by a parked car door being opened. [Car doors are a frequent cause of accidents and deaths.](#) Either being run off the road or being car-doored often lead to serious hospital outcomes. The sharrows thus are intended to provide a measure of protection.

You can see here that with sharrow markers placed 215 ft apart on Progress St, they provide little lane guidance vis-à-vis the “Harvard Plan.” Indeed, you can barely see the upcoming marker in the distance. Yet in this application, the markers do what is intended. They give the cyclist the right to ride in an area of the road normally

reserved for cars, even if it means that cars may in some instances be reduced to travelling at the speed of a bicycle. In a university town filled with cyclists, this seems ok.

Progress Street, Blacksburg



However, it is vastly different from the Pulaski sharrow loop's "Harvard" theme. In Pulaski, two lanes in each direction give cars plenty of passing room either by moving to the left hand lane, or in some instances by sharing a lane with a bike in a sharrow. And, the area for bicycles is clearly demarcated. For example, a sharrow may be 4 ft wide, a lane 12 ft wide, leaving a 8 ft wide passing space in the same lane for cars. Even most large pickup trucks are no more than 6.7 ft wide, which can leave 15.6 inches between a truck and sharrow border. Of course the typical car is narrower, making it possible to have yet more clearance when passing in same lane. I might add for car drivers' benefit that Virginia Law allows drivers to cross double yellow lines to pass a bicycle if the move can be made safely, and to their warning, they can be cited for following bicycles too closely.

That bicycles in Pulaski travel roads in the loop now is evidence of the ability of cars and bikes to share lanes. For a year, I rode the shown Pulaski Loop every afternoon for reasons of physical therapy (to speed a recovery from a DVT). I felt it was reasonably safe and drivers were sufficiently polite. A few points worth mentioning: The two lane Rt 99 section between Bob White and the Interstate (not on the four-lane loop, but beyond it eastward) is one of the most nerve racking roads in town – rude excessively fast car drivers coming from the Interstate, allowing little to no clearance between bike and car. I seldom went there. Features that make sharrows in the loop important are: The climb up the hill to McDonalds slows cyclists down significantly and makes the closing speed between bikes and cars uncomfortably fast, making it necessary to have a clearly demarcated row for bikes. In the summer hours prior to sunset travelling westward on Rt. 99, the setting sun blinds drivers and cyclists. Continuous sharrow symbols are necessary to remind the driver to be on heightened alert for cyclists. A friend of mine's remark (she is not a particularly good driver) that she always assumed I was riding in the correct part of the road and for that reason she felt comfortable about passing me in the same lane. She also remarked that she was not particularly good at knowing where the right hand side of her car was. My knuckles then turned white – a not too subtle hint that advisory sharrow markings of the "Harvard" kind are necessary when cars and bikes share a lane.

Infrastructure.

A persistent perplexing issue is the debate about how much infrastructure increases bicycle ridership. There is ample historical support for the predominant model that bicycle ridership precedes infrastructure. A contrary position is that when roads are dangerous for cyclists, people will not consider cycling to begin with.

In the Netherlands there was a long standing base of cyclists of all ages that used bicycles for getting around, shopping and commuting. Huge protests in the 1960s about how cars were overtaking Dutch cities were widely

supported. Bit by bit the Dutch focused on bikes and worked toward what arguably is the world’s most sophisticated bicycle infrastructure, with crowds of bicycles far larger than we can easily imagine here. In this country too when you look at major cycling cities, it is often large university student populations that result in increased bicycle infrastructure. When relatively flat (rather than hilly) routes are available that also seems to help. Surprisingly, cold weather does not seem to be a great impediment. Many of the most active cycling centers are in northern regions.

Close to home we see a bit of a mix, Blacksburg being a university town and Christiansburg being a retail and residential center. The Huckleberry Trail is a [7-mile trail](#) between Blacksburg and Christiansburg. The Huckleberry bicycle bridge you see here over Rt 114 in Christiansburg was made possible by a [\\$1 million donation](#) from local resident Renva Weeks Knowles:



I regard the bicycle lanes on Rt 114 as being completely appropriate. I would have expected them to be widely popular because they linked Blacksburg and Christiansburg via the Huckleberry. Yet, I have never seen a single cyclist using bike lanes here. I am also perplexed that that the bridge does not have direct bicycle ramps to the bike lanes. Instead on one side there are steps and on the other there is a “No Trespassing” sign. Undoubtedly there are ways for bikes to get to the trail, but it is odd that they are not more apparent.



Bicycle usage.

Bicycle usage is a moving target. For bicycle commuters, Virginia is a high growth state. From 2005 to 2014, Virginia commuters [increased 87% \(an average 7.2% annually\)](#). The precise numbers for the town of Pulaski are not known so I developed the table here with [city data](#) from the 375 highest bicycle commuting cities and knowing commuters are about [7% of total cyclists](#). The list of 375 cities is condensed here to include all cities with a commuting population greater than 2% and to include all listed cities in nearby culturally similar southern states: North Carolina, South Carolina, Tennessee, Virginia. Cities in red had a fewer percent of commuters than average.

City Rank	Pulaski equivalent total number of Bicyclists	Pulaski equivalent number of commuters	Relative to Richmond Virginia	Percentage of Bicycle Commuters	City	State
	304	21	0.24	0.53%	United States	United States
1	12,602	882	10.02	22.1%	Davis	California
2	5,651	396	4.49	9.9%	Boulder	Colorado
3	4,711	330	3.74	8.3%	Eugene	Oregon
4	4,529	317	3.60	8.0%	Berkeley	California
5	3,864	270	3.07	6.8%	Cambridge	Massachusetts
6	3,630	254	2.89	6.4%	Santa Barbara	California
7	3,432	240	2.73	6.0%	Madison	Wisconsin
8	3,387	237	2.69	6.0%	Gainesville	Florida
9	3,387	237	2.69	6.0%	Portland	Oregon
10	3,167	222	2.52	5.6%	Iowa City	Iowa
11	3,142	220	2.50	5.5%	Chico	California
12	3,076	215	2.44	5.4%	Missoula	Montana
13	2,879	202	2.29	5.1%	Flagstaff	Arizona
14	2,869	201	2.28	5.0%	Miami Beach	Florida
15	2,709	190	2.15	4.8%	Pasadena	California
16	2,492	174	1.98	4.4%	Fort Collins	Colorado
17	2,330	163	1.85	4.1%	Mountain View	California
18	2,241	157	1.78	3.9%	Boise	Idaho
19	2,065	145	1.64	3.6%	Seattle	Washington
20	2,052	144	1.63	3.6%	Somerville	Massachusetts
21	1,977	138	1.57	3.5%	San Francisco	California
22	1,975	138	1.57	3.5%	Minneapolis	Minnesota
23	1,798	126	1.43	3.2%	Champaign	Illinois
24	1,784	125	1.42	3.1%	Beaverton	Oregon
25	1,782	125	1.42	3.1%	Washington, DC	District of Columbia
26	1,776	124	1.41	3.1%	Ann Arbor	Michigan
27	1,718	120	1.37	3.0%	Bellingham	Washington
28	1,696	119	1.35	3.0%	Charleston	South Carolina
29	1,684	118	1.34	3.0%	Tucson	Arizona
30	1,533	107	1.22	2.7%	Bloomington	Indiana
31	1,524	107	1.21	2.7%	Salt Lake City	Utah
32	1,465	103	1.16	2.6%	Hartford	Connecticut
33	1,456	102	1.16	2.6%	Paradise CDP	Nevada
34	1,451	102	1.15	2.5%	Portland	Maine
35	1,423	100	1.13	2.5%	Sacramento	California
36	1,405	98	1.12	2.5%	Tempe	Arizona
37	1,373	96	1.09	2.4%	Provo	Utah
38	1,342	94	1.07	2.4%	Evanston	Illinois
39	1,293	91	1.03	2.3%	Santa Monica	California
40	1,258	88	1.00	2.2%	Richmond	Virginia
41	1,251	88	0.99	2.2%	Denver	Colorado
42	1,239	87	0.98	2.2%	Lawrence	Kansas
43	1,223	86	0.97	2.1%	Oshkosh	Wisconsin
44	1,205	84	0.96	2.1%	New Haven	Connecticut
45	1,191	83	0.95	2.1%	San Mateo	California
46	1,170	82	0.93	2.1%	Irvine	California
47	1,151	81	0.91	2.0%	Providence	Rhode Island
70	836	58	0.66	1.5%	Mount Pleasant	South Carolina
77	771	54	0.61	1.4%	Arlington	Virginia
85	723	51	0.57	1.3%	Greenville	North Carolina
122	551	39	0.44	1.0%	Wilmington	North Carolina
144	472	33	0.38	0.8%	Norfolk	Virginia
153	458	32	0.36	0.8%	Virginia Beach	Virginia
170	399	28	0.32	0.7%	Alexandria	Virginia
179	381	27	0.30	0.7%	Rock Hill	South Carolina
203	314	22	0.25	0.6%	Raleigh	North Carolina
217	277	19	0.22	0.5%	Durham	North Carolina
220	274	19	0.22	0.5%	Portsmouth	Virginia
234	251	18	0.20	0.4%	Nashville-Davidson	Tennessee
241	242	17	0.19	0.4%	North Charleston	South Carolina
270	189	13	0.15	0.3%	Murfreesboro	Tennessee
297	138	10	0.11	0.2%	Charlotte	North Carolina
306	122	9	0.10	0.2%	Fayetteville	North Carolina
307	117	8	0.09	0.2%	Chattanooga	Tennessee
313	110	8	0.09	0.2%	Greensboro	North Carolina
315	108	8	0.09	0.2%	High Point	North Carolina
318	98	7	0.08	0.2%	Newport News	Virginia
321	96	7	0.08	0.2%	Chesapeake	Virginia
340	76	5	0.06	0.1%	Hampton	Virginia
347	71	5	0.06	0.1%	Knoxville	Tennessee
348	69	5	0.05	0.1%	Jacksonville	North Carolina
362	54	4	0.04	0.1%	Columbia	South Carolina
371	40	3	0.03	0.1%	Cary town	North Carolina
372	39	3	0.03	0.1%	Winston-Salem	North Carolina
374	33	2	0.03	0.1%	Memphis	Tennessee

The table approximates the number of local cyclists the town of Pulaski can expect when we achieve usage rates equivalent to any of the shown cities.

For Pulaski the message is that if we have cycling characteristics identical to the national average there are about 304 total cyclists and 21 bike commuters here in town, but if we grow to levels experienced in Richmond, VA we can expect these numbers to increase to about 1,258 and 88 respectively. The Richmond region had 18 miles of traditional bike lanes in 2013 and [38 miles in Feb 2016](#). The 5 mile Pulaski bike loop, together with the Dora Trail's access to 50+ miles to Galax, provides ample infrastructure to reach Richmond's biking levels. And we put a positive sheen on the Town, making it evermore an attractive place to live and do business. These are essential ingredients of diversity that make a town interesting and memorable. They also boost economic development.

Consider [Damascus, Virginia](#). Its population is a mere 800. In May of each year it draws 20,000+ tourists. Drive through the town. Look at the number of bicycle and outfitter shops. Treat bikes right and they treat you right.

Clawing our way back.

You may ask how bikes fit into economic development. I suggest looking at Pulaski as if its current population of 8,890 were facing historically experienced growth rates. In each of the shown years, population would have changed in the town of Pulaski at the indicated average rate during the previous decade. In the following table those growth rates are applied to its current 8,890 population base.

Growth rate year	Annual Percent Change	Annual change in number of people in Pulaski	Monthly change
1900	2.9%	259	22
1910	5.5%	489	41
1920	0.9%	84	7
1930	3.1%	276	23
1940	2.1%	184	15
1950	0.5%	41	3
1960	1.3%	116	10
1970	-0.2%	-16	-1
1980	-0.2%	-15	-1
1990	-0.1%	-11	-1
2000	-0.5%	-46	-4
2010	-0.4%	-37	-3
2015	-0.4%	-39	-3

Up until 1960 the town's population change was positive, in some years booming. Then it went into a slow decline which accelerated during roughly the past three decades. Economic development efforts during the past three decades were insufficient and we lost roughly 40 people per year, even in years when national GDP growth was strong.

Pulaski's decline can be arrested by clawing our way back, person by person. This is a town with unusually great attributes. Its singular crime is that we have failed to develop them. Bring in 40 people a year and decline stops. Bikes may or may not be dramatic, but they certainly will help stem the decline. Similarly, more often than not, success is incremental not dramatic.

People are voting with their feet and going elsewhere. If here in Pulaski, we, without distinction, do roughly the same that towns and cities elsewhere have done for decades (more of the same perhaps just better), where is the sparkle of interest that will bring people here rather than their going elsewhere? Where is the diversity? Where is the excellence? Where are new drawing points to give the town luster and success?

Consider the recently graduated university student who bikes daily and is now moving into full time employment. Will he or she give up the pleasure and practicality of biking to come to a Pulaski that has so little biking infrastructure that it would compel him or her to give up one of their principal pleasures? Think long and hard.

At the end of the day a sharrow is just paint on the road. If it does not produce the claimed results, no harm, no foul; replace it. The investment was tiny. The position here, however, is that there are solid reasons to expect the loop to be hugely successful – an attraction that brings and holds people.

Public-Private partnership.

Consider again those “32 dual signs, stencils, paint, and labor” for the Pulaski Loop. Such a program is vastly different from heavy equipment required in most infrastructure projects. In short, notwithstanding that the loop is a massive project, it can be accomplished step by step by people with ordinary skills. Bike enthusiasts, students, and other volunteers can get important work done. This is not only of practical benefit to the town, it instills pride and a sense of ownership for having completed a bicycle project that can be transformative for the community.

It also gives cycling greater status and sense of personal connection to the community than can be achieved by other means. The sense of “I built that” lasts forever. It is something your kids will see. They will remember your role in it.

If the Town can supply one or two people from the town shop to work with volunteers once a week, it would help move the project forward. It also would create a sense of respect for Town workers. I have worked with these guys. They are a fine bunch. It would be nice if others, by personal experience, knew this also.

The project can be funded in part by private donations. It would help if the Town can establish a tax deductible entity and audited account to handle receipts and expenditures for the bike project. I am prepared to deposit \$3,000 now in a Town account towards purchasing the designated 32 dual signs for the “Harvard Plan” sharrow loop. Many of us make philanthropic donations. Having donations spent close to home and with no overhead management costs, makes such contributions highly appealing. The million dollar contribution to the Huckleberry Trail is evidence of this. Here in Pulaski, large and small contributions alike would seem central in our project.

Given that the Pulaski Loop is roughly the same length as the Huckleberry Trail and can be implemented at trivially low costs should get the attention of thrifty politicians. In short, huge returns for tiny efforts.

In contrast to grant proposals that are “stringy” and require much time and expense to execute and put in practice, I hope the “money in your lap” and community involvement of a Public-Private partnership will serve you well.

I hope Public Hearings with free and open discussion will provide an opportunity for contemplating available options.

Thank you for your consideration,

Ike Jeanes