

Pitt and Lippe

Appendix

Methodology

Approach

Fiscal impact is defined as the difference between all revenues to Isle of Wight County generated by the project and all costs to the County attributable to the project. Only variable revenues and costs are counted in the fiscal impact study. This means that, rather than applying per capita or per household total non-tax revenue and total County per capita or per household expenditures to Pitt and Lippe (“the proposed development”), only those incremental revenues and costs that the County will actually receive or incur due to the increase in households and businesses are counted as having a fiscal impact. Fixed costs that do not rise as population, households or businesses increase incrementally are not counted as having a fiscal impact.

Revenues include one-time direct revenues, annual direct revenues from the project and tax revenues generated by households. One-time revenues include building permit fees and other development fees, sewer and water connection fees, and recordation and grantors’ taxes. They also include the value of any on and off-site public infrastructure improvements or amenities provided by the developer that have benefit to the County beyond the benefit to the proposed development.

Annual direct revenues include: real estate property taxes, personal property taxes, car rental taxes, motor vehicle registration fees, utility taxes, and various local government fees, fines and user charges. They also include sewer collection and water consumption charges which provide revenue to the County’s enterprise funds. Tax revenues generated by households are taxes paid or collected by Isle of Wight County businesses due to purchases made by the proposed development’s households.

Costs include: operating costs of government per household or per other unit, and any County (non-school) capital costs generated by the proposed development that will actually be incurred by the County. Because the proposed development will be age restricted, no students will be generated to attend the Isle of Wight public schools and, therefore, no education costs or revenues/costs related to children or youth are included in the fiscal impact analysis.

All fiscal impacts are presented in constant 2019 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 assessment increases in the County. No assumptions are made about future increases in tax revenues from sales, meals or business license taxes that are based upon retail 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. All cost and revenue data were derived from the *Isle of Wight County, Virginia, Adopted Operating and Capital Budgets, Fiscal Year 2018-2019* (“the Budget”).

The net revenue surplus or deficit of the proposed development is calculated by subtracting total costs to the County attributable to the project from total revenues to the County derived from the project over the analysis period. This was calculated for each year of project activity through the stabilization year. The year in which all costs and revenues have been fully realized was designated the stabilization year for the proposed development. This was FY 2027. The stabilization year captures the cost and revenue impact generated by the project upon and after completion. Because revenues and costs are reported in constant dollars, there is no significant change in the projected cash flow after the stabilization year. Since the stabilization year falls within the second five-year increment following the assumed rezoning approval, a ten-year analysis period was used for convenience (FY 2020-FY 2029).

Three measures of fiscal impact are used. One is the annual cash flow through the stabilization year (revenue minus costs). The second fiscal impact measure is the cumulative net revenue surplus over the ten-year analysis period (total revenues minus total costs). This is also the cumulative annual cash flow over the analysis period.

Finally, the benefit-to-cost ratio is the ratio of total project revenues to the County and total project costs to the County. A benefit-to-cost ratio greater than 1.0-to-1 signals a net fiscal benefit. The magnitude of the benefit-to-cost ratio signals the strength of the fiscal impact on the County. For instance, a benefit-to-cost ratio of 1.5.0-to-1 indicates that for every additional dollar of spending the project costs the County, the County is expected to receive \$1.50 in additional revenue.

Throughout, revenue and cost data are estimated on a per-household basis or per some other unit, as appropriate. When costs are clearly variable per-capita (e.g., population-based funding formulas), they were converted to a per-household cost. Additionally, per-household data were adjusted, where appropriate, for the smaller household size of Pitt and Lippe residents as opposed to all households in Isle of Wight County. This was done whenever the number of persons in a household would have a marginal impact on variable costs or revenues. This is more fully described below under “Cost Calculation.”

The number of households in the County in FY 2019 (14,253) was estimated by multiplying the number of households reported by the U.S. Census Bureau’s American Community Survey (ACS) for 2016 (five-year average) by the rate of household increase from 2013 to 2016 (also from the ACS). No additional increase in households was forecast in keeping with the constant dollar approach. The County’s estimated FY 2019 population (36,937) using the same methodology used for calculating the FY 2019 number of households but using the ACS 2017 and 2015 population estimates.

The number of business establishments in the County (768), available from the fourth quarter 2017 Virginia Employment Commission’s Quarterly Census of Employment and Wages, was used to adjust per-household metrics when services are provided to both businesses and households (see under “Cost Calculations” for an explanation of the adjustment methodology).

Parameters and Assumptions

A total of 340 residential units are proposed by the developer for the Pitt and Lippe parcels. This development (“Pitt and Lippe” or “the proposed development”) is expected to consist of up to 165 detached single-family units and 175 attached townhouse units. These unit counts represent the maximum density requested by the applicant and have been used to compute the expected fiscal impact of the proposed development. The maximum number of units allowed under federal housing law (80%) will be age-restricted to over 55 years of age. The remainder are also assumed to be occupied by households age 55 and older due to the design appeal to this age group, marketing as an older adult community and preference for younger adults to integrate into more age-diverse neighborhoods. In any case, no residents under 19 years of age will be permitted to reside at Pitt and Lippe (except on a temporary basis as required under federal housing law) and, therefore, no school children would reside at the proposed development.

Age referenced behavior affecting the calculation of fiscal impact was modeled on all households being age 55 or over. For analysis purposes, the age distribution of Pitt and Lippe households was assumed to be somewhat older than the distribution of this age group within the County, assuming that most pre-retirement households would still prefer to live in more age-diverse neighborhoods. Thus, estimating the age distribution for Pitt and Lippe households, the percentage of households in the 55-64 age group was weighted with a value of 0.5 relative to other age groups (65-74, and 75+). This produces a more conservative estimate of fiscal impact than assuming the proposed development would reflect the current age distribution age 55 and older, due to more limited spending by older households.

The proposed development will be located between to the east of Carrollton Boulevard (US 17/258) north of its intersection with Brewers Neck Boulevard in the Carrollton district of the County. It will encompass parcels 34-01-077 and 34-01-077D and a portion (3.2 acres) of 34-01-003A1 (the “Site”). The Site will access Carrollton Boulevard through entrances opposite North Gate Lane and Smith’s Neck Road. Channel Way will provide a third and fourth access, which will also feed into Carrollton Boulevard. The entire Site is 114.59 acres and is undeveloped. It is noted that the acreage of the three parcels combined is approximately 118 acres. However, only 114.59 acres is to be rezoned. Parcels 34-01-077 and 34-01-077D are zoned for agricultural use and parcel 34-01-003A1 is currently zoned for business use. The current assessed value of the Site is \$641,800 (rounding to the nearest \$100), with most of this value in the portion of parcel 34-01-003A1 that is to be included in the Site.

Home model plans are to be determined in consultation with builders (to be selected). However, all models are expected to have a master-on-main floor plan, with models being one-story or one and ½ story. Pricing for the townhouse units is expected to start at \$300,000 and pricing for the single-family detached units is expected to start at \$400,000. These prices, which are conservative estimates, have been used to estimate average household incomes for residents of the proposed development. Unit sizes are expected to range from 1,600 square feet to 2,400 square feet on 55’x125’ lots for the detached single-family product and from 1,400 square feet to 2,100 square feet on 28’x65’ zero-lot-line lots for the attached townhouse product. All units are assumed to have three bedrooms and two and ½ baths with upscale finishes.

Pitt and Lippe will be served by a clubhouse with features appealing to the target age population (activity room, exercise room, library, etc.). The developer plans to install an outdoor lap pool, park area and walking paths.

The applicant expects that construction of the townhouse product would begin by the start of the first quarter of 2020 (the third quarter of FY 2020), with sitework beginning earlier. Allowing for a seven month construction, sale and move-in period, the first townhouse units are expected to be occupied in August 2020. Construction of the first single-family detached units is expected to begin in the third quarter of 2020 (the first quarter of FY 2021). Occupancy of the first detached units is expected to occur by April 2021. The applicant expects that 40 units of each product will be built annually. All units are expected to be sold and occupied by the end of the second quarter 2026 (fourth quarter of FY 2026). Thus, the stabilization year—the year following completion of development beyond which revenues and costs, measured in constant dollars, do not change—is expected to be FY 2027.

Prior to the construction of each phase, the existing parcels will be replatted into individual parcels—175 to be developed as attached townhouse units for sale, 165 to be developed as single-family homes, a parcel for the clubhouse and pool, a parcel consisting of the right of way for the roads, and one parcel consisting of land for open space, park, BMPs and lakes. The latter parcel may be discontinuous.

It is recognized that the above description is based on a preliminary concept plan and details of the proposed development may change due to site considerations or changing market conditions. This representation is not a pledge or guarantee from the developer that the proposed development will exactly match this description. However, the final development plan is expected to not diverge from the above description to an extent that would materially change the results of this fiscal impact.

Revenue Calculations

Revenues estimated for the proposed development fall into three categories: one-time direct revenues, direct annual revenues, and additional annual tax revenues and fees generated by households. The methodology does not use multipliers to calculate revenues that could be generated through the project's secondary impacts. Such multipliers are considered to be unreliable when applied to small economic units, such as localities.

One-time direct revenues are revenues to the County derived from the construction of the proposed development. These include County development and building permit fees, as well as County water and sanitary sewer connection fees, plus one-time taxes and payments. Specific fees are listed on the following page.

- Building permit fees, including electrical, mechanical, plumbing, sign and technology fees
- Building plan examination fee
- Code enforcement administration fee
- Construction/development plan fee
- Erosion and sediment control permit fee
- Fire hydrant meter fees
- Recordation tax and grantors fees
- Stormwater infrastructure inspection fee
- Street sign permit fee
- Subdivision plan fee
- Utility infrastructure inspection fee
- VSMP fees local share, including renewal fees
- Water and sewer service fees
- Water and sewer tap fees

For calculating building permits, average sizes of 2,000 square feet and 1,750 square feet were used for the single-family units and townhouses, respectively, based upon the unit size ranges provided by the applicant. Three models were assumed to be offered for the single-family detached product and two models were assumed to be offered for the townhouse product. It was assumed that the plan examination fee would be levied for the review of each model but not for each unit. Building inspections were calculated for each unit. Electrical permit fees were calculated assuming all services are under 400 amps, except for the clubhouse/pool, which was assumed to be between 401 and 600 amps. One temporary electrical service was assumed for every three single-family units and one for each townhouse block, plus the clubhouse/pool. Forty-six (46) townhouse blocks were assumed.

Plumbing permits for residential units were based upon an assumption of 2 ½ baths per unit. Plumbing permits for manholes and storm drains were based upon a standard of one occurrence every 400 feet and 11,214 linear feet of roadway, yielding an estimated 56 manholes and storm drains. All infrastructure is assumed to be permitted in FY 2020. One sewer line connection was assumed for each residential unit, plus the clubhouse and the pool. Mechanical permits were based on a cost of \$7,500 per unit for single-family detached units, \$6,500 per unit for townhouse units and \$12,500 for the clubhouse and pool.

It was assumed that a single erosion and sediment control permit fee would be paid for the entire development and not for each lot and that the developer would obtain a bond in lieu of obtaining erosion and sediment control inspections. Four monument signs are anticipated for the proposed development. Based on the applicant's concept plan, seventeen public street signs were assumed.

The stormwater and utility infrastructure inspection fees were assumed to be for their minimum amounts. The local portion of the VSMP fee and renewals was assumed to be calculated on developable, rather than gross acreage. The County's 5% IT surcharge was applied to all building permits. Water and sewer tap fees were calculated based on 5/8" meters for each residential unit and a 1" meter serving the clubhouse/pool. Based upon a standard of one fire hydrant every 500 feet and 11,214 linear feet of street, 23 fire hydrants were assumed. Recordation and grantor's taxes were based on selling prices.

The developer proposes to build a regional sewer pump station on an adjacent property that will serve the proposed development and surrounding vacant parcels. The cost of the pump station is estimated to be \$1,000,000. Based upon the Site's acreage in proportion to the acreage of the surrounding parcels, 36.5% of the cost of this pump station was deemed to be for the benefit of the Pitt and Lippe, with the remaining cost (\$635,000) used to create additional capacity benefiting the County. However, this was not counted as an avoided cost to the County in recognition that the County would require a developer of the vacant adjacent parcels to install a pump station capable of providing adequate and safe sewage disposal if no other pump station provided capacity for the development of those parcels.

Direct annual revenues consist of those revenues paid directly to Isle of Wight County by the proposed development's property owners and residents. These include real estate property taxes, personal property taxes on vehicles, the car rental tax remitted to the County by the Commonwealth, motor vehicle license fees, utility taxes, water usage charges, sewer usage charges and other fees paid to the County.

The annual stormwater fee was not included as a direct annual revenue, though it is likely to be paid by Pitt and Lippe property owners and provide revenue for the County's enterprise fund. It was excluded because this fee is levied at the discretion of the County (and is, thus, not a reliable revenue source) and because these fees are dedicated to funding stormwater improvements that would not be made if the County did not levy the fee (thus, they do not constitute a net revenue to the enterprise fund). The remittance from the Commonwealth of the communications sales tax was also not included as direct annual revenue because this remittance is based upon a fixed formula that would not be affected by increasing population in the County. Furthermore, revenue from the County's refuse fee was not included as a direct annual revenue per instruction from the County Planning and Zoning Department. Refuse is a contracted service that is not provided to all County single-family households and refuse fees pay for this contracted service. Also, per the County Planning and Zoning Department, refuse costs were not included in the fiscal impact analysis.

The Commissioner of the Revenue recommended that real estate assessment estimates be based on 95% of the developer's asking price for both lots and finished product. The applicant estimates that single-family lots would sell for between \$85,000 and \$95,000 and townhouse lots would sell for about \$65,000 per unit. The 95% formula was applied to the mid-point price of \$90,000 for single-family lots and the estimated price for townhouse lots, resulting in estimated lot assessments of \$85,500 and \$61,750 for single-family and townhouse lots, respectively. The assessment of finished product was computed by applying the 95% formula to the \$400,000 base asking price for single-family dwellings and the \$300,000 asking price for townhouse units, resulting in estimated assessed values of \$380,000 and \$285,000 for single-family dwellings and townhouse units, respectively. At full development, Pitt and Lippe was assumed to be assessed for \$112,575,000.

Although land value will ultimately be incorporated into the assessed value of the residential product, it must be taken into account during the development phase of the project. The developer intends to combine and resubdivide the parcels into lots once the entire Site is assembled. Once lots are platted, they will be assessed at the rates assumed above and subject to taxation as unimproved real estate until the finished product is sold, at which time the estimated assessment is based upon the selling price of the finished product. It is assumed, given the short time between the initiation of the townhouse and single-family phases of the proposed development, that all lots will be platted simultaneously. Other land held by the developer is assumed to be taxed at the current assessment per acre until disposed of by the developer, except for land devoted to right-of-way (approximately 13.57 acres), which is conventionally assumed to be assessed at zero value in anticipation of its dedication to VDOT.

All but 3.2 acres of the Site is zoned for agricultural use and the two parcels making up this greater portion of the Site are assessed at an average value of \$712 per acre. The lots contained within the 3.2 acres currently zoned for business use are expected to be used for right-of-way, which will not be assessed. Thus, beginning in FY 2020, residual acreage retained by the developer is expected to be assessed at the current rate of \$707.47 per acre. Acreage devoted to parks, BMPs and lakes, as well as the approximately 49 undevelopable acres of the Site and the clubhouse and pool (approximately 1.95 acres), are assumed to be deeded to a tax-exempt homeowner's association (HOA) when development is 50% completed, which is expected to occur at the start of FY 2024 with these parcels becoming tax exempt beginning in the third quarter of FY 2024. Until that time, the clubhouse and pool are assumed to be assessed at cost (estimated \$500,000 for the 5,000 square foot clubhouse and \$650,000 for the pool).

The annual personal property tax to be received by the County from the proposed development's residents was estimated by first calculating the County's average personal property tax per vehicle. This amount was then adjusted by income level and household size to account for variations in the number and value of vehicles owned by the proposed development's households.

The average personal property tax per vehicle (\$264.02) was calculated by dividing the personal property tax on passenger vehicles estimated to be received by the County in FY2019 by the number of vehicles subject to the personal property tax. The number of vehicles in the County was supplied by the County's Commissioner of the Revenue. The estimated personal property tax was calculated from the sum of the estimated FY 2019 personal property tax on vehicles and the FY 2019 PPTRA reimbursement from the Commonwealth, both derived from the *Budget*.

Data from the 2017 U.S. Bureau of Labor Statistics Consumer Expenditure Survey (CES), the latest data available, were used to estimate the relative value of vehicles owned by households at various income levels. This was done by first calculating the vehicle purchase net outlay from the CES data for the average income estimated for each residential product at the proposed development. This amount was then divided by the amount of vehicle purchase net outlay calculated for the average household income for Isle of Wight County. The ratio of predicted purchase outlay for each model type to the predicted purchase outlay for the average Isle of Wight household was then applied to the average personal property tax per vehicle received by the County to derive the average personal property tax per vehicle for households with an average income comparable to that of the proposed development's residents.

The number of vehicles owned per household for the average income level of the proposed development's households was then calculated. The average number of vehicles per household for the income level associated with each model type at the proposed development was first derived from the CES data. Adjustments for the difference in ownership patterns by age of household head were calculated but were foregone, as the estimates of vehicles per household produced through these calculations exceeded the average number of persons per household estimated for Pitt and Lippe.

It was not deemed reasonable that any household member would own more than one car at Pitt and Lippe but, given the expectation of two-car garage models being offered at the proposed development, it was deemed reasonable that two-person households would own two vehicles, particularly given the estimated income levels at Pitt and Lippe. Therefore, the average number of vehicles per household was capped at the estimated average household size of 1.72. This cap applied to households at both average household income levels (i.e., for single-family and townhouse products) for the proposed development.

Finally, for each model type 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 model type. The entire calculation can be demonstrated in the series of equations on the following page. Calculations that were performed but not implemented are shown in brackets.

$$PPT = \sum PPT/V_{PL} \times V/HH_{PL} \times HH_{OPL}$$

Where, PPT = Total personal property tax paid by Pitt and Lippe households

PPT/V_{PL} = Personal property tax per vehicle for each residential product at Pitt and Lippe

V/HH_{PL} = Vehicles per household for each residential product at Pitt and Lippe and

HH_{PL} = the number of occupied households for each residential product at Pitt and Lippe

and

$$PPT/V_{PL} = PPT/V_{IoW} \times VPNO_{IPL} / VPNO_{IoW}$$

Where, PPT/V_{IoW} = Average personal property tax per vehicle for all Isle of Wight County households

VPNO_{IPL} = Vehicle purchase net outlay for the income level of each residential product at Pitt and Lippe and

VPNO_{IoW} = Vehicle purchase net outlay for households at mean income for the Isle of Wight County

$$V/HH_{PL} = [V/HH_{IPL} \times (HH_{OACS} / V/HH_{ACS}) \times (VHH_{A55} / VHH_{CESIA55})], \leq 1.72$$

Where, VHH_{OACS} = Vehicles per household for owner households in the Isle of Wight County (from ACS data)

V/HH_{IPL} = Vehicles per household for the income level of each residential product at Pitt and Lippe

V/HH_{ACS} = Vehicles per household for all Isle of Wight County households (from ACS data)

VHH_{A55} = Vehicles per household for the age group residing at Pitt and Lippe (from CES data)

VHH_{CESIA55} = Vehicles per household calculated using the CES data for average income of the age referenced group

), ≤ 1.72 = capped at 1.72 VHH

The resulting estimates of personal property tax to be received by the County per Pitt and Lippe household (\$470.11 for single-family households and \$405.68 for townhouse dwellers) were significantly lower than the average personal property tax per household (\$947.61) computed by dividing the total personal property tax estimate by the estimated number of households. This reflects both the smaller number of vehicles estimated to be owned by Pitt and Lippe households and the relatively lower vehicle purchase expenditures made by households in this age group.

The vehicle rental tax, which is remitted to the County by the Commonwealth, and motor vehicle registration fees estimated to be received from the proposed development's households were calculated using similar methodologies. The vehicle rental tax per household (\$2.66) was adjusted for expenditures by household income using CES data for vehicle rental expenditures. The motor vehicle registration fee was multiplied by the estimated number of vehicles per Pitt and Lippe household as calculated for V/HH_{PL} in the formula above.

In estimating revenues per household from local utility taxes on electric and gas service, the maximum residential utility tax levies were assumed (as these are capped at relatively low levels).

User fees per household were calculated by dividing revenues estimated to be received in FY 2019, as reported in the *Budget*, by the number of households in the County. Per household user fee revenue was calculated for animal licenses, court security and building fees, fines, delinquent tax collections and forfeitures and concealed weapons permit fees. A reduction in fees associated with criminal cases was applied to Court Security & Building Fees and to Fines and Forfeitures in light of the greatly reduced incidence criminal activity among the elderly. The criminal incidence reduction (see under "Cost Calculations") was applied to 35% of revenues for these categories. For Fines and Forfeitures, the criminal incidence reduction associated with Sheriff activities was applied in recognition that this category also includes traffic violations. Additionally, an adjustment for smaller household size was made for Court Security & Building Fees, Fines and Forfeitures, and Weapons Permits. These adjustments are reflected in the revenue per household calculation shown in Table A-1.

Table A-1, below, details the County's variable revenues, other than those derived from the direct levy of taxes on the project. It also shows revenues per household.

| Table A-1 Isle of Wight County Variable, Per-Household Revenues FY 2018-2019 Adopted Operating and Capital Budget | | |
|--|-----------|-----------------------|
| Item | Revenue | Revenue per Household |
| Animal Licenses | \$ 41,000 | \$ 2.88 |
| Concealed Weapons Permits | \$ 25,000 | \$ 1.17 |
| Court Security & Building Fees | \$109,000 | \$ 3.30 |
| Delinquent Tax Collections | \$ 11,000 | \$ 0.73 |
| Fines and Forfeitures | \$145,800 | \$ 4.88 |
| Total | \$331,000 | \$12.96 |

Revenues rounded to the nearest \$25

Tax rates and fees found on the current Isle of Wight County website and/or reported in the *Budget* were used and assumed to be accurate.

Tax revenues generated by households are estimates of taxes paid by Isle of Wight County businesses due to purchases made by the proposed development's residents. Purchases by the proposed development's residents are estimated based upon their projected spending patterns. These spending patterns were estimated using the CES.

Household incomes were estimated for the proposed development's residents 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 for households at the proposed development of \$87,125, with annual household incomes for residents of the single-family detached units estimated to be \$100,000 and annual household incomes for residents of the townhouses estimated to be \$75,000. This compares to the average 2020 estimated countywide household income of \$83,600.

The countywide household income was estimated based on 2016 estimates from the ACS inflated by the growth in average household income in the County from 2013 to 2016 as reported in the ACS. These estimates are rounded to the nearest \$25. However, because the ACS showed a decline in average household income from 2012 to 2013 (due to the rolling average methodology employed to calculate 5-year averages), 2013 income was imputed by taking the midpoint between 2012 and 2014 average household income.

These spending estimates were then used to calculate local sales and meals taxes generated by the proposed development at Isle of Wight businesses, as well as the business license fees from revenue generated by this spending. Using a methodology similar to that used to estimate spending on vehicle purchases, average household spending for households with income levels equivalent to those predicted for Pitt and Lippe households was estimated for food at home, food away from home, other retail, and personal service spending. These spending estimates were then adjusted for spending patterns of households headed by persons 55 years of age and older. This adjustment was made using the methodology described above to adjust for vehicle ownership patterns of this age group.

Adjustment was made for purchases made outside the County. The adjustment for purchases made outside the County was based on a calculation of the leakage of retail spending from the County. This was accomplished by comparing the per-household spending levels predicted with CES data (using spending predicted for the County's average household income level) to actual retail spending in the County. The County's average per-household income was obtained from the ACS and retail spending in the County was obtained from data on taxable retail sales as reported by the Weldon Cooper Center for Public Service, Center for Economic Policy Studies, at the University of Virginia, 2017 annual data (with data derived from the Virginia Department of Taxation).

Some CES spending categories were collapsed or distributed among the NAICS store categories contained in the Weldon Cooper data in order to arrive at four category groupings—food at home (grocery and convenience store spending), food away from home, other retail spending, and personal services spending. Retail sales in each category group were divided by the retail spending predicted for that category group using CES data to compute the percentage of household spending in Isle of Wight that was retained within the County and, thus, generated tax revenue for the County.

Overall, it was determined that 63.23% of household retail spending occurred within the Isle of Wight County. For grocery item spending, the retail leakage analysis indicated an influx of grocery spending into the County and, thus, 100% of grocery spending retained within the County. This could be the result of residents of outlying, more rural counties patronizing grocery outlets in Isle of Wight County.

However, Food Lion is the only major grocery store located in Isle of Wight County. While the daily shopping and the majority of weekly grocery shopping can be expected to occur at the Food Lion located at Eagle Harbor Shopping Center due to its proximity to the proposed development, those wishing to shop at higher end grocers (Harris Teeter, Fresh Market, Trader Joe's and Whole Foods) or other grocers (Kroger, Wal-Mart) or a buying club (BJs, Costco, Sam's Club) will have to do so outside Isle of Wight County.

It was assumed that residents of Pitt and Lippe will not be constrained by income considerations but may be somewhat more restrained with respect to mobility than the average household with respect to their shopping patterns. It was assumed that Pitt and Lippe residents would do their daily and convenience grocery shopping and a substantial amount of their weekly grocery shopping at the nearby Food Lion. While the average Eagle Harbor household could be expected to conduct at least 25% of their grocery shopping at relatively nearby competing grocery stores in Suffolk, Newport News or Hampton, and at buying clubs and specialty grocers outside of Isle of Wight County, this estimate was reduced to 20% for Pitt and Lippe considering that an older population may be less likely to travel farther distances. Thus, the percentage of grocery spending by Pitt and Lippe households assumed to be retained within the County was estimated to be 80%.

The percentage of food away from home spending (restaurants, fast food, concessions) retained within Isle of Wight County was estimated by the retail leakage analysis to be 65.88%. For most other retail categories, the County experiences significant retail leakage, as the closest department stores, category-killer stores and shopping malls are all located in Hampton, Newport News and Suffolk. Only 39.05% of other retail spending was estimated to occur within the County. Personal service spending (hair and nail salons, dry cleaners, etc.) was assumed to mirror food at home spending patterns, as these establishments tend to cluster around grocery stores. Thus, 80% of personal service spending was assumed to remain within the County. The County has no movie theaters and, therefore, 100% of admissions spending was assumed to occur outside the County.

Based upon these estimates of retail spending retention, local sales and meals taxes and business license fees calculated from predicted retail spending by the proposed development's households were reduced by 20% for grocery and personal service spending, 34.12% for restaurant spending and 60.95% for all other retail spending—the amounts of estimated grocery, restaurant and other retail spending leakage out of the County.

Additional adjustments were then made for the distribution of the local option sales tax revenue between the County and the towns and for meals tax spending occurring within the Towns of Smithfield and Windsor. The local option sales tax remitted by the Commonwealth to the County is divided by the Commissioner of the Revenue between the County and the towns based upon the proportion of school children generated from each jurisdiction. The percentage retained by the County (84.14%) was derived from the Commissioner and applied to the estimated net new local option sales tax revenue expected to be generated by the proposed development.

With respect to the meals tax calculation, the County does not levy a meals tax on meals purchased in the towns and, therefore, food away from home spending calculated as retained within the County must be disaggregated between the County and the towns. The projected FY 2019 revenues for meals taxes in the budgets of the County and the two towns were converted into estimated gross receipts using their respective tax rates. The proportion of estimated food and beverage sales occurring in the towns was then subtracted from the percentage of food and beverage sales retained within the County. The percentage of total meals tax remittance projected to be received by the County was 25.75%. Consequently, meals tax and associated business license fees received by the County from predicted meals spending by the proposed development's households was further reduced by 74.25%.

Cost Calculations

Costs were divided into three categories: general government operating costs, general government capital costs, and enterprise fund costs. Certain special funds are treated as belonging to the general fund, even though they are separate from the general fund for budgetary purposes. These include functions that are often included in the by many localities in the general fund and do not constitute separate enterprises. These funds include:

- Children's Service Act (although not applicable to the proposed development)
- County Fair (a fixed cost)
- Emergency Communications Center
- Grants Fund (self-sustaining)
- Risk Management and
- Social Services (although not applicable to the proposed development)

General government operating costs and capital costs were calculated on either a per household basis or on a per capita basis and, then, converted to cost per household. Costs calculated on a per capita basis were converted to a per household measure by multiplying the per capita cost by 1.72 (the number of persons per household estimated for Pitt and Lippe [see below for the calculation of this estimate]). Cost data and assumptions were derived from the *Budget*.

Variable per household cost of public services other than education. As stated above, variable cost estimates for services provided by Isle of Wight County general government were derived from the *Budget*. 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 and only costs generated by households attributed to the proposed development.

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 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 formula below:

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

Per business costs were determined according to the following formula:

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

- adult criminal justice (5th District Court Services, Clerk of Court, Commonwealth Attorney, Prisoner Confinement, Sheriff), since crimes are committed against (and by) businesses as well as persons
- Assessment (both business and residential property are assessed)
- Commissioner of the Revenue and Treasurer (both businesses and households are taxed)
- E-911 Operations, Emergency Services and Fire & Rescue Response (responses to events occur at businesses and households)
- Public Utilities (both businesses and households are billed) and
- Budget & Finance, Human Resource, Risk Management and Unemployment Insurance (which support all County governmental functions).

Certain per household costs were then adjusted to take into account the smaller household sizes of Pitt and Lippe compared to the County's overall average household size. The calculation of the estimated household size for Pitt and Lippe households was made using ACS data under the assumption that very few, if any, Eagle Harbor 2 households would have more than two persons, given that these units will be age-restricted. Data were derived from the ACS Tenure by Household Size by Age of Householder table for 2016, five-year average. The number of owner occupied households with householders over age 55 was used to estimate the total number of persons in this category by summing the number of 1-person households plus the number of 2-person households multiplied by two (2). The total number of estimated persons was then divided by the total number of households to derive the persons per household estimate.

The person per household estimate for Pitt and Lippe households (1.72) was divided by the person per household estimate for all County households (2.57) to calculate the adjustment factor (0.6695). For the Electoral Board, the household size adjustment was made by dividing the estimated persons per household at Pitt and Lippe by two (2), considering that, in most cases, the number of voting age persons per household would be no more than two persons. This is a conservative estimate since a denominator larger than two would result in a lower adjustment factor and, therefore, lower estimated costs per household.

The per household cost of governmental functions that serve persons, rather than households, was adjusted according to the following formula:

$$\text{Expenditure per owner household} = [\text{Expenditure per household}] \times \frac{[\text{persons per owner households}]}{[\text{persons per all households}]}$$

Government functions that are sensitive to household size were

- criminal justice functions
- E-911 Operations and
- recreation.

Adjustments to Emergency Services/EMS cost for increased usage by older populations were assumed to factor in the smaller household size typical of this demographic.

Certain contributions to regional organizations made by the County are based on a population formula. These contributions were calculated on a per-capita basis and then converted to a per-household cost using the Pitt and Lippe persons-per-household estimate according to the formula shown below:

$$E_{HH} = E / P \times P_{EH}$$

Where: E_{HH} = Expenditure per household

E = Regional organization contribution

P = County population and

P_{EH} = Pitt and Lippe persons-per-owner household

The County's 2019 population (36,937) was estimated by multiplying the ACS 2017 and population estimate by the rate of population increase from 2015 to 2017 (also from the ACS). Regional organizations for which costs were calculated are shown below:

- Blackwater Regional Library Services
- Hampton Roads Military and Federal Facilities Alliance
- Hampton Roads Planning District Commission and
- Senior Services of Virginia

The County also made contributions to certain regional criminal justice functions based on usage. Usage was assumed to be related to the number households and the age of householders, with the cost per household also adjusted for differences in household size and criminal incidence (see below for the calculation of the criminal incidence reduction). Since regional agencies that are part of the juvenile criminal justice system were excluded from the fiscal impact analysis, this calculation applied only to the Western Tidewater Regional Jail.

The County performs a real estate re-assessment every four years which it contracts out. Thus, the annual cost of the re-assessment is equal to 25% of the total of this contract amount. The cost for the upcoming re-assessment, which would apply to the proposed development, \$309,000, was budgeted in the FY 2019 *Budget*. To this was added the extra cost of advertising, postage, office supplies and training. These extra costs were calculated by subtracting the latest non-re-assessment year costs (shown in the FY 2018 *Budget*) from those contained in the FY 2019 *Budget*. This combined cost was allocated on a per parcel basis using the number of real estate parcels obtained from the County's Commissioner of the Revenue. The Assessor's Office also performs an initial assessment for new construction and real estate transfers. This assessment is also contracted at a cost of \$15 per parcel.

An initial assessment is assumed to occur for each parcel when the site is platted, as well as when each unit is sold. Ancillary postage and mailing costs were estimated to be \$0.50 per parcel. Staff costs associated with initial assessments are included in the Commissioner of the Revenue variable cost analysis, and the Commissioner's Office's workload from initial assessments is assumed to be absorbed without any increase in staff positions or overtime.

Government functions for which the proposed development's population would generate no significant demands were then excluded. These included:

- Children's Services Act Fund
- Comprehensive Services Act Fund
- Court Services Unit (serves juvenile population)
- Fifth District Court Services – VJCCA Match (serves juvenile population)
- Juvenile Accountability Program
- Section 8 Housing
- Social Services (household income levels of residents of the proposed development make it extremely unlikely that these households will ever demand social services from the County)
- Virginia Cooperative Extension Service (serves the rural areas of the County)
- Western Tidewater Community Services Board (primarily serves the Medicaid-eligible population) and
- Western Tidewater Health District (primarily serves lower income population).

In addition, 75% of the variable cost expenses of the Juvenile and Domestic Relations Court (estimate of juvenile related cases as opposed to divorce cases) was excluded from the fiscal impact analysis.

Government functions that would be performed regardless of population size were excluded. These included:

- the chief executive and legislative functions of the County
- administrative divisions of various departments
- Communications (which is a 1-person office)
- Cooperative Extension Service
- County Attorney
- County Fair
- Debt Service
- Economic Development
- Emergency Management (which includes the administrative functions of Fire & Rescue)
- Farmer's Market
- Grants Fund
- Local Organizational Support (except as noted)
- Non-departmental (except unemployment contributions)
- Parks and Recreation – Gateways and Grounds
- Public Works – Buildings and Grounds, Capital Programs and Inspections, and Transportation
- Purchasing (which is a 1-person office)
- Road Maintenance (which is provided by VDOT)
- Technology Services and
- Tourism.

The costs of those departments providing development services to the proposed development were counted as fixed costs. It is reasonable to expect that existing staff of the Planning & Zoning and Inspections Departments would handle the workload created by the development of the proposed development. The costs of these functions were, thus, counted as fixed costs and not included as a public service cost attributable to the proposed development. Additionally, per instructions from the County's Planning & Zoning Department, Refuse Collection/Disposal costs and revenues were not included in the fiscal impact analysis, since this service is not directly provided by the County.

For functions which are a one-person office that is not likely to be expanded due to population growth but which have other variable costs, such as office supplies, personnel costs were excluded from the variable cost calculation.

These functions included:

- Circuit Court
- General District Court
- Juvenile and Domestic Relations Court and
- Public Utilities Administration, billing (calculated on a per-customer basis)

The variable costs of certain court and criminal justice functions were adjusted to take into account the rarity with which Pitt and Lippe residents could be expected to be "on the wrong side of the law" with respect to these functions. It was assumed that the Pitt and Lippe target population will not be involved in the criminal justice system (as criminals) to any great extent. The variable cost of activities associated with preventing, apprehending, prosecuting or punishing criminal activity was reduced by 91.5% for the proposed development. This conclusion was based on data from the *Blackwell Encyclopedia of Sociology*.

The data stated that 80% of all crimes are committed by persons under age 40 and less than 1% of all crimes are committed by persons over 65, with victimization rates following similar (though not precisely the same) trends. Since the population at the Pitt and Lippe will be over 55, the percentage of this population associated with criminal activity would be closer to 1%. Taking a straight line projection approach, the incidence of involvement with criminal activity would increase by an additional 0.75% for each year under 65.

Thus, taking the conservative approach of taking the highest predicted incidence of criminal activity involvement, the age group at the proposed development would be involved in crimes handled by the County criminal justice system only 8.5% of the time compared to the general population. Thus, variable costs and revenues associated with crime were reduced by 91.5% for this population (the "criminal incidence reduction"). This percentage was adjusted to 70% for Sheriff activity, however, in recognition that traffic offenses would not be as subject to reduction based on age and some patrol activity would take place at Pitt and Lippe.

Where a function includes both civil and criminal components, these were distinguished and the criminal activity reduction was applied to those costs associated with criminal activity. Based upon metrics from previous fiscal impact studies using data disaggregating civil and criminal court cases, the percentage of civil actions handled by the Clerk of Court was estimated to be 65% and the percentage of civil cases handled by the General District Court was estimated to be 85%. Nearly all of the cases handled by the Circuit Court were assumed to be criminal cases. Thus, in computing the variable cost of these functions generated by the proposed development, the criminal incidence reduction was applied to 35% of Clerk of Court variable costs, to 15% of General District Court variable costs and all of the Circuit Court and Commonwealth Attorney variable costs. With regard to court associated revenues, these were adjusted by applying the formula used to adjust Clerk of Court costs.

For Juvenile and Domestic Court variable costs, only the percentage of variable costs associated with domestic misdemeanors or divorce cases were counted. Based on recently derived metrics, the percentage of non-juvenile court cases was estimated to be about 25%.

Certain administrative support functions can be viewed as fixed costs (since they must be provided) but have a variable cost component (since they serve County functions that incur variable costs due to population growth). A percentage of the variable costs of these functions were thus counted in the cost calculations. This percentage was calculated to be 37.77% of budgeted cost of these functions. This was obtained by dividing total variable cost salaries into the amount of total salaries in the County's operating budget.

Functions to which this percentage was applied included:

- Budget & Finance
- Human Resources
- Risk Management – workers' compensation and
- Non-departmental – unemployment payments.

For Risk Management line-of-duty insurance, the percentage of variable cost salaries in the Fire and Rescue and the Sheriff's departments (67.88%) was applied.

Various adjustments were made to expenditure line items to arrive at the County's variable cost of providing public services. Generally, positions that must be provided for a department to function and that will not expand due to population growth ("fixed cost positions") were excluded from the cost analysis. Salaries for fixed cost positions were identified in the *Isle of Wight County, Virginia Position Classification and Compensation Plan, 2018-2019 Fiscal Year*. The mid-point of the range was used to estimate salaries except in the case of the Chief Deputy Commissioner of the Revenue (which was provided directly by the Commissioner of the Revenue).

Fixed cost positions included the director and assistant director, or equivalent position(s). For E-911, the Sheriff Lieutenant position was deemed to be equivalent to the director of this division. In the Sheriff's office, the Major was deemed to be equivalent to an assistant director and, in Fire & Rescue Response, the Fire & EMS Captains were deemed to be equivalent to assistant directors. The Fire Chief's position was contained in Emergency Services, which was entirely counted as a fixed cost. Fixed cost positions also included certain specialized, single-person positions for which a second person is not expected to be added in the foreseeable future.

These specialized positions included:

- EMS Coordinator and Medical Billing/HIPPA Supervisor (Emergency Services)
- Human Resources Coordinator
- IT Support Specialist II (Emergency Communication Center)
- Kennel Assistant (Animal Control)
- Office Manager or equivalent position,
- Procurement Agent
- Recreation Manager and
- Sheriff Captain.

Furthermore, only the accountants and technicians positions in Budget and Financing and only part-time employment of the Electoral Board were counted as variable cost positions in those departments. Salaries for the Budget and Finance positions were also identified using the *Position Classification and Compensation Plan*.

Fringe benefits and other costs associated with personnel are shown for all personnel within a budget function and must be disaggregated for fixed cost personnel and subtracted from costs, as well. These costs included:

- 457 deferred compensation
- FICA
- group life
- hospital/medical
- travel and training
- uniforms and wearing apparel and
- VRS retirement.

For the Sheriff, this also included fleet expenses.

Fringe benefit and other costs associated with fixed cost positions were removed proportionally according to the formula shown below.

$$FB_{FC} = FB \times (S_{FC} / S)$$

Where: FB_{FC} = fringe benefit and other personnel associated costs assigned to fixed cost positions

FB = all fringe benefits and other personnel associated costs

S_{FC} = salaries of fixed cost positions

S = all full-time salaries (of the department or division)

In applying this formula, a distinction was made between FICA, which is paid on all salaries and wages, and other fringe benefit categories, which generally are applicable only to full-time employees. Thus, for the FICA calculation, part-time salaries and overtime were added to full-time salaries for S.

Various other types of line item costs were also excluded as fixed costs to the County. These included items shown below:

- advertising (except Electoral Board, Human Resources, Real Estate Assessment and Treasurer)
- books and subscriptions (except Commissioner of the Revenue)
- building and grounds maintenance
- capital costs
- copier costs
- dues and associated memberships
- equipment and machinery
- insurance
- leases
- repair and maintenance (except Commissioner of the Revenue maintenance contract)
- telecommunications/telephone (except E-911 Operations) and
- utilities.

Certain other costs specific to various functions were also excluded as fixed costs. These included:

- Four for Life program (fully funded by a grant) – Fire and Rescue Response
- RMS licenses – Sheriff and
- Contribution – Smithfield - Parks and Recreation

The variable costs for Public Utilities billing (postage and office supplies from Public Utilities Administration, since the billing function is carried out by a single position) were divided by the total number of combined sewer and water customers (4,469) for FY 2018 obtained from the County's FY 2018 *Budget* to yield a cost per customer. Information on Public Utilities operations, including the number of water and sewer customers, was not available in the County's FY 2019 *Budget* or on the County's website. The Public Utilities Department did not respond to repeated requests for this and other information. Therefore, the FY 2018 data was used. Although it is probable that the County has added water and sewer customers, it would be difficult to confidently estimate this number. However, the FY 2018 data can be taken as resulting in a conservative estimate of billing costs per customer, as variable costs associated with billing are amortized over a somewhat smaller customer base, resulting in a somewhat higher estimated cost than otherwise.

The cost of installing water meters was estimated through on-line pricing for materials. It was assumed that labor is a fixed cost since water meter installation is episodic and Public Utilities crews would not be expanded to handle the water meter installation at the proposed development. Prices were estimated at \$150 for a 5/8" water meter.

For the Public Utilities water and sewer divisions, only the costs of treatment supplies were counted as variable costs. The presence of large water users argues for the calculation of these costs on a per gallon basis rather than on a per customer basis. The number of gallons of water purchased was obtained from the County's Public Utilities department in early 2018. Requests were made to the Department for any update to that data but no response from the Department was received. Therefore, the data received earlier was used to calculate the variable cost of water and sewage treatment.

Also, although requested, the current number of gallons of water sold by the County was not available from the County's Public Utilities Department at the time this fiscal impact analysis was completed. Therefore, the number of gallons of water sold by the County was estimated. The amount of water sold was used to calculate the cost per gallon of water treatment.

A proportional methodology, correcting for the change in the County's water consumption charge, was used to estimate the number of gallons sold by the County. The revenue from water sales estimated in the FY 2019 *Budget* was divided by the FY 2019 water consumption charge per gallon to obtain the budgeted number of gallons of water estimated to be sold in FY 2019. This was then done using the data in the FY 2016 *Budget* to obtain the budgeted number of gallons of water estimated to be sold in FY 2016. The FY 2019 quotient was then divided by the FY 2016 quotient to obtain the change from FY 2016 to FY 2019 in the budgeted estimated number of gallons of water to be sold. This percentage change was then multiplied by the number of gallons of water sold provided previously by the County's Public Utilities Department for FY 2016. That method would use the change in revenue from water sales, factoring out the change in the water rate, to estimate proportionally the change in the number of gallons sold.

This can be summarized by the formula below:

$$WS_{FY2019} = (W\$_{FY2019}/WR_{FY2019})/(W\$_{FY2016}/WR_{FY2016}) * WS_{FY2016}$$

Where WS = Number of gallons of water sold

W\$ = Estimated revenue from water sales and

WR = Water consumption rate

Based on data for revenue from water sales and the water consumption rate for FYs 2016 and 2019, the number of gallons estimated to be sold by the County in FY 2019 is projected to be an estimated 144,786,150 gallons, rounding to the nearest 25 gallons. This compares to 273,740,490 gallons of water purchased and pumped from wells according to the data recently supplied by the County's Public Utilities Department.

This amount of gallons of water sold results in an average water use per water customer (3,405 customers according to the FY 2018 *Budget*) of only 116.5 gallons per day. The County's Department of Public Utilities has estimated average daily water use of households to be a standard 310 gallons per day. Assuming that the estimated water use reflects an average Countywide household size, this gallon-per-day-per-household estimate was adjusted for the smaller household size predicted for Pitt and Lippe, resulting in an estimate of 207.6 gallons-per-day-per-Pitt and Lippe household. Even if the greater estimated average daily water use (310 gallons per day) is used, however, the number of gallons estimated to be sold after the development of Pitt and Lippe (180,994,150) is still considerably less than the number of gallons purchased and pumped from wells.

When the average rate of water consumption estimated by the County's Department of Public Utilities for housing (310 gallons per day per residential customer) is used, the proposed development's households will consume only an estimated 36.2 million gallons annually (24.25 million gallons if the estimate adjusted for a smaller household size is used). Whichever method of calculating water usage is employed (the County's average household estimate or the estimate adjusted for household size), the resulting number of gallons can easily be drawn from existing water purchases at no additional cost to the County. Therefore, for the proposed development, water purchases were deemed a fixed cost. Also, note that the use of the water usage estimate adjusted for household size in the fiscal impact analysis results in a larger (more conservative) estimated water treatment cost per gallon.

The cost of sewer and water maintenance was not deemed to be a variable cost based upon information previously obtained from the County's Public Utilities Department. Currently, and in the foreseeable future, amounts budgeted for sewer and water line maintenance are determined not by the length of sewer and water lines serviced by the County but by budgetary constraint. Therefore, water and sewer line maintenance was deemed to be a fixed cost. Furthermore, the new sewer and water lines to be installed by the developer and deeded to the County are not likely to require County maintenance for a period well beyond the fiscal impact analysis period.

Billing is also performed by Emergency Services—Emergency Management and Billing (for EMS Services). All other positions in this department except the Medical Billing Clerk are fixed cost positions. Even though the Medical Billing Clerk is currently a position filled by only one staff member, it was deemed that in the absence of the Medical Billing Clerk position the billing function would be performed by the Medical Billing/HIPPA Supervisor and that, therefore, this staff function was expandable. Besides the salary and associated fringe benefits for the Medical Billing Clerk position, all postage and 50% of office supplies were assumed to be a function of billing rather than emergency planning or Emergency Services administration. Uniforms were not included as an associated personnel cost for the Medical Billing Clerk.

Fire & Rescue Response and Parks and Recreation each perform functions that can be deemed to generate fixed costs. Costs associated with fire protection and prevention are not affected by incremental changes in population or households. Fire protection is, for the most part, a function of latent demand which is distributed over geographic areas determined by response times. The department's EMS function, on the other hand, is sensitive to incremental changes in population and is deemed to generate variable costs. These fixed and variable cost functions are not differentiated within the County's *Budget* for Fire & Rescue Response. In the absence of such data, 50% of the otherwise variable costs for each department were deemed to support fixed cost functions and excluded from the variable cost calculation.

The EMS function, besides being sensitive to household growth, is also sensitive to the age of the population served. Older residents typically generate a higher demand for EMS services, resulting in increased variable costs compared to the average for all households. Therefore, an adjustment was made to the per-household variable cost of EMS services to account for the higher level of demand that would be generated by the proposed age-restricted development.

The methodology for calculating this adjustment multiplies the per-household variable cost for all Isle of Wight County households by a factor computed by dividing the incidence of EMS usage for the age referenced group by the EMS usage incidence for all households. The data used to compute this factor were obtained from the County's Emergency Services Department. The number of EMS runs by age of patient was provided in 10-year increments.

Data was converted to five-year increments for the 55-59 and 60-64 year age groups by pro-rating the number of runs by the percentage of population in each five-year age group in reference to their respective 10-year increment. Incidence for the 55-64 year age group was then weighted by 0.5, in accordance with the assumption that they will reside at Pitt and Lippe in lower proportions than their share of the general population, as explained above. The computed EMS incidence per person for Pitt and Lippe households (0.2211) was divided by the EMS incidence for the general population in the County (0.1056) to arrive at an EMS incidence factor of 2.09. Thus, 88 EMS related calls are expected to be generated by the proposed development annually, as opposed to 42 EMS calls generated by a similarly sized development that is not age-restricted.

This factor was applied to the estimated variable cost per household for Fire and Rescue Response (EMS function of the Division) and to 50% of Emergency Communications Center variable cost. In the absence of data, 50% of E-911 calls were assumed to be for Fire and Rescue Response and 50% were assumed to be for Sheriff services (police protection). The latter 50% of variable costs were adjusted by applying the criminal incidence reduction to the calculation of per household costs. However, in recognition of the potential for older citizens making a higher number of suspicious activity calls that are not directly related to criminal victimization, the assumed criminal incidence was doubled, resulting in a criminal incidence reduction of 83% rather than 9.5%. The additional cost to Fire and Rescue Response was offset, however, by a corresponding expected increase in EMS fees, which were also adjusted on a per household basis by the EMS incidence factor.

For Parks and Recreation, the parks function is deemed to generate fixed costs since the costs of park supervision and maintenance will remain the same regardless of the size of the population served. Therefore, the Administration and the Parks, Gateways and Ground Maintenance components of Parks and Recreation costs were deemed to be fixed costs and were excluded from the analysis. The demand for recreational services, however, is generally sensitive to changes in population and generates variable costs.

The cost of Aging Programs (Parks and Recreation) was distributed over the number of households headed by persons age 55 and over, rather than distributed over all households. This is because only increases in the population served by these programs would generate new variable costs for the County. The number of households in the referenced age group was calculated using available 2017 ACS data, adjusted for projected growth by multiplying the 2017 number of households in the referenced age group by the rate of increase from 2015 to 2017.

Finally, revenues received by the County from the Commonwealth, as well as program income and other dedicated non-tax local revenue sources (e.g. EMS/ambulance fees) were deducted to leave only the County's operating costs. This was applied to the line items shown on the following page.

- Animal Control
- Clerk of Circuit Court
- Commissioner of the Revenue
- Commonwealth Attorney
- E-911 Operations
- Fire and Rescue Response
- General Registrar
- Parks and Recreation
- Sheriff and
- Treasurer.

With respect to E-911 Operations, various non-local revenue sources are used to fund E-911 costs. These include 40% of the remittance of communications sales tax, payments from the Towns of Smithfield and Windsor, and other grants and contributions from the Commonwealth. These totaled \$928,350 in the FY 2019 *Budget*.

When revenues were deducted from costs, the reduction in cost was distributed between 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 = Reimbursement Revenue

TC = Total Cost (variable and fixed costs)

This formula was not applied to EMS revenues in Fire and Rescue Response because all of this revenue was assumed to defray variable costs. Also, as noted above, EMS/Ambulance fees can be expected to increase due to the higher incidence of EMS use by the older Pitt and Lippe population. Thus, the EMS incidence factor, adjusted for differences in household size, was used to adjust the expected revenue contribution from these households.

Portions of the reimbursement from the Commonwealth for shared cost positions are earmarked for the support of constitutional officers, which are fixed cost positions. The salaries of these positions were subtracted from the amount of reimbursement available to fund variable costs. The amount of Constitutional Officer salaries reimbursed by the Commonwealth, as well as the amount of fringe benefits for these positions that were reimbursed by the Commonwealth, was obtained for FY 2019 from the Commonwealth of Virginia Compensation Board website. The salaries and fringe benefits of other fixed costs positions (e.g. a deputy constitutional officer) were also subtracted from R in the above formula. TC was set to equal total costs less the reimbursed salaries and fringe benefits of the constitutional officer and other fixed cost positions (which were also subtracted from R).

Table A-2 on the following page details the County's variable cost expenditures for households. Table A-3 on page A-28 details the County's variable cost expenditures for government functions calculated on other than a per-household basis. Total variable costs are shown for each department or function and any adjustments are made to the cost per household, with those adjustments shown in the Notes column. An exception to this convention is the adjustment for support of variable cost activities as opposed to fixed cost activities for Budget and Finance, Human Resources, Risk Management and unemployment benefits. In these cases, the adjustment was made to Variable Costs to more accurately reflect the variable cost expenditure within these departments and functions.

Capital costs. Eagle Harbor is well served by County facilities and infrastructure and no additional public facilities are expected to be needed due to the development of Pitt and Lippe. However, the size of the proposed development may warrant the addition of one Sheriff deputy patrol officer. Based upon state standards, four Sheriff deputies are required for court security duty and the remaining deputies were assumed to be patrol officers. Currently, subtracting the court security officers, there are 419 Isle of Wight County households for every Sheriff deputy. The proposed development is planned to add 340 households to the County. If the current number of households per patrol officer is taken as a standard, the proposed development, will contribute more than 80% to warranting the addition of one patrol officer. It was assumed that this degree of warrant would be sufficient for to add this position.

Table A-2
Isle of Wight County Non-School Expenditures: Expenditure per Household
FY 2018-2019 Adopted Operating and Capital Budget

| Item | Expenditure* | Expenditure per Household | Notes |
|--|---------------------|---------------------------|--|
| Animal Control | \$ 359,800 | \$ 25.24 | Excludes animal control fees |
| Budget & Finance | \$ 143,850 | \$ 9.58 | 37.77% variable cost |
| Circuit Court | \$ 400 | ** | Criminal incidence reduction made |
| Clerk of Circuit Court | \$ 146,150 | \$ 4.67 | Excludes costs paid by Commonwealth; adjusted for household size and criminal incidence reduction |
| Commissioner of the Revenue | \$ 399,600 | \$ 26.60 | Excludes costs paid by Commonwealth. |
| Commonwealth Attorney | \$ 268,225 | \$ 1.07 | Excludes costs paid by Commonwealth; adjusted for household size and criminal incidence reduction |
| E-911 | \$ 335,400 | \$ 16.92 | Excludes costs paid by Communications Sales Tax, grants and towns; adjusted for household size, EMS incidence and criminal incidence reduction |
| Electoral Board | \$ 86,900 | \$ 5.25 | Excludes General Registrar costs paid by Commonwealth; average FY2017-FY 2019 |
| Emergency Services | \$ 62,425 | \$ 8.70 | EMS billing; adjusted for EMS incidence |
| Fire & Rescue Response | \$ 811,625 | \$ 50.51 | Excludes EMS fees; EMS (50% of costs); excludes costs paid by Four for Life; adjusted for EMS incidence |
| General District Court | \$ 2,875 | \$ 0.12 | Adjusted for household size and criminal incidence reduction; no personnel costs |
| Hampton Roads Military and Federal Facility Alliance | \$ 18,525 | \$ 0.86 | Adjusted for household size |
| Hampton Roads Planning District Commission | \$ 27,075 | \$ 1.26 | Adjusted for household size |
| Human Resources | \$ 45,275 | \$ 3.01 | Adjusted for household size |
| Juvenile & Domestic Relations Court | \$ 1,275 | \$ 0.08 | 37.77% variable cost |
| Library (Blackwater Regional) | \$ 778,275 | \$ 36.26 | Adult domestic cases only; no personnel costs |
| Parks & Recreation Programs | \$ 246,525 | \$ 11.58 | Adjusted for household size |
| Parks & Recreation – Aging Programs | \$ 10,925 | \$ 0.81 | Excludes costs paid by fees; adjusted for household size |
| Risk Management-Line of Duty Insurance | \$ 54,075 | \$ 3.60 | Per household over age 55 |
| Risk Management-Workers Compensation | \$ 90,950 | \$ 6.05 | 67.88% variable costs |
| Senior Services of Virginia | \$ 52,400 | \$ 2.44 | 37.77% variable costs |
| Sheriff | \$ 3,817,150 | \$ 51.04 | Adjusted for household size |
| Treasurer | \$ 292,325 | \$ 19.46 | Excludes fees received and costs paid by Commonwealth; adjusted for household size and criminal incidence reduction |
| Unemployment Payments | \$ 11,700 | \$ 0.78 | Excludes costs paid by Commonwealth, Administrative Court Fees |
| Western Tidewater Regional Jail | \$ 948,025 | \$ 3.79 | 37.77% variable costs |
| Total | \$ 9,011,750 | \$289.68 | Adjusted for household size and criminal incidence reduction |

* All expenditures exclude fixed cost positions

** Less than \$0.01 per household

Rounded to the nearest \$25

| Table A-3 Isle of Wight County Non-School Expenditures: Expenditures per Unit other than Household FY 2017-2018 Adopted Operating and Capital Budget | | | |
|---|--------------|-------------------------|--|
| Item | Expenditure* | Expenditure per Unit | Unit of Measure/Notes |
| Assessment (Quadrennial assessment) | \$ 79,275 | \$3.86 | Per parcel / 25% of quadrennial professional services purchase |
| Assessment (One-time costs) | N/A | \$30.00 | Per housing unit (new construction) |
| Public Utilities Administration (billing) | \$ 24,300 | \$5.44 | Per customer |
| Public Utilities Water (water and sewage treatment) | \$ 63,000 | \$0.435 | Per 1,000 gallons |

* All expenditures exclude fixed cost positions

While the variable costs of an additional Sheriff deputy are accounted for in the fiscal impact analysis, there are one-time costs associated with training and equipping a Sheriff deputy, including the purchase of a patrol vehicle. These costs were estimated to be \$70,000 and were counted as a capital cost. The deputy was assumed to be added in the year in which Pitt and Lippe reaches buildout (FY 2024).

