

# **Fenton Mill**

## Appendix

### Methodology

## Approach

This study examines the revenues to be received by York County generated by Fenton Mill, a residential community proposed to be developed on several parcels in the Lightfoot area of the County, and all costs to the County attributable to that development. The fiscal impact of a hypothetical by-right development was also calculated for comparison purposes.

Only variable revenues and costs are counted in the fiscal impact study. This means that, rather than applying per capita/employee or per household/business total revenue and total County per capita/employee or per household/business expenditures to Fenton Mill, only those incremental revenues and costs that the County will actually receive or incur due to the increase in households are counted as having an impact. Fixed costs that do not rise as population or households increase incrementally are not counted as having a cost impact.

Revenues include one-time direct revenues, annual direct revenues from the project and tax revenues generated by households. One-time direct revenues are revenues to the County derived from the construction of Fenton Mill. They include all building permit and associated fees (electrical, mechanical, plumbing, sewer and natural gas), and various development fees. They also include public improvements that will be constructed or paid for by the applicant for the benefit of the County and donations to the County non-cash donations to the County that have public benefit.

Annual direct revenues include: real estate property taxes, personal property taxes, vehicle registration fees, the car rental tax remitted to the County, EMS charges, and user fees (various fees and fines, and the County's utility consumption tax calculated per household. Additional tax revenues generated by residents at Fenton Mill are estimates of taxes paid by York County businesses due to purchases made by households occupying Fenton Mill.

Costs include operating costs of government per household, certain capital costs incurred by general government, operating costs of education, and capital costs incurred by the York County Public Schools. Cost data and assumptions were derived from the *York County Fiscal Year 2020 Adopted Annual Budget* and the *York County Public Schools Fiscal Year 2020 Approved Annual Budget* (collectively or individually, "the *Budget(s)*"). **These were the approved budgets in effect at the time that research for the revenue and cost data was conducted for this analysis.** The methodology for performing these calculations is explained in the "Cost Calculation" section, below.

Additionally, a separate analysis was performed to include variable costs and revenues incurred and received by the County's enterprise funds. While enterprise funds are designed to be self-sustaining fiscal entities, net (surplus) revenues received by these funds constitute a "profit" generated by the fund. This profit can be used to reduce customer user charges or to retire debt more quickly, or the surplus revenue may be transferred to the County's general fund as revenue to that fund. In any case, incremental costs and revenues to the County's enterprise funds generate a fiscal impact, though not necessarily to the County's general fund.

While Fenton Mill will be served by Newport News Waterworks, the County had extended water lines to the Lightfoot area. Therefore, the County's utility enterprise fund will receive both sewer and water connection fees from the developer (counted as a one-time revenue). Sewer service user fees were included as annual direct revenues. Costs and revenues for solid waste management costs were included for the proposed development. The developer plans to extend sewer lines within the proposed development with an extension to an existing pump station and, therefore, a sewer maintenance cost was assumed to be incurred by the County (see below under "Cost Calculation").

All impacts are presented in constant 2020 dollars. Inflation is not applied to either revenues or costs throughout the analysis period. The constant dollar approach also means that no assumptions are made about the rate of real estate or personal property assessment increases in the County. No assumptions are made about future increases in business tax revenues derived from Fenton Mill households based upon price increases. Neither are assumptions made about future increases in the unit costs or revenues of government. The practical implication of this approach is that any systemic future imbalances between rising (or falling) revenues and rising costs will be adjusted through changes in the County's tax rate, either upward or downward.

The fiscal impact is calculated through the stabilization year (the year in which all costs and revenues have been realized). The stabilization year for the proposed development is expected to be FY 2032, except that a \$40,000 capital purchase recurring every five years occurs in FY 2034, which is within the analysis period for this development. Because revenues and costs are reported in constant dollars, there is no significant change in the projected cash flow after the stabilization year. The stabilization year of the alternative by-right development also occurs in FY 2032. Because the stabilization year begins a third five-year segment, the analysis period was extended to the end of that five-year segment, FY 2036 was used as the final year of the analysis period (which was determined to be FY 2022 to FY 2036).

Real estate taxes from the Site currently received by the County are subtracted from the revenues to be generated by both Fenton Mill and the by-right development.

Throughout, revenue and cost data are estimated on a per-household basis (per student for education costs). The projected number of households in the County in 2020 (26,255) was estimated by multiplying the number of households reported in the 1-year 2018 U.S. Census Bureau American Community Survey (ACS) by the estimated rate of household increase. The estimated rate of household increase (5.0% over a two year period) was calculated as the percentage household increase from 2016 to 2018 derived from the ACS.

The calculation of per-unit costs for services delivered to households (see under “Cost Calculations,” below, for a description of this methodology) entails an estimate of the number of businesses located in the County. The number of business establishments in the County (1,587) was derived from the Virginia Employment Commission’s Quarterly Census of Employment and Wages (2<sup>nd</sup> quarter 2019). No increase in the number of businesses was projected. The business firm, rather than a per-employee measure, was deemed to be a more appropriate unit to measure the delivery of most County services to the business community.

### Parameters and Assumptions

The applicant is proposing the construction of 592 residential units. Fenton Mill would be developed on parcels C20d-4780-1137 (tax map 002 6 B), D19a-1381-3152 (tax map 002 60), D19b-2734-4736 (tax map 002 82), D19b-2545-2534 (tax map 002 59), D20c-1816-0933 (tax map 002 73) and D20c-1880-1425 (tax map 02 72), except for approximately 2.36 acres deducted from parcels D19a-1381-3152 and D19b-2545-2534 for VDOT right-of-way. The entire Site to be rezoned equals 376.1894 acres. Of this, the applicant plans to donate a site of approximately 16 acres served by public utilities along Fenton Mill Road to the County for public use (which could include use as a future school site) and donate approximately 52.1 acres along Barlow Road and to the County for potential passive recreation use.

The proposed development will consist of 495 single-family detached units developed on 50’, 60’, 70’ and lots along an extension of Wichita Lane (“the Wichita lots”), plus 104 townhouse units. The developer anticipates that 102 single-family dwellings on 50’ lots would sell for between \$300,000 to \$350,000; 286 single-family dwellings on 60’ lots would sell for between \$400,000 and \$600,000, depending on location; 100 single-family dwellings on 70’ lots would sell for between \$400,000 and \$500,000; seven (7) single-family dwellings on the Wichita lots would sell for \$400,000; and townhouses would sell for between \$250,000 and \$350,000. Mid-points were used to estimate average sale prices (for the purpose of estimating real estate assessments and household income), resulting in predicted average selling prices of \$325,000 for 50’ lot homes, \$425,000 for 60’ lot homes without forest views, \$525,000 for 60’ lot homes with forest views, \$450,000 for 70’ lot homes, and \$300,000 for townhomes.

Fenton Mill is also planned to contain a clubhouse/swimming pool complex. The proposed development would also be served by other amenities, such as a multi-use path, and playgrounds and parks.

Assuming a timely rezoning approval, the developer anticipates construction of the proposed development beginning in the Spring of 2022 with initial infrastructure being put in place. For analysis purposes, an infrastructure construction start date of March 2022 was used. A six month period was assumed for sitework and initial infrastructure construction. Construction of the first residential units was assumed to begin in August 2022. Construction was assumed to occur in a continuous fashion. For analysis purposes, development was assumed to begin at the Newman Road entrance to the proposed development and around the proposed clubhouse (with a construction entrance from Fenton Mill Road), with construction of the 60' and 70' single-family lot homes beginning simultaneously and construction of the 50' lot homes and townhomes commencing a year later. Construction would then proceed in a logical order.

Residential products would be absorbed at various rates according to the developer's best estimates. It is projected that the single-family detached product would sell at an average rate of about 5 units per month over a period of eight years and townhouses would sell at a rate of about 2 units per month over a period of five years.

A five-month construction period was assumed for each single-family detached unit and a six-month construction period was assumed for each townhouse block or quad/patio building. Townhouses were assumed to be built in blocks of four to six units. A two-month marketing/closing and move-in period was assumed for the residential product. Thus, the first residential units were assumed to be occupied in February 2023 and the last units were assumed to be occupied by May 2030 (FY 2031). Both Fenton Mill and the alternative by-right development are projected to be fully developed by FY 2031. All revenues and costs are projected to be actualized in FY 2032, which was determined to be the stabilization year. As noted above, the analysis period was determined to be FY 2022 to FY 2036.

These parameters are best estimates of the scope of the proposed development made by the applicant at this point in time. The specifics of the proposed development are subject to change based upon final determinations of site constraints and/or market conditions. Descriptions of the proposed development contained herein are not guarantees by the applicant that the proposed development will be constructed exactly as described above. However, the basic elements of the proposed development are those outlined above. Any change in the fiscal impact of the proposed development on the County due to minor changes in the scope of the proposed development are expected to be in the magnitude of projected revenues and costs and are expected to be in practically the same proportion of revenues to costs as estimated in the fiscal impact analysis report.

### By-right Development Assumption

The Site is currently zoned Residential Rural (RR), with a portion zoned Limited Business (LB). The entire property was assumed to be developed as a clustered single-family detached community. A total of 288 units was assumed based upon an estimate of the carrying capacity of the Site received from the applicant's civil engineer. Average lot size was assumed to be between one-third and less than one half of an acre. Dwelling units were assumed to be similar to the most expensive units proposed for Fenton Mill, averaging 3,000 square feet in size and selling for an average price of \$525,000. Because of the larger lot sizes and the challenging topography of the Site, the developable area and infrastructure needs were assumed to be similar to those of Fenton Mill.

If a rezoning of the Site is not obtained, Fenton Mill Associates would need to extensively revise the plans and engineering for the Site in order to construct a by-right development. In this case, the entire site owned by Fenton Mill Associates would be developed, not just the acreage requested for rezoning. Given that there would be no reduction in site development costs compared to the proposed development, development of the Site under its by-right use would be notably less profitable to investors than the proposed development. Thus, additional time would be spent in obtaining financing for the project. Thus, it is reasonable to assume that it could take three additional years for the Site to be developed in its by-right. Absorption was assumed to take place a slightly slower rate than the single-family units proposed for Fenton Mill, extending over a six year period. As noted above, the stabilization year for the by-right development was deemed to be FY 2032.

### Revenue Calculations

Revenues estimated for Fenton Mill fall into three categories: one-time direct revenues, annual direct revenues and additional tax revenues generated by residents of Fenton Mill. The methodology does not use multipliers to calculate revenues that could be generated through the project's secondary impacts, as such multipliers are considered to be unreliable for small geographic areas. The methodology does not include revenues generated from spending by construction workers as this cannot reliably be said to occur within the County.

### One-time Direct Revenues

As noted above, one-time direct revenues are revenues to the County derived from the construction of Fenton Mill. They include all building permit and associated fees (electrical, mechanical and sprinkler system, plumbing, water, sewer and natural gas), various development fees and certificate of occupancy fees. Also, as noted above, the enterprise fund alternative analysis includes sewer and water connection fees.

Building permit fees were calculated using the fee schedule from the County's website as confirmed by staff. Average square footages for each product type were supplied by the applicant. These are: 2,500 square feet for 50' lot single-family dwelling units, 3,000 square feet for 60' and 70' lot single-family dwelling units, 2,800 square feet for the Wichita lot single-family dwelling units, 2,000 square feet for townhouse units, and 5,000 square feet for the community clubhouse. The community swimming pool was estimated to cost \$500,000.

For the purpose of calculating plumbing permits, each full bath was assumed to have three fixtures and each half bath was assumed to have two fixtures, with each unit assumed to have a sink, dishwasher, washing machine and water heater. Residential units will all have two and one-half baths. Each clubhouse is assumed to have two restrooms, each with six fixtures and each pool area was assumed to have two dressing/shower rooms each with six fixtures, plus the plumbing for the pool. The clubhouse/pool was assumed to be subject to the commercial fee rate.

For the purposes of calculating electrical permits, each residential unit was assumed to have a 200 amp single-phase service. Each clubhouse was assumed to have a 400 amp single-phase service. Temporary services were assumed to be required for every three single-family detached units and for each townhouse block or quadruplex (assumed to be equivalent to four patio homes, if developed).

The clubhouse was assumed to be sprinklered. The cost of each sprinkler system was estimated to be \$1.00 per square foot, based on a recent cost estimate for another development within the region. The entire development will be served by natural gas with one outlet per unit or tenant space.

A water/sewer permit was assumed to be required for each residential unit. The sewer and water meter connection fees, which are paid to the County's sewer utility enterprise fund, were taken from the County Code. It was assumed that the clubhouse would be served by a 1" water meter, with the residential units served by 5/8" meters.

Sign permit fees were as stated in the County Code. Three monument signs between 51 and 100 square feet were assumed for the development: one at each entrance of the proposed development, with four signs assumed for the by-right development. Based on the applicant's concept plan, 33 street signs were assumed, with 46 street signs assumed for the by-right development, based upon the applicant's previous configuration which developed the entire Site.

Development fees included all subdivision fees, site improvement inspection fees; erosion and sediment control fees; and the VSMP fee. It is assumed that the applicant will submit all plans in the County's approved digital format and that plan review fees will, thus, be waived. Fees used were as stated in County's Code (Sec. 7.1-8) or (for VSMP) in the stormwater section of the Code, unless updated on the County's website. Development fees were calculated on data pertaining to the proposed development provided by the applicant and, except for inspection fees, were assumed to be paid prior to the beginning of construction.

One-time revenues also include public improvements that will be constructed or paid for by the applicant for the benefit of the County and donations to the County non-cash donations to the County that have public benefit.

Additionally, the applicant plans to donate a 16 acre public use site that could be used for a future elementary school or for other purposes (see below under “Education capital cost”). This site is relatively flat and will be fully served by utilities and infrastructure. The applicant estimates the value of the site at \$800,000, which is a reasonable estimate. This site could substitute for the Marquis site on which a new elementary school is planned in the County’s *Proposed Capital Improvements Program (CIP)*, which has been found to be inadequate.

The applicant also plans to donate a 52.0946 acre site to the County along Barlow Road, which the applicant had originally intended to develop in residential use. This site could be used by the County as open space or for passive recreation. Conservatively, the value of this property (\$299,100) was estimated using the County’s current per-acre assessment.

The developer has also agreed to provide a water line interconnect to the Skimino Hills neighborhood that will increase water pressure to desired levels at a cost of \$30,000. Both the water system extension and the site donations are counted as avoided cost revenues in the fiscal impact analysis. While they are counted as fiscal revenue, they are not counted as revenue to the County’s general fund.

#### Annual Direct Revenues

Annual direct revenues include: real estate property taxes, personal property taxes, EMS charges, user fees (miscellaneous fees and fines, and the County’s utility consumption tax per household). These taxes are paid directly to the County by households and the Fenton Mill developer during the construction period. They are calculated based upon estimates of the assessed property values, per household personal property taxes adjusted for income status, stated rates and per-household revenues calculated from data in the *Budget*.

The County’s sewer and water fees were included as revenue to the County’s enterprise fund separately in the fiscal impact analysis. A solid waste fee was calculated for Fenton Mill households. The senior citizen discount rate was applied to 10.5% of all households (the percentage of the total County population age 70 and over according to the U.S. Census Bureau).

#### *Real estate property taxes*

York County’s real estate assessment of Fenton Mill was estimated using the applicant’s estimated selling price for each product. As noted above, the average selling price for single-family detached product was assumed to be \$325,000 per unit for 50’ lot homes, \$400,000 for the Wichita lot homes, \$425,000 for 60’ lot homes without views, \$450,000 for 70’ lot homes and \$525,000 for 60’ lot homes with views. The average selling price for the townhouse product was assumed to be \$300,000 per unit.

In order to obtain real estate assessment estimates, these selling prices were adjusted by applying the assessment-to-sale price ratio for York County from the Virginia Department of Taxation's 2018 *Assessment Sales Ratio Study* (the latest available). Residential units were adjusted by multiplying the estimated sale price by the assessment-to-sale ratio for suburban single-family units for York County averaged over the past five years (0.99876). This approach was taken because the latest assessment-to-sales ratio (1.1276) was considerably above previous ratios, which were all less than 1.0.

The clubhouse was assessed at an estimated construction cost of \$89.43 per square foot based upon BuildingJournal.com's online Commercial Cost Estimator. The pool was assumed to be assessed at its construction cost. The clubhouse and pool were assumed to be owned by the developer and, thus, taxable until deeded to a homeowner's association (HOA) at a time determined by the developer. It was assumed to be constructed in FY 2023, becoming taxable in the last quarter of FY 2023. It was projected to be deeded to the HOA in FY 2030, becoming non-taxable for that fiscal year. It was assumed that the by-right development would not contain a clubhouse/pool amenity.

Land was assumed to be assessed at its current rate until developed and sold. Land dedicated in right-of-way was assumed to become non-taxable as infrastructure was put in place as each land bay is developed. Open space was assumed to be deeded to the HOA as determined by the developer. Upon full development, no land would be owned by the developer and all land would be taxed as part of developed property or would be tax-exempt.

At full development, Fenton Mill was estimated to be assessed for a total of \$248,691,200. The by-right development was estimated to be assessed for a total of \$151,012,500.

*Personal property (car) taxes and motor vehicle registration fee*

Personal property taxes were calculated per Fenton Mill household and adjusted for differences in automobile expenditures based on income relative to the County's general population and on age, as well as tenure. The base car tax per vehicle was derived by first calculating the County's total car tax revenue (PPRTA received from the Commonwealth estimated by the County in the *Budget* divided by the percentage [52% in 2020, the latest year available on the County's website] of car tax relief divided by the number of vehicles in the County, obtained from the County's Commissioner of the Revenue).

The County's average car tax paid per vehicle (\$253.57) was adjusted by multiplying this average by a factor calculated by dividing the expected automobile purchase expenditure associated with each unit type's household income (based on selling price) by the expected automobile purchase expenditure for the County's average household income (using ACS 2018 5-year average data adjusted for inflation using the 2018 to 2020 Consumer Price Index (CPI) change to inflate to 2020 dollars). Automobile expenditures per household for various income levels and age groups were derived from the most recent (2018) U.S. Bureau of Labor Statistics Consumer Expenditure Survey (CES). The methodology for estimating income levels for Fenton Mill households is provided under "Additional Revenues Derived from Households," below.

This estimated car tax payment per vehicle for Fenton Mill households was then multiplied by the number of vehicles owned by Fenton Mill households. The average number of vehicles per household for the income level associated with each residential product at the proposed development was first derived from the CES data. This was then adjusted for the difference in vehicle ownership between owner-occupied households in Census tract 510 (the Census tract in which Fenton Mills would be located) and all households in the County.

The number of vehicles per owner occupied household in Census tract 510 (2.24) and the number of vehicles per household for all households in the County (2.18) was derived using ACS data. ACS data was used even though it undercounts the actual number of vehicles owned by households under the assumption that this undercount would apply equally to owner and renter households and, therefore, the relative difference between vehicles per owner-occupied households and all households would not be affected. The expected number of vehicles predicted to be owned by the CES data was then adjusted to take into account the higher number of vehicles per owner-occupied residence in Census tract 510.

Another adjustment to the estimated number of vehicles for each household type was made to take into account the significantly fewer vehicles per household predicted using CES data for the average household income in York County (2.37 vehicles per household) than the number of vehicles per household calculated from data supplied by the Commissioner of the Revenue (2.53 vehicles per household). This adjustment was made by multiplying the calculated number of vehicles per household (derived as described above) by the ratio of the average number of vehicles per household in the County to the number predicted using CES data.

Finally, for each residential product at the proposed development, the estimated number of vehicles per household at the proposed development was multiplied by the estimated personal property tax received per vehicle. This result was multiplied by the number of occupied units for the appropriate residential product.

These calculations can be represented by the formula below and on the following page:

$$PPT = \sum PPT/V_{FM} \times V/HH_{FM} \times HH_{OFM}$$

- Where, PPT = Total personal property tax paid by Fenton Mill residents
- PPT/V<sub>FM</sub> = Personal property tax per vehicle for each unit type at Fenton Mill
- V/HH<sub>FM</sub> = Vehicles per household for each unit type at Fenton Mill and
- HH<sub>OFM</sub> = the number of occupied households for each unit type at Fenton Mill

$$PPT/V_{FM} = PPT/V_Y \times (VPNO_{IFM} / VPNO_{IY})$$

Where,  $PPT/V_Y$  = Average personal property tax per vehicle for all York County households

$VPNO_{IFM}$  = Vehicle purchase net outlay for each Fenton Mill unit type by income level

$VPNO_{IY}$  = Vehicle purchase net outlay for households at mean income for York County

$VPNO_{US}$  = Vehicle purchase net outlay for households

and

$$V/HH_{FM} = V/HH_{IFM} \times (V/HH_{O510} / V/HH_{YACS}) \times (V/HH_{IY} / V/HH_Y)$$

Where  $V/HH_{IFM}$  = Vehicle per household for each Fenton Mill unit type by income level

$V/HH_{O510}$  = the average number of vehicles per household in Census tract 510 reported by the ACS

$V/HH_{YACS}$  = the average number of vehicles per household in York County reported by the ACS

$V/HH_{IY}$  = Vehicle per household for households at mean income for York County from CES data and

$V/HH_Y$  = Vehicles per household in York County from Commissioner of the Revenue data

Motor vehicle registration fees were applied to the number of vehicles per Fenton Mill household as calculated according to the formula for  $V/HH_{FM}$ , above.

#### *User fees and other miscellaneous revenue*

Certain user fees and charges were based on revenues reported in the *Budget* and calculated per household or per household and business. These included civil fines and fees (including parking fees and portions of the Clerk of Court Excess fee, various court fees and charges and various Sheriff fees and charges), criminal fines and forfeitures (including Commonwealth Attorney charges, DNA/blood test fees, jail admission fees and portions of the Clerk of Court Excess fee, various court fees and charges and various Sheriff fees and charges), concealed weapon fees, dog licenses, EMS charges, library fines and charges, parks and recreation fees, and utility consumption fees.

The local share of the communication sales tax was not included as a variable revenue. This is because the remittance of this tax to the County by the Commonwealth is according to a fixed formula that was calculated based upon York County's public school population relative to statewide public school enrollment and, therefore, will not change with the addition of new households.

An adjustment was made for smaller household sizes at Fenton Mill than the average household size in the County. Household sizes are expected to be somewhat smaller at Fenton Mill than the average household size Countywide. ACS 5-year average 2017 data for Census tract 510 showed average household size for owner-occupied dwellings as 2.42 persons per household, as opposed to 2.72 persons per household for all York County dwelling units. It was assumed that Fenton Mill households would be similar to other households in Census tract 510.

This adjustment was made when revenue was deemed to be derived from persons rather than households. Revenue per household (reflecting average County household size) was multiplied by the ratio of Fenton Mill estimated household size to County household size. This was done for all of the revenue sources noted above except dog licenses and utility consumption fees.

Additionally, some of the revenue sources noted above collect revenue from both households and businesses while others collect revenue from households only. The methodology for distributing revenues between households and businesses is described under “Cost Calculations,” below. Revenues collected from households only were concealed weapons fees, dog licenses, criminal justice revenues related to persons (Commonwealth Attorney charges, court appointed attorney fees, and jail admission fees), library fines and charges, and parks and recreation fees. Although business owners or employees may hold concealed weapons permits, they were assumed to obtain them in their locality of residence.

Table A-1, on the following page, details the County’s variable revenues, other than those derived from the direct levy of taxes on the development, revenues applied to the reduction of County costs (see the discussion below under “Cost Calculations”) and revenues derived from spending by Fenton Mill households.

#### *Enterprise fund revenues*

For the enterprise fund impact analysis, bi-monthly sewer fees and monthly solid waste fees that are received by the County as part of enterprise funds were calculated at rates stated on the County’s website. The calculation of fees based on the senior solid waste fee discount is explained above at the beginning of this section.

#### *Additional Revenues Generated by Households*

Tax revenues generated by households are estimates of taxes paid by York County businesses due to purchases made by Fenton Mill residents. Purchases by Fenton Mill residents are estimated based upon their projected spending patterns. These spending patterns were estimated using CES data. Spending per household was obtained by income level and age of head of household.

<b>Table A-1</b>		
<b>York County Non-Direct Revenues from Households</b>		
Item	Revenue	Revenue per Household
Clerk of Court Excess Fee	\$ 105,000	\$ 3.36
Commonwealth Attorney Charges	\$ 6,000	\$ 0.20
Concealed Weapon Fees	\$ 20,000	\$ 0.68
Court Fines, Courthouse		
Assessment, Court Security Fees	\$ 330,000	\$10.55
DNA/Blood Test Fee	\$ 1,000	\$ 0.03
Dog License Fees	\$ 20,000	\$ 0.76
EMS Fees	\$1,400,000	\$44.74
Jail Admission Fee	\$ 9,000	\$ 0.30
Library Fines and Charges	\$ 35,000	\$ 1.19
Parking Fines	\$ 4,000	\$ 0.13
Parks and Recreation Fees**	\$ 425,000	\$14.40
Senior Activity Fees	\$ 16,000	\$ 0.00
Sheriff Fees and Charges	\$ 168,000	\$ 5.37
Utility Consumption Tax	\$ 240,000	\$ 8.62
<b>Total</b>	<b>\$2,779,000</b>	<b>\$90.33</b>

Revenue rounded to the nearest \$50

Household incomes for Fenton Mills households were estimated based upon the projected sale price of residential units. A housing price-to-income ratio of 4-to-1 was assumed, based on recent conversations with area mortgage brokers. The proposed development's household incomes were, thus, estimated by dividing average unit sale prices by 4.0. This resulted in an average income estimate of about \$92,700. Table A-2 below, shows estimated average household income for each Fenton Mill residential product type.

<b>Table A-2</b>	
<b>Fenton Mill Estimated Average Household Incomes</b>	
Residential Product Type	Average Household Income
Single-family detached, 50' lot	\$ 81,250
Single-family detached, 60' lot, no view	\$106,250
Single-family detached, 60' lot, with view	\$131,250
Single-family detached, 70' lot	\$112,500
Single-family detached Wichita lot	\$100,000
Townhouse	\$ 75,000
Weighted Average	\$105,100

Spending was estimated for food at home (grocery spending), food away from home, other retail, and personal and other services. Food away from home was used to calculate meals tax revenue. Spending estimates per household were then adjusted to subtract spending that is predicted to occur outside York County so that only taxes associated with household spending that are new to the County are counted in the fiscal impact analysis. Normally, spending retained in a locality by its residents is assumed to be the inverse of retail leakage.

However, due to spending by tourists and the influx of shoppers from James City County and Williamsburg to certain big-box stores located in York County, the standard model for calculating leakage of retail spending does not work for the County. Building material, general merchandise and food and beverage establishments are particularly vulnerable to overestimation of spending in York by County residents. Also, grocery spending, as well, as spending at restaurants, is likely to spill over into neighboring jurisdictions as shoppers seek convenience and variety when making their shopping decisions. This is particularly true of Fenton Mill since the Site is located relatively close to James City County. Therefore, rather than a retail leakage model, a retail shopping gradient model was used to estimate the retention of Fenton Mill residents' retail spending in York County.

The gradient model, briefly described, plots retail locations and their distances from the subject development. All other things held equal, it is assumed that shoppers are less likely to patronize competing retail outlets the farther the distance from their residence. Distance is measured in driving time and the propensity to shop at a given location is calculated as the reciprocal of the distance in minutes, with 1 minute given a weight of 1, 2 minutes a weight of 0.5, 3 minutes a weight of 0.33 and so on. Only the closest same store location is mapped and stores at which residents are unlikely to shop are either excluded or given a lower weight. Distance weighted scores are disaggregated by locality and summed for the host locality and all other localities. The sum of the host locality score divided by the sum of all distance weighted scores is the best estimate of the percentage of spending retained in the host locality. Gradient models were developed for grocery spending, food away from home, and shoppers' goods.

A driving distance of about ten minutes from the Site was assumed to be viable for grocery shopping. Additionally, Fenton Mill residents were also assumed to shop at the Whole Foods in Newport News and the Costco and Sam's Club buying clubs there. Seven grocery stores were identified within Fenton Mill shopping area. Only one—Wal-Mart on E. Rochambeau Drive—is located in York County. The other six, are located in James City County. These are: Harris Teeter in Lightfoot; Food Lion at Williamsburg Premium Outlets; Farm Fresh in Norge; and Fresh Market, Publix and Trader Joe's near New Town. Kroger on Ironbound Road was not included as it was 11 minutes from the Site and similar in enough in market appeal to Harris Teeter and Publix that Fenton Mill residents were assumed to shop at one of those closer stores. Also, the distance gradient scores for Sam's Club and Costco were averaged, as it was assumed that Fenton Mill households would shop at one or the other of these buying clubs. The distance weighting methodology yielded an estimate of 20.39% of spending on food at home, ABC and tobacco expenditures from Fenton Mill households remaining in the County.

Dining establishments were divided into fast food, family style and QSR/casual dining, and fine dining categories. Fast food establishments were plotted within a 10 minute drive time but only the closest brand franchise was counted. No fast food establishment was more than six minutes away from the Site. For food away from home, QSR/casual dining, buffet and family style restaurant establishments were plotted within a 15 minute drive time, although at more than a 10 minute drive time establishments without a popular or unique appeal were eliminated. Fine dining restaurants were plotted within a 20 minute drive time from the Site. Eight of ten fast food establishments identified were located in York County. However, only 6 of the 38 mid-line restaurants identified were located in York County. No fine dining restaurants within the market area were located in York County.

The three categories of dining establishments were weighted according to frequency of use. It was assumed that 30% of food away from home spending was at fast food restaurants, 50% was at mid-line restaurants, and 20% was at fine dining restaurants. The distance weighting methodology yielded an estimated 33% of food and beverage spending away from home by Fenton Mill households remaining in the County. Thus, 33% of Fenton Mill household food away from home spending would generate new tax revenue for the County.

Shopping goods locations were plotted over a radius that included the farthest retail node or mall with a unique store likely to be patronized by Fenton Mill residents, but not greater than 30 minutes drive time from the Site. Five retail centers were identified as destinations for shopping goods purchases—Lightfoot (Wal-Mart, Ross Dress for Less, and Lowe's/Home Depot), Williamsburg Premium Outlets, the Marquis Center (Kohl's, Best Buy, Target, Dick's Sporting Goods), the New Town area (Barnes & Noble, Bed Bath Beyond, Office Depot and Petco/Petsmart), and the Patrick Henry retail area (Dillard's, J.C. Penney, Macy's, and Costco/Sam's Club).

Lightfoot and the Marquis Center are located in York County. Lightfoot is the closest retail center to Fenton Mill. Each location was weighted by the number of unique anchor tenants located there, with Lowe's/Home Depot, Petco/PetSmart and Costco/Sam's Club each counted as one anchor and the Premium Outlets given a weight of 2. Various methods were used to weight the distance gradient and these results were averaged. This distance gradient model calculated that 47.92% of shopper's goods purchases by Fenton Mill residents would take place in York County. This is a conservative estimate, as it does not include online shopping by Fenton Mill residents, for which all of the local sales tax collected would be remitted to York County.

It was estimated that 45% of all non-food retail spending would be for shopping goods, with the remaining 55% spent on convenience goods. Spending on convenience goods was assumed to follow closely the consumer spending patterns for grocery shopping, as stores selling convenience goods tend to cluster around grocery anchors or be located in strip commercial shopping areas near grocery-anchored shopping centers (this pattern was also assumed to be true for personal and other services). Therefore, the propensity to shop for shopping goods in York County was applied to 45% of all non-food retail spending and the propensity to shop for grocery items in York County was applied to 55% of all non-food retail spending. This resulted in 32.78% of spending on other retail by Fenton Mill households occurring in York County.

No movie theaters are located in York County and no admissions tax is levied by the County.

### Cost Calculations

Costs were calculated for variable operating costs of government per household, general government capital costs, education operating costs per student, and education capital costs. Cost data and assumptions were derived from the *Budgets*.

Per household variable costs were calculated for various budget line items. State revenues supporting various budget line items were deducted to leave only the County's operating cost. Certain government functions, such as social services, that would not serve Fenton Mill population were not included in the calculations of cost per household.

Water lines are maintained by Newport News Waterworks and the County will incur no water line maintenance costs. Sewer lines will be extended within the Site (25,700 linear feet) and also from the Site to a nearby pump station (5,900 linear feet). While little maintenance is expected to be needed on the new sewer lines, sewer maintenance costs were conservatively deemed to occur after the sewer system is fully accepted by the County, with the line connecting to the pump station accepted after the initial infrastructure is put in place. Fenton Mill will be served by on Site stormwater infrastructure in accordance with current regulations. Therefore, variable costs associated with stormwater maintenance were not included as costs to the County attributable to Fenton Mill.

Chief executive and legislative functions, as well as certain special purpose functions, which would be performed regardless of population size, were not included in the calculations. With regard to administrative support services, only that percentage proportional to the variable cost share of all costs was included in the calculations.

When calculating the variable cost of public services, some public services are consumed by households only and some public services are consumed by households and businesses (i.e., recreational services would be assigned completely to households, since businesses do not directly consume these services). For those public services that serve businesses and households, the costs generated by businesses and the costs generated by households must be distinguished.

Per household and per business variable operating costs were determined in the following manner. Business establishments and households were considered to be equal from the standpoint of generating public service costs, when both households and business establishments consumed those services.

A percentage of each service shared by households and businesses was allocated to households or businesses according to the formula on the below.

$$\begin{aligned} \% \text{ allocated to households} &= \# \text{ households} / [\# \text{ households} + \# \text{ businesses}] \\ \% \text{ allocated to business} &= \# \text{ businesses} / [\# \text{ households} + \# \text{ businesses}] \end{aligned}$$

Per household costs were then determined according to the following formula:

$$\begin{aligned} \text{Expenditure per household} &= \\ &[\text{Expenditure}] \times [\% \text{ allocated to households}] / \# \text{ of households} \end{aligned}$$

Per business costs would be determined according to the following formula:

$$\begin{aligned} \text{Expenditure per business} &= \\ &[\text{Expenditure}] \times [\% \text{ allocated to business}] / \# \text{ of businesses} \end{aligned}$$

Governmental functions with variable costs that serve both households and businesses were:

- civil justice (Clerk of Circuit Court, General District Court and Sheriff), since civil suits are engaged in by businesses as well as persons
- Commissioner of the Revenue and Treasurer (both businesses and households are taxed)
- E-911 Operations, and the Emergency Services component of Fire & Rescue (response events occur at businesses and households)
- Fiscal Accounting, Human Resources and Purchasing (which support all County governmental functions) and
- Sheriff protective services.

Government functions for which Fenton Mill population would generate no significant demands but would otherwise generate variable costs were then excluded. These included those function shown below:

- Children and Family Services Fund
- Community Services Special Programs
- Health Services
- Housing Rental Assistance
- Housing Rehabilitation
- Social Services and
- Water and Sewer Extension (to be provided by the developer)

Government functions that would be performed regardless of population size were excluded. These functions are listed below:

- the chief executive and legislative functions of the County
- Budget and Accounting and Financial Services
- Capital Outlay
- Central Insurance
- Colonial Behavioral Health Contribution
- Colonial Group Home Commission
- Community Development Authority Fund
- Community Services Administration
- Computer Support
- County Attorney
- County Capital Fund
- Debt Service
- Economic Development
- Electoral Board
- Emergency Management
- Environmental/Development Regulation (Building Regulation, BOZA, Compliance, Wetlands)
- Finance Administration
- Fire & Rescue Administration, Technical Services & Special Operations and Prevention
- General Services (including Building Maintenance)
- Housing Administration
- Human Services Payments to Outside Agencies
- Law Library
- Litter Control
- Mosquito Control
- Non-departmental
- Planning
- Public Information and Community Services
- Public Transportation
- Regional Radio Project Fund
- Sheriff General Operations
- Sewer Utility Fund
- Solid Waste Management Fund
- Stormwater Management and Stormwater Management Fund
- Tourism and Tourism Fund
- Video Services
- Water Utility Fund
- Yorktown Capital Improvements
- Yorktown Operations Fund

Various adjustments were made to expenditure line items to arrive at the County's variable cost of providing public services. First, fixed costs were removed from budget line items. This included costs for senior and middle management personnel (essentially department heads and assistant department heads), as well as some specialized positions filled by only one employee. Employee positions and salaries were identified using the County's October 1, 2019 *Pay and Classification Schedule*. (This was the latest schedule available at the time that research was conducted on County costs.) Salaries were assumed to be the midpoint (average) between the entry level and maximum pay for the relevant position. While it is recognized that individual salaries are likely to be either above or below the midpoint, it was assumed that these differences would average out to or close to the midpoint over the total number of positions identified as "excluded positions." Fringe benefits for excluded positions were estimated to be 30% of salaries.

Certain other expenses which had been detailed line items in past County budgets were estimated using current budget categories. "Other expenses" was assumed to contain such variable costs as printing and postage and was counted fully as a variable cost, as was the "materials and supplies" category. "Contractual services" and "capital outlay" were assumed to contain fixed cost expenses in most instances. The "internal services" category within departmental budgets was not counted as these charges were calculated separately (see below).

Certain assumptions and adjustments were made for various departments. For the General Registrar, the Registrar's salary was assumed to be 50% higher than that of the Chief Assistant Registrar. In the Sheriff's Office, seven Sheriff's Deputies were assumed to be needed to provide courtroom security (based on data from the Virginia Compensation Board) and were considered excluded positions. For Animal Control, Fire and Rescue, and Sheriff Law Enforcement one-third of internal services charges were assumed to be for vehicle maintenance that is above the normal variable cost of vehicle maintenance reflected in the Vehicle Maintenance line item and were counted as a variable cost (more discussion of Fire and Rescue variable costs is provided below). For Parks and Recreation, 50% of variable costs were assigned to park and facility maintenance, which must be performed regardless of variations in use and, thus, were excluded as a fixed cost.

Fire protection, as opposed to EMS services, was deemed to be largely a fixed cost, except for the cost of materials and supplies, and transportation. This is because the personnel cost of fire response is a function of latent demand. Firefighters must be available 24/7 to respond to relatively infrequent calls for fire suppression regardless of the number of fires. While fire stations are limited in the number of building units that can be served, this limitation is largely a function of response time rather than the number of units within a geographic area (within certain density limits). It is presumed that Fire Station #5, which will serve Fenton Mill, has enough latent demand capacity that no new firefighting equipment or crews will be needed in order to serve Fenton Mill.

Conservatively, 50% of variable personnel costs, after deducting the salaries and fringe benefits of battalion chiefs was assumed to apply to EMS functions, which were considered to be more variable than the fire response function with respect to latent demand. Although an argument could be made that all Fire and Rescue personnel costs can be attributed to latent demand and, therefore, fixed, EMS costs were deemed to be variable. Material costs, other charges and one-third of internal services costs were then added to personnel costs to obtain an estimate for Fire and Rescue variable costs applicable to businesses and general market households.

For the Electoral Board, the household size adjustment for smaller households at Fenton Mill was calculated based upon the ratio of the Fenton Mill average adult household size to the average adult household size for all York County households. The average number of adults (i.e., potential voters) was assumed to equal the average number of adults per household in Census tract 510. This was computed to be 1.65 adults per household.

It was assumed that all households with more than two persons in the County, except single parent households, had two potential voters. The number of single-parent households was estimated from 2010 Census data (the latest available) by calculating single parent households as a percentage of all households with two or more persons. These were then assumed to represent households with only one potential voter. The ratio of the adults per household in Census tract 510 to the calculated adult household size Countywide (1.74 persons per household) was then used to adjust the variable General Registrar cost per household for Fenton Mill residents.

With respect to the Domestic Violence Program, the cost per household was multiplied by the ratio of the percentage of Fenton Mill households with two adults present and the percentage of all York County households with two adults present. Using ACS data, this was determined to be 0.8761 (so that the variable Domestic Violence Program cost per household was multiplied by 87.61% to obtain the estimated cost for Fenton Mill households. This reduction was also applied to the Juvenile and Domestic Court variable costs except that the two-adult ratio was applied only to that portion of costs attributed to domestic cases.

The Sheriff's department activities were divided into three components—law enforcement, investigation and civil operations/court security. With respect to law enforcement, it was assumed, based upon court case data from the prior *Budget*, that 25% of the Sheriff law enforcement workload was traffic violation related. Of the remaining workload, it was assumed, lacking any data on the matter, that half of law enforcement activity involved patrol and active engagement with criminal activity and the other half involved police call responses. As stated above, the personnel costs for seven Sheriff's deputies were subtracted from the civil operations/court security component and no further adjustment was made to disaggregate court security expenses.

Certain administrative support functions, shown in the *Budget* as an internal cost line item but also in the Internal Service Funds budget, are substantially fixed costs (since they must be provided) but have a variable cost component (since they serve County functions that incur variable costs from household growth). This variable cost component for County functions serving households was calculated to be 30.86% of the costs for these support functions, with this percentage applied to the internal services functions' variable costs only. The variable cost percentage was calculated dividing variable cost personnel costs for those functions serving households only by all personnel costs in the County General Fund budget. These administrative support functions are: Central Purchasing, Fiscal Accounting, Health Insurance, Human Resources, Radio Maintenance, Vehicle Maintenance and Workers Compensation.

Next, revenues from the Commonwealth and certain other sources were deducted to leave only the County's locally funded operating costs. This procedure was applied to the functions listed below:

- Clerk of Circuit Court
- Commissioner of the Revenue
- Commonwealth Attorney
- Domestic Violence Program
- E-911
- Library
- Sheriff
- Treasurer and
- Victim Witness Program.

Revenues deducted from these functions included grants and Poquoson and Williamsburg contributions to E-911, and Williamsburg public safety contributions. It should be noted that the *Budget* identifies other revenues supplementing local costs that were deemed to be variable revenues (revenues that would change with increases or decreases in households and businesses). These variable revenues were not deducted from costs but were, instead, treated as revenues (see above under "User fees and other miscellaneous revenues").

When revenues were deducted from costs, the reduction in cost was distributed among fixed and variable costs. Only that portion of revenues defraying costs assigned to variable costs was actually deducted from costs. The formula for distributing revenues and calculating costs is displayed below:

$$NVC = VC - (R*(VC/TC))$$

Where NVC = Net Variable Costs (variable costs after revenue is deducted)

VC = Variable Costs (prior to revenue deduction)

R = Revenue

TC = Total Cost (variable and fixed costs)

Finally, adjustments were made to reflect lower demand for certain services based on smaller household sizes at Fenton Mill. This was done by multiplying the County’s variable cost per household by the ratio of the average household size for Fenton Mill households to the average household size for all households in York County. Calculations for average household size at Fenton Mill have been described above.

Line items whose per household costs were adjusted for lower demand due to smaller household sizes are listed below:

- Adult criminal justice functions
- Emergency Communications/E-911
- Fire & Rescue EMS
- Library
- Parks & Recreation

Table A-3 on the following pages details the County’s variable cost expenditures per household. The variable cost for certain functions was calculated based on units of measure other than households. These were the cost of real estate assessments, sewer line maintenance and solid waste management. Variable costs associated with the County’s Real Estate Assessor were calculated on a per-parcel basis as \$21.08 per assessed parcel.

Billing for sewer charges was assumed to be handled by either the Hampton Roads Sanitation District or Newport News Waterworks with no identifiable cost incurred by the County. The cost of sewer line maintenance was calculated per linear foot of existing sewer line. The cost of solid waste management was calculated per customer. Table 4, below, shows the calculated variable cost and the cost per service unit for each function. Metrics for these service units were obtained from County staff.

<b>Table A-4 York County Non-School Expenditures per Service Unit Other Than Household Fiscal Year 2020 Adopted Annual Budget</b>			
Item	Variable Cost Expenditure	Expenditure per Service Unit	Service Unit
Real Estate Assessment	\$ 558,800	\$ 21.08	Parcel
Sewer Line Maintenance	\$3,338,175	\$ 2.24	Linear foot
Solid Waste Management	\$5,431,300	\$309.62	Customer

**Table A-3  
York County Non-School Expenditures per Household  
Fiscal Year 2020 Adopted Annual Budget**

Item	Variable Cost Expenditure	Expenditure per Fenton Mill Household	Notes
Adult Corrections	\$ 2,456,175	\$ 83.23	Adjusted for household size
Animal Control	\$ 361,125	\$ 13.75	
Central Purchasing	\$ 311,600	\$ 3.45	30.86%/26.59% variable cost
Circuit Court	\$ 33,575	\$ 1.07	
Clerk of Circuit Court	\$ 522,850	\$ 16.71	Excludes costs paid by Commonwealth; adjusted for household size..
Commissioner of the Revenue	\$ 804,550	\$ 28.90	Excludes costs paid by Commonwealth.
Commonwealth Attorney	\$ 611,675	\$ 19.55	Excludes costs paid by Commonwealth; adjusted for household size..
Domestic Violence Program	\$ 24,475	\$ 0.82	Adjusted for % of 2-person households
Emergency Communications/911	\$ 1,807,050	\$ 57.74	Excludes intergovernmental revenue.
Fire and Rescue	\$ 5,756,125	\$183.94	Adjusted for household size;
Fiscal Accounting	\$ 472,925	\$ 5.24	30.86%/26.59% variable cost
General District Court	\$ 9,625	\$ 0.31	No personnel costs; adjusted for household size Excludes costs paid by Commonwealth; adjusted for number of adults in household
General Registrar	\$ 127,875	\$ 4.62	
Health Insurance	\$12,167,700	\$134.86	30.86%/26.59% variable cost
Human Resources	\$ 593,325	\$ 6.58	30.86%/26.59% variable cost
Juvenile & Domestic Relations Court	\$ 15,300	\$ 0.50	No personnel costs. Adjusted for 2-person HH size.
Juvenile Corrections	\$ 357,350	\$ 12.11	Adjusted for household size
Library	\$ 2,063,925	\$ 69.94	Adjusted for household size.
Magistrate	\$ 775	\$ 0.03	
Parks & Recreation Operations	\$ 772,850	\$ 26.19	Excludes administration; 50% reduction for parks; adjusted for household size
Radio Maintenance	\$ 1,274,100	\$ 14.12	30.86%/26.59% variable cost
Sheriff: Civil Operations, Investigations, Law Enforcement	\$ 6,125,325	\$202.49	Excludes costs paid by Commonwealth; adjusted for household size
Treasurer	\$ 626,925	\$ 22.52	Excludes costs paid by Commonwealth
Vehicle Maintenance	\$ 2,794,200	\$ 30.97	30.86%/26.59% variable cost
Victim-Witness Program	\$ 118,650	\$ 4.02	Excludes costs paid by state grant. Adjusted for household size
Workers Compensation	\$ 176,800	\$ 1.96	30.86%/26.59% variable cost
<b>Total</b>	<b>\$40,386,850</b>	<b>\$945.62</b>	

Rounded to the nearest \$25

*General government capital costs.* The County is expected to incur no new capital infrastructure costs as a result of the proposed development. The developer will construct all infrastructure necessary to serve Fenton Mill, including roads, water lines, sewer lines and stormwater infrastructure. Fire and Rescue services are presumed adequate to serve Fenton Mill, with no new vehicles or equipment needed to be purchased. The County would incur capital costs due to providing additional Sheriff currently patrols to serve the Site. Currently, there is on Sheriff patrol deputy for every 469 households in the County. With the addition of 592 new households, it is assumed that the County would add one Sheriff's patrol to serve Fenton Mill. The remaining 123 households are only about one-fourth of the warrant for a new Sheriff patrol deputy and this was not deemed enough to induce the County to hire another patrol officer. The operating costs associated with the additional patrol is accounted for in the variable operating cost analysis (see above).

To add the new patrol, the County would purchase one patrol vehicle and incur a one-time officer equipment and training cost. Based upon data supplied by the County's Sheriff in 2014, updated for inflation, the cost in 2020 of hiring a new patrol officer was estimated to be \$110,000. Based upon more recent data from another Virginia locality, the cost of a patrol vehicle was estimated to be \$40,000. Vehicles were assumed to be replaced very five years. The new officer was assumed to be hired after 400 housing units were occupied. Since a by-right development would produce almost 62% of a warrant for an additional patrol officer, a new officer with the attendant capital expense was assumed to be hired when the by-right development was built out.

*Education costs* were estimated separately from other public service costs of local government. Education costs were calculated on a per pupil basis. The York County Public School population for the 2019-20 school year (12,978 full time students) was obtained from Virginia Department of Education (VDOE) *Fall Membership* website. Cost data and assumptions for school operating costs were derived from the school *Budget*.

Costs for functions that must be provided and are not affected by relatively small changes in student population were excluded from the calculation of variable costs. These included the administrative functions and functions staffed with only a single position, whether systemwide or at individual schools. However, student service functions for which staff resources were distributed systemwide or over a number of schools (such as social work services) were included as variable cost components, since fluctuations in student population would affect staffing levels. However, this does not include administrative and other functions that would not increase with student population.

Those functions excluded from the variable cost calculations are listed on the following page.

- Alternative Education
- Capital projects
- Communication services
- Contingency
- Curriculum Development
- Executive administration (including School board)
- Grounds services
- Interscholastic sports [VHSL/Interscholastic activities (athletics)]
- Operations management; maintenance
- Principals
- Technology administration, operations & maintenance, grants
- Technology support
- Transportation management
- Vehicle services
- Warehouse

Additionally, adult education was excluded from the variable cost calculation because, based on income level, it would be highly unlikely that residents of the Fenton Mill would be pursuing their GED. Pre-school costs were also excluded since eligibility for pre-school enrollment is income-tested and Fenton Mill residents would not qualify for this program.

Other functions were entirely self-funded by program income or state and/or federal grants. The costs of these programs were excluded from the calculation of per-student costs. These programs were:

- DODEA grants
- Food services
- Title I
- Title IIA
- Title IIIA
- Title IVA
- Title VIB
- Miscellaneous Programs

There were also certain functions for which staffing met the fixed cost criteria but which contained some variable cost component, such as special materials. Those functions falling into this category are listed below:

- Elementary school guidance
- Elementary and middle school art, music and PE
- Health services, except occupational and physical therapists
- High school consumer science, marketing, NJROTC and TV communications
- Media services
- School of the Arts, elementary and middle school grades

Certain fixed costs were then deducted from the budgeted amounts of those remaining functions that were deemed to create variable costs.

Typical line item fixed costs included:

- Administrative and supervisory personnel
- Capital outlays
- Contractual services, except for Governor's School
- Dues and subscriptions
- Furniture and equipment (except replacement)
- Leases and rentals
- Purchased services (except in Special Education and to New Horizons)
- Software and
- VRS debt retirement

Certain assumptions were made with regard to the distribution of staff across fixed cost and variable cost activities for operations and maintenance (building services) and pupil transportation (vehicle maintenance services). For building services it was assumed that 25% of janitorial work could be related to demand placed by a school's student population. All other work would need to be performed regardless of fluctuations in a school's population. Therefore, 25% of janitorial service personnel salaries and fringes and of janitorial materials and supplies were counted as variable costs. Water and sewer charges were assumed to be variable based on student demand but 25% of this cost was assumed to be for cleaning that would occur regardless of student population.

Transportation vehicle maintenance has an eight-person staff. It was estimated that, for a minimum size bus fleet, two mechanics would be required. Therefore two-eighths (one quarter) of the personnel cost for this function was deemed a fixed cost.

Certain functions, though administrative, support both fixed and variable cost activities, with the cost of providing these functions being sensitive to increases in variable costs. These support functions include: fiscal services and human resources. As with other functions, typical fixed costs were deducted from the function's total cost to leave only variable costs. These variable costs were then distributed between the fixed cost and the variable cost functions they support. In order to calculate this distribution, the total amount of variable costs in the *Proposed Annual Budget* (excluding these support functions) was divided into the total budget. The variable cost for each support function was multiplied by the resulting percentage (66.19%) of variable costs within the budget.

Health and dental insurance costs are accounted for in a separate fund are distributed to functional costs in the general operating fund through budget transfers. Approximately 14.33% of the Health and Dental Insurance Fund is funded through employee contributions, which represents a source of non-County revenue. Consequently, the value of employee contributions was deducted from health insurance fringe benefit costs for variable cost positions in the *Budget*.

Next, categorical revenues received from state, federal and other sources were deducted from functional line item variable costs. When the functional line item contained both fixed and variable costs, a portion of categorical revenue proportional to the percentage of fixed costs was deducted from these categorical revenues.

The general formula for computing this deduction is shown below:

$$CR_{var} = CR \times VC/TC$$

Where  $CR_{var}$  = Variable categorical revenues  
 CR = Total categorical revenues  
 VC = Variable costs and  
 TC = Total costs

Functional line item costs from which categorical revenues were subtracted and those categorical revenues are shown in Table A-5 below. Categorical revenue shown in Table A-5 is from the Commonwealth, unless otherwise indicated. Federal categorical revenues completely fund programs that are separate cost centers in the *Annual Budget* except for NJROTC.

<b>Table A-5</b>	
<b>Line Item Functions Receiving Categorical Revenue</b>	
<b>York County Schools</b>	
Function	Categorical Revenues
All instructional programs	K-3 initiative; VRS retirement, social security and group life contributions
Special education	Special education SOQ; special education support
Gifted and talented	Gifted education - SOQ
Homebound	Homebound contribution
Limited English Proficiency	LEP contribution
NJROTC	Federal NJROTC grant
Reading	Early reading intervention
Summer school	Remedial summer school contribution; Summer school tuition (local program income)
Technology instruction	Technology initiative
Textbooks	Textbook funding
Virtual High School	Virtual high school tuition (local program income)
Vocational education	Voc-Ed SOQ; Voc-Ed contribution

Source *York County School Division Fiscal Year 2020 Approved Annual Budget*

The Commonwealth contribution to VRS retirement, social security and group life contributions from the Commonwealth was proportionally distributed as categorical revenue among teachers in variable cost positions and teachers in fixed cost positions.

After deducting categorical revenue, these variable costs were then distributed among local funding and other funding sources. In order to calculate this percentage, non-categorical funding from all sources was summed.

Funding sources were:

- Commonwealth
  - Basic Aid
  - Local sales tax remittance
  - At risk program funding
  - Compensation supplement
  - Comprehensive services contribution
  - Foster home children funding
  - National board certification
  - Project graduation funding
  - Remedial programs funding
  - SOL Algebra contribution and
  - Supplementary lottery
- Federal government
  - Impact aid
- Local/program income
  - County appropriation
  - Day school tuition
  - Pupil fees
  - Revenue stabilization fund and
  - Miscellaneous school system revenue.

All program income was assumed to be available for operating budget expenses.

Certain revenues were excluded from the calculation of the County's share of education expenses. These include revenues that are earmarked for functions that are not relevant to the student population generated by Fenton Mill and other functional categories that were excluded from the fiscal impact analysis, including program revenue that fully funds various cost centers. Excluded revenues include those shown below:

- Commonwealth
  - Pre-school initiative
  - Miscellaneous grants
- Federal government
  - DODEA grants
  - Medicaid reimbursement
  - Miscellaneous grants
  - Titles 1A, IIA, IIIA and IVA and
  - Title VIB special education funding

The Food Service Fund was also excluded from the calculations, since this is completely self-funded. The Health and Dental Expenditures Fund was excluded (except for employee contribution revenue) to avoid double counting. The Capital Projects Fund was also excluded since it supports fixed costs.

The local share of variable costs was calculated by dividing local source revenue by total revenue, excluding categorical and excluded revenues. Local source revenue was composed of County operating fund appropriations. Total revenue included local source, local program income, Commonwealth non-categorical revenue and federal non-categorical revenue. Categorical revenue was excluded from the calculation because this was subtracted when calculating variable costs.

Table A-6 below shows the data for these calculations as well as total amounts of categorical revenues provided by state, federal and program income.

<b>Table A-6</b>		
<b>Sources of Non-categorical and Categorical Funding</b>		
Source of Funding	Non-categorical Funding	Total Categorical/ Excluded Funding
York County	\$ 54,802,450	
Commonwealth of Virginia	\$ 58,228,325	\$ 15,349,400
Federal government	\$ 9,157,400	\$ 5,179,550
Program income, other local	\$ 721,200	\$ 2,306,250
<b>Total</b>	<b>\$122,909,375</b>	<b>\$22,835,200</b>
Percent York County Funding	44.59%	

Rounded to the nearest \$25

Source *The York County School Division Fiscal Year 2020 Approved Annual Budget*

This calculated local share of variable costs, after subtracting that portion of categorical revenue assigned to variable costs, was then divided by the number of students within the school system to yield the variable cost to the County per each additional student.

The general formula for calculating York County’s variable student cost is shown below.

$$SVC_{YC} = \sum(\{[TC_n - FC_n - (CR_n \times (TC_n - FC_n) / TC_n)] * (YC_{ncr} / TC_{ncr})\} / S)$$

Where,  $SVC_{YC}$  = York County Variable Cost per Student

$TC_n$  = Total Cost of cost center line item

$FC_n$  = Fixed Cost of cost center line item

$CR_n$  = Categorical Revenue funding cost center line item

$YC_{ncr}$  = York County Non-categorical Revenue funding

$TC_{ncr}$  = Total Non-categorical Revenue funding and

$S$  = Number of students enrolled

Per-student variable operating costs to York County are detailed in Table A-7 on the following page.

**Table A-7  
York County Variable Cost of Operations per Student**

Item	Budgeted Variable Costs	Categorical Revenue attributed to Variable Costs	Variable Costs (less Categorical Revenue)	Variable Cost Per Student	County Cost per Student (44.59%)
General Classroom Instruction	\$53,499,350	\$ 4,756,975	\$48,742,375	\$3,755.77	\$1,674.61
Building Services	\$ 1,213,625	\$ 0	\$ 1,213,625	\$ 93.51	\$ 41.70
Career-Technical	\$ 2,242,900	\$ 396,450	\$ 1,846,450	\$ 142.28	\$ 63.44
Encore (Middle School)	\$ 2,260,675	\$ 224,425	\$ 2,036,250	\$ 156.90	\$ 69.96
Fiscal Services (66.19%)	\$ 622,150	\$ 0	\$ 622,150	\$ 48.71	\$ 21.72
Gifted	\$ 447,550	\$ 401,100	\$ 46,450	\$ 3.58	\$ 1.60
Guidance	\$ 3,485,525	\$ 303,100	\$ 3,182,425	\$ 245.22	\$ 109.34
Governor's School (H.S. contractual services)	\$ 425,825	\$ 0	\$ 425,825	\$ 32.81	\$ 14.63
Health Services	\$ 667,575	\$ 0	\$ 667,575	\$ 52.98	\$ 23.62
Homebound	\$ 76,725	\$ 28,150	\$ 48,575	\$ 3.74	\$ 1.67
H.S. Art, Drama, Music	\$ 1,669,300	\$ 168,975	\$ 1,500,325	\$ 115.61	\$ 51.55
Elem/M.S. Art, Music, PE; H.S. Consumer Sci, Marketing, NJROTC, TV Communication	\$ 66,650	\$ 125	\$ 66,525	\$ 5.13	\$ 2.29
Human Resources (66.19%)	\$ 446,700	\$ 425,825	\$ 446,700	\$ 34.42	\$ 15.35
Limited English Proficiency	\$ 986,625	\$ 390,600	\$ 596,025	\$ 45.93	\$ 20.48
Media Services	\$ 298,425	\$ 0	\$ 298,425	\$ 23.00	\$ 10.25
Psychological Services	\$ 806,950	\$ 0	\$ 806,950	\$ 62.18	\$ 27.72
Reading	\$ 1,818,775	\$ 249,625	\$ 1,569,150	\$ 120.91	\$ 53.91
School of the Arts	\$ 486,300	\$ 44,150	\$ 442,150	\$ 34.07	\$ 15.19
Social Work Services	\$ 216,675	\$ 0	\$ 216,675	\$ 16.70	\$ 7.44
Special Education	\$13,772,675	\$ 5,768,325	\$ 8,004,350	\$ 616.76	\$ 275.00
Speech Services	\$ 942,050	\$ 0	\$ 942,050	\$ 72.59	\$ 32.37
Summer School	\$ 198,075	\$ 185,000	\$ 13,075	\$ 1.01	\$ 0.45
Technology Instruction	\$ 2,454,275	\$ 681,950	\$ 1,772,325	\$ 136.56	\$ 60.89
Textbooks	\$ 727,625	\$ 807,750	\$ (80,050)	\$ (6.17)	\$ (2.75)
Vehicle Maintenance	\$ 869,600	\$ 0	\$ 869,600	\$ 67.01	\$ 29.88
Vehicle Operation	\$ 5,785,700	\$ 0	\$ 5,785,700	\$ 445.81	\$ 198.78
Virtual High School	\$ 394,825	\$ 18,500	\$ 376,325	\$ 29.00	\$ 12.93
Workers' Compensation (66.19%)	\$ 224,850	\$ 0	\$ 224,850	\$ 17.32	\$ 7.72
York River Academy	\$ 545,275	\$ 52,525	\$ 492,750	\$ 37.97	\$ 16.93
<b>Total</b>	<b>\$97,458,475</b>	<b>\$14,477,775</b>	<b>\$82,980,700</b>	<b>\$6,411.28</b>	<b>\$2,858.64</b>
All Costs*	\$145,744,575				

Rounded to the nearest \$25

Source *The York County School Division Proposed Annual Budget for Fiscal Year 2015.*

\*Includes excluded costs; excludes food service and capital projects funds

Table A-7 shows that, although gross spending per student, including all funds, is calculated at \$11,230, variable costs funded by the County account for only \$2,858.64 of this per-pupil cost.

Education annual expenditures were assigned to the Fenton Mill Development by estimating the number of students to be generated by the project and multiplying this by the per-student cost of education. The student generation metric assumed by the County for single-family units is 0.54 students per unit for the single-family units and 0.37 students per unit for the townhouse units.

Based on the County's student generation rates, it is anticipated that the development of Fenton Mill would add 306 students to the York County school system by SY 2030-2031. Based on the current system-wide distribution of students, it is projected that 137 students would be added to Waller Mill Elementary School, 72 students would be added to Queens Lake Middle School and 97 students would be added to Bruton High School.

*Education capital costs* were determined through an analysis of the actual fiscal impact of the proposed development. Actual fiscal impact related to education capital costs is determined by the extent to which a locality can reasonably be expected to incur a budgetary expenditure due to the addition of students generated by the proposed development. Here, students to be generated by development under construction plus approved or proposed development may be considered when calculating remaining facility capacity. This includes a by-right development of the Site, which would generate 157 students attending the York County public schools, 70 of whom would attend Waller Mill Elementary School.

Also, capacity additions that are planned for the future, as well as other potential remedies to address the inadequacy of public facilities, are considered in the calculations. Furthermore, future student generation at schools other than the school to which students from the proposed development are zoned may be considered *if* this can reasonably be expected to affect remaining facility capacity at the school to which students from the proposed development are zoned through changes in school zoning boundaries

Data on such future "pipeline developments" was obtained from the County via its *Residential Development Tracking Report* as of January 1, 2020. This report includes developments under construction, those in the review and approval process, and those in the planning stage. All developments zoned for Waller Mill or Magruder Elementary School were included in the foregoing analysis.

Applying the County’s student generation ratios and the proportion of elementary school enrollment resulted in a prediction of 215 additional students attending Waller Mill Elementary School from pipeline developments. Counting only pipeline development, Waller Mill Elementary School would exceed its instructional capacity by 95 students. This does not include the 70 students that would be generated with a by-right development of the Site. Including those students, Waller Mill Elementary School would exceed its instructional capacity by 165 students—33% above its instructional capacity and enough to trigger the need for another elementary school serving the Lightfoot area. Because there would be a need for a new elementary school in the Lightfoot area whether or not Fenton Mill is developed, it cannot be said that the development of Fenton Mill would cause the County to build a new elementary school and, therefore, no capital fiscal impact was attributed to Fenton Mill.

We may also consider that the County is already planning to construct a new elementary school to serve both the Bruton and York districts (area of the County north of the Yorktown Naval Weapons Station, which includes Lightfoot). The County’s school system has included the construction of a new elementary school in its *CIP* for FY 2020-2025. This school would serve the proposed development either directly or indirectly by relieving facility overcapacity at Waller Mill Elementary School. Construction of the new school is proposed for FYs 2023 and 2024 and, thus, falls within the development timeframe for Fenton Mill.

A new elementary school is currently programmed for a site on the Marquis development property. If the County determines that site to be inadequate, a new elementary school could be built on the 16+ acre public use site being donated to the County by the applicant. This site is on flat ground and will be fully served with utilities. Regardless, the inclusion of the new school in the *CIP* indicates the County’s recognition that a new elementary school is needed to serve this area independently of whether Fenton Mill is developed.

According to the County’s capacity data and the VDOE *Fall Membership* data, Magruder Elementary School is already exceeding its instructional capacity by 56 students. Data from the County’s *Residential Development Tracking Report* indicate that at least 98 students would be added due to pipeline development (this assumes a reduced number of apartment units at the Marquis development site). Combining a projected facility deficit of 154 students at Magruder Elementary School with a projected facility deficit of 94 students at Waller Mill Elementary School (not including students that would be added by a by-right development of the Site), justifies the need for a new elementary school to be constructed in the northern part of the County regardless of whether Fenton Mill is developed or not. These calculations also show that the proposed 500 student elementary school would be sufficient to relieve current overcapacity at Magruder Elementary School, absorb students to be generated from pipeline development in the area, and absorb students to be generated by Fenton Mill, while leaving a remaining capacity of 90 students at the new elementary school.

A similar analysis was conducted for Queens Lake Middle School. Pipeline development is projected to add 164 students to Queens Lake Middle School. Current remaining capacity at this school is 163 students. Thus, the development of Fenton Mill would ostensibly result in Queens Lake Middle School exceeding its capacity by 71 students after students from pipeline development are added. However, development of the Site under its current zoning would also cause Queens Lake Middle School to exceed its instructional capacity (by 37 students). Furthermore, the *CIP* includes plans to expand Queens Lake Middle School by adding eight new classrooms in FYs 2022 and 2023. At a maximum class size of 30, this would add capacity to absorb 240 new students—easily accommodating students to be generated by Fenton Mill. Again, it cannot be said that Fenton Mill will cause the County to expend capital funds to mitigate middle school overcapacity caused by the proposed development since the County is planning a capital expenditure whether or not Fenton Mill is approved for rezoning. Bruton High remains well within capacity after pipeline developments and the proposed development are added.

Tables A-8A, below, and A-8B on the following page summarize this discussion. They show the instructional capacity, current enrollment, projected enrollment from pipeline development, projected enrollment with the development of Fenton Mill and remaining capacity at each school after both pipeline development and development on the Site. Table A-8A assumes development of Fenton Mill and Table A-8B assumes construction of an alternative by-right development. The tables show the expected remaining capacity of Waller Mill Elementary School without the construction of a new elementary school, and the expected capacity of the planned new elementary school *after students causing the capacity deficit shown for Waller Mill and Magruder Elementary Schools are transferred to the new school.*

<b>Table A-8A</b>					
<b>School Capacity, Enrollment and Remaining Capacity</b>					
<b>Fenton Mill</b>					
	Capacity	Current Enrollment	Projected Enrollment Post Pipeline Development	Projected Enrollment Post Fenton Mill	Remaining Capacity: Pipeline/ <b>Fenton Mill</b>
Waller Mill Elementary School	495	375	590	727	-95/- <b>232</b>
Queens Lake Middle School	681	518	682	754	-1/- <b>73</b>
Bruton High School	1,039	578	799	896	240/ <b>143</b>
Magruder Elementary School	585	641	739	NA	-154
New Elementary School	500	0	249	411	251/ <b>114</b>

<b>Table A-8B</b>					
<b>School Capacity, Enrollment and Remaining Capacity</b>					
<b>By-right Development</b>					
	Capacity	Current Enrollment	Projected Enrollment Post Pipeline Development	Projected Enrollment Post By-right	Remaining Capacity: Pipeline/By-right
Waller Mill Elementary School	495	375	590	660	-95/-165
Queens Lake Middle School	681	518	682	719	-1/-38
Bruton High School	1,039	578	799	849	240/190
Magruder Elementary School	585	641	739	NA	-154
New Elementary School	500	0	249	319	251/181

Another education capital cost that Fenton Mill will occasion related to the need to transport students generated by the proposed development. A national standard of 1.56 school buses required for every 100 pupils was used to determine that the number of elementary school students generated by the Fenton Mill Development would fill the standard bus capacity of 64 students. However, according to the York County Public Schools, approximately 11% of elementary school students must ride a special needs school bus. This would reduce the number of students generated by Fenton Mill riding a standard school bus to 122 students. It can also be expected that Fenton Mill would generate 15 special needs students.

Two school buses would be required to transport students from Fenton Mill to Waller Mill Elementary School. Buses are assumed to be purchased when student generation would fill 40% of bus capacity.

It is assumed that the existing special needs school bus fleet is running at capacity. Special needs school buses purchased by the Yorktown Public School System have rated capacities of 21 and 45 students. However, pipeline development is projected to generate 24 special needs students, triggering the purchase of a larger, 45-student capacity special needs school bus. Adding the expected 15 special needs students from Fenton Mill would fill this bus to 87% of its capacity. Since Fenton Mill students would consume capacity on a bus already needing to be purchased by the County, regardless of whether Fenton Mill is approved for development, no capital fiscal impact is assumed for the purchase of a special needs bus to accommodate Fenton Mill students.

Assuming new school buses are purchased when ridership from Fenton Mill is projected to reach 40% of bus capacity, new school buses would be purchased in FYs 2025 and FY 2029. Based upon data recently supplied by another Hampton Roads locality, the cost of a school bus was estimated at about \$126,800 in SY 2020-21. Using the CPI for the most recent one-year period (2018-2019) to deflate this estimate to 2020 dollars, the FY 2020 constant dollar cost of this purchase was estimated to be \$123,950, rounding to the nearest \$25.