

Economic Impact of the
Proposed Park Improvements in the
Northern Jefferson Davis Highway Section
of Chesterfield County, VA

Submitted to:
Chesterfield County, VA

Prepared by
Urban Partners
325 Chestnut Street, Suite 506
Philadelphia, PA 19106

2019

BACKGROUND

Urban Partners was retained by Chesterfield County, VA, to independently assess the economic impact of the proposed park improvements in the Northern Jefferson Davis Highway section. First, the County is proposing new recreational amenities and improved riverfront access at the James River Conservation Area. Originally planned for commercial development, the land was eventually purchased by the County with the help of a grant from the Virginia Land Conservancy Fund. The proposed improvements will connect County residents with much needed recreational resources, including walking/hiking trails, biking, picnicking, boating, and nature observation.

The second project is the Falling Creek Linear Park, which involves the construction of 11,000 linear feet of multi-use trail on both sides of the creek starting from Cogbill Road to James River waterfront. This portion of Falling Creek has a rich, but under-appreciated, historical significance with the Falling Creek Ironworks site and the 19th century stone bridge both located along this stretch of the creek. The Falling Creek Ironworks site consists of subsurface remains of an iron manufacturing facility which dates to 1619. The facility was the first ironworks in English North America and is clearly documented in the records of the Virginia Company of London. A museum/visitor center is planned for the site. The Falling Creek Bridge is believed to be one of the earliest stone bridges in the Commonwealth. Constructed about 1824, the bridge played an important early role in linking Richmond and Petersburg. The bridge fell out of use in 1933 and became Virginia's first wayside park. The bridge was heavily damaged during Hurricane Gaston in 2004.

The preliminary total budget for the two park improvements are \$15.51 million: specifically, \$7.71 million for recreational improvements at James River Conservation Area, and \$7.8 million for the Falling Creek Linear Park. Park amenities enhance the quality of life in Chesterfield County, which is an essential component of the County's economic development strategy. Additionally, the County's capital investments in constructing these park amenities create significant economic benefit for the Richmond Metropolitan Region. Using widely accepted economic modeling practices, this report quantifies these benefits in terms of new jobs and wages, tax revenue benefits at the local, state, and federal levels, and property value increases for nearby residential properties.

METHODOLOGY

In order to calculate the potential economic impact of the County's planned capital investments on the Commonwealth of Virginia, Urban Partners employed the IMPLAN (IMPact analysis for PLANning) model. Developed by the U.S. Forest Service's Land Management Planning Unit and the University of Minnesota, IMPLAN utilizes the quantitative economic technique called the input-output model to track the way a dollar injected into one sector is spent and re-spent in other sectors of the economy. Through the use of IMPLAN, the economic impact of the County's planned capital investments can be traced over multiple rounds of spending in the economy.

The initial round of spending is referred to as the direct impact. This figure is limited to the portion of economic activity that occurs within the local economy. In other words, the expenditures that leave the local economy (e.g. purchases from an out-of-state vendor) are excluded from the figure.

By inputting the initial round of spending into the IMPLAN model, additional effects can be measured in a local economy in two forms: indirect and induced. First, the changes in inter-industry purchases as a result of the direct effect are referred to as the indirect impact. For example, the County will purchase goods and services from suppliers and vendors, who in turn make purchases of goods and services. Second, the induced effect refers to the impact generated by increased wages

as a result of direct and indirect impacts. These wages in turn will pay for local goods and services, creating another round of economic impact. This process continues until leakages eventually stop the cycle.

The magnitude or degree in which the direct impact triggers indirect and induced impacts is referred to as the “multiplier.” IMPLAN calculates different multipliers depending on the types of spending that comprises the direct impact, as well as the geographic region that’s being studied. For the purposes of this analysis, the study area is the Commonwealth of Virginia.

CONSTRUCTION PERIOD IMPACT

The economic impact analyzed in this section are limited to the construction period. As shown in Table 1 below, the total development budget for the proposed park improvements is \$15,510,750 of which \$15,170,750 is budgeted for hard construction costs and \$340,000 for architectural and engineering costs.¹

Table 1: Total Development Budget

Item	Subtotal	Total
Construction & Contingency		\$ 15,170,750
Soft Costs		\$340,000
Professional Fees	\$340,000	
TOTAL		\$ 15,510,750

Source: Chesterfield County

Total Outputs

Inputting these expenditures as the initial round of spending results in the following outputs for the construction period:

Table 2: Industry Impact by Sector - Construction Period

Description	Direct	Indirect	Induced	Total
Total	\$15,510,750	\$4,259,843	\$5,598,790	\$25,369,383
58 - Construction of other new nonresidential structures	\$15,170,750	-	-	\$15,170,750
395 - Wholesale trade	-	\$662,757	\$201,983	\$864,740
441 - Owner-occupied dwellings	-	-	\$817,907	\$817,907
449 - Architectural, engineering, and related services	\$340,000	\$359,542	\$29,053	\$728,594
440 - Real estate	-	\$217,977	\$438,134	\$656,111
482 - Hospitals	-	-	\$236,916	\$236,916
411 - Truck transportation	-	\$157,375	\$52,367	\$209,742
All other industries	-	\$2,862,192	\$3,822,431	\$6,684,623

Source: IMPLAN, Urban Partners

- Direct investment in construction-related activities, estimated at \$15.51 million will generate additional outputs from other regional sectors in the range of \$4.26 million.
- Increased activities in construction and other sectors, which provide goods and services for the construction activities, will result in the creation of new jobs and labor income to otherwise unemployed local residents. This will lead to increased commercial activity induced by increases in wages and consumption in the amount of \$5.60 million.

¹ This analysis assumes that all of the contractors and professional services firms that will be retained for this project will be based in the Commonwealth of Virginia.

- In total, the Commonwealth of Virginia will enjoy a positive impact of \$25.37 million once the construction and wage payments for workers start.

Wages

The impact of the proposed park improvements on wages appears in the table shown below:

Table 3: Wage Impact by Sector - Construction Period

Description	Direct	Indirect	Induced	Total
Total	\$4,891,391	\$1,378,784	\$1,592,818	\$7,862,993
58 - Construction of other new nonresidential structures	\$4,700,354	-	-	\$4,700,354
449 - Architectural, engineering, and related services	\$191,037	\$202,017	\$16,324	\$409,378
395 - Wholesale trade	-	\$226,931	\$69,160	\$296,090
475 - Offices of physicians	-	-	\$111,452	\$111,452
482 - Hospitals	-	-	\$108,366	\$108,366
461 - Management of companies and enterprises	-	\$62,446	\$37,608	\$100,055
434 - Nondepository credit intermediation/related activities	-	\$26,808	\$40,220	\$67,028
411 - Truck transportation	-	\$44,376	\$14,766	\$59,142
454 - Management consulting services	-	\$37,177	\$19,961	\$57,138

Source: IMPLAN, Urban Partners

- Direct investment in construction will generate wages of \$4.89 million, of which 96% will be in the construction sector.
- The resulting indirect output is estimated at \$1.38 million of additional wages for those who would otherwise be unemployed.
- Increased activities in construction and other sectors, which provide goods and services for these construction activities will result in the creation of new jobs and labor income to otherwise unemployed local residents. This will lead to increased wages paid in other sectors in the amount of \$1.59 million.
- In total, the Commonwealth of Virginia will enjoy a positive impact of \$7.86 million in wages during construction.

Employment

The impact of the proposed park improvements on job creation is detailed in the table shown below:

Table 4: Employment Impact by Sector - Construction Period

Description	Direct	Indirect	Induced	Total
Total	104.21	24.24	38.05	166.61
58 - Construction of other new nonresidential structures	102.36	-	-	102.36
449 - Architectural, engineering, and related services	1.85	1.96	0.16	3.97
395 - Wholesale trade	-	2.77	0.85	3.62
440 - Real estate	-	0.94	1.89	2.83
501 - Full-service restaurants	-	0.40	1.97	2.37
502 - Limited-service restaurants	-	0.17	2.01	2.18
482 - Hospitals	-	-	1.46	1.46
405 - Retail - General merchandise stores	-	0.18	1.20	1.38

Source: IMPLAN, Urban Partners

- Direct investment in construction will generate employment of about 104 annualized fulltime equivalent jobs, of which 98% will be in the construction sector and the rest in

architectural and engineering jobs. The surge in investment in the construction sector leads to an increase in new jobs in the Commonwealth of Virginia to meet the demands for goods and services for the proposed park improvements, thus yielding about 24 annualized fulltime equivalent jobs for those who would otherwise be unemployed.

- Increased activities in construction and other sectors, which provide goods and services for construction activities, will result in the creation of new jobs which are estimated at 38 annualized fulltime equivalent positions, all across broad industrial sectors.
- In total, the Commonwealth of Virginia will enjoy about 167 annualized fulltime equivalent jobs due to the proposed park improvements.

Tax Impact

The impact of the proposed park improvements on taxes is detailed in the following table:

Table 5: Tax Impact - Construction Period

Description	Federal	State	County	Total
Total	\$2,079,864	\$464,176	\$294,305	\$2,838,346
Social Insurance Tax	\$994,743	\$80	-	\$994,823
Taxes on Production & Imports	\$40,922	\$192,103	\$287,662	\$520,687
Corporate Profits Tax	\$175,907	\$20,575	-	\$196,482
Personal Tax	\$860,492	\$246,627	\$3,738	\$1,110,856
Personal Transfers	\$7,801	\$4,792	\$2,905	\$15,498

Source: IMPLAN, Urban Partners

- The proposed park improvements will generate substantial tax revenues at the federal, state, and local (County) levels. The total tax impact is estimated to be \$2.84 million, of which \$294,305 is generated for Chesterfield County.

PERMANENT IMPACT

In addition to the one-time economic impacts associated with the development/construction activities, this project will result in on-going benefits to adjacent neighborhoods. Because residents generally enjoy recreational trails and park amenities, residential properties located in close proximity to high-quality parks and open space infrastructure maintain higher property values compared to those situated farther away.

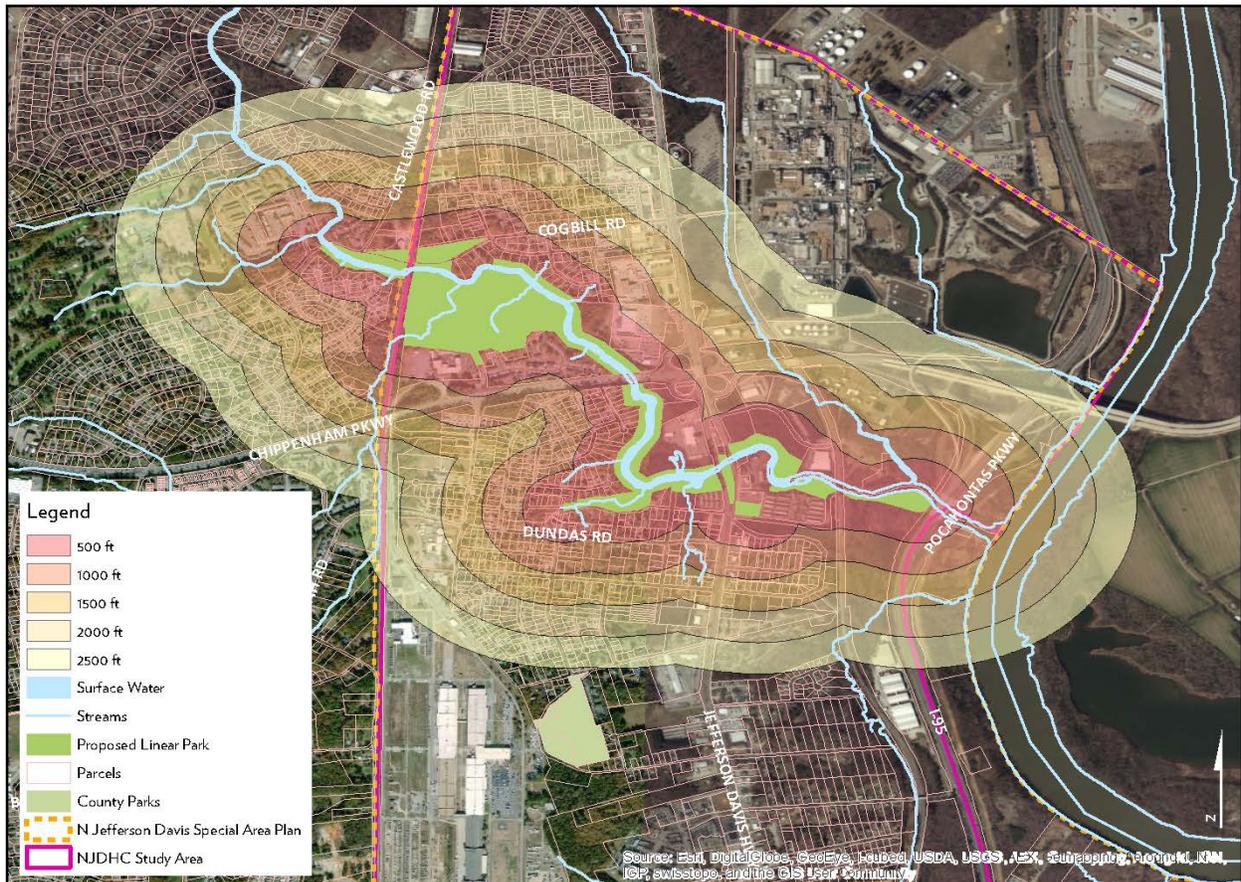
According to Kathleen L. Wolf, Ph.D., and her team of researchers at the University of Washington’s College of the Environment that evaluated findings from more than 30 academic studies, an important concept in estimating how much people are willing to pay higher prices for a property located in close proximity to an open space amenity is the “proximate principle.” Dr. Wolf summarized that most studies found 20% higher values for properties that are immediately adjacent to an open space amenity, but also evidenced a “linear decline” with distance from the edge of an open space with a positive price effect declining to zero at ½ mile away.

For the purpose of estimating the increased property values triggered by Chesterfield County’s planned park improvements, the following formula is used to calculate the amount of property value increase for homes located within ½ mile from the Falling Creek Linear Park²:

² Due to the fact that the James River Conservation Area is separated from residential neighborhoods by the CSX Railroad tracks, there are no residential properties within ½ mile walking distance that are not already included for the Falling Creek Linear Park calculations.

- Zone 1, Properties within 500 feet: 20% benefit
- Zone 2, Properties within 501 to 1,000 feet: 15% benefit
- Zone 3, Properties within 1,001 to 1,500 feet: 11% benefit
- Zone 4, Properties within 1,501 to 2,000 feet: 7% benefit
- Zone 5, Properties within 2,001 to 2,500 feet: 3% benefit (see Figure 1)

Figure 1: Parcels Located within ½ Mile of Proposed Linear Park



Current Value of Homes within ½ Mile

The current assessed values of residential properties located within ½ mile from the proposed linear park are summarized below. In 2019, the aggregate assessed value of all residential properties within this area is \$286.43 million (Table 6).

Table 6: Current Assessed Value of Residential Properties within ½ Mile

Description	0 to 500 Feet	501 to 1,000 Feet	1,001 to 1,500 Feet	1,501 to 2,000 Feet	2,001 to 2,500 Feet	Total
Condos	\$6,238,500	-	-	-	-	\$6,238,500
Multi-Family Apartments	\$34,947,700	\$16,804,700	\$17,432,000	\$5,463,100	\$21,593,400	\$96,240,900
Single-Family Homes	\$32,748,800	\$47,533,100	\$40,185,900	\$30,818,100	\$32,666,700	\$183,952,600
Total	\$73,935,000	\$64,337,800	\$57,617,900	\$36,281,200	\$54,260,100	\$286,432,000

Source: Chesterfield County, Urban Partners

Single-family home values represent 64% of the aggregate assessment value, while multi-family apartments and condos make up 34% and 2%, respectively.

Increased Value of Existing Homes within ½ Mile

Based on the formula outlined on the previous page, the property value increases triggered by the Falling Creek Linear Park improvements are summarized for the five zones, as well as the three different home types (Table 7).

Table 7: Increased Values for Residential Properties within ½ Mile

Description	0 to 500 Feet	501 to 1,000 Feet	1,001 to 1,500 Feet	1,501 to 2,000 Feet	2,001 to 2,500 Feet	Total
Condos	\$1,247,700	-	-	-	-	\$1,247,700
Multi-Family Apartments	\$6,989,540	\$2,520,705	\$1,917,520	\$382,417	\$647,802	\$12,457,984
Single-Family Homes	\$6,549,760	\$7,129,965	\$4,420,449	\$2,157,267	\$980,001	\$21,237,442
Total	\$14,787,000	\$9,650,670	\$6,337,969	\$2,539,684	\$1,627,803	\$34,943,126

Source: Chesterfield County, Urban Partners

Single-family home values will increase by \$21.24 million, while multi-family apartments and condos will see increases of \$12.46 million and \$1.25 million, respectively. Properties located within 0 to 500 feet of the linear park will see \$14.79 million increase in property values, representing 42% of all value increases.

Increased Value of New Homes within ½ Mile

In addition to positive benefits on existing home values, the proposed parks improvements will also have positive economic impacts for new residential communities within the ½ mile radius as well. In the alternative redevelopment scenarios described previously, there are five residential communities that are located within ½ mile of the linear park:

- Properties within 500 feet (20% benefit):
 - Townhomes at former Falling Creek Apartments
 - Multi-family development at former Nemf trucking terminal
 - Townhomes east of indoor flea market
- Properties within 501 to 1,000 feet (15% benefit)
 - Townhomes along Marina Drive/Chester Hill Circle
 - Multi-family development north of Raceway station

The increased property values for these five projects that can be attributed to the positive effects of the proposed park improvements total \$15.59 million.

Increased Property Tax Revenue for Chesterfield County

Based on Chesterfield County's 2019 tax rate, \$331,960 in increased property tax revenue for the County is shown below for existing homes within ½ mile of the proposed park improvements.

Table 7: Increased Values for Existing Residential Properties within ½ Mile

Description	0 to 500 Feet	501 to 1,000 Feet	1,001 to 1,500 Feet	1,501 to 2,000 Feet	2,001 to 2,500 Feet	Total
Condos	\$11,853	-	-	-	-	\$11,853
Multi-Family Apartments	\$66,401	\$23,947	\$18,216	\$3,633	\$6,154	\$118,351
Single-Family Homes	\$62,223	\$67,735	\$41,994	\$20,494	\$9,310	\$201,756
Total	\$140,477	\$91,681	\$60,211	\$24,127	\$15,464	\$331,960

Source: Chesterfield County, Urban Partners

Additionally, real estate taxes from new residential communities within the ½ mile zone will contribute another \$148,148 in revenue for Chesterfield County.

In summary, the permanent economic benefits of the proposed park improvements are **\$50.6 million** in increased property values for residential properties within ½ mile of the linear park and **\$480,000** in annual tax revenue (2019) for Chesterfield County.