Impact Fee Study

Prepared for:

Berkeley County, West Virginia

October 9, 2025

TischlerBise

FISCAL | ECONOMIC | PLANNING

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EXECUTIVE SUMMARY

Berkeley County, West Virginia, retained TischlerBise to prepare this study to analyze the impacts of development on county capital facilities and public services and to calculate impact fees pursuant to West Virginia Code § 7-20 (hereafter referred to as the "Enabling Legislation"). Counties in West Virginia may assess impact fees to offset infrastructure costs to a county for necessary capital improvements and public services. TischlerBise developed the proposed impact fees through interviews and discussions with county staff. Methodologies and calculations are presented in this report as supporting documentation for the proposed impact fee program in Berkeley County.

Impact fees are collected from new construction at the time a building permit is issued and used to construct system improvements needed to accommodate new development. An impact fee represents future development's proportionate share of infrastructure costs for capital improvements and public services. Impact fees have limitations and should not be regarded as the total solution for infrastructure funding. Rather, they are one component of a comprehensive funding strategy to ensure provision of adequate public facilities. Impact fees may only be used for capital improvements or debt service for growth-related infrastructure. In contrast to general taxes, impact fees may not be used for operations, maintenance, replacement of infrastructure, or correcting existing deficiencies. This impact fee study includes all necessary elements required to be in full compliance with the Enabling Legislation and includes the following components:

1. County Administration
2. Fire and Rescue
3. Law Enforcement
4. Parks and Recreation
5. Schools

GENERAL LEGAL FRAMEWORK

Both state and federal courts have recognized the imposition of impact fees on development as a legitimate form of land use regulation, provided the fees meet standards intended to protect against regulatory takings. Land use regulations, development exactions, and impact fees are subject to the Fifth Amendment prohibition on taking of private property for public use without just compensation. To comply with the Fifth Amendment, development regulations must be shown to substantially advance a legitimate governmental interest. In the case of impact fees, that interest is in the protection of public health, safety, and welfare by ensuring that development is not detrimental to the quality of essential public services. The means to this end are also important, requiring both procedural and substantive due process. The process followed to receive community input, with stakeholder meetings, work sessions, and public hearings provide opportunity for comments and refinements to the impact fees.

There is little federal case law specifically dealing with impact fees, although other rulings on other types of exactions (e.g., land dedication requirements) are relevant. In one of the most important exaction cases, the U. S. Supreme Court found that a government agency imposing exactions on development must demonstrate an "essential nexus" between the exaction and the interest being protected (see *Nollan v. California Coastal Commission,* 1987). In a more recent case (*Dolan v. City of Tigard, OR,* 1994), the Court

ruled that an exaction also must be "roughly proportional" to the burden created by development. *Koontz v. St. Johns River Water Management District* (2013) clarified that the Nollan/Dolan test applies to monetary exactions as conditions of a property owner's building permit: Government's "monetary exactions" as a condition of a land use permit must satisfy requirements that government's mitigation demand have an essential nexus and rough proportionality to the impacts of a proposed development; abrogating *McClung v. City of Sumner*, 548 F.3d 1219. U.S.C.A. Const. Amend. 5 (2008).

There are three reasonable relationship requirements for impact fees that are closely related to "rational nexus" or "reasonable relationship" requirements enunciated by a number of state courts. Although the term "dual rational nexus" is often used to characterize the standard by which courts evaluate the validity of impact fees under the U.S. Constitution, we prefer a more rigorous formulation that recognizes three elements: need, benefit, and proportionality. The dual rational nexus test explicitly addresses only the first two, although proportionality is reasonably implied, and was specifically mentioned by the U.S. Supreme Court in the *Dolan* case. Individual elements of the nexus standard are discussed further in the following paragraphs.

All new development in a community creates additional demands on some, or all, public facilities provided by local government. If the capacity of facilities is not increased to satisfy that additional demand, the quality or availability of public services for the entire community will deteriorate. Impact fees may be used to recover the cost of growth-related facilities, but only to the extent that the need for facilities is a consequence of development that is subject to the fees. The *Nollan* decision reinforced the principle that development exactions may be used only to mitigate conditions created by the developments upon which they are imposed. That principle clearly applies to impact fees. In this study, the impact of development on infrastructure needs is analyzed in terms of quantifiable relationships between various types of development and the demand for specific facilities, based on applicable level-of-service standards.

The requirement that exactions be proportional to the impacts of development was clearly stated by the U.S. Supreme Court in the *Dolan* case and is logically necessary to establish a proper nexus. *Koontz v. St. Johns River Water Management District* (2013) clarified this. Furthermore, *Sheetz v. County of Eldorado* (2024) clarified that it also applies to both legislative and administrative permit conditions. Proportionality is established through the procedures used to identify growth-related facility costs, and in the methods used to calculate impact fees for various types of facilities and categories of development. The demand for facilities is measured in terms of relevant and measurable attributes of development (e.g. a typical housing unit's average weekday vehicle trips).

A sufficient benefit relationship requires that impact fee revenues be segregated from other funds and expended only on the facilities for which the fees were charged. Impact fees must be expended in a timely manner and the facilities funded by the fees must serve the development paying the fees. However, nothing in the U.S. Constitution or the state enabling legislation requires that facilities funded with fee revenues be available *exclusively* to development paying the fees. In other words, benefit may extend to a general area including multiple real estate developments. These procedural and substantive issues are intended to ensure that new development benefits from the impact fees they are required to pay. The authority and procedures to implement impact fees is separate from and complementary to the authority to require improvements as part of subdivision or zoning review.

INTRODUCTION TO IMPACT FEES

Impact fees are one-time payments used to fund infrastructure costs for capital improvements and public services necessitated by future development. Impact fees have been utilized by local governments in various forms for at least fifty years. Impact fees have limitations and should not be regarded as the total solution for infrastructure financing needs. Rather, they should be considered one component of a comprehensive portfolio to ensure adequate provision of public facilities with the goal of maintaining current levels of service in a community. Any community considering impact fees should note the following limitations:

1. Fees can only be used to finance capital infrastructure costs for capital improvements and public services and cannot be used to finance ongoing operations and / or maintenance and rehabilitation costs.
2. Fees cannot be deposited in the General Fund. The funds must be accounted for separately in individual accounts and earmarked for the capital expenses for which they were collected.
3. Fees cannot be used to correct existing infrastructure deficiencies unless there is a funding plan in place to correct the deficiency for all current residents and businesses in the community.

CONCEPTUAL IMPACT FEE CALCULATION

In contrast to project-level improvements, impact fees fund growth-related infrastructure that will benefit multiple development projects, or the entire service area (usually referred to as system improvements). The first step is to determine an appropriate demand indicator for the particular type of infrastructure. The demand indicator measures the number of service units for each unit of development. For example, an appropriate indicator of the demand for parks is population growth and the increase in population can be estimated from the average number of persons per housing unit. The second step in the impact fee formula is to determine infrastructure units per service unit, typically called level-of-service (LOS) standards. In keeping with the park example, a common LOS standard is improved park acres per thousand people. The third step in the impact fee formula is the cost of various infrastructure units. To complete the park example, this part of the formula would establish a cost per acre for land acquisition and/ or park improvements.

METHODOLOGY

Impact fees for the capital facilities made necessary by future development must be based on the same level of service (LOS) provided to existing development in the service area. There are three basic methodologies used to calculate impact fees. They examine the past, present, and future status of infrastructure. Each methodology has advantages and disadvantages in a particular situation and can be used simultaneously for different cost components. Reduced to its simplest terms, the process of calculating impact fees involves two main steps: (1) determining the cost of growth-related capital improvements and (2) allocating those costs equitably to various types of development. In practice, though, the calculation of impact fees can become quite complicated because of the many variables involved in defining the relationship between development and the need for facilities within the designated service area. The following paragraphs discuss basic methodologies for calculating impact fees and how those methodologies can be applied.

- **Cost Recovery** (past improvements) - The rationale for recoupment, often called cost recovery, is that new development is paying for its share of the useful life and remaining capacity of facilities already built, or land already purchased, from which new growth will benefit. This methodology is often used for utility systems that must provide adequate capacity before new development can take place.
- **Incremental Expansion** (concurrent improvements) - The incremental expansion methodology documents current LOS standards for each type of public facility, using both quantitative and qualitative measures. This approach assumes there are no existing infrastructure deficiencies or surplus capacity in infrastructure. New development is only paying its proportionate share for growth-related infrastructure. Revenue will be used to expand or provide additional facilities, as needed, to accommodate new development. An incremental expansion cost method is best suited for public facilities that will be expanded in regular increments to keep pace with development.
- **Plan-Based** (future improvements) - The plan-based methodology allocates costs for a specified set of improvements to a specified amount of development. Improvements are typically identified in a long-range facility plan and development potential is identified by a land use plan. There are two basic options for determining the cost per demand unit: (1) total cost of a public facility can be divided by total demand units (average cost), or (2) the growth-share of the public facility cost can be divided by the net increase in demand units over the planning timeframe (marginal cost).

EVALUATION OF CREDITS

There are two types of credits that should be addressed in impact fee studies and ordinances. The first type of credit is a revenue credit due to possible double payment situations, which could occur when other revenues may contribute to the capital costs of infrastructure covered by the impact fee. This type of credit is integrated into the fee calculation, thus reducing the fee amount.

The second type of credit is a site-specific credit, or developer reimbursement, for dedication of land or construction of system improvements. This type of credit is addressed in the administration and implementation of the impact fee program. For ease of administration, TischlerBise normally recommends developer reimbursements for system improvements.

IMPACT FEE SUMMARY

IMPACT FEE COMPONENTS

Shown below, Figure 1 summarizes service areas, methodologies, and capital facilities for each infrastructure category.

Figure 1: Proposed Impact Fee Service Areas, Methodologies, and Capital Facilities

Capital Facilities	Service Area	Cost Recovery	Incremental Expansion	Plan-Based	Cost Allocation
County Administration	Berkeley County	N/A	Judicial Facilities	N/A	Population, Jobs
Fire and Rescue	Berkeley County (except Martinsburg)	N/A	Facilities, Land, Fire Apparatus, Rescue Apparatus	N/A	Population, Vehicle Trips
Law Enforcement	Berkeley County (except Martinsburg)	N/A	Sheriff Facilities, Sheriff Vehicles	N/A	Population, Vehicle Trips
Parks and Recreation	Berkeley County	N/A	Park Land, Park Amenities, Trails, Recreation Facilities	N/A	Population
Schools	Berkeley County	N/A	Elementary School Facilities, Elementary School Land	N/A	Public School Students

Calculations throughout this report are based on an analysis conducted using Excel software. Most results are discussed in the report using two, three, and four decimal places, which represent rounded figures. However, the analysis itself uses figures carried to their ultimate decimal places; therefore, the sums and products generated in the analysis may not equal the sum or product if the reader replicates the calculation with the factors shown in the report (due to the rounding of figures shown, not in the analysis).

PROPOSED IMPACT FEES

Proposed impact fees will be assessed per development unit shown below in Figure 2. For residential development, the development unit is a housing unit. For nonresidential development, the development unit is a room for lodging development and 1,000 square feet of floor area for all other development types. The proposed fees represent the maximum allowable fees based on the analysis outlined in this report. Berkeley County may adopt fees that are less than the amounts shown; however, a reduction in impact fee revenue will necessitate an increase in other revenues, a decrease in planned capital improvements, and/or a decrease in level-of-service standards. All costs in the Impact Fee Report represent current dollars with no assumed inflation over time. If costs change significantly over time, impact fees should be recalculated.

Figure 2: Proposed Impact Fees

Residential Fees per Development Unit							
Development Type	Development Unit	County Admin	Fire and Rescue	Law Enforcement	Parks and Recreation	School	Proposed Fees
Single Family	Housing Unit	$874	$1,415	$372	$2,099	$7,137	$11,897
Multi-Family	Housing Unit	$621	$1,005	$264	$1,491	$4,848	$8,229
Mobile Home	Housing Unit	$686	$1,112	$292	$1,649	$4,399	$8,138

Nonresidential Fees per Development Unit							
Development Type	Development Unit	County Admin	Fire and Rescue	Law Enforcement	Parks and Recreation	School	Proposed Fees
Industrial	1,000 Sq Ft	$815	$770	$202	$0	$0	$1,787
Warehouse	1,000 Sq Ft	$147	$278	$73	$0	$0	$498
Commercial	1,000 Sq Ft	$914	$3,949	$1,038	$0	$0	$5,901
Office / Other Services	1,000 Sq Ft	$1,406	$1,753	$461	$0	$0	$3,620
Institutional	1,000 Sq Ft	$1,307	$2,410	$633	$0	$0	$4,350
Lodging	Room	$56	$543	$143	$0	$0	$742

COUNTY ADMINISTRATION IMPACT FEES

METHODOLOGY

The county administration impact fees include a component for county judicial facilities, and the incremental expansion methodology is used for the county judicial facilities component.

SERVICE AREA

Berkeley County provides judicial services throughout Berkeley County; therefore, there is a countywide service area for county administration impact fees.

PROPORTIONATE SHARE

Impact fees should not exceed a proportionate share of the capital cost needed to provide capital facilities to the development, and this analysis considers all necessary elements required to be in full compliance with the Enabling Legislation. County administration impact fees allocate the cost of capital facilities between residential and nonresidential development using functional population shown below. Functional population is similar to what the U.S. Census Bureau calls "daytime population." This accounts for people living and working in a jurisdiction, but it also considers commuting patterns and time spent at home and nonresidential locations. The functional population approach allocates the cost of the county administration infrastructure to residential and nonresidential development based on the activity of residents and workers through 24 hours in a day.

Figure CA1: Functional Population

Demand Units in 2022					
Residential				Demand Hours/Day	Person Hours
	Population	129,011			
	Residents Not Working	68,357		20	1,367,142
	Employed Residents	60,654			
	Employed in Berkeley County		22,986	14	321,804
	Employed outside Berkeley County		37,668	14	527,352
				Residential Subtotal	2,216,298
				Residential Share	**77%**
Nonresidential					
	Non-working Residents	68,357		4	273,428
	Jobs Located in Berkeley County	37,471			
	Residents Employed in Berkeley County		22,986	10	229,860
	Non-Resident Workers (inflow commuters)		14,485	10	144,850
				Nonresidential Subtotal	648,138
				Nonresidential Share	**23%**
				Total	2,864,436

Source: TischlerBise estimate (population), U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics, Version 6.24.2 (employment).

Residents that do not work are assigned 20 hours per day to residential development and four hours per day to nonresidential development (annualized averages). Residents that work in Berkeley County are assigned 14 hours to residential development and 10 hours to nonresidential development. Residents that work outside Berkeley County are assigned 14 hours to residential development, and the remaining 10 hours in the day are assumed to be spent working outside of Berkeley County. Inflow commuters are assigned 10 hours to nonresidential development. Based on 2022 population estimates calculated by TischlerBise and 2022 employment data from the U.S. Census Bureau's OnTheMap web application, functional population is 77 percent residential development and 23 percent nonresidential development.

The proportionate share of costs attributable to residential development will be allocated to population and then converted to an appropriate amount based on housing unit type. TischlerBise recommends using jobs as the best demand indicator for nonresidential development. Employment density rates are highest for office / other services development and lowest for warehouse development. Commercial development, such as a shopping center, institutional development, and industrial development fall between the other two categories. This ranking of employment density is consistent with the relative demand for county administration services from nonresidential development.

RATIO OF SERVICE UNIT TO DEVELOPMENT UNIT

Shown below, Figure CA2 displays the demand indicators per development unit for residential and nonresidential development. For residential development, the table displays the number of persons per housing unit for each development unit based on American Community Survey data shown in Figure A3. For nonresidential development, the table displays the number of jobs per development unit based on ITE employment density factors shown in Figure A11.

Figure CA2: Ratio of Service Unit to Development Unit

Residential Development		
Development Type	Development Unit	Persons per Unit[1]
Single Family	Housing Unit	2.52
Multi-Family	Housing Unit	1.79
Mobile Home	Housing Unit	1.98

Nonresidential Development		
Development Type	Development Unit	Jobs per Unit[2]
Industrial	1,000 Sq Ft	1.89
Warehouse	1,000 Sq Ft	0.34
Commercial	1,000 Sq Ft	2.12
Office / Other Services	1,000 Sq Ft	3.26
Institutional	1,000 Sq Ft	3.03
Lodging	Room	0.13

1. U.S. Census Bureau, 2018-2022 American Community Survey 5-Year Estimates.
2. Trip Generation, Institute of Transportation Engineers, 11th Edition (2021).

LEVEL-OF-SERVICE ANALYSIS

Judicial Facilities – Incremental Expansion

Berkeley County currently provides 122,600 square feet of judicial facilities to existing development countywide, and Berkeley County plans to construct additional judicial facilities to serve future development. To allocate the proportionate share of demand for judicial facilities to residential and nonresidential development, this analysis uses functional population shown in Figure CA1. The existing level of service for residential development is 0.6744 square feet per person (122,600 square feet X 77 percent residential share / 139,989 persons). The nonresidential level of service is 0.8387 square feet per job (122,600 square feet X 23 percent nonresidential share / 33,619 jobs).

The analysis uses the Judicial Center expansion construction cost estimate of $514 per square foot ($20,000,000 total cost / 38,900 square feet) as a proxy for future growth-related judicial facility costs. For judicial facilities, the cost is $346.71 per person (0.6744 square feet per person X $514 per square foot) and $431.23 per job (0.8387 square feet per job X $514 per square foot).

Figure CA3: Existing Level of Service and Cost Allocation

Description	Square Feet
Judicial Center	122,600
Total	122,600

Cost Factors	
Judicial Center Expansion	$20,000,000
Square Feet	38,900
Cost per Square Foot	$514

Level-of-Service (LOS) Standards	
Existing Square Feet	122,600
Residential	
Residential Share	77%
2025 Population	139,989
Square Feet per Person	0.6744
Cost per Person	$346.71
Nonresidential	
Nonresidential Share	23%
2025 Jobs	33,619
Square Feet per Job	0.8387
Cost per Job	$431.23

Source: Berkeley County, West Virginia

PROJECTED DEMAND

Judicial Facilities – Incremental Expansion

Berkeley County plans to maintain its existing countywide level of service for judicial facilities over the next 10 years. Based on a projected population increase of 40,499 persons, future residential development demands approximately 27,310 square feet of judicial facilities (40,499 additional persons X 0.6744 square feet per person). With projected nonresidential growth of 9,726 jobs, future nonresidential development demands approximately 8,158 additional square feet of judicial facilities (9,726 additional jobs X 0.8387 square feet per job). Future development demands approximately 35,468 square feet of judicial facilities at a cost of $18,235,424 (35,467.9 X $514 per square foot). Berkeley County will use impact fees to construct new judicial facilities or to expand existing judicial facilities.

Figure CA4: Projected Demand

Type of Infrastructure	Level of Service	Demand Unit	Cost per Sq Ft
Judicial Facilities	0.6744 Square Feet	per Person	$514
	0.8387 Square Feet	per Job	

Demand for Judicial Facilities					
Year	Population	Jobs	Square Feet		
			Residential	Nonresidential	Total
2025	139,989	33,619	94,402.0	28,198.0	122,600.0
2026	144,039	34,592	97,133.0	29,013.8	126,146.8
2027	148,089	35,564	99,864.1	29,829.5	129,693.6
2028	152,138	36,537	102,595.1	30,645.3	133,240.4
2029	156,188	37,510	105,326.1	31,461.1	136,787.2
2030	160,238	38,482	108,057.2	32,276.8	140,334.0
2031	164,288	39,455	110,788.2	33,092.6	143,880.8
2032	168,338	40,427	113,519.2	33,908.3	147,427.6
2033	172,388	41,400	116,250.3	34,724.1	150,974.4
2034	176,438	42,373	118,981.3	35,539.9	154,521.2
2035	180,487	43,345	121,712.3	36,355.6	158,067.9
10-Yr Increase	40,499	9,726	27,310.3	8,157.6	35,467.9

Growth-Related Expenditures	$14,041,285	$4,194,139	$18,235,424
Incorporated Share	$1,830,694	$653,316	$2,484,010
Unincorporated Share	$12,210,591	$3,540,823	$15,751,414

PROPOSED COUNTY ADMINISTRATION IMPACT FEES

Figure CA5 includes infrastructure components and cost factors for county administration impact fees. The cost per service unit is $346.71 per person and $431.23 per job.

Residential impact fees are calculated per housing unit and vary proportionately according to the number of persons per housing unit. For a single-family unit, the fee of $874 is calculated using a cost of $346.71 per person multiplied by 2.52 persons per housing unit.

Nonresidential impact fees are calculated per development unit and vary proportionately according to the number of jobs. For industrial development, the fee of $815 per development unit (1,000 square feet) is calculated using a cost of $431.23 per job multiplied by 1.89 jobs per development unit.

Figure CA5: Proposed County Administration Impact Fees

Fee Component	Cost per Person	Cost per Job
Judicial Facilities	$346.71	$431.23
Total	$346.71	$431.23

Residential Fees per Development Unit			
Development Type	Development Unit	Persons per Unit[1]	Proposed Fees
Single Family	Housing Unit	2.52	$874
Multi-Family	Housing Unit	1.79	$621
Mobile Home	Housing Unit	1.98	$686

Nonresidential Fees per Development Unit			
Development Type	Development Unit	Jobs per Unit[1]	Proposed Fees
Industrial	1,000 Sq Ft	1.89	$815
Warehousehouse	1,000 Sq Ft	0.34	$147
Commercial	1,000 Sq Ft	2.12	$914
Office / Other Services	1,000 Sq Ft	3.26	$1,406
Institutional	1,000 Sq Ft	3.03	$1,307
Lodging	Room	0.13	$56

1. See Land Use Assumptions

PROJECTED COUNTY ADMINISTRATION IMPACT FEE REVENUE

Projected fee revenue shown below is based on the development projections shown in Appendix A and the proposed county administration impact fees shown in Figure CA5. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase and impact fee revenue will increase at a corresponding rate. If development occurs at a slower rate than projected, the demand for infrastructure will also decrease, along with impact fee revenue. Projected impact fee revenue over the next 10 years equals $18,210,966 and projected growth-related expenditures equal $18,235,424.

Figure CA6: Projected County Administration Impact Fee Revenue

Fee Component	Growth Share	Existing Share	Total
Judicial Facilities	$18,235,424	$0	$18,235,424
Total	$18,235,424	$0	$18,235,424

Year		Single Family $874 per unit	Multi-Family $621 per unit	Mobile Home $686 per unit	Industrial $815 per 1,000 sq ft	Commercial $914 per 1,000 sq ft	Office / Other $1,406 per 1,000 sq ft	Institutional $1,307 per 1,000 sq ft
		Housing Unit	Housing Unit	Housing Unit	KSF	KSF	KSF	KSF
Base	2025	46,252	6,336	5,671	3,032	4,688	1,802	3,978
Year 1	2026	47,630	6,570	5,748	3,120	4,824	1,854	4,093
Year 2	2027	49,008	6,803	5,825	3,208	4,959	1,906	4,208
Year 3	2028	50,386	7,036	5,902	3,295	5,095	1,958	4,323
Year 4	2029	51,764	7,270	5,979	3,383	5,230	2,010	4,438
Year 5	2030	53,142	7,503	6,056	3,471	5,366	2,062	4,553
Year 6	2031	54,520	7,736	6,133	3,559	5,502	2,115	4,668
Year 7	2032	55,898	7,969	6,210	3,646	5,637	2,167	4,783
Year 8	2033	57,276	8,203	6,287	3,734	5,773	2,219	4,898
Year 9	2034	58,654	8,436	6,364	3,822	5,908	2,271	5,014
Year 10	2035	60,031	8,669	6,441	3,909	6,044	2,323	5,129
10-Year Increase		13,779	2,333	770	877	1,356	521	1,151
Projected Revenue		$12,042,846	$1,448,793	$528,220	$714,755	$1,239,384	$732,890	$1,504,078

Projected Fee Revenue	$18,210,966
Total Expenditures	$18,235,424

FIRE AND RESCUE IMPACT FEES

METHODOLOGY

The fire and rescue impact fees include components for fire and rescue facilities, fire and rescue land, fire apparatus, and rescue apparatus. The incremental expansion methodology is used for all components.

SERVICE AREA

Berkeley County provides fire and rescue services throughout Berkeley County except for Martinsburg; therefore, there is a single service area for fire and rescue impact fees (excludes Martinsburg).

PROPORTIONATE SHARE

Impact fees should not exceed a proportionate share of the capital cost needed to provide capital facilities to the development, and this analysis considers all necessary elements required to be in full compliance with the Enabling Legislation. Fire and rescue impact fees allocate the cost of capital facilities between residential and nonresidential development using functional population shown below. Functional population is similar to what the U.S. Census Bureau calls "daytime population." This accounts for people living and working in a jurisdiction, but it also considers commuting patterns and time spent at home and nonresidential locations. The functional population approach allocates the cost of the fire and rescue infrastructure to residential and nonresidential development based on the activity of residents and workers through 24 hours in a day.

Figure F1: Functional Population

Demand Units in 2022					
Residential				Demand Hours/Day	Person Hours
	Population	129,011			
	Residents Not Working	68,357		20	1,367,142
	Employed Residents	60,654			
	Employed in Berkeley County		22,986	14	321,804
	Employed outside Berkeley County		37,668	14	527,352
				Residential Subtotal	2,216,298
				Residential Share	**77%**
Nonresidential					
	Non-working Residents	68,357		4	273,428
	Jobs Located in Berkeley County	37,471			
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				Nonresidential Share	**23%**
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Source: TischlerBise estimate (population), U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics, Version 6.24.2 (employment).

Residents that do not work are assigned 20 hours per day to residential development and four hours per day to nonresidential development (annualized averages). Residents that work in Berkeley County are assigned 14 hours to residential development and 10 hours to nonresidential development. Residents that work outside Berkeley County are assigned 14 hours to residential development, and the remaining 10 hours in the day are assumed to be spent working outside of Berkeley County. Inflow commuters are assigned 10 hours to nonresidential development. Based on 2022 population estimates calculated by TischlerBise and 2022 employment data from the U.S. Census Bureau's OnTheMap web application, functional population is 77 percent residential development and 23 percent nonresidential development.

The proportionate share of costs attributable to residential development will be allocated to population and then converted to an appropriate amount based on housing unit type. Since nonresidential calls for service were unavailable by specific nonresidential use (i.e. commercial/retail, office, industrial, etc.), TischlerBise recommends using average weekday vehicle trips as the best demand indicator for fire and rescue demand. Trip generation rates are highest for commercial development, such as a shopping center, and lowest for warehouse development. Industrial, office, and institutional trip rates fall between the other two categories. This ranking of trip rates is consistent with the relative fire and rescue demand from nonresidential development.

RATIO OF SERVICE UNIT TO DEVELOPMENT UNIT

Figure F2 displays the demand indicators per development unit for residential and nonresidential development. For residential development, the table displays the number of persons per housing unit for each development unit based on American Community Survey data shown in Figure A3. For nonresidential development, the table displays the number of average weekday vehicle trips (AWVT) per development unit based on Institute of Transportation Engineers (ITE) trip generation rates shown in Figure A11.

Figure F2: Ratio of Service Unit to Development Unit

Residential Development		
Development Type	Development Unit	Persons per Unit[1]
Single Family	Housing Unit	2.52
Multi-Family	Housing Unit	1.79
Mobile Home	Housing Unit	1.98

Nonresidential Development				
Development Type	Development Unit	AWVTE per 1,000 Sq Ft[2]	Trip Rate Adjustment[2]	AWVT per Unit
Industrial	1,000 Sq Ft	4.75	50%	2.38
Warehouse	1,000 Sq Ft	1.71	50%	0.86
Commercial	1,000 Sq Ft	37.01	33%	12.21
Office / Other Services	1,000 Sq Ft	10.84	50%	5.42
Institutional	1,000 Sq Ft	22.59	33%	7.45
Lodging	Room	3.35	50%	1.68

1. U.S. Census Bureau, 2018-2022 American Community Survey 5-Year Estimates.
2. Trip Generation, Institute of Transportation Engineers, 11th Edition (2021).

LEVEL-OF-SERVICE ANALYSIS

Fire and Rescue Facilities – Incremental Expansion

Berkeley County currently provides 133,185 square feet of fire and rescue facilities to existing development in the unincorporated area, and Berkeley County plans to construct additional fire and rescue facilities to serve future development.

Figure F3: Existing Fire and Rescue Facilities

Description	Square Feet	Acres
Field Operations Office	3,300	1.00
Lot 5 (Sue Court)	0	1.55
Station 20	27,750	3.80
Station 29	6,160	0.00
Station 30	27,708	8.21
Station 40	10,100	1.91
Station 49	5,820	1.00
Station 50	4,950	2.00
Station 60	22,004	2.77
Station 69	6,600	2.36
Station 70	2,396	1.68
Station 96 (Falling Waters)	2,380	6.50
Station 97 (Sue Court)	9,837	1.60
Station 98 (Inwood)	4,180	1.80
Total	133,185	36.18

Source: Berkeley County Fire Department and Berkeley County Emergency Ambulance Authority

To allocate the proportionate share of demand for fire and rescue facilities to residential and nonresidential development in the unincorporated area, this analysis uses functional population shown in Figure F1. The existing level of service for residential development is 0.8481 square feet per person (133,185 square feet X 77 percent residential share / 120,914 persons). The nonresidential level of service is 0.4885 square feet per vehicle trip (133,185 square feet X 23 percent nonresidential share / 62,705 vehicle trips).

Based on discussions with staff, the analysis uses a construction cost estimate of $500 per square foot as a proxy for future growth-related fire and rescue facility costs. For fire and rescue facilities, the cost is $424.07 per person (0.8481 square feet per person X $500 per square foot) and $244.26 per vehicle trip (0.4885 square feet per vehicle trip X $500 per square foot). Berkeley County will use impact fees to construct new fire and rescue facilities or to expand existing fire and rescue facilities.

Figure F4: Existing Level of Service and Cost Allocation

Cost Factors	
Cost per Square Foot	$500

Level-of-Service (LOS) Standards	
Existing Square Feet	133,185
Residential	
Residential Share	77%
2025 Population	120,914
Square Feet per Person	0.8481
Cost per Person	$424.07
Nonresidential	
Nonresidential Share	23%
2025 Vehicle Trips	62,705
Square Feet per Vehicle Trip	0.4885
Cost per Vehicle Trip	$244.26

Source: Berkeley County Fire Department and Berkeley County Emergency Ambulance Authority

Fire and Rescue Land – Incremental Expansion

Berkeley County currently provides 36.18 acres of land for fire and rescue facilities to existing development in the unincorporated area, and Berkeley County plans to acquire additional land to serve future development. To allocate the proportionate share of demand for fire and rescue land to residential and nonresidential development in the unincorporated area, this analysis uses functional population shown in Figure F1. The existing level of service for residential development is 0.0002 acres per person (36.18 acres X 77 percent residential share / 120,914 persons). The nonresidential level of service is 0.0001 acres per vehicle trip (36.18 acres X 23 percent nonresidential share / 62,705 vehicle trips).

Based on discussions with staff, the analysis uses $150,000 per acre as a proxy for future growth-related fire and rescue land costs. For fire and rescue land, the cost is $34.56 per person (0.0002 acres per person X $150,000 per acre) and $19.91 per vehicle trip (0.0001 acres per vehicle trip X $150,000 per acre). Berkeley County will use impact fees to acquire land for fire and rescue facilities.

Figure F5: Existing Level of Service and Cost Allocation

Cost Factors	
Cost per Acre	$150,000

Level-of-Service (LOS) Standards	
Existing Acres	36.18
Residential	
Residential Share	77%
2025 Population	120,914
Acres per Person	0.0002
Cost per Person	$34.56
Nonresidential	
Nonresidential Share	23%
2025 Vehicle Trips	62,705
Acres per Vehicle Trip	0.0001
Cost per Vehicle Trip	$19.91

Source: Berkeley County Fire Department and Berkeley County Emergency Ambulance Authority

Fire Apparatus – Incremental Expansion

Berkeley County currently serves existing development in the unincorporated area with 25 fire apparatus and plans to acquire additional fire apparatus to serve future development. The total cost of the existing fleet is $33,800,000. The average cost of the existing fleet is $1,352,000 per unit ($33,800,000 total cost / 25 units), and the analysis uses this as a proxy for future growth-related fire apparatus costs. To allocate the proportionate share of demand for fire apparatus to residential and nonresidential development in the unincorporated area, this analysis uses functional population outlined in Figure F1. The existing level of service for residential development is 0.00016 units per person (25 units X 77 percent residential share / 120,914 persons). The nonresidential level of service is 0.00009 units per vehicle trip (25 units X 23 percent nonresidential share / 62,705 vehicle trips).

The average cost of the existing fleet is $1,352,000 per unit ($33,800,000 total cost / 25 units), and the analysis uses this cost as a proxy for future growth-related fire apparatus costs. For fire apparatus, the cost is $215.24 per person (0.00016 units per person X $1,352,000 per unit) and $123.98 per vehicle trip (0.00009 units per vehicle trip X $1,352,000 per unit). Berkeley County will use impact fees to expand its fleet of fire apparatus.

Figure F6: Existing Level of Service and Cost Allocation

Description	Units	Unit Cost	Total Cost
Aerial	2	$2,500,000	$5,000,000
Pumper	10	$1,300,000	$13,000,000
Rescue	5	$1,400,000	$7,000,000
Tanker	8	$1,100,000	$8,800,000
Total	25	$1,352,000	$33,800,000

Cost Factors	
Cost per Unit	$1,352,000

Level-of-Service (LOS) Standards	
Existing Units	25
Residential	
Residential Share	77%
2025 Population	120,914
Units per Person	0.00016
Cost per Person	$215.24
Nonresidential	
Nonresidential Share	23%
2025 Vehicle Trips	62,705
Units per Vehicle Trip	0.00009
Cost per Vehicle Trip	$123.98

Source: Berkeley County Fire Department

Rescue Apparatus – Incremental Expansion

Berkeley County currently serves existing development in the unincorporated area with 27 rescue apparatus and plans to acquire additional rescue apparatus to serve future development. The total cost of the existing fleet is $11,115,000. The average cost of the existing fleet is $411,667 per unit ($11,115,000 total cost / 27 units), and the analysis uses this as a proxy for future growth-related rescue apparatus costs. To allocate the proportionate share of demand for rescue apparatus to residential and nonresidential development in the unincorporated area, this analysis uses functional population outlined in Figure F1. The existing level of service for residential development is 0.00017 units per person (27 units X 77 percent residential share / 120,914 persons). The nonresidential level of service is 0.00010 units per vehicle trip (27 units X 23 percent nonresidential share / 62,705 vehicle trips).

The average cost of the existing fleet is $411,667 per unit ($11,115,000 total cost / 27 units), and the analysis uses this cost as a proxy for future growth-related rescue apparatus costs. For rescue apparatus, the cost is $70.78 per person (0.00017 units per person X $411,667 per unit) and $40.77 per vehicle trip (0.00010 units per vehicle trip X $411,667 per unit). Berkeley County will use impact fees to expand its rescue apparatus fleet.

Figure F7: Existing Level of Service and Cost Allocation

Description	Units	Unit Cost	Total Cost
Ambulance	21	$515,000	$10,815,000
Support Vehicle	6	$50,000	$300,000
Total	27	$411,667	$11,115,000

Cost Factors	
Cost per Unit	$411,667

Level-of-Service (LOS) Standards	
Existing Units	27
Residential	
Residential Share	77%
2025 Population	120,914
Units per Person	0.00017
Cost per Person	$70.78
Nonresidential	
Nonresidential Share	23%
2025 Vehicle Trips	62,705
Units per Vehicle Trip	0.00010
Cost per Vehicle Trip	$40.77

Source: Berkeley County Emergency Ambulance Authority

PROJECTED DEMAND

Fire and Rescue Facilities – Incremental Expansion

Berkeley County plans to maintain the existing level of service for fire and rescue facilities in the unincorporated area over the next 10 years. Based on a projected population increase of 35,218 persons, future residential development demands approximately 29,870 square feet of fire and rescue facilities (35,218 additional persons X 0.8481 square feet per person). With projected nonresidential growth of 25,315 vehicle trips, future nonresidential development demands approximately 12,367 additional square feet of fire and rescue facilities (25,315 additional vehicle trips X 0.4885 square feet per vehicle trip). Future development in the unincorporated area demands approximately 42,237 square feet of fire and rescue facilities at a cost of $21,118,525 (42,237.0 X $500 per square foot). Berkeley County will use impact fees to construct new fire and rescue facilities or to expand existing fire and rescue facilities.

Figure F8: Projected Demand

Type of Infrastructure	Level of Service	Demand Unit	Cost per Sq Ft
Fire and Rescue Facilities	0.8481 Square Feet	per Person	$500
	0.4885 Square Feet	per Vehicle Trip	

Demand for Fire and Rescue Facilities					
Year	Population	Vehicle Trips	Square Feet		
			Residential	Nonresidential	Total
2025	120,914	62,705	102,552.5	30,632.6	133,185.0
2026	124,436	65,236	105,539.5	31,869.2	137,408.7
2027	127,957	67,768	108,526.5	33,105.9	141,632.4
2028	131,479	70,299	111,513.5	34,342.6	145,856.1
2029	135,001	72,830	114,500.6	35,579.3	150,079.8
2030	138,523	75,362	117,487.6	36,815.9	154,303.5
2031	142,045	77,893	120,474.6	38,052.6	158,527.2
2032	145,567	80,425	123,461.6	39,289.3	162,750.9
2033	149,088	82,956	126,448.7	40,526.0	166,974.6
2034	152,610	85,488	129,435.7	41,762.7	171,198.3
2035	156,132	88,019	132,422.7	42,999.3	175,422.0
10-Yr Increase	35,218	25,315	29,870.3	12,366.8	42,237.0

Growth-Related Expenditures	$14,935,126	$6,183,399	$21,118,525

Fire and Rescue Land – Incremental Expansion

Berkeley County plans to maintain the existing level of service for fire and rescue land in the unincorporated area over the next 10 years. Based on a projected population increase of 35,218 persons, future residential development demands approximately 8.11 acres of land for fire and rescue facilities (35,218 additional persons X 0.0002 acres per person). With projected nonresidential growth of 25,315 vehicle trips, future nonresidential development demands approximately 3.36 acres of land for fire and rescue facilities (25,315 additional vehicle trips X 0.0001 acres per vehicle trip). Future development in the unincorporated area demands approximately 11.47 acres of land for fire and rescue facilities at a cost of $1,721,068 (11.47 acres X $150,000 per acre). Berkeley County will use impact fees to acquire land for fire and rescue facilities.

Figure F9: Projected Demand

Type of Infrastructure	Level of Service	Demand Unit	Cost per Acre
Fire and Rescue Land	0.0002 Acres	per Person	$150,000
	0.0001 Acres	per Vehicle Trip	

Demand for Fire and Rescue Land					
Year	Population	Vehicle Trips	Acres		
			Residential	Nonresidential	Total
2025	120,914	62,705	27.86	8.32	36.18
2026	124,436	65,236	28.67	8.66	37.33
2027	127,957	67,768	29.48	8.99	38.47
2028	131,479	70,299	30.29	9.33	39.62
2029	135,001	72,830	31.10	9.67	40.77
2030	138,523	75,362	31.92	10.00	41.92
2031	142,045	77,893	32.73	10.34	43.06
2032	145,567	80,425	33.54	10.67	44.21
2033	149,088	82,956	34.35	11.01	45.36
2034	152,610	85,488	35.16	11.34	46.51
2035	156,132	88,019	35.97	11.68	47.65
10-Yr Increase	35,218	25,315	8.11	3.36	11.47

Growth-Related Expenditures	$1,217,148	$503,920	$1,721,068

Fire Apparatus – Incremental Expansion

Berkeley County plans to maintain the existing level of service for fire apparatus in the unincorporated area over the next 10 years. Based on a projected population increase 35,218 persons, future residential development demands approximately 5.6 fire apparatus (35,218 persons X 0.00016 units per person). With projected nonresidential growth of 25,315 vehicle trips, future nonresidential development demands approximately 2.3 fire apparatus (25,315 vehicle trips X 0.00009 units per vehicle trip). Future development in the unincorporated area demands approximately 7.9 fire apparatus at a cost of $10,719,017 (7.9 units X $1,352,000 per unit). Berkeley County will use impact fees to expand its fleet of fire apparatus.

Figure F10: Projected Demand

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Fire Apparatus	0.00016 Units	per Person	$1,352,000
	0.00009 Units	per Vehicle Trip	

Demand for Fire Apparatus					
Year	Population	Vehicle Trips	Units		
			Residential	Nonresidential	Total
2025	120,914	62,705	19.3	5.8	25.0
2026	124,436	65,236	19.8	6.0	25.8
2027	127,957	67,768	20.4	6.2	26.6
2028	131,479	70,299	20.9	6.4	27.4
2029	135,001	72,830	21.5	6.7	28.2
2030	138,523	75,362	22.1	6.9	29.0
2031	142,045	77,893	22.6	7.1	29.8
2032	145,567	80,425	23.2	7.4	30.5
2033	149,088	82,956	23.7	7.6	31.3
2034	152,610	85,488	24.3	7.8	32.1
2035	156,132	88,019	24.9	8.1	32.9
10-Yr Increase	35,218	25,315	5.6	2.3	7.9

Growth-Related Expenditures	$7,580,542	$3,138,475	$10,719,017

Rescue Apparatus – Incremental Expansion

Berkeley County plans to maintain the existing level of service for rescue apparatus in the unincorporated area over the next 10 years. Based on a projected population increase 35,218 persons, future residential development demands approximately 6.1 rescue apparatus (35,218 persons X 0.00017 units per person). With projected nonresidential growth of 25,315 vehicle trips, future nonresidential development demands approximately 2.5 rescue apparatus (25,315 vehicle trips X 0.00010 units per vehicle trip). Future development in the unincorporated area demands approximately 8.6 rescue apparatus at a cost of $3,524,907 (8.6 units X $411,667 per unit). Berkeley County will use impact fees to expand its rescue apparatus fleet.

Figure F11: Projected Demand

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Rescue Apparatus	0.00017 Units	per Person	$411,667
	0.00010 Units	per Vehicle Trip	

Demand for Rescue Apparatus					
Year	Population	Vehicle Trips	Units		
			Residential	Nonresidential	Total
2025	120,914	62,705	20.8	6.2	27.0
2026	124,436	65,236	21.4	6.5	27.9
2027	127,957	67,768	22.0	6.7	28.7
2028	131,479	70,299	22.6	7.0	29.6
2029	135,001	72,830	23.2	7.2	30.4
2030	138,523	75,362	23.8	7.5	31.3
2031	142,045	77,893	24.4	7.7	32.1
2032	145,567	80,425	25.0	8.0	33.0
2033	149,088	82,956	25.6	8.2	33.9
2034	152,610	85,488	26.2	8.5	34.7
2035	156,132	88,019	26.8	8.7	35.6
10-Yr Increase	35,218	25,315	6.1	2.5	8.6

Growth-Related Expenditures	$2,492,832	$1,032,075	$3,524,907

PROPOSED FIRE AND RESCUE IMPACT FEES

Figure F12 includes infrastructure components and cost factors for fire and rescue impact fees. The cost per service unit is $561.55 per person and $323.45 per vehicle trip.

Residential impact fees are calculated per housing unit and vary proportionately according to the number of persons per housing unit. For a single-family unit, the fee of $1,415 is calculated using a cost of $561.55 per person multiplied by 2.52 persons per housing unit.

Nonresidential impact fees are calculated per development unit and vary proportionately according to the number of vehicle trips. For industrial development, the fee of $770 per development unit (1,000 square feet) is calculated using a cost of $323.45 per vehicle trip multiplied by 2.38 vehicle trips per development unit.

Figure F12: Proposed Fire and Rescue Impact Fees

Fee Component	Cost per Person	Cost per Trip
Fire and Rescue Facilities	$240.97	$138.79
Fire and Rescue Land	$34.56	$19.91
Fire Apparatus	$215.24	$123.98
Rescue Apparatus	$70.78	$40.77
Total	$561.55	$323.45

Residential Fees per Development Unit			
Development Type	Development Unit	Persons per Unit[1]	Proposed Fees
Single Family	Housing Unit	2.52	$1,415
Multi-Family	Housing Unit	1.79	$1,005
Mobile Home	Housing Unit	1.98	$1,112

Nonresidential Fees per Development Unit			
Development Type	Development Unit	AWVT per Unit[1]	Proposed Fees
Industrial	1,000 Sq Ft	2.38	$770
Warehousehouse	1,000 Sq Ft	0.86	$278
Commercial	1,000 Sq Ft	12.21	$3,949
Office / Other Services	1,000 Sq Ft	5.42	$1,753
Institutional	1,000 Sq Ft	7.45	$2,410
Lodging	Room	1.68	$543

1. See Land Use Assumptions

PROJECTED FIRE AND RESCUE IMPACT FEE REVENUE

Projected fee revenue shown below is based on the development projections shown in Appendix A and the proposed fire and rescue impact fees shown in Figure F12. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase and impact fee revenue will increase at a corresponding rate. If development occurs at a slower rate than projected, the demand for infrastructure will also decrease, along with impact fee revenue. Projected impact fee revenue over the next 10 years equals $27,962,009 and projected growth-related expenditures equal $27,964,992.

Figure F13: Projected Fire and Rescue Impact Fee Revenue

Fee Component	Growth Share	Existing Share	Total
Fire and Rescue Facilities	$12,000,000	$0	$12,000,000
Fire and Rescue Land	$1,721,068	$0	$1,721,068
Fire Apparatus	$10,719,017	$0	$10,719,017
Rescue Apparatus	$3,524,907	$0	$3,524,907
Total	$27,964,992	$0	$27,964,992

	Single Family $1,415 per unit	Multi-Family $1,005 per unit	Mobile Home $1,112 per unit	Industrial $770 per 1,000 sq ft	Commercial $3,949 per 1,000 sq ft	Office / Other $1,753 per 1,000 sq ft	Institutional $2,410 per 1,000 sq ft
Year	Housing Unit	Housing Unit	Housing Unit	KSF	KSF	KSF	KSF
Base 2025	40,156	3,453	5,662	2,599	2,882	1,111	2,054
Year 1 2026	41,400	3,584	5,739	2,675	2,996	1,155	2,150
Year 2 2027	42,644	3,715	5,816	2,751	3,111	1,198	2,246
Year 3 2028	43,888	3,846	5,893	2,828	3,225	1,242	2,342
Year 4 2029	45,132	3,977	5,970	2,904	3,339	1,286	2,438
Year 5 2030	46,376	4,108	6,047	2,980	3,454	1,330	2,534
Year 6 2031	47,620	4,239	6,124	3,056	3,568	1,374	2,630
Year 7 2032	48,864	4,370	6,201	3,133	3,683	1,418	2,726
Year 8 2033	50,108	4,501	6,278	3,209	3,797	1,462	2,822
Year 9 2034	51,352	4,632	6,355	3,285	3,912	1,506	2,917
Year 10 2035	52,596	4,763	6,432	3,361	4,026	1,550	3,013
10-Year Increase	12,440	1,310	770	762	1,144	440	959
Projected Revenue	$17,602,600	$1,316,550	$856,240	$586,933	$4,517,766	$770,961	$2,310,959

Projected Fee Revenue	$27,962,009
Total Expenditures	$27,964,992

LAW ENFORCEMENT IMPACT FEES

METHODOLOGY

The law enforcement impact fees include components for sheriff facilities and sheriff vehicles. The incremental expansion methodology is used for all components.

SERVICE AREA

Berkeley County provides law enforcement services throughout Berkeley County except for Martinsburg; therefore, there is a single service area for law enforcement impact fees (excludes Martinsburg).

PROPORTIONATE SHARE

Impact fees should not exceed a proportionate share of the capital cost needed to provide capital facilities to the development, and this analysis considers all necessary elements required to be in full compliance with the Enabling Legislation. Law enforcement impact fees allocate the cost of capital facilities between residential and nonresidential development using functional population shown below. Functional population is similar to what the U.S. Census Bureau calls "daytime population." This accounts for people living and working in a jurisdiction, but it also considers commuting patterns and time spent at home and nonresidential locations. The functional population approach allocates the cost of the law enforcement infrastructure to residential and nonresidential development based on the activity of residents and workers through 24 hours in a day.

Figure L1: Functional Population

Demand Units in 2022					
Residential				Demand Hours/Day	Person Hours
	Population	129,011			
	Residents Not Working	68,357		20	1,367,142
	Employed Residents	60,654			
	Employed in Berkeley County		22,986	14	321,804
	Employed outside Berkeley County		37,668	14	527,352
				Residential Subtotal	2,216,298
				Residential Share	**77%**
Nonresidential					
	Non-working Residents	68,357		4	273,428
	Jobs Located in Berkeley County	37,471			
	Residents Employed in Berkeley County		22,986	10	229,860
	Non-Resident Workers (inflow commuters)		14,485	10	144,850
				Nonresidential Subtotal	648,138
				Nonresidential Share	**23%**
				Total	2,864,436

Source: TischlerBise estimate (population), U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics, Version 6.24.2 (employment).

Residents that do not work are assigned 20 hours per day to residential development and four hours per day to nonresidential development (annualized averages). Residents that work in Berkeley County are assigned 14 hours to residential development and 10 hours to nonresidential development. Residents that work outside Berkeley County are assigned 14 hours to residential development, and the remaining 10 hours in the day are assumed to be spent working outside of Berkeley County. Inflow commuters are assigned 10 hours to nonresidential development. Based on 2022 population estimates calculated by TischlerBise and 2022 employment data from the U.S. Census Bureau's OnTheMap web application, functional population is 77 percent residential development and 23 percent nonresidential development.

The proportionate share of costs attributable to residential development will be allocated to population and then converted to an appropriate amount based on housing unit type. Since nonresidential calls for service were unavailable by specific nonresidential use (i.e. commercial/retail, office, industrial, etc.), TischlerBise recommends using average weekday vehicle trips as the best demand indicator for law enforcement demand. Trip generation rates are highest for commercial development, such as a shopping center, and lowest for warehouse development. Industrial, office, and institutional trip rates fall between the other two categories. This ranking of trip rates is consistent with the relative law enforcement demand from nonresidential development.

RATIO OF SERVICE UNIT TO DEVELOPMENT UNIT

Figure L2 displays the demand indicators per development unit for residential and nonresidential development. For residential development, the table displays the number of persons per housing unit for each development unit based on American Community Survey data shown in Figure A3. For nonresidential development, the table displays the number of average weekday vehicle trips (AWVT) per development unit based on Institute of Transportation Engineers (ITE) trip generation rates shown in Figure A11.

Figure L2: Ratio of Service Unit to Development Unit

Residential Development		
Development Type	Development Unit	Persons per Unit[1]
Single Family	Housing Unit	2.52
Multi-Family	Housing Unit	1.79
Mobile Home	Housing Unit	1.98

Nonresidential Development				
Development Type	Development Unit	AWVTE per 1,000 Sq Ft[2]	Trip Rate Adjustment[2]	AWVT per Unit
Industrial	1,000 Sq Ft	4.75	50%	2.38
Warehouse	1,000 Sq Ft	1.71	50%	0.86
Commercial	1,000 Sq Ft	37.01	33%	12.21
Office / Other Services	1,000 Sq Ft	10.84	50%	5.42
Institutional	1,000 Sq Ft	22.59	33%	7.45
Lodging	Room	3.35	50%	1.68

1. U.S. Census Bureau, 2018-2022 American Community Survey 5-Year Estimates.
2. Trip Generation, Institute of Transportation Engineers, 11th Edition (2021).

LEVEL-OF-SERVICE ANALYSIS

Sheriff Facilities – Incremental Expansion

The existing Berkeley County Sheriff's Department headquarters is 33,000 square feet, and Berkeley County plans to construct additional law enforcement facilities to serve future development in unincorporated areas. Based on discussions with staff, potential law enforcement facilities include substations in the northern and southern parts of Berkeley County. Each potential substation includes 7,500 square feet at an estimated cost of $3,750,000.

To allocate the proportionate share of demand for sheriff facilities to residential and nonresidential development in the unincorporated area, this analysis uses functional population shown in Figure L1. The existing level of service for residential development is 0.2101 square feet per person (33,000 square feet X 77 percent residential share / 120,914 persons). The nonresidential level of service is 0.1210 square feet per vehicle trip (33,000 square feet X 23 percent nonresidential share / 62,705 vehicle trips).

Based on the potential north and south substations, the analysis uses a construction cost estimate of $500 per square foot ($3,750,000 total cost / 7,500 square feet) as a proxy for future growth-related sheriff facility costs. For sheriff facilities, the cost is $105.07 per person (0.2101 square feet per person X $500 per square foot) and $60.52 per vehicle trip (0.1210 square feet per vehicle trip X $500 per square foot). Berkeley County will use impact fees to construct new sheriff facilities or to expand existing sheriff facilities.

Figure L3: Existing Level of Service and Cost Allocation

Description	Square Feet
Sheriff's Department HQ	33,000
Total	33,000

Cost Factors	
North / South Substation	$3,750,000
Square Feet	7,500
Cost per Square Foot	$500

Level-of-Service (LOS) Standards	
Existing Square Feet	33,000
Residential	
Residential Share	77%
2025 Population	120,914
Square Feet per Person	0.2101
Cost per Person	$105.07
Nonresidential	
Nonresidential Share	23%
2025 Vehicle Trips	62,705
Square Feet per Vehicle Trip	0.1210
Cost per Vehicle Trip	$60.52

Source: Berkeley County Sheriff's Department

Sheriff Vehicles – Incremental Expansion

Berkeley County currently serves existing development in the unincorporated area with 75 patrol vehicles and plans to acquire additional vehicles to serve future development. The total cost of the existing fleet is $6,675,000. The average cost of the existing fleet is $89,000 per unit ($6,675,000 total cost / 75 units), and the analysis uses this as a proxy for future growth-related vehicle costs. To allocate the proportionate share of demand for sheriff vehicles to residential and nonresidential development in the unincorporated area, this analysis uses functional population outlined in Figure L1. The existing level of service for residential development is 0.0005 units per person (75 units X 77 percent residential share / 120,914 persons). The nonresidential level of service is 0.0003 units per vehicle trip (75 units X 23 percent nonresidential share / 62,705 vehicle trips).

The average cost of the existing fleet is $89,000 per unit ($6,675,000 total cost / 75 units), and the analysis uses this cost as a proxy for future growth-related sheriff vehicle costs. For sheriff vehicles, the cost is $42.51 per person (0.0005 units per person X $89,000 per unit) and $24.48 per vehicle trip (0.0003 units per vehicle trip X $89,000 per unit). Berkeley County will use impact fees to expand its current fleet of sheriff vehicles.

Figure L4: Existing Level of Service and Cost Allocation

Description	Units	Unit Cost	Total Cost
Patrol Vehicle	75	$89,000	$6,675,000
Total	75	$89,000	$6,675,000

Cost Factors	
Cost per Unit	$89,000

Level-of-Service (LOS) Standards	
Existing Units	75
Residential	
Residential Share	77%
2025 Population	120,914
Units per Person	0.0005
Cost per Person	$42.51
Nonresidential	
Nonresidential Share	23%
2025 Vehicle Trips	62,705
Units per Vehicle Trip	0.0003
Cost per Vehicle Trip	$24.48

Source: Berkeley County Sheriff's Department

PROJECTED DEMAND

Sheriff Facilities – Incremental Expansion

Berkeley County plans to maintain the existing level of service for sheriff facilities in the unincorporated area over the next 10 years. Based on a projected population increase of 35,218 persons, future residential development demands approximately 7,401 square feet of sheriff facilities (35,218 additional persons X 0.2101 square feet per person). With projected nonresidential growth of 25,315 vehicle trips, future nonresidential development demands approximately 3,064 additional square feet of sheriff facilities (25,315 additional vehicle trips X 0.1210 square feet per vehicle trip). Future development in the unincorporated area demands approximately 10,465 square feet of sheriff facilities at a cost of $5,232,656 (10,465.3 X $500 per square foot). Berkeley County will use impact fees to construct new sheriff facilities or to expand existing sheriff facilities.

Figure L5: Projected Demand

Type of Infrastructure	Level of Service	Demand Unit	Cost per Sq Ft
Sheriff Facilities	0.2101 Square Feet	per Person	$500
	0.1210 Square Feet	per Vehicle Trip	

Demand for Sheriff Facilities					
Year	Population	Vehicle Trips	Square Feet		
			Residential	Nonresidential	Total
2025	120,914	62,705	25,410.0	7,590.0	33,000.0
2026	124,436	65,236	26,150.1	7,896.4	34,046.5
2027	127,957	67,768	26,890.2	8,202.8	35,093.1
2028	131,479	70,299	27,630.3	8,509.3	36,139.6
2029	135,001	72,830	28,370.4	8,815.7	37,186.1
2030	138,523	75,362	29,110.6	9,122.1	38,232.7
2031	142,045	77,893	29,850.7	9,428.5	39,279.2
2032	145,567	80,425	30,590.8	9,734.9	40,325.7
2033	149,088	82,956	31,330.9	10,041.4	41,372.2
2034	152,610	85,488	32,071.0	10,347.8	42,418.8
2035	156,132	88,019	32,811.1	10,654.2	43,465.3
10-Yr Increase	35,218	25,315	7,401.1	3,064.2	10,465.3

Growth-Related Expenditures	$3,700,561	$1,532,096	$5,232,656

Sheriff Vehicles – Incremental Expansion

Berkeley County plans to maintain the existing level of service for sheriff vehicles in the unincorporated area over the next 10 years. Based on a projected population increase 35,218 persons, future residential development demands approximately 16.8 vehicles (35,218 persons X 0.0005 units per person). With projected nonresidential growth of 25,315 vehicle trips, future nonresidential development demands approximately 7.0 vehicles (25,315 vehicle trips X 0.0003 units per vehicle trip). Future development in the unincorporated area demands approximately 24 sheriff vehicles at a cost of $2,116,847 (23.8 units X $89,000 per unit). Berkeley County will use impact fees to expand its current fleet of sheriff vehicles.

Figure L6: Projected Demand

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Sheriff Vehicles	0.0005 Units	per Person	$89,000
	0.0003 Units	per Vehicle Trip	

Demand for Sheriff Vehicles					
Year	Population	Vehicle Trips	Units		
			Residential	Nonresidential	Total
2025	120,914	62,705	57.8	17.3	75.0
2026	124,436	65,236	59.4	17.9	77.4
2027	127,957	67,768	61.1	18.6	79.8
2028	131,479	70,299	62.8	19.3	82.1
2029	135,001	72,830	64.5	20.0	84.5
2030	138,523	75,362	66.2	20.7	86.9
2031	142,045	77,893	67.8	21.4	89.3
2032	145,567	80,425	69.5	22.1	91.6
2033	149,088	82,956	71.2	22.8	94.0
2034	152,610	85,488	72.9	23.5	96.4
2035	156,132	88,019	74.6	24.2	98.8
10-Yr Increase	35,218	25,315	16.8	7.0	23.8

Growth-Related Expenditures	$1,497,045	$619,802	$2,116,847

PROPOSED LAW ENFORCEMENT IMPACT FEES

Figure L7 includes infrastructure components and cost factors for law enforcement impact fees. The cost per service unit is $147.58 per person and $85.00 per vehicle trip.

Residential impact fees are calculated per housing unit and vary proportionately according to the number of persons per housing unit. For a single-family unit, the fee of $372 is calculated using a cost of $147.58 per person multiplied by 2.52 persons per housing unit.

Nonresidential impact fees are calculated per development unit and vary proportionately according to the number of vehicle trips. For industrial development, the fee of $202 per development unit (1,000 square feet) is calculated using a cost of $85.00 per vehicle trip multiplied by 2.38 vehicle trips per development unit.

Figure L7: Proposed Law Enforcement Impact Fees

Fee Component	Cost per Person	Cost per Trip
Sheriff Facilities	$105.07	$60.52
Sheriff Vehicles	$42.51	$24.48
Total	$147.58	$85.00

Residential Fees per Development Unit			
Development Type	Development Unit	Persons per Unit[1]	Proposed Fees
Single Family	Housing Unit	2.52	$372
Multi-Family	Housing Unit	1.79	$264
Mobile Home	Housing Unit	1.98	$292

Nonresidential Fees per Development Unit			
Development Type	Development Unit	AWVT per Unit[1]	Proposed Fees
Industrial	1,000 Sq Ft	2.38	$202
Warehousehouse	1,000 Sq Ft	0.86	$73
Commercial	1,000 Sq Ft	12.21	$1,038
Office / Other Services	1,000 Sq Ft	5.42	$461
Institutional	1,000 Sq Ft	7.45	$633
Lodging	Room	1.68	$143

1. See Land Use Assumptions

PROJECTED LAW ENFORCEMENT IMPACT FEE REVENUE

Projected fee revenue shown below is based on the development projections shown in Appendix A and the proposed law enforcement impact fees shown in Figure L7. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase and impact fee revenue will increase at a corresponding rate. If development occurs at a slower rate than projected, the demand for infrastructure will also decrease, along with impact fee revenue. Projected impact fee revenue over the next 10 years equals $7,349,488 and projected growth-related expenditures equal $7,349,503.

Figure L8: Projected Law Enforcement Impact Fee Revenue

Fee Component	Growth Share	Existing Share	Total
Sheriff Facilities	$5,232,656	$0	$5,232,656
Sheriff Vehicles	$2,116,847	$0	$2,116,847
Total	$7,349,503	$0	$7,349,503

Year		Single Family $372 per unit	Multi-Family $264 per unit	Mobile Home $292 per unit	Industrial $202 per 1,000 sq ft	Commercial $1,038 per 1,000 sq ft	Office / Other $461 per 1,000 sq ft	Institutional $633 per 1,000 sq ft
		Housing Unit	Housing Unit	Housing Unit	KSF	KSF	KSF	KSF
Base	2025	40,156	3,453	5,662	2,599	2,882	1,111	2,054
Year 1	2026	41,400	3,584	5,739	2,675	2,996	1,155	2,150
Year 2	2027	42,644	3,715	5,816	2,751	3,111	1,198	2,246
Year 3	2028	43,888	3,846	5,893	2,828	3,225	1,242	2,342
Year 4	2029	45,132	3,977	5,970	2,904	3,339	1,286	2,438
Year 5	2030	46,376	4,108	6,047	2,980	3,454	1,330	2,534
Year 6	2031	47,620	4,239	6,124	3,056	3,568	1,374	2,630
Year 7	2032	48,864	4,370	6,201	3,133	3,683	1,418	2,726
Year 8	2033	50,108	4,501	6,278	3,209	3,797	1,462	2,822
Year 9	2034	51,352	4,632	6,355	3,285	3,912	1,506	2,917
Year 10	2035	52,596	4,763	6,432	3,361	4,026	1,550	3,013
10-Year Increase		12,440	1,310	770	762	1,144	440	959
Projected Revenue		$4,627,680	$345,840	$224,840	$153,924	$1,187,472	$202,746	$606,986

Projected Fee Revenue	$7,349,488
Total Expenditures	$7,349,503

PARKS AND RECREATION IMPACT FEES

METHODOLOGY

The parks and recreation impact fees include components for park land, park amenities, trails, and recreation facilities. The incremental expansion methodology is used for all components.

SERVICE AREA

Berkeley County provides park and recreation amenities throughout Berkeley County; therefore, there is a countywide service area for parks and recreation impact fees.

PROPORTIONATE SHARE

Impact fees should not exceed a proportionate share of the capital cost needed to provide capital facilities to the development. Parks and recreation impact fees allocate 100 percent of the cost of capital facilities to residential development.

RATIO OF SERVICE UNIT TO DEVELOPMENT UNIT

Figure P1 displays the demand indicators per development unit for residential development. The table displays the number of persons per housing unit for each development unit based on American Community Survey data shown in Figure A3.

Figure P1: Ratio of Service Unit to Development Unit

Residential Development		
Development Type	Development Unit	Persons per Unit[1]
Single Family	Housing Unit	2.52
Multi-Family	Housing Unit	1.79
Mobile Home	Housing Unit	1.98

1. U.S. Census Bureau, 2018-2022 American Community Survey 5-Year Estimates.

LEVEL-OF-SERVICE ANALYSIS

Park Land – Incremental Expansion

Berkeley County currently provides 508.2 acres of park land to existing development countywide and will acquire additional land to serve future development. This analysis allocates 100 percent of demand to residential development. The existing level of service for residential development is 0.00363 acres per person (508.2 acres X 100 percent residential share / 139,989 persons). Based on land acquisition costs provided by staff, the analysis uses a cost of $150,000 per acre as a proxy for future park land acquisition costs. The park land cost is $544.50 per person (0.00363 acres per person X $150,000 per acre). Berkeley County will use impact fees to acquire park land.

Figure P2: Existing Level of Service and Cost Allocation

Description	Acres
Allensville Park Site	76.0
Ambrose Park	4.0
Baltimore St Pickleball Courts	3.0
Dupont Soccer Complex	28.0
East Burke Street Park	1.0
Gerrardstown Athletic Field	2.0
Goldie Gibbons Park	1.2
Hoke's Run Battlefield Park	10.0
Inwood / Bunker Hill Park	20.0
Inwood Park Site	31.0
Lambert Park	12.0
Leeland Park	1.1
Martin Luther King, Jr. Park	0.5
Oak Street Park	1.5
Oatesdale Park	28.5
PO Faulkner / Charlotte Prather	30.0
Poor House Farm	207.0
Randy Smith Recreation Center	3.0
Rooney Park	17.0
Roush Field	1.8
Spring Mills Park	10.0
War Memorial Park	19.6
Total	508.2

Cost Factors	
Cost per Acre	$150,000

Level-of-Service (LOS) Standards	
Existing Acres	508.2
2025 Population	139,989
Acres per Person	0.00363
Cost per Person	$544.50

Source: Berkeley County Parks and Recreation Department

Park Amenities – Incremental Expansion

Berkeley County plans to expand its current inventory of park amenities to serve future development. The current inventory includes 609 park amenities with a total cost of $24,032,000. The average cost of existing park amenities is $39,461 per amenity, and the analysis uses this cost as a proxy for future park amenity costs.

This analysis allocates 100 percent of demand for park amenities to residential development. The existing residential level of service is 0.0044 amenities per person (609 amenities X 100 percent residential share / 139,989 persons). Using the average cost of $39,461 per amenity, the park amenities cost is $171.67 per person (0.0044 amenities per person X $39,461 per amenity). Berkeley County will use impact fees to construct additional park amenities.

Figure P3: Existing Level of Service and Cost Allocation

Description	Units	Unit Cost	Total Cost
Baseball / Softball Field (200')	12	$400,000	$4,800,000
Baseball / Softball Field (300')	1	$500,000	$500,000
Baseball Stadium	1	$1,000,000	$1,000,000
Basketball Court	4	$125,000	$500,000
Concession Building	2	$250,000	$500,000
Disc Golf (holes)	27	$6,000	$162,000
Football Field	1	$750,000	$750,000
Hockey Rink	2	$250,000	$500,000
Parking Space (paved)	325	$5,000	$1,625,000
Parking Space (unpaved)	170	$2,000	$340,000
Pavillion	19	$150,000	$2,850,000
Pavillion / Batting Cage	1	$150,000	$150,000
Pickleball Court	8	$125,000	$1,000,000
Playground	14	$250,000	$3,500,000
Restroom	9	$250,000	$2,250,000
Sand Volleyball Court	3	$35,000	$105,000
Soccer Field	4	$500,000	$2,000,000
Tennis Court	6	$250,000	$1,500,000
Total	609	$39,461	$24,032,000

Cost Factors	
Cost per Unit	$39,461

Level-of-Service (LOS) Standards	
Existing Units	609
Residential	
Residential Share	100%
2025 Population	139,989
Units per Person	0.0044
Cost per Person	$171.67

Source: Berkeley County Parks and Recreation Department

Trails – Incremental Expansion

Berkeley County currently provides 9.50 miles of trails to existing development countywide, and Berkeley County plans to expand its current inventory of trails to serve future development. This analysis allocates 100 percent of demand to residential development. The existing level of service for residential development is 0.00007 miles per person (9.50 miles X 100 percent residential share / 139,989 persons). According to trail cost estimates for Poor House Farm Park published in the Martinsburg-Berkeley County Parks and Recreation Master Plan, the analysis uses $95,040 per mile as a proxy for future trail costs. For trails, the cost is $6.45 per person (0.00007 miles per person X $95,040 per mile). Berkeley County will use impact fees to construct additional trails.

Figure P4: Existing Level of Service and Cost Allocation

Cost Factors	
Cost per Mile	$95,040

Level-of-Service (LOS) Standards	
Existing Trails (miles)	9.50
Residential	
Residential Share	100%
2025 Population	139,989
Miles per Person	0.00007
Cost per Person	$6.45

Source: Berkeley County Parks and Recreation Department

Recreation Facilities – Incremental Expansion

Berkeley County currently provides 61,750 square feet of recreation facilities to existing development countywide, and Berkeley County plans to construct additional recreation facilities to serve future development. This analysis allocates 100 percent of demand to residential development. The existing level of service for residential development is 0.441 square feet per person (61,750 square feet X 100 percent residential share / 139,989 persons). Using an estimated construction cost of $250 per square foot, the recreation facilities cost is $110.28 per person (0.441 square feet per person X $250 per square foot). Berkeley County will use impact fees to construct new recreation facilities or to expand existing recreation facilities.

Figure P5: Existing Level of Service and Cost Allocation

Description	Square Feet
Berkeley 2000 Rec Center	43,550
Randy Smith Rec Center	18,200
Total	61,750

Cost Factors	
Cost per Square Foot	$250

Level-of-Service (LOS) Standards	
Existing Square Feet	61,750
Residential	
Residential Share	100%
2025 Population	139,989
Square Feet per Person	0.441
Cost per Person	$110.28

Source: Berkeley County Parks and Recreation Department

PROJECTED DEMAND

Park Land – Incremental Expansion

Berkeley County plans to maintain the existing countywide level of service for park land over the next 10 years. Based on a projected population increase of 40,499 persons, future residential development demands approximately 147 acres of park land (40,499 additional persons X 0.00363 acres per person) at a cost of $22,050,000 (147.0 acres X $150,000 per acre). Berkeley County will use impact fees to acquire park land.

Figure P6: Projected Demand

Type of Infrastructure	Level of Service	Demand Unit	Cost per Acre
Park Land	0.00363 Acres	per Person	$150,000
	- Acres	per Job	

Demand for Park Land					
Year	Population	Jobs	Acres		
			Residential	Nonresidential	Total
2025	139,989	-	508.2	-	508.2
2026	144,039	-	522.9	-	522.9
2027	148,089	-	537.6	-	537.6
2028	152,138	-	552.3	-	552.3
2029	156,188	-	567.0	-	567.0
2030	160,238	-	581.7	-	581.7
2031	164,288	-	596.4	-	596.4
2032	168,338	-	611.1	-	611.1
2033	172,388	-	625.8	-	625.8
2034	176,438	-	640.5	-	640.5
2035	180,487	-	655.2	-	655.2
10-Yr Increase	40,499	-	147.0	-	147.0

Growth-Related Expenditures	$22,050,000	-	$22,050,000
Incorporated Share	$2,880,000	-	$2,880,000
Unincorporated Share	$19,170,000	-	$19,170,000

Park Amenities – Incremental Expansion

Berkeley County plans to maintain the existing countywide level of service for park amenities over the next 10 years. Based on a projected population increase of 40,499 persons, future residential development demands approximately 176 park amenities (40,499 additional persons X 0.0044 amenities per person) at a cost of $6,952,412 (176.2 amenities X $39,461 per amenity). Berkeley County will use impact fees to construct additional park amenities.

Figure P7: Projected Demand

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Park Amenities	0.0044 Units	per Person	$39,461
	- Units	per Job	

Demand for Park Amenities					
Year	Population	Jobs	Units		
			Residential	Nonresidential	Total
2025	139,989	-	609.0	-	609.0
2026	144,039	-	626.6	-	626.6
2027	148,089	-	644.2	-	644.2
2028	152,138	-	661.9	-	661.9
2029	156,188	-	679.5	-	679.5
2030	160,238	-	697.1	-	697.1
2031	164,288	-	714.7	-	714.7
2032	168,338	-	732.3	-	732.3
2033	172,388	-	749.9	-	749.9
2034	176,438	-	767.6	-	767.6
2035	180,487	-	785.2	-	785.2
10-Yr Increase	40,499	-	176.2	-	176.2

Growth-Related Expenditures	$6,952,412	-	$6,952,412
Incorporated Share	$906,459	-	$906,459
Unincorporated Share	$6,045,952	-	$6,045,952

Trails – Incremental Expansion

Berkeley County plans to maintain the existing countywide level of service for trails over the next 10 years. Based on a projected population increase of 40,499 persons, future residential development demands approximately 2.7 miles of trails (40,499 additional persons X 0.00007 miles per person) at a cost of $256,608 (2.7 miles X $95,040 per mile). Berkeley County will use impact fees to construct additional trails.

Figure P8: Projected Demand

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Trails	0.00007 Miles	per Person	$95,040
	- Miles	per Job	

Demand for Trails					
Year	Population	Jobs	Miles		
			Residential	Nonresidential	Total
2025	139,989	-	9.5	-	9.5
2026	144,039	-	9.8	-	9.8
2027	148,089	-	10.0	-	10.0
2028	152,138	-	10.3	-	10.3
2029	156,188	-	10.6	-	10.6
2030	160,238	-	10.9	-	10.9
2031	164,288	-	11.1	-	11.1
2032	168,338	-	11.4	-	11.4
2033	172,388	-	11.7	-	11.7
2034	176,438	-	12.0	-	12.0
2035	180,487	-	12.2	-	12.2
10-Yr Increase	40,499	-	2.7	-	2.7

Growth-Related Expenditures	$256,608	-	$256,608
Incorporated Share	$34,214	-	$34,214
Unincorporated Share	$222,394	-	$222,394

Recreation Facilities – Incremental Expansion

Berkeley County plans to maintain the existing countywide level of service for recreation facilities over the next 10 years. Based on a projected population increase of 40,499 persons, future residential development demands approximately 17,864 square feet of recreation facilities (40,499 additional persons X 0.441 square feet per person) at a cost of $4,466,050 (17,864.2 square feet X $250 per square foot). Berkeley County will use impact fees to construct new recreation facilities or to expand existing recreation facilities.

Figure P9: Projected Demand

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Recreation Facilities	0.441 Square Feet	per Person	$250
	- Square Feet	per Job	

Demand for Recreation Facilities					
Year	Population	Jobs	Square Feet		
			Residential	Nonresidential	Total
2025	139,989	-	61,750.0	-	61,750.0
2026	144,039	-	63,536.4	-	63,536.4
2027	148,089	-	65,322.8	-	65,322.8
2028	152,138	-	67,109.2	-	67,109.2
2029	156,188	-	68,895.7	-	68,895.7
2030	160,238	-	70,682.1	-	70,682.1
2031	164,288	-	72,468.5	-	72,468.5
2032	168,338	-	74,254.9	-	74,254.9
2033	172,388	-	76,041.3	-	76,041.3
2034	176,438	-	77,827.7	-	77,827.7
2035	180,487	-	79,614.2	-	79,614.2
10-Yr Increase	40,499	-	17,864.2	-	17,864.2

Growth-Related Expenditures	$4,466,050	-	$4,466,050
Incorporated Share	$582,275	-	$582,275
Unincorporated Share	$3,883,750	-	$3,883,750

PROPOSED PARKS AND RECREATION IMPACT FEES

Figure P10 includes infrastructure components and cost factors for parks and recreation impact fees, and the cost per service unit is $832.90 per person.

Residential impact fees are calculated per housing unit and vary proportionately according to the number of persons per housing unit. For a single-family unit, the fee of $2,099 is calculated using a cost of $832.90 per person multiplied by 2.52 persons per housing unit.

Berkeley County will not assess parks and recreation impact fees on nonresidential development.

Figure P10: Proposed Parks and Recreation Impact Fees

Fee Component	Cost per Person
Park Land	$544.50
Park Amenities	$171.67
Trails	$6.45
Recreation Facilities	$110.28
Total	$832.90

Residential Fees per Development Unit			
Development Type	Development Unit	Persons per Unit[1]	Proposed Fees
Single Family	Housing Unit	2.52	$2,099
Multi-Family	Housing Unit	1.79	$1,491
Mobile Home	Housing Unit	1.98	$1,649

1. See Land Use Assumptions

PROJECTED PARKS AND RECREATION IMPACT FEE REVENUE

Projected fee revenue shown below is based on the development projections shown in Appendix A and the proposed parks and recreation impact fees shown in Figure P10. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase and impact fee revenue will increase at a corresponding rate. If development occurs at a slower rate than projected, the demand for infrastructure will also decrease, along with impact fee revenue. Projected impact fee revenue over the next 10 years equals $33,669,604 and projected growth-related expenditures equal $33,725,070.

Figure P11: Projected Parks and Recreation Impact Fee Revenue

Fee Component	Growth Share	Existing Share	Total
Park Land	$22,050,000	$0	$22,050,000
Park Amenities	$6,952,412	$0	$6,952,412
Trails	$256,608	$0	$256,608
Recreation Facilities	$4,466,050	$0	$4,466,050
Total	$33,725,070	$0	$33,725,070

		Single Family $2,099 per unit	Multi-Family $1,491 per unit	Mobile Home $1,649 per unit
Year		Housing Unit	Housing Unit	Housing Unit
Base	2025	46,252	6,336	5,671
Year 1	2026	47,630	6,570	5,748
Year 2	2027	49,008	6,803	5,825
Year 3	2028	50,386	7,036	5,902
Year 4	2029	51,764	7,270	5,979
Year 5	2030	53,142	7,503	6,056
Year 6	2031	54,520	7,736	6,133
Year 7	2032	55,898	7,969	6,210
Year 8	2033	57,276	8,203	6,287
Year 9	2034	58,654	8,436	6,364
Year 10	2035	60,031	8,669	6,441
10-Year Increase		13,779	2,333	770
Projected Revenue		$28,921,621	$3,478,303	$1,269,680

Projected Fee Revenue	$33,669,604
Total Expenditures	$33,725,070

SCHOOL IMPACT FEES

METHODOLOGY

The school impact fees include components for public elementary school facilities and land. The incremental expansion methodology is used for all components.

SERVICE AREA

Berkeley County Schools provide public school facilities throughout Berkeley County; therefore, there is a countywide service area for school impact fees.

PROPORTIONATE SHARE

Impact fees should not exceed a proportionate share of the capital cost needed to provide capital facilities to the development. School impact fees allocate 100 percent of the cost of capital facilities to residential development.

STUDENT GENERATION RATES

Demand for additional school capacity will come from future residential development. To determine the level of this demand, this analysis uses custom student generation rates. The term "student generation rate" refers to the number of public school students per housing unit in Berkeley County. Public school students are a subset of school-aged children, which includes students in charter schools, private schools, and home-schooled children. Student generation rates are important demographic factors that help account for variations in demand for school facilities by housing unit type. Student generation rates per housing unit are held constant over the projection period since the impact fees represent a snapshot approach of current levels of service.

TischlerBise derives custom student generation rates for Berkeley County using demographic data from survey responses published by the U.S. Census Bureau in files known as Public Use Microdata Samples (PUMS) and 2022-2023 school year enrollment data from the Berkeley County Schools. TischlerBise uses American Community Survey (ACS) 2018-2022 PUMS data – the most recent year available – to derive the number of students per housing unit by type of unit. PUMS data are only available for areas of roughly 100,000 persons, and Berkeley County is included in West Virginia Public Use Microdata Area (PUMA) 00400. PUMA 00400 includes Berkeley County and Jefferson County. As shown on the following pages, this analysis calculates unadjusted student generation rates based on all public school students and housing units in PUMA 00400 and then adjusts these rates based on Berkeley County Schools enrollment and housing unit estimates for Berkeley County.

Public School Students and Housing Units – PUMA 00400

Based on Berkeley County demographic characteristics and the potential for future development, the analysis includes student generation rates for the following housing unit types: (1) single family, (2) multi-family, and (3) mobile home. To proportionately allocate demand by school level, the analysis includes student generation rates for the following school levels: (1) elementary school (grades Pre-K to 5), (2) middle school (grades 6 to 8), and (3) high school (grades 9 to 12). Shown below, Figure S1 includes total public school students by school level and total housing units by housing unit type for PUMA 00400. This represents all public school students in PUMA 00400.

Figure S1: Public School Students and Housing Units in PUMA 00400 by Housing Unit Type

Public School Students by Housing Unit Type in West Virginia PUMA 00400				
School Level	Single Family	Multi-Family	Mobile Home	Total
Elementary (PK-5)	13,043	1,049	1,077	15,169
Middle (6-8)	7,184	582	643	8,409
High (9-12)	9,869	200	946	11,015
Total	30,096	1,831	2,666	34,593

Housing Units by Type in West Virginia PUMA 00400				
Description	Single Family	Multi-Family	Mobile Home	Total
Housing Units	81,874	9,703	10,941	102,518

Source: U. S. Census Bureau, 2018-2022 ACS Weighted Public Use Microdata Sample (PUMS) for West Virginia Public Use Microdata Area (PUMA) 00400.

Unadjusted Student Generation Rates – PUMA 00400

Next, TischlerBise calculates unadjusted student generation rates using the public school students and housing unit estimates shown in Figure S1. To estimate the number of public students per housing unit by school level, the analysis divides the number of public students by school level in each type of housing unit by the total number of housing units in PUMA 00400. Shown below, Figure S2 represents the unadjusted student generation rates by housing unit type for PUMA 00400.

Figure S2: Unadjusted Student Generation Rates by Housing Unit Type

Unadjusted Public School Students per Housing Unit in West Virginia PUMA 00400				
School Level	Single Family	Multi-Family	Mobile Home	Total
Elementary (PK-5)	0.159	0.108	0.098	0.148
Middle (6-8)	0.088	0.060	0.059	0.082
High (9-12)	0.121	0.021	0.086	0.107
Total	0.368	0.189	0.244	0.337

Source: TischlerBise calculation using U. S. Census Bureau, 2018-2022 ACS Weighted Public Use Microdata Sample (PUMS) for West Virginia Public Use Microdata Area (PUMA) 00400.

Public School Students and Housing Units – Berkeley County

To reflect demand for public school facilities in Berkeley County, this analysis applies the unadjusted student generation rates in Figure S2 to Berkeley County housing unit estimates (2018-2022 American Community Survey 5-year estimates) shown at the bottom of Figure S3. For example, multiplying the unadjusted elementary school student generation rates shown in Figure S2 by the Berkeley County housing unit estimates generates an estimate of 6,424 elementary school students in single-family units (0.159 elementary school students per single-family unit X 40,404 single-family units), 587 elementary school students in multi-family units (0.108 elementary school students per multi-family unit X 5,437 multi-family units), and 534 elementary school students in mobile home units (0.098 elementary school students per mobile home X 5,451 mobile home units) for a total of 7,546 elementary school students. TischlerBise repeats this calculation for each school level and housing unit type to estimate public school students in Berkeley County. The analysis compares the enrollment estimate of 17,221 students to the actual enrollment of 19,856 students for the 2022-2023 school year.

Figure S3: Public School Students in Berkeley County by Housing Unit Type

Estimated Public School Students by Housing Unit Type in Berkeley County, WV					2022-23
School Level	Single Family	Multi-Family	Mobile Home	Total	Enrollment
Elementary (PK-5)	6,424	587	534	7,546	9,352
Middle (6-8)	3,556	326	322	4,203	4,407
High (9-12)	4,889	114	469	5,472	6,097
Total	14,869	1,028	1,325	17,221	19,856

Housing Units by Type in Berkeley County, WV					2022
Description	Single Family	Multi-Family	Mobile Home	Total	Housing Units
Housing Units	40,404	5,437	5,451	51,292	51,292

Source: TischlerBise estimates for Berkeley County using U. S. Census Bureau, 2018-2022 ACS Weighted Public Use Microdata Sample (PUMS) for West Virginia Public Use Microdata Area (PUMA) 00400 calibrated to 2018-2022 ACS housing unit estimates.

Adjusted Student Generation Rates – Berkeley County Schools

TischlerBise adjusts the enrollment estimates for each school level shown in Figure S3 to match actual 2022-2023 enrollment by school level. For example, the elementary school estimate of 7,546 students is less than the actual elementary school enrollment of 9,352 students, so the analysis increases the elementary school student estimate proportionately according to the share of elementary school students by housing unit type shown in Figure S3. Applying the proportionate share of estimated elementary school students by housing unit type to actual 2022-2023 elementary school enrollment equals 7,962 elementary school students in single-family units (9,352 elementary school students X 85.1 percent single family), 728 elementary school students in multi-family units (9,352 elementary school students X 7.8 percent multi-family), and 662 elementary school students in mobile home units (9,352 elementary school students X 7.1 percent mobile home). TischlerBise repeats this calculation for each school level and housing unit type to estimate public school students in Berkeley County.

To estimate the number of public school students per housing unit by school level, the analysis divides the adjusted number of public school students by school level in each type of housing unit shown at the top of Figure S4 by the total number of housing units in Berkeley County. As shown in Figure S4, a single-family unit generates 0.197 elementary school students, 0.092 middle school students, and 0.135 high school students for a total of 0.424 public school students per single-family unit. A multi-family unit generates 0.134 elementary school students, 0.063 middle school students, and 0.023 high school students for a total of 0.220 public school students per multi-family unit. A mobile home unit generates 0.121 elementary school students, 0.062 middle school students, and 0.096 high school students for a total of 0.279 public school students per mobile home unit.

Student generation rates are shown with three decimal places, but it is often easier to understand the rates based on the expected number of students from 100 housing units. For example, the countywide average is 0.387 public school students per housing unit, so Berkeley County should expect 100 new housing units to generate approximately 39 additional public school students (100 units X 0.387 public school students per unit). Continuing the example, those 100 housing units are expected to generate 18 elementary school students (100 units X 0.182 students per unit), 9.0 middle school students (100 units X 0.086 students per unit), and 12 high school students (100 units X 0.119 students per unit).

Figure S4: Adjusted Student Generation Rates by Housing Unit Type

Berkeley County Public School Students by Housing Unit Type					2022-23
School Level	Single Family	Multi-Family	Mobile Home	Total	Enrollment
Elementary (PK-5)	7,962	728	662	9,352	9,352
Middle (6-8)	3,728	342	337	4,407	4,407
High (9-12)	5,447	127	522	6,097	6,097
Total	17,137	1,197	1,522	19,856	19,856

Housing Units by Type in Berkeley County, WV					2022
Description	Single Family	Multi-Family	Mobile Home	Total	Housing Units
Housing Units	40,404	5,437	5,451	51,292	51,292

Berkeley County Public School Students per Housing Unit				
School Level	Single Family	Multi-Family	Mobile Home	Total
Elementary (PK-5)	0.197	0.134	0.121	0.182
Middle (6-8)	0.092	0.063	0.062	0.086
High (9-12)	0.135	0.023	0.096	0.119
Total	0.424	0.220	0.279	0.387

Source: TischlerBise estimates for Berkeley County using U. S. Census Bureau, 2018-2022 ACS Weighted Public Use Microdata Sample (PUMS) for West Virginia Public Use Microdata Area (PUMA) 00400 calibrated to Berkeley County Schools 2022-23 enrollment.

STUDENT ENROLLMENT

Historical Enrollment

Shown below, Figure S5 includes historical enrollment from the 2019-2020 school year to the 2024-2025 school year. Since the 2019-2020 school year, elementary school enrollment has decreased by nine students, middle school enrollment has decreased by 177 students, and high school enrollment has increased by 475 students for an overall increase of 289 students.

Figure S5: Historical Enrollment

Actual Enrollment				
School Year	Elementary (PK-5)	Middle (6-8)	High (9-12)	Total Enrollment
2019-20	9,414	4,579	5,706	19,699
2020-21	8,925	4,555	5,800	19,280
2021-22	9,265	4,492	5,965	19,722
2022-23	9,352	4,407	6,097	19,856
2023-24	9,556	4,531	5,892	19,979
2024-25	9,405	4,402	6,181	19,988
5-Yr Change	(9)	(177)	475	289

Source: Berkeley County Schools, 2024-2025 Demographics and Enrollment Projection Study

Projected Enrollment

This study uses the medium enrollment projections published in the Berkeley County Schools 2024-2025 Demographics and Enrollment Projection Study. The 2024-2025 school year includes 19,988 students, and the medium projections include 20,891 students in the 2034-2035 school year. The analysis requires enrollment projections beyond 10 years to determine debt service credits (discussed later in this report), so TischlerBise projects enrollment in years 11 through 22 using the average growth rate of the previous five years. Using this approach, projected enrollment growth includes 903 students during the next 10 years and 2,092 students during the next 22 years.

As shown in Figure S5, elementary school and middle school enrollment has been declining since the 2019-2020 school year. This suggests that the influx of school age children generated by new residential development may be partially offset by the loss of school age children in existing housing units as the population ages in place.

Figure S6: Projected Enrollment

Projected Enrollment					
Projection Year	School Year	Elementary (PK-5)	Middle (6-8)	High (9-12)	Total Enrollment
Base	2024-25	9,405	4,402	6,181	19,988
1	2025-26	9,666	4,302	6,108	20,076
2	2026-27	9,720	4,431	6,009	20,160
3	2027-28	9,759	4,439	6,048	20,246
4	2028-29	9,775	4,646	5,915	20,336
5	2029-30	9,801	4,604	6,020	20,425
6	2030-31	9,851	4,572	6,092	20,515
7	2031-32	9,876	4,603	6,130	20,609
8	2032-33	9,856	4,596	6,249	20,701
9	2033-34	9,898	4,669	6,228	20,795
10	2034-35	9,938	4,653	6,300	20,891
11	2035-36	9,966	4,663	6,358	20,987
12	2036-37	9,989	4,682	6,412	21,083
13	2037-38	10,012	4,698	6,471	21,180
14	2038-39	10,043	4,718	6,516	21,277
15	2039-40	10,073	4,728	6,575	21,376
16	2040-41	10,100	4,743	6,632	21,475
17	2041-42	10,127	4,759	6,688	21,574
18	2042-43	10,155	4,775	6,744	21,674
19	2043-44	10,183	4,791	6,800	21,775
20	2044-45	10,212	4,806	6,859	21,876
21	2045-46	10,240	4,821	6,917	21,978
22	2046-47	10,268	4,837	6,975	22,080
22-Year Change		863	435	794	2,092

Source: Years 1-10, Berkeley County Schools, 2024-2025 Demographics and Enrollment Projection Study; Years 11-22, TischlerBise projection using average growth rate of the previous five years.

PLANNED CAPACITY PROJECTS

Shown below, Figure S7 lists growth-related capacity projects within the 10-year study timeframe. Hedgesville Pre-K Center, Inwood Pre-K Center, and Mountain Ridge Primary are currently under construction and funded using a combination of School Board Authority (SBA) funding and 2022 bond referendum funds. Falling Waters Elementary will begin construction during the 2026-2027 school year using SBA funding and 2022 bond referendum funds. Berkeley County Schools will fund construction of the remaining school capacity projects with a mix of SBA funds, impact fees, and future bond funds.

Figure S7: Berkeley County Schools Capacity Projects

Description	School Level	Proposed Construction	Proposed Occupancy	Total Cost	Capacity
Hedgesville Pre-K Center	Elementary	2024-25	2026-27	$17,910,000	240
Inwood Pre-K Center	Elementary	2024-25	2026-27	$18,910,000	240
Mountain Ridge Primary	Elementary	2024-25	2026-27	$30,800,000	500
Falling Waters Elementary	Elementary	2026-27	2027-28	$50,000,000	1,000
New Intermediate School	Elementary	2027-28	2029-30	$38,115,000	700
Hedgesville Middle (Reno/Add)	Middle	2027-28	2029-30	$62,150,000	1,000
New High School	High	2027-28	2029-30	$144,540,000	1,800
Total				$362,425,000	5,480
Elementary School				$155,735,000	2,680
Middle School				$62,150,000	1,000
High School				$144,540,000	1,800

Source: Berkeley County Schools

PROJECTED CAPACITY UTILIZATION

Berkeley County Schools currently provide permanent capacity to serve 21,268 students. By school level, this includes capacity to serve 9,445 elementary school students, 5,333 middle school students, and 6,490 high school students. Based on 2024-2025 enrollment, permanent capacity utilization is 100 percent for elementary schools, 83 percent for middle schools, and 95 percent for high schools.

Elementary School Capacity Utilization

As student enrollment increases, new development will demand elementary school capacity. Berkeley County Schools plan to construct permanent capacity to serve 2,680 students during the next 10 years. This study uses the medium enrollment projections published in the Berkeley County Schools 2024-2025 Demographics and Enrollment Projection Study. The 2024-2025 school year includes 9,405 students, and the medium projections include 9,938 students in the 2034-2035 school year. As shown below, 2034-35 elementary school capacity utilization will be approximately 82 percent of permanent capacity. Without additional capacity, 2034-35 elementary school capacity utilization will increase to 105 percent of permanent capacity.

Figure S8: Projected Elementary School Capacity Utilization

Elementary School (PK-5)				
School Year	Enrollment	New Capacity	Total Capacity	Utilization
2024-25	9,405	0	9,445	100%
2025-26	9,666	0	9,445	102%
2026-27	9,720	980	10,425	93%
2027-28	9,759	1,000	11,425	85%
2028-29	9,775	0	11,425	86%
2029-30	9,801	700	12,125	81%
2030-31	9,851	0	12,125	81%
2031-32	9,876	0	12,125	81%
2032-33	9,856	0	12,125	81%
2033-34	9,898	0	12,125	82%
2034-35	9,938	0	12,125	82%
10-Yr Change	533	2,680	2,680	-18%
Utilization Without New Capacity				105%

Middle School Capacity Utilization

As student enrollment increases, new development will demand middle school capacity. Berkeley County Schools plan to begin renovation and expansion at Hedgesville Middle School in the 2027-28 school year with proposed occupancy in the 2029-30 school year. Although the new Hedgesville Middle School will have permanent capacity for 1,000 students, this represents a net capacity increase to serve 209 students (1,000 total - 709 existing). This study uses the medium enrollment projections published in the Berkeley County Schools 2024-2025 Demographics and Enrollment Projection Study. The 2024-2025 school year includes 4,402 students, and the medium projections include 4,653 students in the 2034-2035 school year. As shown below, 2034-35 middle school capacity utilization will increase to 84 percent of permanent capacity. Without additional capacity, 2034-35 middle school capacity utilization will increase to 87 percent of permanent capacity. TischlerBise does not recommend collection of impact fees for middle school facilities due to the availability of existing middle school capacity to serve future development during the next 10 years.

Figure S9: Projected Middle School Capacity Utilization

Middle School (6-8)				
School Year	Enrollment	New Capacity	Total Capacity	Utilization
2024-25	4,402	0	5,333	83%
2025-26	4,302	0	5,333	81%
2026-27	4,431	0	5,333	83%
2027-28	4,439	0	5,333	83%
2028-29	4,646	0	5,333	87%
2029-30	4,604	209	5,542	83%
2030-31	4,572	0	5,542	82%
2031-32	4,603	0	5,542	83%
2032-33	4,596	0	5,542	83%
2033-34	4,669	0	5,542	84%
2034-35	4,653	0	5,542	84%
10-Yr Change	251	209	209	1%
Utilization Without New Capacity				87%

High School Capacity Utilization

As student enrollment increases, new development will demand high school capacity. Berkeley County Schools plan to begin construction of a new high school in the 2027-28 school year with proposed occupancy in the 2029-30 school year. This study uses the medium enrollment projections published in the Berkeley County Schools 2024-2025 Demographics and Enrollment Projection Study. The 2024-2025 school year includes 6,181 students, and the medium projections include 6,300 students in the 2034-2035 school year. As shown below, 2034-35 high school capacity utilization will decrease to 76 percent of permanent capacity. Without additional capacity, 2034-35 high school capacity utilization will increase to 97 percent of permanent capacity. TischlerBise does not recommend collection of impact fees for high school facilities due to limited enrollment growth during the next 10 years.

Figure S10: Projected High School Capacity Utilization

High School (9-12)				
School Year	Enrollment	New Capacity	Total Capacity	Utilization
2024-25	6,181	0	6,490	95%
2025-26	6,108	0	6,490	94%
2026-27	6,009	0	6,490	93%
2027-28	6,048	0	6,490	93%
2028-29	5,915	0	6,490	91%
2029-30	6,020	1,800	8,290	73%
2030-31	6,092	0	8,290	73%
2031-32	6,130	0	8,290	74%
2032-33	6,249	0	8,290	75%
2033-34	6,228	0	8,290	75%
2034-35	6,300	0	8,290	76%
10-Yr Change	119	1,800	1,800	-19%
Utilization Without New Capacity				97%

LEVEL-OF-SERVICE ANALYSIS

Elementary School Facilities – Incremental Expansion

Figure S11 includes the current inventory and levels of service for elementary schools. For the 2024-25 school year, Berkeley County Schools provide 973,827 square feet of elementary school facilities, 284.70 acres of land, and permanent capacity to serve 9,445 elementary school students. The existing level of service is 103.11 square feet of elementary school facilities (973,827 square feet / 9,445 student capacity) and 0.0301 acres (284.70 acres / 9,445 student capacity) per permanent student station, and the current elementary school capacity utilization is approximately 100 percent (9,405 students / 9,445 capacity). The analysis uses current capacity to calculate level-of-service standards to ensure new development is charged for the same level of service provided to existing development.

Figure S11: Elementary School Inventory

Elementary School	Square Feet	Acres	2024-25 Enrollment	Permanent Capacity	Utilization
201 Back Creek Valley	23,667	5.00	147	183	80%
202 Bedington	21,600	4.65	212	211	100%
203 Berkeley Heights	44,500	20.00	442	452	98%
204 Bunker Hill	40,858	15.00	420	398	106%
205 Burke Street	18,250	1.00	158	183	86%
206 Gerrardstown	16,400	4.40	219	225	97%
207 Hedgesville	59,609	14.40	639	608	105%
208 Inwood Primary	19,600	4.00	152	189	80%
209 Marlowe	26,465	5.00	289	258	112%
210 Opequon	44,500	10.50	427	427	100%
211 Rosemont	38,300	6.00	416	424	98%
212 Tuscarora	43,600	12.00	254	386	66%
213 Valley View	44,500	15.00	420	427	98%
214 Winchester Avenue	28,800	1.23	177	243	73%
215 Tomahawk	64,700	15.00	621	644	96%
216 Potomack	73,530	11.58	852	759	112%
217 Mill Creek	66,200	68.40	575	588	98%
218 Eagle School	74,562	17.00	609	701	87%
219 Orchard View	74,524	22.73	759	751	101%
220 Mountain Ridge	64,360	22.81	567	593	96%
221 Spring Mills Primary	63,702	6.00	498	615	81%
602 Pikeside Pre-K	21,600	3.00	137	180	76%
Off-Site Pre-K[1]	n/a	n/a	322	n/a	n/a
801 Virtual	n/a	n/a	93	n/a	n/a
Total	973,827	284.70	9,405	9,445	100%

Level-of-Service (LOS) Standards		
LOS per Student	Square Feet	Acres
Current Enrollment	103.54	0.0303
Current Capacity	103.11	0.0301

Source: Berkeley County Schools, October 2024-25 Enrollment

1. Includes Pre-K students at Musselman Middle School and Spring Mills High School.

SCHOOL COST FACTORS

School Facility Costs

Figure S12 shows recent funding from West Virginia's School Building Authority (SBA) used for construction of school facilities. Based on these projects, funding for recent school facility construction equals 23 percent SBA funds and 77 percent local funds.

Figure S12: Recent SBA Funds

Description	School Level	Proposed Construction	Total Cost	SBA Funding	SBA Share
Tomahawk Addition	Elementary	2024-25	$4,260,000	$0	0%
Martinsburg High Fine Arts	High	2024-25	$5,746,646	$0	0%
Hedgesville Pre-K Center	Elementary	2024-25	$17,910,000	$0	0%
Inwood Pre-K Center	Elementary	2024-25	$18,910,000	$4,000,000	21%
Mountain Ridge Primary	Elementary	2024-25	$30,800,000	$12,500,000	41%
Falling Waters Elementary	Elementary	2026-27	$50,000,000	$12,500,000	25%
Total			$127,626,646	$29,000,000	23%

Source: Berkeley County Schools

Shown below, Figure S13 includes growth-related capacity projects with a total cost of $362,425,000. TischlerBise uses these projects as a proxy for future school facility costs; however, the analysis excludes SBA funds from the impact fee calculation. As shown above in Figure S12, programmed SBA funds for Inwood Pre-K Center, Mountain Ridge Primary, and Falling Water Elementary equal $29,000,000. The analysis uses the recent trend of 23 percent SBA funds to project SBA funds for future school facilities. For elementary school facilities, the analysis uses the local cost of $117,968,550 ($155,735,000 total cost - $37,766,450 estimated SBA funding) to calculate the local cost of $422 per square foot ($117,968,550 local cost / 279,686 square feet). TischlerBise does not recommend impact fees for middle school facilities or high school facilities.

Figure S13: School Facility Costs

Description	School Level	Proposed Occupancy	Total Cost	SBA Funding[1]	Local Funding	Square Feet	Local Cost per Sq Ft
Hedgesville Pre-K Center	Elementary	2026-27	$17,910,000	$0	$17,910,000	32,693	$548
Inwood Pre-K Center	Elementary	2026-27	$18,910,000	$4,000,000	$14,910,000	32,693	$456
Mountain Ridge Primary	Elementary	2026-27	$30,800,000	$12,500,000	$18,300,000	55,000	$333
Falling Waters Elementary	Elementary	2027-28	$50,000,000	$12,500,000	$37,500,000	90,000	$417
New Intermediate School	Elementary	2029-30	$38,115,000	$8,766,450	$29,348,550	69,300	$424
Hedgesville Middle (Reno/Add)	Middle	2029-30	$62,150,000	$14,294,500	$47,855,500	113,000	$424
New High School	High	2029-30	$144,540,000	$33,244,200	$111,295,800	262,800	$424
Total			$362,425,000	$85,305,150	$277,119,850	655,486	$423
Elementary School			$155,735,000	$37,766,450	$117,968,550	279,686	**$422**
Middle School			$62,150,000	$14,294,500	$47,855,500	113,000	**$424**
High School			$144,540,000	$33,244,200	$111,295,800	262,800	**$424**

Source: Berkeley County Schools

1. Estimates for New Intermediate School, Hedgesville Middle School, and New High School based on recent SBA funding share of 23%.

Land Costs

Berkeley County Schools anticipate the need to purchase land for future school sites to accommodate capital needs from new residential development. This analysis uses the 2023 Falling Waters land acquisition cost of $55,942 per acre ($2,013,897 total cost / 36 acres) as a proxy for future land acquisition costs, but the cost may be a conservative estimate. If the study identified anticipated land purchases, it would likely reduce the district's negotiating leverage and result in an even greater cost per acre.

CREDITS

Existing Debt Principal

This analysis includes a credit for future principal payments related to the 2022 Bond Referendum debt for elementary school construction. A credit is necessary since future residential units will pay for elementary school facilities through the impact fee and will also contribute to future principal payments on this debt. A credit is not necessary for interest payments because impact fees exclude interest costs. Although nonresidential development will also contribute to future principal payments, the school impact fee methodology will credit 100 percent of future revenues to residential development.

Principal payments related to elementary schools equal $87,880,000. To calculate the annual principal payment per student, the analysis divides annual principal payments by projected elementary school enrollment for that year. To account for the time value of money, the analysis calculates the net present value of future principal payments per student using a discount rate of 4.00 percent. The net present value of principal payments related to existing elementary school debt is $6,618 per student. The analysis deducts this amount from the gross capital cost per student to calculate the net capital cost per student.

Figure S14: Credit for Existing Debt Principal

School Year	Total Principal Payments	Projected Enrollment	Payment per Student
2024-2025	$7,069,625	9,405	$752
2025-2026	$4,492,415	9,666	$465
2026-2027	$4,740,224	9,720	$488
2027-2028	$4,998,653	9,759	$512
2028-2029	$5,274,782	9,775	$540
2029-2030	$5,565,073	9,801	$568
2030-2031	$5,869,523	9,851	$596
2031-2032	$6,181,054	9,876	$626
2032-2033	$6,503,205	9,856	$660
2033-2034	$6,835,976	9,898	$691
2034-2035	$7,112,106	9,938	$716
2035-2036	$7,413,016	9,966	$744
2036-2037	$7,738,708	9,989	$775
2037-2038	$8,085,640	10,012	$808
Total	$87,880,000		$8,938
Discount Rate			4.00%
Credit per Student (Net Present Value)			$6,618

Source: Berkeley County Schools

Future Debt Principal

This analysis includes a credit for future principal payments related to future debt for elementary school construction. A credit is necessary since future residential units will pay for elementary school facilities through the impact fee and will also contribute to future principal payments on this debt. A credit is not necessary for interest payments because impact fees exclude interest costs. Although nonresidential development will also contribute to future principal payments, the school impact fee methodology will credit 100 percent of future revenues to residential development.

To estimate future debt principal, the analysis uses the local cost of $117,968,550 shown in Figure S13 minus the existing 2022 Bond Referendum debt of $83,620,000 for future elementary schools. Shown below, principal payments related to future elementary schools equal $34,348,550. To account for the time value of money, the analysis calculates the net present value of future principal payments per student using a discount rate of 4.00 percent. The net present value of principal payments related to future elementary school debt is $2,341 per student. The analysis deducts this amount from the gross capital cost per student to calculate the net capital cost per student.

Figure S15: Credit for Future Debt Principal

School Year	Total Principal Payment[1]	Projected Enrollment	Payment per Student
2027-2028	$1,717,428	9,759	$176
2028-2029	$1,717,428	9,775	$176
2029-2030	$1,717,428	9,801	$175
2030-2031	$1,717,428	9,851	$174
2031-2032	$1,717,428	9,876	$174
2032-2033	$1,717,428	9,856	$174
2033-2034	$1,717,428	9,898	$174
2034-2035	$1,717,428	9,938	$173
2035-2036	$1,717,428	9,966	$172
2036-2037	$1,717,428	9,989	$172
2037-2038	$1,717,428	10,012	$172
2038-2039	$1,717,428	10,043	$171
2039-2040	$1,717,428	10,073	$171
2040-2041	$1,717,428	10,100	$170
2041-2042	$1,717,428	10,127	$170
2042-2043	$1,717,428	10,155	$169
2043-2044	$1,717,428	10,183	$169
2044-2045	$1,717,428	10,212	$168
2045-2046	$1,717,428	10,240	$168
2046-2047	$1,717,428	10,268	$167
Total	$34,348,550		$3,434
Discount Rate			4.00%
Credit per Student (Net Present Value)			$2,341

1. TischlerBise estimate based on local elementary school cost minus 2022 Bond Referendum elementary school debt.

PROPOSED SCHOOL IMPACT FEES

Shown below, Figure S16 includes cost factors used to derive school impact fees for Berkeley County. School impact fees are based on student generation rates (i.e., public school students per housing unit) and are only assessed on residential development. Level-of-service standards are based on capital costs per student for elementary school facilities and land described in the previous sections.

The gross capital cost of $45,175 per student is the sum of capital costs related to elementary school facilities ($43,489 per student) and elementary school land ($1,686 per student). The net capital cost of $36,215 per student is the sum of the gross capital cost ($45,175 per student), the credit for existing debt principal (-$6,618 per student), and the credit for future debt principal (-$2,341 per student).

Figure S16: School Impact Fee Cost Factors

Level-of-Service (LOS) Standards			
Fee Component	Elementary (PK-5)	Middle (6-8)	High (9-12)
School Facility			
Square Feet per Student	103.11	N/A	N/A
Cost per Square Foot	$422	N/A	N/A
School Facility Cost per Student	$43,489	N/A	N/A
Land			
Acres per Student	0.0301	N/A	N/A
Land Cost per Acre	$55,942	N/A	N/A
Land Cost per Student	$1,686	N/A	N/A

Capital Cost per Student			
Fee Component	Elementary (PK-5)	Middle (6-8)	High (9-12)
School Facility Cost	$43,489	N/A	N/A
Land Cost	$1,686	N/A	N/A
Gross Capital Cost per Student	$45,175	N/A	N/A
Credit: Existing Debt Principal	($6,618)	N/A	N/A
Credit: Future Debt Principal	($2,341)	N/A	N/A
Net Capital Cost per Student	$36,215	N/A	N/A

Shown below, Figure S17 includes public school student generation rates by housing unit type.

Figure S17: Berkeley County Public School Student Generation Rates

Berkeley County Public School Students per Housing Unit					
Development Type	Development Unit	Elementary (PK-5)	Middle (6-8)	High (9-12)	Students per Unit
Single Family	Housing Unit	0.197	0.092	0.135	0.424
Multi-Family	Housing Unit	0.134	0.063	0.023	0.220
Mobile Home	Housing Unit	0.121	0.062	0.096	0.279

Figure S18 shows the proposed school impact fees for Berkeley County. School impact fees are calculated by multiplying the net capital cost per elementary school student shown in Figure S16 by the student generation rates shown in Figure S17. Berkeley County will not assess school impact fees related to middle schools and high schools.

For a single-family unit, the fee of $7,137 is calculated using a cost of $36,215 per elementary school student multiplied by 0.197 elementary school students per single-family unit. For a multi-family unit, the fee of $4,848 is calculated using a cost of $36,215 per elementary school student multiplied by 0.134 elementary school students per multi -family unit. For a mobile home, the fee of $4,399 is calculated using a cost of $36,215 per elementary school student multiplied by 0.121 elementary school students per mobile home unit.

Figure S18: Proposed School Impact Fees

Development Impact Fees per Housing Unit					
Development Type	Development Unit	Elementary (PK-5)	Middle (6-8)	High (9-12)	Proposed Fees
Single Family	Housing Unit	$7,137	N/A	N/A	$7,137
Multi-Family	Housing Unit	$4,848	N/A	N/A	$4,848
Mobile Home	Housing Unit	$4,399	N/A	N/A	$4,399

PROJECTED SCHOOL IMPACT FEE REVENUE

Projected fee revenue shown below is based on the development projections shown in Appendix A and the proposed school impact fees shown in Figure S18. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase and impact fee revenue will increase at a corresponding rate. If development occurs at a slower rate than projected, the demand for infrastructure will also decrease, along with impact fee revenue. Projected impact fee revenue over the next 10 years equals $113,033,773 and projected growth-related expenditures equal $156,633,768.

Figure S19: Projected School Impact Fee Revenue

Fee Component	Total
School Facility	$155,735,000
Land	$898,768
Total	$156,633,768

		Single Family $7,137 per unit	Multi-Family $4,848 per unit	Mobile Home $4,399 per unit
Year		Housing Unit	Housing Unit	Housing Unit
Base	2025	46,252	6,336	5,671
Year 1	2026	47,630	6,570	5,748
Year 2	2027	49,008	6,803	5,825
Year 3	2028	50,386	7,036	5,902
Year 4	2029	51,764	7,270	5,979
Year 5	2030	53,142	7,503	6,056
Year 6	2031	54,520	7,736	6,133
Year 7	2032	55,898	7,969	6,210
Year 8	2033	57,276	8,203	6,287
Year 9	2034	58,654	8,436	6,364
Year 10	2035	60,031	8,669	6,441
10-Year Increase		13,779	2,333	770
Projected Revenue		$98,337,275	$11,309,459	$3,387,039

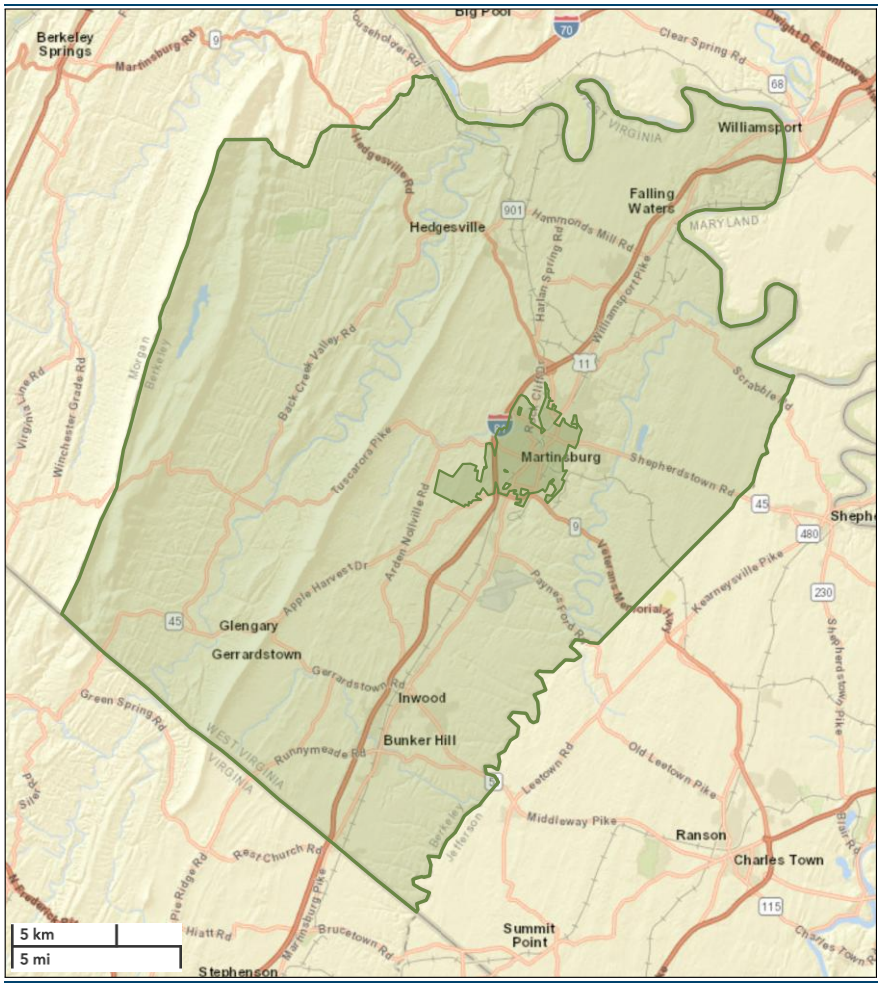
Projected Fee Revenue	$113,033,773
Total Expenditures	$156,633,768

APPENDIX A: LAND USE ASSUMPTIONS

Berkeley County, West Virginia, retained TischlerBise to analyze the impacts of development on its capital facilities and public services and to calculate impact fees based on that analysis. TischlerBise prepared current demographic estimates and future development projections for both residential and nonresidential development that will be used in the calculation of the impact fees. Current demographic data estimates are used to calculate levels of service (LOS) provided to existing development in Berkeley County. TischlerBise utilized a variety of data sources to estimate current and to project future population, housing units, employment, and nonresidential floor area. These sources include the U.S. Census Bureau, Esri Business Analyst, Institute of Transportation Engineers (ITE), Berkeley County, and the City of Martinsburg.

The estimates and projections of residential and nonresidential development in this *Land Use Assumptions* document are for areas within the boundaries of Berkeley County, West Virginia. The map below illustrates the areas within the countywide service area for county administration, parks and recreation, and school impact fees. For fire and rescue impact fees and law enforcement impact fees, the impact fee service area does not include the City of Martinsburg.

Figure A1: Impact Fee Service Area



RESIDENTIAL DEVELOPMENT

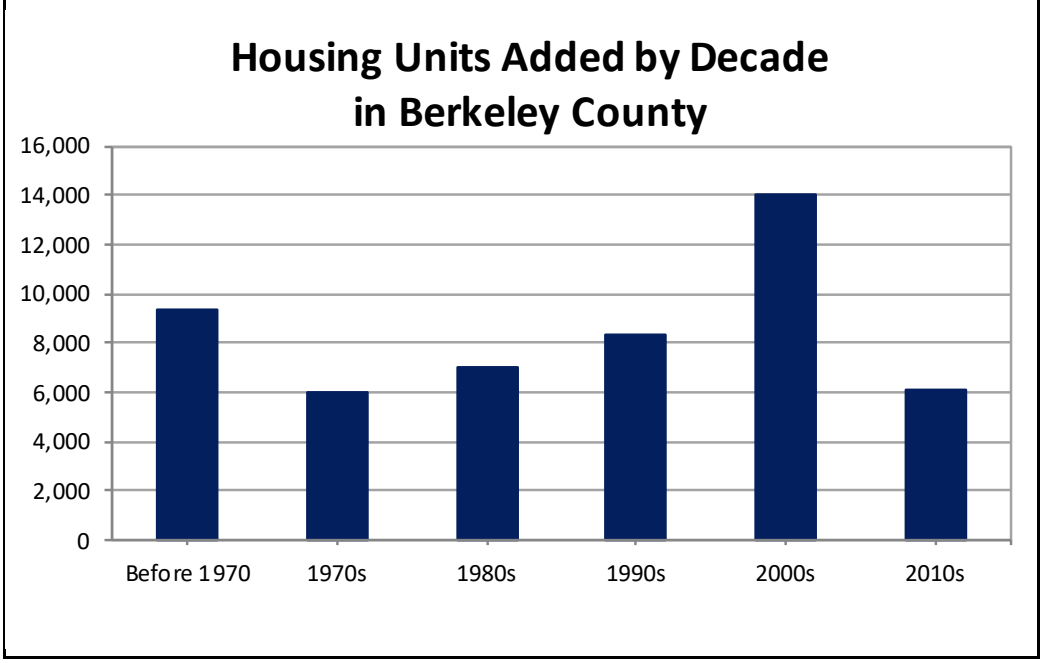
This section details current estimates and future projections of residential development including population and housing units.

Recent Residential Construction

Impact fees require an analysis of current levels of service. For residential development, current levels of service are determined using estimates of population and housing units. Shown below, Figure A2 shows the number of housing units added by decade according to U.S. Census Bureau data. In the previous decade, Berkeley County's housing stock grew by an average of 611 housing units per year.

Figure A2: Housing Units by Decade

Census 2010 Housing Units	44,762	Berkeley County's housing stock grew by an average of 611 housing units per year from 2010 to 2020.
Census 2020 Housing Units	50,868	
New Housing Units 2010 to 2020	6,106	



Source: U.S. Census Bureau, Census 2020 Summary File 1, Census 2010 Summary File 1, 2018-2022 5-Year American Community Survey (for 2000s and earlier, adjusted to yield total units in 2010).

Occupancy Factors

According to the U.S. Census Bureau, a household is a housing unit occupied by year-round residents. Impact fees often use per capita standards and persons per housing unit (PPHU) or persons per household (PPH) to derive proportionate share fee amounts. When PPHU is used in the fee calculations, infrastructure standards are derived using year-round population. When PPH is used in the fee calculations, the impact fee methodology assumes a higher percentage of housing units will be occupied, thus requiring seasonal or peak population to be used when deriving infrastructure standards. TischlerBise recommends that Berkeley County impose impact fees for residential development according to the number of persons per housing unit (PPHU).

Occupancy calculations require data on population and the types of units by structure. The 2020 census did not obtain detailed information using a "long-form" questionnaire. Instead, the U.S. Census Bureau switched to a continuous monthly mailing of surveys, known as the American Community Survey (ACS), which has limitations due to sample-size constraints. For example, data on detached housing units are now combined with attached single units (commonly known as townhouses, which share a common sidewall, but are constructed on an individual parcel of land). For impact fees in Berkeley County, "single-family" includes detached and attached units, "multi-family" includes duplexes and all structures with two or more units on an individual parcel of land, and "mobile home" includes mobile home units.

Figure A3 below shows the occupancy estimates for unincorporated Berkeley County and Martinsburg based on 2018-2022 American Community Survey 5-Year Estimates. In unincorporated Berkeley County, single-family units averaged 2.52 persons per housing unit, multi-family units averaged 1.79 persons per housing unit, and mobile home units average 1.98 persons per housing unit. These estimates are used only to calculate occupancy factors and may not match population and housing unit estimates shown throughout this report.

Figure A3: Persons per Housing Unit

Unincorporated Berkeley County, West Virginia							
Housing Type	Persons	Households	Persons per Household	Housing Units	Persons per Housing Unit	Housing Mix	Vacancy Rate
Single Family[1]	88,094	33,167	2.66	35,007	**2.52**	80.8%	5.26%
Multi-Family[2]	5,164	2,768	1.87	2,884	**1.79**	6.7%	4.02%
Mobile Home	10,755	5,003	2.15	5,443	**1.98**	12.6%	8.08%
Total	104,013	40,938	2.54	43,334	**2.40**	100.0%	5.53%

Martinsburg, West Virginia							
Housing Type	Persons	Households	Persons per Household	Housing Units	Persons per Housing Unit	Housing Mix	Vacancy Rate
Single Family[1]	13,653	5,206	2.62	5,397	**2.53**	67.8%	3.54%
Multi-Family[2]	4,733	2,376	1.99	2,553	**1.85**	32.1%	6.93%
Mobile Home	16	8	2.00	8	**2.00**	0.1%	0.00%
Total	18,402	7,590	2.42	7,958	**2.31**	100.0%	4.62%

Source: U.S. Census Bureau, 2018-2022 American Community Survey 5-Year Estimates

1. Includes detached and attached (townhouse) units.
2. Includes dwellings in structures with two or more units.

Residential Estimates

Unincorporated Berkeley County

The Berkeley County Planning Commission provided recent building permit data for unincorporated Berkeley County. As shown below, Berkeley County issued building permits for 7,263 housing units from 2020 through 2024 – 6,220 single-family units, 657 multi-family units, and 386 mobile home units. This represents an average of 1,452 housing units per year, and it exceeds the countywide average of 611 housing units per year from 2010 to 2020 as shown in Figure A2.

Figure A4: Residential Permitted Units

Housing Unit Type	2020	2021	2022	2023	2024	Total	Average
Sinlge-Family Detatched	889	826	674	644	656	3,689	738
Single-Family Attatched	265	405	655	625	581	2,531	506
Single-Family Total	**1,154**	**1,231**	**1,329**	**1,269**	**1,237**	**6,220**	**1,244**
Apartments	180	19	48	0	8	255	51
Duplex	24	66	130	102	80	402	80
Multi-Family Total	**204**	**85**	**178**	**102**	**88**	**657**	**131**
Mobile Home	**69**	**57**	**80**	**79**	**101**	**386**	**77**
Total	**1,427**	**1,373**	**1,587**	**1,450**	**1,426**	**7,263**	**1,452**

Source: Berkeley County Planning Commission

The 2020 U.S. Census Bureau estimate for unincorporated Berkeley County includes a total population of 103,299 persons and 42,008 housing units. To estimate housing units in the 2025 base year, TischlerBise adds permitted housing units shown in Figure A4 to the 2020 estimate. The 2025 base year includes 49,271 housing units (42,008 housing units in 2020 + 7,263 permitted housing units since 2020).

To estimate population in the 2025 base year, the analysis converts permitted housing units into population using the occupancy factors shown in Figure A3. The 2025 base year includes 120,914 persons (103,299 persons in 2020 + (6,220 single-family units X 2.52 persons per housing unit = 15,674 persons) + (657 multi-family units X 1.79 persons per housing unit = 1,176 persons) + (386 mobile home units X 1.98 persons per housing unit = 764 persons)).

Figure A5: Residential Estimates – Unincorporated Berkeley County

Unincorporated Berkeley County, WV	2020 Census	2021	2022	2023	2024	2025 Base Year
Population						
Single Family	87,489	90,397	93,499	96,848	100,046	103,163
Multi-Family	5,129	5,494	5,646	5,965	6,148	6,305
Mobile Home	10,681	10,818	10,930	11,089	11,245	11,445
Population	**103,299**	**106,709**	**110,076**	**113,902**	**117,439**	**120,914**
Housing Units						
Single Family	33,936	35,090	36,321	37,650	38,919	40,156
Multi-Family	2,796	3,000	3,085	3,263	3,365	3,453
Mobile Home	5,276	5,345	5,402	5,482	5,561	5,662
Total	**42,008**	**43,435**	**44,808**	**46,395**	**47,845**	**49,271**

Martinsburg

The 2020 U.S. Census Bureau estimate for Martinsburg includes a total population of 18,777 persons and 8,860 housing units. The analysis uses growth trends from recent population estimates published by the U.S. Census Bureau to estimate the 2025 base year population of 19,075 persons. To estimate housing units in the 2025 base year, TischlerBise divides the five-year population increase by the citywide occupancy rate of 2.31 persons per housing unit shown in Figure A3. The 2025 base year includes 8,989 housing units (8,860 housing units in 2020 + (298 additional persons since 2020 / 2.31 persons per housing unit = 129 housing units)).

Figure A6: Residential Estimates – Martinsburg

Martinsburg, WV	2020	2021	2022	2023	2024	2025
	Census	Census	Census	Census		Base Year
Population						
Single Family	13,931	13,974	14,048	14,051	14,110	14,152
Multi-Family	4,829	4,844	4,870	4,870	4,891	4,906
Mobile Home	17	17	17	17	17	17
Population	**18,777**	**18,835**	**18,935**	**18,938**	**19,018**	**19,075**
Housing Units						
Single Family	6,009	6,026	6,055	6,056	6,080	6,096
Multi-Family	2,842	2,850	2,864	2,864	2,875	2,883
Mobile Home	9	9	9	9	9	9
Total	**8,860**	**8,885**	**8,928**	**8,930**	**8,964**	**8,989**

Berkeley County

Show below, the 2025 base year estimates for Berkeley County include 139,989 persons and 58,260 housing units countywide.

Figure A7: Residential Estimates – Berkeley County

Berkeley County, WV	2020	2021	2022	2023	2024	2025
	Census					Base Year
Population						
Single Family	101,420	104,371	107,548	110,899	114,156	117,316
Multi-Family	9,958	10,338	10,516	10,835	11,038	11,211
Mobile Home	10,698	10,835	10,948	11,106	11,263	11,463
Population	**122,076**	**125,544**	**129,011**	**132,840**	**136,457**	**139,989**
Housing Units						
Single Family	39,945	41,116	42,376	43,706	44,999	46,252
Multi-Family	5,638	5,850	5,949	6,127	6,240	6,336
Mobile Home	5,285	5,354	5,411	5,491	5,570	5,671
Total	**50,868**	**52,320**	**53,736**	**55,325**	**56,809**	**58,260**

Residential Projections

Population and housing unit projections are used to illustrate the possible future pace of service demands, revenues, and expenditures. To the extent these factors change, the projected need for infrastructure will also change. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase at a corresponding rate. If development occurs at a slower rate than projected, the demand for infrastructure will also decrease.

Unincorporated Berkeley County

To project future housing units in unincorporated Berkeley County, the analysis uses average annual permit trends shown in Figure A4 – 1,244 single-family units per year, 131 multi-family units per year, and 77 mobile home units per year. To convert projected housing units to population, the analysis uses occupancy factors for unincorporated Berkeley County shown in Figure A3. For this study, the analysis assumes the occupancy factors shown in Figure A3 will remain constant throughout the 10-year projection period.

Based on these assumptions, the 10-year projections include an increase of 14,520 housing units and 35,218 persons ((12,440 single-family units X 2.52 persons per housing unit) + (1,310 multi-family units X 1.79 persons per housing unit) + (770 mobile home units X 1.98 persons per housing unit)) in unincorporated Berkeley County.

Figure A8: Residential Projections – Unincorporated Berkeley County

Unincorporated Berkeley County, WV	2025 Base Year	2026 1	2027 2	2028 3	2029 4	2030 5	2035 10	10-Year Increase
Population	**120,914**	**124,436**	**127,957**	**131,479**	**135,001**	**138,523**	**156,132**	**35,218**
Housing Units								
Single Family	40,156	41,400	42,644	43,888	45,132	46,376	52,596	12,440
Multi-Family	3,453	3,584	3,715	3,846	3,977	4,108	4,763	1,310
Mobile Home	5,662	5,739	5,816	5,893	5,970	6,047	6,432	770
Total	**49,271**	**50,723**	**52,175**	**53,627**	**55,079**	**56,531**	**63,791**	**14,520**

Martinsburg

Based on projects in the development pipeline, the City of Martinsburg projects an additional 1,339 single-family units and 1,023 multi-family units during the next 10 years. To convert projected housing units to population, the analysis uses occupancy factors for Martinsburg shown in Figure A3. For this study, the analysis assumes the occupancy factors shown in Figure A3 will remain constant throughout the 10-year projection period. Based on these assumptions, the 10-year projections include an increase of 2,362 housing units and 5,280 persons ((1,339 single-family units X 2.53 persons per housing unit) + (1,023 multi-family units X 1.85 persons per housing unit)) in Martinsburg.

Figure A9: Residential Projections – Martinsburg

Martinsburg, WV	2025	2026	2027	2028	2029	2030	2035	10-Year
	Base Year	1	2	3	4	5	10	Increase
Population	**19,075**	**19,603**	**20,131**	**20,659**	**21,187**	**21,715**	**24,355**	**5,280**
Housing Units								
Single Family	6,096	6,230	6,364	6,498	6,632	6,766	7,435	1,339
Multi-Family	2,883	2,986	3,088	3,190	3,293	3,395	3,906	1,023
Mobile Home	9	9	9	9	9	9	9	0
Total	**8,989**	**9,225**	**9,461**	**9,698**	**9,934**	**10,170**	**11,351**	**2,362**

Berkeley County

Shown below, projected countywide growth during the next 10 years includes 40,499 persons and 16,882 additional housing units.

Figure A10: Residential Projections – Berkeley County

Berkeley County, WV	2025	2026	2027	2028	2029	2030	2035	10-Year
	Base Year	1	2	3	4	5	10	Increase
Population	**139,989**	**144,039**	**148,089**	**152,138**	**156,188**	**160,238**	**180,487**	**40,499**
Housing Units								
Single Family	46,252	47,630	49,008	50,386	51,764	53,142	60,031	13,779
Multi-Family	6,336	6,570	6,803	7,036	7,270	7,503	8,669	2,333
Mobile Home	5,671	5,748	5,825	5,902	5,979	6,056	6,441	770
Total	**58,260**	**59,948**	**61,636**	**63,325**	**65,013**	**66,701**	**75,142**	**16,882**

NONRESIDENTIAL DEVELOPMENT

This section details current estimates and future projections of nonresidential development including jobs and nonresidential floor area.

Nonresidential Demand Factors

TischlerBise uses the term jobs to refer to employment by place of work. In Figure A11, gray shading indicates the nonresidential development prototypes used by TischlerBise to derive employment densities and average weekday vehicle trip ends. For nonresidential development, TischlerBise uses data published in Trip Generation, Institute of Transportation Engineers, 11th Edition (2021).

The prototype for industrial development is Manufacturing (140) which generates 4.75 average weekday vehicle trip ends per 1,000 square feet of floor area and has 528 square feet of floor area per employee. For warehouse development, the proxy is Warehouse (ITE 150); it generates 1.71 average weekday vehicle trip ends per 1,000 square feet of floor area and has 2,953 square feet of floor area per employee. For lodging development, the proxy is Motel (ITE 320); it generates 3.35 average weekday vehicle trip ends per room. For office development, the proxy is General Office (ITE 710); it generates 10.84 average weekday vehicle trip ends per 1,000 square feet of floor area and has 307 square feet of floor area per employee. The prototype for institutional development is Government Office (ITE 730) which generates 22.59 average weekday vehicle trips per 1,000 square feet of floor area and has 330 square feet of floor area per employee. The prototype for commercial development is Shopping Center (ITE 820) which generates 37.01 average weekday vehicle trips per 1,000 square feet of floor area and has 471 square feet of floor area per employee.

Figure A11: Nonresidential Demand Units

ITE Code	Land Use / Size	Demand Unit	Wkdy Trip Ends Per Dmd Unit[1]	Wkdy Trip Ends Per Employee[1]	Emp Per Dmd Unit	Square Feet Per Emp
110	Light Industrial	1,000 Sq Ft	4.87	3.10	1.57	637
130	Industrial Park	1,000 Sq Ft	3.37	2.91	1.16	864
140	Manufacturing	1,000 Sq Ft	4.75	2.51	1.89	528
150	Warehousing	1,000 Sq Ft	1.71	5.05	0.34	2,953
254	Assisted Living	bed	2.60	4.24	0.61	n/a
320	Motel	room	3.35	25.17	0.13	n/a
520	Elementary School	student	2.27	22.50	0.10	n/a
525	High School	student	1.94	21.95	0.09	n/a
540	Community College	student	1.15	14.61	0.08	n/a
560	Church	1,000 Sq Ft	7.60	n/a	n/a	n/a
565	Day Care	student	4.09	21.38	0.19	n/a
610	Hospital	1,000 Sq Ft	10.77	3.77	2.86	350
620	Nursing Home	bed	3.06	3.31	0.92	n/a
710	General Office (avg size)	1,000 Sq Ft	10.84	3.33	3.26	307
720	Medical-Dental Office	1,000 Sq Ft	36.00	8.71	4.13	242
730	Government Office	1,000 Sq Ft	22.59	7.45	3.03	330
770	Business Park	1,000 Sq Ft	12.44	4.04	3.08	325
820	Shopping Center (avg size)	1,000 Sq Ft	37.01	17.42	2.12	471

1. Trip Generation, Institute of Transportation Engineers, 11th Edition (2021).

Nonresidential Estimates

Shown below, the analysis uses data published by Esri Business Analyst Online. 2024 employment estimates include 20,074 jobs in unincorporated Berkeley County and 12,697 jobs in Martinsburg for a total of 32,771 jobs in Berkeley County. To estimate existing nonresidential floor area, the analysis applies ITE employment density factors shown in Figure A11 to the 2024 employment estimates shown below. Existing nonresidential development includes 8,319,851 square feet in unincorporated Berkeley County and 4,839,382 square feet in Martinsburg for a total of 13,159,233 square feet in Berkeley County.

Figure A12: Nonresidential Estimates

Unincorporated Berkeley County, WV	2024 Jobs[1]	Percent of Total Jobs	Square Feet per Job[2]	2024 Estimated Floor Area[3]
Industrial[4]	4,780	24%	528	2,523,840
Commercial[5]	5,879	29%	471	2,769,009
Office / Other Services[6]	3,476	17%	307	1,067,132
Institutional[7]	5,939	30%	330	1,959,870
Total	20,074	100%		8,319,851

Martinsburg, WV	2024 Jobs[1]	Percent of Total Jobs	Square Feet per Job[2]	2024 Estimated Floor Area[3]
Industrial[4]	818	6%	528	431,904
Commercial[5]	3,823	30%	471	1,800,633
Office / Other Services[6]	2,245	18%	307	689,215
Institutional[7]	5,811	46%	330	1,917,630
Total	12,697	100%		4,839,382

Berkeley County, WV	2024 Jobs[1]	Percent of Total Jobs	Square Feet per Job[2]	2024 Estimated Floor Area[3]
Industrial[4]	5,598	17%	528	2,955,744
Commercial[5]	9,702	30%	471	4,569,642
Office / Other Services[6]	5,721	17%	307	1,756,347
Institutional[7]	11,750	36%	330	3,877,500
Total	32,771	100%		13,159,233

1. Esri Business Analyst Online, Business Summary, 2024.
2. Trip Generation, Institute of Transportation Engineers, 11th Edition (2021).
3. TischlerBise calculation (2024 jobs X square feet per job).
4. Major sectors are Manufacturing; Wholesale Trade.
5. Major sectors are Retail Trade; Accommodation & Food Services.
6. Major sectors are Other Services; Real Estate, Holding, Other Investment Offices.
7. Major sectors are Health Services; Government.

Nonresidential Projections

Employment and floor area projections are used to illustrate the possible future pace of service demands, revenues, and expenditures. To the extent these factors change, the projected need for infrastructure will also change. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase at a corresponding rate. If development occurs at a slower rate than projected, the demand for infrastructure will also decrease.

Berkeley County

In 2024, Berkeley County provided 0.24 jobs per person (32,771 jobs / 136,457 persons). To estimate employment in the 2025 base year, TischlerBise applies the 2024 ratio of jobs per person to the 2025 estimate of 139,989 persons countywide. 2025 estimated employment includes 33,619 jobs (139,989 persons X 0.24 jobs per person). For this study, the analysis assumes the share of countywide jobs by nonresidential category shown at the bottom of Figure A12 will remain constant during the next 10 years. 2025 countywide employment includes 5,743 industrial jobs (17 percent), 9,953 commercial jobs (30 percent), 5,869 office / other services jobs (17 percent), and 12,054 institutional jobs (36 percent).

To project countywide employment in subsequent years, TischlerBise uses the 2024 ratio of 0.24 jobs per person. Based on projected countywide population growth of 40,499 persons, TischlerBise projects 9,726 additional jobs during the next 10 years. The analysis assumes the share of countywide jobs by nonresidential category shown at the bottom of Figure A12 will remain constant during the next 10 years.

Applying the ITE employment density factors shown in Figure A11 to the countywide employment projections shown in Figure A13 provides the necessary conversion from jobs to nonresidential floor area. During the next 10 years, projected nonresidential development growth includes approximately 3,905,000 square feet of floor area. This includes 877,000 square feet of industrial development (1,661 commercial jobs X 528 square feet per job), 1,356,000 square feet of commercial development (2,879 commercial jobs X 471 square feet per job), 521,000 square feet of office / other services development (1,698 office / other services jobs X 307 square feet per job), and 1,151,000 square feet of institutional development (3,487 institutional jobs X 330 square feet per job).

Figure A13: Nonresidential Projections – Berkeley County

Berkeley County, WV	2025	2026	2027	2028	2029	2030	2035	10-Year Increase
	Base Year	1	2	3	4	5	10	
Employment								
Industrial	5,743	5,909	6,075	6,241	6,407	6,574	7,404	1,661
Commercial	9,953	10,241	10,529	10,817	11,105	11,393	12,833	2,879
Office / Other Services	5,869	6,039	6,209	6,378	6,548	6,718	7,567	1,698
Institutional	12,054	12,403	12,752	13,100	13,449	13,798	15,541	3,487
Total	**33,619**	**34,592**	**35,564**	**36,537**	**37,510**	**38,482**	**43,345**	**9,726**
Nonres. Sq. Ft. (x1,000)								
Industrial	3,032	3,120	3,208	3,295	3,383	3,471	3,909	877
Commercial	4,688	4,824	4,959	5,095	5,230	5,366	6,044	1,356
Office / Other Services	1,802	1,854	1,906	1,958	2,010	2,062	2,323	521
Institutional	3,978	4,093	4,208	4,323	4,438	4,553	5,129	1,151
Total	**13,500**	**13,890**	**14,281**	**14,671**	**15,062**	**15,453**	**17,405**	**3,905**

SUMMARY OF GROWTH INDICATORS

Development projections summarized in this section will be used to estimate impact fee revenue and to indicate the anticipated need for growth-related infrastructure. However, impact fee methodologies are designed to reduce sensitivity to development projections in the determination of the proportionate share fee amounts. If actual development is slower than projected, fee revenue will decline, but so will the need for growth-related infrastructure. In contrast, if development occurs faster than anticipated, Berkeley County will receive additional fee revenue but will also need to accelerate infrastructure improvements to keep pace with the actual rate of development.

Unincorporated Berkeley County

During the next 10 years, projected development in unincorporated Berkeley County includes an increase of 14,520 housing units and 3,305,000 square feet of nonresidential floor area.

Figure A14: Summary of Growth Indicators - Unincorporated Berkeley County

Unincorporated Berkeley County, WV	2025 Base Year	2026 1	2027 2	2028 3	2029 4	2030 5	2031 6	2032 7	2033 8	2034 9	2035 10	10-Year Increase
Population	**120,914**	**124,436**	**127,957**	**131,479**	**135,001**	**138,523**	**142,045**	**145,567**	**149,088**	**152,610**	**156,132**	**35,218**
Housing Units												
Single Family	40,156	41,400	42,644	43,888	45,132	46,376	47,620	48,864	50,108	51,352	52,596	12,440
Multi-Family	3,453	3,584	3,715	3,846	3,977	4,108	4,239	4,370	4,501	4,632	4,763	1,310
Mobile Home	5,662	5,739	5,816	5,893	5,970	6,047	6,124	6,201	6,278	6,355	6,432	770
Total	**49,271**	**50,723**	**52,175**	**53,627**	**55,079**	**56,531**	**57,983**	**59,435**	**60,887**	**62,339**	**63,791**	**14,520**
Employment												
Industrial	4,922	5,067	5,211	5,356	5,500	5,644	5,789	5,933	6,077	6,222	6,366	1,444
Commercial	6,119	6,362	6,604	6,847	7,090	7,333	7,576	7,819	8,062	8,305	8,548	2,429
Office / Other Services	3,617	3,761	3,904	4,047	4,190	4,334	4,477	4,620	4,763	4,907	5,050	1,433
Institutional	6,226	6,516	6,807	7,097	7,388	7,679	7,969	8,260	8,550	8,841	9,131	2,906
Total	**20,884**	**21,705**	**22,526**	**23,347**	**24,168**	**24,990**	**25,811**	**26,632**	**27,453**	**28,274**	**29,095**	**8,211**
Nonres. Sq. Ft. (x1,000)												
Industrial	2,599	2,675	2,751	2,828	2,904	2,980	3,056	3,133	3,209	3,285	3,361	762
Commercial	2,882	2,996	3,111	3,225	3,339	3,454	3,568	3,683	3,797	3,912	4,026	1,144
Office / Other Services	1,111	1,155	1,198	1,242	1,286	1,330	1,374	1,418	1,462	1,506	1,550	440
Institutional	2,054	2,150	2,246	2,342	2,438	2,534	2,630	2,726	2,822	2,917	3,013	959
Total	**8,646**	**8,976**	**9,307**	**9,637**	**9,968**	**10,298**	**10,629**	**10,959**	**11,290**	**11,620**	**11,951**	**3,305**

Martinsburg

The projections for Martinsburg are summarized below. During the next 10 years, development projections include an increase of 2,362 housing units and 600,000 square feet of nonresidential floor area.

Figure A15: Summary of Growth Indicators – Martinsburg

Martinsburg, WV	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	10-Year
	Base Year	1	2	3	4	5	6	7	8	9	10	Increase
Population	**19,075**	**19,603**	**20,131**	**20,659**	**21,187**	**21,715**	**22,243**	**22,771**	**23,299**	**23,827**	**24,355**	**5,280**
Housing Units												
Single Family	6,096	6,230	6,364	6,498	6,632	6,766	6,900	7,034	7,168	7,302	7,435	1,339
Multi-Family	2,883	2,986	3,088	3,190	3,293	3,395	3,497	3,599	3,702	3,804	3,906	1,023
Mobile Home	9	9	9	9	9	9	9	9	9	9	9	0
Total	**8,989**	**9,225**	**9,461**	**9,698**	**9,934**	**10,170**	**10,406**	**10,642**	**10,879**	**11,115**	**11,351**	**2,362**
Employment												
Industrial	820	842	864	886	908	929	951	973	995	1,016	1,038	218
Commercial	3,834	3,880	3,925	3,970	4,015	4,060	4,105	4,150	4,195	4,240	4,285	450
Office / Other Services	2,252	2,278	2,305	2,331	2,358	2,384	2,411	2,437	2,464	2,491	2,517	265
Institutional	5,828	5,887	5,945	6,003	6,061	6,119	6,177	6,235	6,294	6,352	6,410	581
Total	**12,735**	**12,887**	**13,038**	**13,190**	**13,341**	**13,493**	**13,644**	**13,796**	**13,947**	**14,099**	**14,250**	**1,515**
Nonres. Sq. Ft. (x1,000)												
Industrial	433	445	456	468	479	491	502	514	525	537	548	115
Commercial	1,806	1,827	1,848	1,870	1,891	1,912	1,933	1,955	1,976	1,997	2,018	212
Office / Other Services	691	699	708	716	724	732	740	748	756	765	773	81
Institutional	1,923	1,943	1,962	1,981	2,000	2,019	2,039	2,058	2,077	2,096	2,115	192
Total	**4,854**	**4,914**	**4,974**	**5,034**	**5,094**	**5,154**	**5,214**	**5,274**	**5,334**	**5,394**	**5,454**	**600**

Berkeley County

The projections for Berkeley County are summarized below. During the next 10 years, countywide development projections include an increase of 16,882 housing units and 3,905,000 square feet of nonresidential floor area.

Figure A16: Summary of Growth Indicators – Berkeley County

Berkeley County, WV	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	10-Year
	Base Year	1	2	3	4	5	6	7	8	9	10	Increase
Population	**139,989**	**144,039**	**148,089**	**152,138**	**156,188**	**160,238**	**164,288**	**168,338**	**172,388**	**176,438**	**180,487**	**40,499**
Housing Units												
Single Family	46,252	47,630	49,008	50,386	51,764	53,142	54,520	55,898	57,276	58,654	60,031	13,779
Multi-Family	6,336	6,570	6,803	7,036	7,270	7,503	7,736	7,969	8,203	8,436	8,669	2,333
Mobile Home	5,671	5,748	5,825	5,902	5,979	6,056	6,133	6,210	6,287	6,364	6,441	770
Total	**58,260**	**59,948**	**61,636**	**63,325**	**65,013**	**66,701**	**68,389**	**70,077**	**71,766**	**73,454**	**75,142**	**16,882**
Employment												
Industrial	5,743	5,909	6,075	6,241	6,407	6,574	6,740	6,906	7,072	7,238	7,404	1,661
Commercial	9,953	10,241	10,529	10,817	11,105	11,393	11,681	11,969	12,257	12,545	12,833	2,879
Office / Other Services	5,869	6,039	6,209	6,378	6,548	6,718	6,888	7,058	7,227	7,397	7,567	1,698
Institutional	12,054	12,403	12,752	13,100	13,449	13,798	14,146	14,495	14,844	15,193	15,541	3,487
Total	**33,619**	**34,592**	**35,564**	**36,537**	**37,510**	**38,482**	**39,455**	**40,427**	**41,400**	**42,373**	**43,345**	**9,726**
Nonres. Sq. Ft. (x1,000)												
Industrial	3,032	3,120	3,208	3,295	3,383	3,471	3,559	3,646	3,734	3,822	3,909	877
Commercial	4,688	4,824	4,959	5,095	5,230	5,366	5,502	5,637	5,773	5,908	6,044	1,356
Office / Other Services	1,802	1,854	1,906	1,958	2,010	2,062	2,115	2,167	2,219	2,271	2,323	521
Institutional	3,978	4,093	4,208	4,323	4,438	4,553	4,668	4,783	4,898	5,014	5,129	1,151
Total	**13,500**	**13,890**	**14,281**	**14,671**	**15,062**	**15,453**	**15,843**	**16,234**	**16,624**	**17,015**	**17,405**	**3,905**

AVERAGE WEEKDAY VEHICLE TRIPS

Berkeley County will use average weekday vehicle trips (AWVT) as the nonresidential demand units for fire and rescue fees and law enforcement fees.

Nonresidential Trip Generation Rates

For nonresidential development, TischlerBise uses trip generation rates published in Trip Generation, Institute of Transportation Engineers, 11th Edition (2021). The prototype for industrial development is Manufacturing (140) which generates 4.75 average weekday vehicle trip ends per 1,000 square feet of floor area. For warehouse development, the proxy is Warehousing (150) that generates 1.71 average weekday vehicle trip ends per 1,000 square feet of floor area. The prototype for lodging development is Motel (320) which generates 3.35 average weekday vehicle trip ends per room. For office / other services development, the proxy is General Office (ITE 710), and it generates 10.84 average weekday vehicle trip ends per 1,000 square feet of floor area. For institutional development, the proxy is Government Office (ITE 730), and it generates 22.59 average weekday vehicle trip ends per 1,000 square feet of floor area. The prototype for commercial development is Shopping Center (ITE 820) which generates 37.01 average weekday vehicle trips per 1,000 square feet of floor area.

Figure A17: Average Weekday Vehicle Trip Ends by Land Use

ITE Code	Land Use / Size	Demand Unit	Wkdy Trip Ends Per Dmd Unit[1]	Wkdy Trip Ends Per Employee[1]	Emp Per Dmd Unit	Square Feet Per Emp
110	Light Industrial	1,000 Sq Ft	4.87	3.10	1.57	637
130	Industrial Park	1,000 Sq Ft	3.37	2.91	1.16	864
140	Manufacturing	1,000 Sq Ft	4.75	2.51	1.89	528
150	Warehousing	1,000 Sq Ft	1.71	5.05	0.34	2,953
254	Assisted Living	bed	2.60	4.24	0.61	n/a
320	Motel	room	3.35	25.17	0.13	n/a
540	Community College	student	1.15	14.61	0.08	n/a
560	Church	1,000 Sq Ft	7.60	n/a	n/a	n/a
565	Day Care	student	4.09	21.38	0.19	n/a
610	Hospital	1,000 Sq Ft	10.77	3.77	2.86	350
620	Nursing Home	bed	3.06	3.31	0.92	n/a
710	General Office (avg size)	1,000 Sq Ft	10.84	3.33	3.26	307
720	Medical-Dental Office	1,000 Sq Ft	36.00	8.71	4.13	242
730	Government Office	1,000 Sq Ft	22.59	7.45	3.03	330
770	Business Park	1,000 Sq Ft	12.44	4.04	3.08	325
820	Shopping Center (avg size)	1,000 Sq Ft	37.01	17.42	2.12	471

1. Trip Generation, Institute of Transportation Engineers, 11th Edition (2021).

Trip Rate Adjustments

Average weekday vehicle trip ends (AWVTE) are used as a measure of demand by land use. Vehicle trips are estimated using average weekday vehicle trip ends published in Trip Generation, Institute of Transportation Engineers, 11th Edition (2021). A vehicle trip end represents a vehicle entering or exiting a development (as if a traffic counter were placed across a driveway). To calculate the impact fees, trip generation rates are adjusted to avoid double counting each trip at both the origin and destination points. The basic trip adjustment factor is 50 percent. As discussed further below, the impact fee methodology includes additional adjustments to make the fees proportionate to the infrastructure demand for particular types of development.

Adjustment for Pass-By Trips

For commercial and institutional development, the trip adjustment factor is less than 50 percent because these types of development attract vehicles as they pass by on arterial and collector roads. For example, when someone stops at a convenience store on the way home from work, the convenience store is not the primary destination. For the average shopping center, ITE data indicate 34 percent of the vehicles that enter are passing by on their way to some other primary destination. The remaining 66 percent of attraction trips have the commercial site as their primary destination. Because attraction trips are half of all trips, the trip adjustment factor is 66 percent multiplied by 50 percent, or approximately 33 percent of the trip ends.

Average Weekday Vehicle Trip Estimates

Shown below, Figure A18 includes 2025 base year average weekday vehicle trip (AWVT) estimates for nonresidential development in unincorporated Berkeley County based on the demand indicators for discussed in the previous sections multiplied by base year development estimates. For nonresidential development, the table displays AWVT factors per 1,000 square feet of floor area. Existing industrial development generates approximately 6,173 AWVT (4.75 average weekday vehicle trip ends per 1,000 square feet X 50 percent trip adjustment factor X 2,599 KSF), existing commercial development generates approximately 35,197 AWVT (37.01 average weekday vehicle trip ends per 1,000 square feet X 33 percent trip adjustment factor X 2,882 KSF), existing office / other services development generates approximately 6,019 AWVT (10.84 average weekday vehicle trip ends per 1,000 square feet X 50 percent trip adjustment factor X 1,111 KSF), and existing institutional development generates approximately 15,316 AWVT (22.59 average weekday vehicle trip ends per 1,000 square feet X 33 percent trip adjustment factor X 2,054 KSF). Existing nonresidential development in unincorporated Berkeley County generates 62,705 AWVT.

Figure A18: Unincorporated Nonresidential Average Weekday Vehicle Trip Estimates

Development Type	Development Unit	ITE Code	Avg Wkday VTE	Trip Adjustment	2025 Dev Units	2025 Veh Trips
Industrial	KSF	130	4.75	50%	2,599	6,173
Commercial	KSF	820	37.01	33%	2,882	35,197
Office / Other Services	KSF	710	10.84	50%	1,111	6,019
Institutional	KSF	610	22.59	33%	2,054	15,316
Total						62,705

Average Weekday Vehicle Trip Projections

Provided below are nonresidential average weekday vehicle trip projections for unincorporated Berkeley County used in the Impact Fee Study.

Figure A19: Unincorporated Nonresidential Average Weekday Vehicle Trip Projections

Development Type	Development Unit	ITE Code	Avg Wkday VTE	Trip Adjustment	2025 Dev Units	2025 Veh Trips
Industrial	KSF	130	4.75	50%	2,599	6,173
Commercial	KSF	820	37.01	33%	2,882	35,197
Office / Other Services	KSF	710	10.84	50%	1,111	6,019
Institutional	KSF	610	22.59	33%	2,054	15,316
Total						62,705

Unincorporated Berkeley County, WV	Base 2025	1 2026	2 2027	3 2028	4 2029	5 2030	10 2035	10-Year Increase
Industrial KSF	2,599	2,675	2,751	2,828	2,904	2,980	3,361	762
Commercial KSF	2,882	2,996	3,111	3,225	3,339	3,454	4,026	1,144
Office / Other Services KSF	1,111	1,155	1,198	1,242	1,286	1,330	1,550	440
Institutional KSF	2,054	2,150	2,246	2,342	2,438	2,534	3,013	959
Industrial Trips	6,173	6,354	6,535	6,716	6,897	7,078	7,983	1,810
Commercial Trips	35,197	36,595	37,992	39,389	40,786	42,183	49,170	13,972
Office / Other Services Trips	6,019	6,257	6,496	6,734	6,973	7,211	8,403	2,384
Institutional Trips	15,316	16,030	16,745	17,460	18,175	18,890	22,464	7,148
Nonresidential Trips	62,705	65,236	67,768	70,299	72,830	75,362	88,019	25,315

APPENDIX B: LAND USE DEFINITIONS

RESIDENTIAL DEVELOPMENT

As discussed below, residential development categories are based on data from the U.S. Census Bureau, American Community Survey. Berkeley County will collect impact fees from all new residential units. One-time impact fees are determined by site capacity (i.e. number of residential units).

Single-Family Units:

1. Single-family detached is a one-unit structure detached from any other house, that is, with open space on all four sides. Such structures are considered detached even if they have an adjoining shed or garage. A one-family house that contains a business is considered detached as long as the building has open space on all four sides.
2. Single-family attached (townhouse) is a one-unit structure that has one or more walls extending from ground to roof separating it from adjoining structures. In row houses (sometimes called townhouses), double houses, or houses attached to nonresidential structures, each house is a separate, attached structure if the dividing or common wall goes from ground to roof.

Multi-Family Units:

1. 2+ units (duplexes and apartments) are units in structures containing two or more housing units, further categorized as units in structures with "2, 3 or 4, 5 to 9, 10 to 19, 20 to 49, and 50 or more apartments."
2. Boat, RV, Van, etc. includes any living quarters occupied as a housing unit that does not fit the other categories (e.g., houseboats, railroad cars, campers, and vans). Recreational vehicles, boats, vans, railroad cars, and the like are included only if they are occupied as a current place of residence.

Mobile Home Units:

1. Mobile home includes both occupied and vacant mobile homes, to which no permanent rooms have been added. Mobile homes used only for business purposes or for extra sleeping space and mobile homes for sale on a dealer's lot, at the factory, or in storage are not counted in the housing inventory.

NONRESIDENTIAL DEVELOPMENT

The proposed general nonresidential development categories (defined below) can be used for all new construction within Berkeley County. Nonresidential development categories represent general groups of land uses that share similar average weekday vehicle trip generation rates and employment densities (i.e., jobs per thousand square feet of floor area).

Commercial: Establishments primarily selling merchandise, eating/drinking places, and entertainment uses. By way of example, *Commercial* includes shopping centers, supermarkets, pharmacies, restaurants, bars, nightclubs, automobile dealerships, and movie theaters.

Industrial: Establishments primarily engaged in the production of goods or light industrial activities such as printing, material testing, assembly, fabrication, packaging, and processing materials. By way of example, *Industrial* includes manufacturing plants, assembly plants, processing plants, factories, utility substations, power generation facilities, and telecommunications buildings.

Institutional: Public and quasi-public buildings providing educational, social assistance, or religious services. By way of example, *Institutional* includes schools, universities, churches, daycare facilities, hospitals, government buildings, assisted living facilities, and nursing home facilities.

Lodging: Establishments providing sleeping accommodations that may include supporting facilities such as restaurants, cocktail lounges, meeting and banquet rooms or convention facilities, limited recreational facilities (pool, fitness room), and/or other retail and service shops. By way of example, lodging includes hotels, motels, resorts, and hostels.

Office / Other Services: Establishments providing management, administrative, professional, or business services. By way of example, *Office / Other Services* includes banks, business offices, medical offices, and veterinarian clinics.

Warehouse: Establishments primarily devoted to the storage of goods and materials but may also include office and maintenance areas. Stored goods can include raw materials, packing materials, parts, or other finished goods. A warehouse may provide long-term storage or serve as a distribution center for transferring goods between carriers (e.g., from long-haul carrier to a local delivery vehicle). A warehouse typically has loading docks to load and unload goods from trucks.