

**DRAFT**  
**Impact Fee Study**

**Prepared for:**  
**Jefferson County, West Virginia**

**May 8, 2025**



**4701 Sangamore Road**

**Suite S240**

**Bethesda, MD 20816**

**301.320.6900**

**[www.TischlerBise.com](http://www.TischlerBise.com)**

[PAGE INTENTIONALLY LEFT BLANK]

## TABLE OF CONTENTS

|                                                          |           |
|----------------------------------------------------------|-----------|
| <b>EXECUTIVE SUMMARY.....</b>                            | <b>1</b>  |
| GENERAL LEGAL FRAMEWORK .....                            | 1         |
| CONCEPTUAL IMPACT FEE CALCULATION.....                   | 2         |
| METHODOLOGY .....                                        | 3         |
| EVALUATION OF CREDITS .....                              | 3         |
| <b>IMPACT FEE SUMMARY .....</b>                          | <b>4</b>  |
| IMPACT FEE COMPONENTS.....                               | 4         |
| PROPOSED IMPACT FEES .....                               | 5         |
| CURRENT IMPACT FEES.....                                 | 6         |
| DIFFERENCE BETWEEN PROPOSED AND CURRENT IMPACT FEES..... | 6         |
| <b>COUNTY ADMINISTRATION IMPACT FEES.....</b>            | <b>7</b>  |
| METHODOLOGY .....                                        | 7         |
| SERVICE AREA.....                                        | 7         |
| PROPORTIONATE SHARE.....                                 | 8         |
| IMPACT FEE COMPONENTS.....                               | 9         |
| County Administration Facilities .....                   | 9         |
| Principal Payment Credit .....                           | 11        |
| Impact Fee Study.....                                    | 12        |
| PROJECTED DEMAND.....                                    | 12        |
| County Administration Facilities .....                   | 12        |
| PROPOSED COUNTY ADMINISTRATION IMPACT FEES.....          | 13        |
| PROJECTED COUNTY ADMINISTRATION IMPACT FEE REVENUE.....  | 14        |
| <b>EMS IMPACT FEES .....</b>                             | <b>15</b> |
| METHODOLOGY .....                                        | 15        |
| SERVICE AREA.....                                        | 15        |
| PROPORTIONATE SHARE.....                                 | 16        |
| IMPACT FEE COMPONENTS.....                               | 17        |
| EMS Facilities.....                                      | 17        |
| EMS Vehicles and Equipment .....                         | 18        |
| Impact Fee Study.....                                    | 19        |
| PROJECTED DEMAND.....                                    | 19        |
| EMS Facilities.....                                      | 19        |
| EMS Vehicles and Equipment .....                         | 20        |
| PROPOSED EMS IMPACT FEES.....                            | 21        |
| PROJECTED EMS IMPACT FEE REVENUE.....                    | 22        |
| <b>LAW ENFORCEMENT IMPACT FEES .....</b>                 | <b>23</b> |
| METHODOLOGY .....                                        | 23        |
| SERVICE AREA.....                                        | 23        |
| PROPORTIONATE SHARE.....                                 | 24        |
| IMPACT FEE COMPONENTS.....                               | 25        |

|                                                                    |           |
|--------------------------------------------------------------------|-----------|
| Sheriff Facilities.....                                            | 25        |
| Sheriff Vehicles.....                                              | 26        |
| Impact Fee Study.....                                              | 27        |
| PROJECTED DEMAND.....                                              | 27        |
| Sheriff Facilities.....                                            | 27        |
| Sheriff Vehicles.....                                              | 28        |
| PROPOSED LAW ENFORCEMENT IMPACT FEES .....                         | 29        |
| PROJECTED LAW ENFORCEMENT IMPACT FEE REVENUE .....                 | 30        |
| <b>PARKS AND RECREATION IMPACT FEES .....</b>                      | <b>31</b> |
| METHODOLOGY .....                                                  | 31        |
| SERVICE AREA.....                                                  | 31        |
| IMPACT FEE COMPONENTS.....                                         | 32        |
| Park Land.....                                                     | 32        |
| Park Improvements .....                                            | 33        |
| Recreation .....                                                   | 35        |
| Park Vehicles and Equipment .....                                  | 36        |
| Impact Fee Study.....                                              | 37        |
| PROJECTED DEMAND .....                                             | 37        |
| Park Land.....                                                     | 37        |
| Park Improvements .....                                            | 38        |
| Recreation Center Space .....                                      | 39        |
| Park Vehicles and Equipment .....                                  | 40        |
| PROPOSED PARKS AND RECREATION IMPACT FEES.....                     | 41        |
| PROJECTED PARKS AND RECREATION IMPACT FEE REVENUE .....            | 42        |
| <b>SCHOOL IMPACT FEES .....</b>                                    | <b>43</b> |
| METHODOLOGY .....                                                  | 43        |
| SERVICE AREA.....                                                  | 43        |
| PROPORTIONATE SHARE.....                                           | 44        |
| STUDENT GENERATION RATES .....                                     | 44        |
| Public School Students and Housing Units – PUMA 00400 .....        | 44        |
| Unadjusted Student Generation Rates – PUMA 00400 .....             | 45        |
| Public School Students and Housing Units – Jefferson County .....  | 46        |
| Adjusted Student Generation Rates – Jefferson County Schools ..... | 46        |
| STUDENT ENROLLMENT.....                                            | 47        |
| Historical Enrollment.....                                         | 47        |
| Projected Enrollment.....                                          | 48        |
| COST OF CONSTRUCTION .....                                         | 48        |
| IMPACT FEE COMPONENTS.....                                         | 49        |
| High Schools – Incremental Expansion.....                          | 49        |
| Impact Fee Study – Plan-Based.....                                 | 49        |
| CREDITS .....                                                      | 50        |
| Series 2021 Credit.....                                            | 50        |
| PROPOSED SCHOOL IMPACT FEES.....                                   | 51        |
| PROJECTED SCHOOL IMPACT FEE REVENUE .....                          | 52        |
| <b>APPENDIX A: LAND USE ASSUMPTIONS .....</b>                      | <b>53</b> |

---

RESIDENTIAL DEMAND FACTORS ..... 54

    Housing Unit Size..... 54

    Residential Construction Trends ..... 54

NONRESIDENTIAL DEMAND FACTORS ..... 55

SUMMARY OF COUNTYWIDE GROWTH INDICATORS..... 56

AVERAGE WEEKDAY VEHICLE TRIPS ..... 57

    Nonresidential Trip Generation Rates ..... 57

    Trip Rate Adjustments ..... 58

    Adjustment for Pass-By Trips..... 58

NONRESIDENTIAL VEHICLE TRIP PROJECTIONS ..... 59

    Countywide ..... 59

    Unincorporated Jefferson County ..... 59

**APPENDIX B: LAND USE DEFINITIONS ..... 60**

    RESIDENTIAL DEVELOPMENT ..... 60

    NONRESIDENTIAL DEVELOPMENT ..... 61

**APPENDIX C: SERVICE AREA MAPS..... 62**

    COUNTYWIDE SERVICE AREA..... 62

    LAW ENFORCEMENT SERVICE AREA ..... 63

**APPENDIX D: PUBLIC USE MICRODATA AREA MAP..... 64**

[PAGE INTENTIONALLY LEFT BLANK]

## EXECUTIVE SUMMARY

Jefferson County, West Virginia, contracted with TischlerBise to update the County's impact fees using current level-of-service standards. Impact fees are one-time payments used to construct system improvements needed to accommodate future development. The fee represents future development's proportionate share of infrastructure costs. Impact fees may be used for infrastructure improvements or debt service for growth-related infrastructure. In contrast to general taxes, impact fees may not be used for operations, maintenance, replacement, or correcting existing deficiencies. This update of Jefferson County's impact fees includes the following capital facilities:

1. County Administration
2. EMS
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. However, the *Dolan* decision appeared to set a higher standard of review for mandatory dedications of land than for monetary exactions such as impact fees.

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 (although the relevance of that decision to impact fees has been debated) and is logically necessary to establish a proper nexus. 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. All of these procedural, as well as 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.

### **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**

| Infrastructure Category | Service Area                    | Cost Recovery | Incremental Expansion                                                      | Plan-Based                                          | Cost Allocation                          |
|-------------------------|---------------------------------|---------------|----------------------------------------------------------------------------|-----------------------------------------------------|------------------------------------------|
| County Administration   | Jefferson County                | N/A           | N/A                                                                        | County Administration Facilities, Impact Fee Report | Population, Jobs                         |
| EMS                     | Jefferson County                | N/A           | EMS Vehicles and Equipment                                                 | EMS Facilities, Impact Fee Report                   | Population, Nonresidential Vehicle Trips |
| Law Enforcement         | Unincorporated Jefferson County | N/A           | Sheriff Facilities and Vehicles                                            | Impact Fee Report                                   | Population, Nonresidential Vehicle Trips |
| Parks and Recreation    | Jefferson County                | N/A           | Park Land, Park Improvements, Park Facilities, Park Vehicles and Equipment | Impact Fee Report                                   | Population                               |
| School                  | Jefferson County                | N/A           | High School Facilities, Land                                               | Impact Fee Report                                   | Students                                 |

## PROPOSED IMPACT FEES

Proposed impact fees for residential development will be assessed per dwelling unit, based on the type of unit. Nonresidential impact fees will be assessed per 1,000 square feet of floor area, based on the type of development (per room for hotels and per bed for nursing homes). Proposed impact fees are shown below in Figure 2.

Fees shown below represent the maximum allowable fees. Jefferson 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 Jefferson County's level-of-service standards. All costs are in current dollars with no assumed inflation rate over time. If cost estimates change significantly over time, impact fees should be recalibrated.

**Figure 2: Proposed Impact Fees**

| Residential Fees per Unit |              |       |                 |                      |         |                 |
|---------------------------|--------------|-------|-----------------|----------------------|---------|-----------------|
| Development Type          | County Admin | EMS   | Law Enforcement | Parks and Recreation | School  | Total           |
| Single Family             | \$1,453      | \$509 | \$394           | \$1,179              | \$6,772 | <b>\$10,307</b> |
| Multi-Family              | \$1,026      | \$359 | \$278           | \$832                | \$1,198 | <b>\$3,692</b>  |

| Nonresidential Fees per 1,000 Square Feet |              |       |                 |                      |        |                |
|-------------------------------------------|--------------|-------|-----------------|----------------------|--------|----------------|
| Development Type                          | County Admin | EMS   | Law Enforcement | Parks and Recreation | School | Total          |
| Light Industrial                          | \$604        | \$119 | \$119           | \$0                  | \$0    | <b>\$842</b>   |
| Business Park                             | \$1,185      | \$304 | \$303           | \$0                  | \$0    | <b>\$1,791</b> |
| Manufacturing                             | \$728        | \$116 | \$116           | \$0                  | \$0    | <b>\$960</b>   |
| Warehousing                               | \$130        | \$42  | \$42            | \$0                  | \$0    | <b>\$214</b>   |
| Commercial/Shopping Center                | \$817        | \$596 | \$595           | \$0                  | \$0    | <b>\$2,008</b> |
| Office/Institutional                      | \$1,252      | \$265 | \$264           | \$0                  | \$0    | <b>\$1,781</b> |
| Hotel (per room)                          | \$51         | \$82  | \$82            | \$0                  | \$0    | <b>\$214</b>   |
| Nursing Home (per bed)                    | \$356        | \$75  | \$74            | \$0                  | \$0    | <b>\$505</b>   |

## CURRENT IMPACT FEES

Current impact fees for residential development are assessed per dwelling unit, based on the type of unit. Nonresidential impact fees are assessed per 1,000 square feet of floor area, based on the type of development. The current fee schedule does not contain fee categories for hotel and nursing home land use categories. Current impact fees shown below in Figure 3 represent the current County fee schedule.

**Figure 3: Current Impact Fees**

| Residential Fees per Unit |              |       |                 |                      |        |                |
|---------------------------|--------------|-------|-----------------|----------------------|--------|----------------|
| Development Type          | County Admin | EMS   | Law Enforcement | Parks and Recreation | School | Total          |
| Single Family Detached    | \$57         | \$119 | \$636           | \$1,131              | \$1    | <b>\$1,944</b> |
| Multi-Family              | \$40         | \$86  | \$455           | \$810                | \$1    | <b>\$1,392</b> |

| Nonresidential Fees per 1,000 Square Feet |              |     |                 |                      |        |            |
|-------------------------------------------|--------------|-----|-----------------|----------------------|--------|------------|
| Development Type                          | County Admin | EMS | Law Enforcement | Parks and Recreation | School | Total      |
| Light Industrial                          | \$0          | \$0 | \$0             | \$0                  | \$0    | <b>\$0</b> |
| Business Park                             | \$0          | \$0 | \$0             | \$0                  | \$0    | <b>\$0</b> |
| Manufacturing                             | \$0          | \$0 | \$0             | \$0                  | \$0    | <b>\$0</b> |
| Warehousing                               | \$0          | \$0 | \$0             | \$0                  | \$0    | <b>\$0</b> |
| Commercial/Shopping Center                | \$0          | \$0 | \$0             | \$0                  | \$0    | <b>\$0</b> |
| Office/Institutional                      | \$0          | \$0 | \$0             | \$0                  | \$0    | <b>\$0</b> |

## DIFFERENCE BETWEEN PROPOSED AND CURRENT IMPACT FEES

The differences between proposed and current impact fees are displayed in Figure 4.

**Figure 4: Difference Between Proposed and Current Impact Fees**

| Residential Fees per Unit |              |       |                 |                      |         |                |
|---------------------------|--------------|-------|-----------------|----------------------|---------|----------------|
| Development Type          | County Admin | EMS   | Law Enforcement | Parks and Recreation | School  | Total          |
| Single Family             | \$1,396      | \$390 | (\$242)         | \$48                 | \$6,771 | <b>\$8,363</b> |
| Multi-Family              | \$986        | \$273 | (\$177)         | \$22                 | \$1,197 | <b>\$2,300</b> |

| Nonresidential Fees per 1,000 Square Feet |              |       |                 |                      |        |                |
|-------------------------------------------|--------------|-------|-----------------|----------------------|--------|----------------|
| Development Type                          | County Admin | EMS   | Law Enforcement | Parks and Recreation | School | Total          |
| Industrial                                | \$604        | \$119 | \$119           | \$0                  | \$0    | <b>\$842</b>   |
| Business Park                             | \$1,185      | \$304 | \$303           | \$0                  | \$0    | <b>\$1,791</b> |
| Manufacturing                             | \$728        | \$116 | \$116           | \$0                  | \$0    | <b>\$960</b>   |
| Warehousing                               | \$130        | \$42  | \$42            | \$0                  | \$0    | <b>\$214</b>   |
| Commercial                                | \$817        | \$596 | \$595           | \$0                  | \$0    | <b>\$2,008</b> |
| Office & Institutional                    | \$1,252      | \$265 | \$264           | \$0                  | \$0    | <b>\$1,781</b> |
| Hotel (per room)                          | \$51         | \$82  | \$82            | \$0                  | \$0    | <b>\$214</b>   |
| Nursing Home (per bed)                    | \$356        | \$75  | \$74            | \$0                  | \$0    | <b>\$505</b>   |

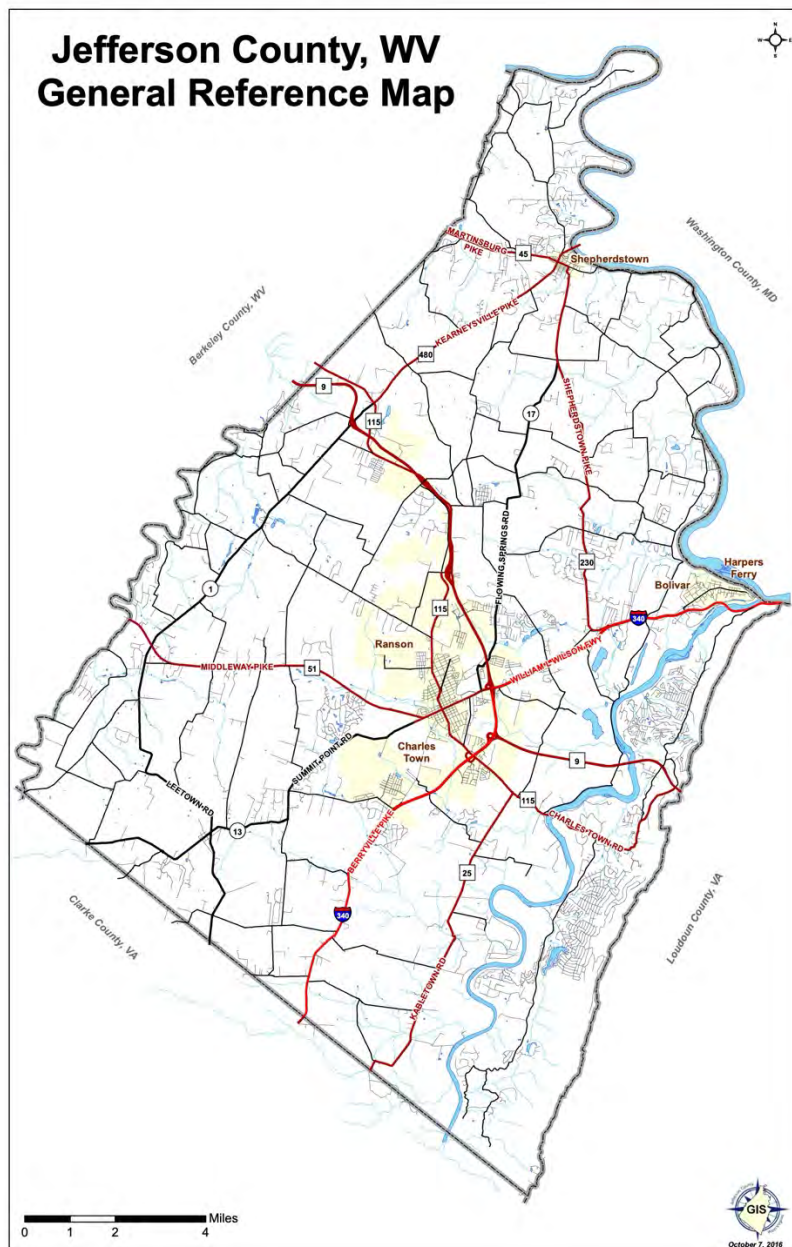
## COUNTY ADMINISTRATION IMPACT FEES

### METHODOLOGY

The County Administration impact fees include components for county administration facilities and the cost of preparing the Impact Fee Study. The plan-based methodology is used for the county administration facilities component and the Impact Fee Study.

### SERVICE AREA

Jefferson County government provides administrative services throughout Jefferson County; therefore, there is a single service area for the 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. The County Administration impact fees allocate the cost of capital facilities between residential and nonresidential development using functional population. Based on 2021 estimates (the latest data available at the time of this study) from the U.S. Census Bureau's OnTheMap web application, residential development accounts for approximately 78 percent of functional population and nonresidential development is responsible for the remaining 22 percent.

**Figure CA1: Proportionate Share**

| Demand Units in 2021                       |        |  |                     |                 |
|--------------------------------------------|--------|--|---------------------|-----------------|
| Residential                                |        |  | Demand<br>Hours/Day | Person<br>Hours |
| Population                                 | 58,473 |  |                     |                 |
| Residents Not Working                      | 32,571 |  | 20                  | 651,425         |
| Employed Residents                         | 25,902 |  |                     |                 |
| Employed in Jefferson County, WV           | 6,814  |  | 14                  | 95,396          |
| Employed outside Jefferson County, WV      | 19,088 |  | 14                  | 267,232         |
| Residential Subtotal                       |        |  |                     | 1,014,053       |
| Residential Share                          |        |  |                     | 78%             |
| Nonresidential                             |        |  |                     |                 |
| Non-working Residents                      | 32,571 |  | 4                   | 130,285         |
| Jobs Located in Jefferson County, WV       | 16,053 |  |                     |                 |
| Residents Employed in Jefferson County, WV | 6,814  |  | 10                  | 68,140          |
| Non-Resident Workers (inflow commuters)    | 9,239  |  | 10                  | 92,390          |
| Nonresidential Subtotal                    |        |  |                     | 290,815         |
| Nonresidential Share                       |        |  |                     | 22%             |
| Total                                      |        |  |                     | 1,304,869       |

Source: TischlerBise calculation (population); U.S. Census Bureau, OnTheMap 6.23.5 Application and LEHD Origin-Destination Employment Statistics (employment).

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

## IMPACT FEE COMPONENTS

### County Administration Facilities

Jefferson County's general government/administrative functions are currently housed in several facilities totaling 145,267 square feet.

**Figure CA2: Existing County Administration Facilities**

| Description                      | Square Feet    |
|----------------------------------|----------------|
| Courthouse                       | 17,850         |
| Old Jail Annex                   | 14,498         |
| Reininger                        | 7,755          |
| Moffet                           | 5,172          |
| Mason                            | 13,272         |
| Hunter House                     | 5,825          |
| Gray Building                    | 8,250          |
| St. Margaret's Judicial Building | 28,684         |
| Maintenance                      | 15,000         |
| 911 Communications               | 10,000         |
| Public Service Center            | 18,961         |
| <b>Total</b>                     | <b>145,267</b> |

Source: Jefferson County

Jefferson County plans to purchase and renovate a new County Administration Building and a Judicial Building to serve future development. As shown below, these facilities include 136,600 square feet at a cost of \$35,052,000, and the analysis uses the average cost of \$257 per square foot (\$35,052,000 total cost / 136,600 square feet) in the impact fee calculation.

**Figure CA3: Planned County Administration Facilities**

| Description                           | Square Feet    | Cost                | Cost per Sq Ft |
|---------------------------------------|----------------|---------------------|----------------|
| County Admin Building (Purchase/Reno) | 91,600         | \$19,100,000        | \$209          |
| Judicial Building (Purchase/Reno)     | 45,000         | \$15,952,000        | \$354          |
| <b>Total</b>                          | <b>136,600</b> | <b>\$35,052,000</b> | <b>\$257</b>   |

Source: Jefferson County

Shown below, Jefferson County currently serves existing development with 145,267 square feet of county administration facilities and plans to purchase an additional 136,600 square feet of facilities to serve existing and future development through 2034. The planned facilities will replace 26,354 square feet of existing facilities, so Jefferson County will provide 255,513 square feet of county administration facilities to all development in 2034.

The planned level of service for residential development is 2.7017 square feet per person (255,513 square feet X 78 percent residential share / 73,768 persons). The planned nonresidential level of service is 1.7729 square feet per job (255,513 square feet X 22 percent nonresidential share / 31,708 jobs). The analysis uses the planned facilities cost of \$257 per square foot to calculate the cost per demand unit. The county administration facilities cost is \$693.27 per person (2.7017 square feet per person X \$257 per square foot) and \$454.92 per job (1.7729 square feet per job X \$259 per square foot).

**Figure CA4: County Administration Level of Service and Cost Allocation**

| Description                                    | Square Feet    |
|------------------------------------------------|----------------|
| Existing Square Feet                           | 145,267        |
| Planned: County Admin Bldg (Purchase/Reno)     | 91,600         |
| Planned: Judicial Building                     | 45,000         |
| Subtotal (Existing and Planned)                | 281,867        |
| Less: Courthouse - Circuit Judge               | 4,800          |
| Less: Jail Annex - Circuit Clerk, Family Court | 3,890          |
| Less: St. Margaret's Judicial                  | 17,664         |
| Subtotal (Replacement)                         | 26,354         |
| <b>Future Square Feet</b>                      | <b>255,513</b> |

| Cost Factors         |       |
|----------------------|-------|
| Cost per Square Foot | \$257 |

| Level-of-Service (LOS) Standards |                 |
|----------------------------------|-----------------|
| Residential                      |                 |
| Residential Share                | 78%             |
| 2034 Population                  | 73,768          |
| Square Feet per Person           | 2.7017          |
| <b>Cost per Person</b>           | <b>\$693.27</b> |
| Nonresidential                   |                 |
| Nonresidential Share             | 22%             |
| 2034 Jobs                        | 31,708          |
| Square Feet per Job              | 1.7729          |
| <b>Cost per Job</b>              | <b>\$454.92</b> |

Source: Jefferson County

## Principal Payment Credit

Jefferson County will issue debt to finance a portion of the planned county administration facilities. This analysis includes a credit for future principal payments related to the debt. A credit is necessary since future development will pay for county administration 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 the impact fee calculation only includes principal costs.

As shown below, planned debt for planned county administration facilities will be repaid through 2044. The total principal balance is \$16,000,000, and the analysis uses functional population shown in Figure CA1 to allocate the proportionate share of annual principal payments to residential and nonresidential development. Annual principal payments are divided by projected population or jobs to determine the credit per person or per job. To account for the time value of money, annual payments are discounted using a net present value formula based on a discount rate of 5.00 percent. The net present value of future principal payments is \$108.09 per person and \$70.80 per job.

**Figure CA5: Principal Payment Credit**

| Year         | Principal           | Residential Share   | Population | Credit per Person | Nonresidential Share | Jobs   | Credit per Job  |
|--------------|---------------------|---------------------|------------|-------------------|----------------------|--------|-----------------|
| 2025         | \$800,000           | \$624,000           | 62,932     | \$9.92            | \$176,000            | 27,821 | \$6.33          |
| 2026         | \$800,000           | \$624,000           | 64,136     | \$9.73            | \$176,000            | 28,259 | \$6.23          |
| 2027         | \$800,000           | \$624,000           | 65,340     | \$9.55            | \$176,000            | 28,697 | \$6.13          |
| 2028         | \$800,000           | \$624,000           | 66,544     | \$9.38            | \$176,000            | 29,134 | \$6.04          |
| 2029         | \$800,000           | \$624,000           | 67,748     | \$9.21            | \$176,000            | 29,572 | \$5.95          |
| 2030         | \$800,000           | \$624,000           | 68,952     | \$9.05            | \$176,000            | 30,010 | \$5.86          |
| 2031         | \$800,000           | \$624,000           | 70,156     | \$8.89            | \$176,000            | 30,434 | \$5.78          |
| 2032         | \$800,000           | \$624,000           | 71,360     | \$8.74            | \$176,000            | 30,859 | \$5.70          |
| 2033         | \$800,000           | \$624,000           | 72,564     | \$8.60            | \$176,000            | 31,283 | \$5.63          |
| 2034         | \$800,000           | \$624,000           | 73,768     | \$8.46            | \$176,000            | 31,708 | \$5.55          |
| 2035         | \$800,000           | \$624,000           | 74,971     | \$8.32            | \$176,000            | 32,132 | \$5.48          |
| 2036         | \$800,000           | \$624,000           | 76,175     | \$8.19            | \$176,000            | 32,511 | \$5.41          |
| 2037         | \$800,000           | \$624,000           | 77,379     | \$8.06            | \$176,000            | 32,889 | \$5.35          |
| 2038         | \$800,000           | \$624,000           | 78,583     | \$7.94            | \$176,000            | 33,268 | \$5.29          |
| 2039         | \$800,000           | \$624,000           | 79,787     | \$7.82            | \$176,000            | 33,646 | \$5.23          |
| 2040         | \$800,000           | \$624,000           | 80,991     | \$7.70            | \$176,000            | 34,025 | \$5.17          |
| 2041         | \$800,000           | \$624,000           | 83,399     | \$7.48            | \$176,000            | 34,371 | \$5.12          |
| 2042         | \$800,000           | \$624,000           | 84,603     | \$7.38            | \$176,000            | 34,717 | \$5.07          |
| 2043         | \$800,000           | \$624,000           | 85,807     | \$7.27            | \$176,000            | 35,064 | \$5.02          |
| 2044         | \$800,000           | \$624,000           | 87,011     | \$7.17            | \$176,000            | 35,410 | \$4.97          |
| <b>Total</b> | <b>\$16,000,000</b> | <b>\$12,480,000</b> |            | <b>\$168.88</b>   | <b>\$3,520,000</b>   |        | <b>\$111.32</b> |

|                          |                 |                          |                |
|--------------------------|-----------------|--------------------------|----------------|
| Discount Rate            | 5.00%           | Discount Rate            | 5.00%          |
| <b>Net Present Value</b> | <b>\$108.09</b> | <b>Net Present Value</b> | <b>\$70.80</b> |

## Impact Fee Study

The cost to prepare the County Administration impact fees equals \$6,600, and Jefferson County plans to update its impact fees every five years. Based on this cost, proportionate share, and five-year projections of future residential and nonresidential development, the cost is \$0.86 per person and \$0.64 per job.

Figure CA6: Impact Fee Study

| Infrastructure Category | Cost    | Proportionate Share |     | Service Unit | 5-Year Change | Cost per Service Unit |
|-------------------------|---------|---------------------|-----|--------------|---------------|-----------------------|
| County Administration   | \$6,600 | Residential         | 78% | Population   | 6,020         | \$0.86                |
|                         |         | Nonresidential      | 22% | Jobs         | 2,270         | \$0.64                |

## PROJECTED DEMAND

### County Administration Facilities

Based on projected population growth of 12,040 persons over the next 10 years, future residential development demands 32,528 square feet of the planned facilities (12,040 persons X 2.7017 square feet per person). With projected growth of 4,405 jobs over the next 10 years, future nonresidential development demands 7,810 square feet of the planned facilities (4,405 jobs X 1.7729 square per job). Growth-related demand is approximately 40,338 square feet at a cost of approximately \$10.4 million. Existing development's share of planned facilities is approximately \$24.7 million.

Figure CA7: Projected Demand for County Administration Facilities

| Type of Infrastructure           | Level of Service   | Demand Unit | Cost per Sq Ft |
|----------------------------------|--------------------|-------------|----------------|
| County Administration Facilities | 2.7017 Square Feet | per Person  | \$257          |
|                                  | 1.7729 Square Feet | per Job     |                |

| Demand for County Administration Facilities |            |        |             |                |         |
|---------------------------------------------|------------|--------|-------------|----------------|---------|
| Year                                        | Population | Jobs   | Square Feet |                |         |
|                                             |            |        | Residential | Nonresidential | Total   |
| 2024                                        | 61,728     | 27,302 | 166,773     | 48,403         | 215,175 |
| 2025                                        | 62,932     | 27,821 | 170,025     | 49,322         | 219,348 |
| 2026                                        | 64,136     | 28,259 | 173,278     | 50,099         | 223,377 |
| 2027                                        | 65,340     | 28,697 | 176,531     | 50,875         | 227,406 |
| 2028                                        | 66,544     | 29,134 | 179,784     | 51,651         | 231,435 |
| 2029                                        | 67,748     | 29,572 | 183,036     | 52,427         | 235,463 |
| 2030                                        | 68,952     | 30,010 | 186,289     | 53,203         | 239,492 |
| 2031                                        | 70,156     | 30,434 | 189,542     | 53,956         | 243,498 |
| 2032                                        | 71,360     | 30,859 | 192,795     | 54,708         | 247,503 |
| 2033                                        | 72,564     | 31,283 | 196,047     | 55,460         | 251,508 |
| 2034                                        | 73,768     | 31,708 | 199,300     | 56,213         | 255,513 |
| 10-Yr Increase                              | 12,040     | 4,405  | 32,528      | 7,810          | 40,338  |

| Growth-Related Expenditures | \$8,346,690  | \$2,004,102 | \$10,350,792 |
|-----------------------------|--------------|-------------|--------------|
| Existing Development Share  | \$19,266,942 | \$5,434,266 | \$24,701,208 |
| Total                       | \$27,613,633 | \$7,438,367 | \$35,052,000 |

### PROPOSED COUNTY ADMINISTRATION IMPACT FEES

Infrastructure components and cost factors for County Administration impact fees are summarized in the upper portion of Figure CA8. For County Administration impact fees, the capital cost is \$586.04 per person and \$384.76 per job.

County Administration impact fees for residential development are assessed according to the number of persons per housing unit. The single-family fee of \$1,453 is calculated using a cost of \$586.04 per person multiplied by a demand unit of 2.48 persons per housing unit.

Nonresidential impact fees are assessed according to the number of jobs per 1,000 square feet of floor area (per room for Hotel and per bed Nursing Home). The commercial/shopping center fee of \$817 per 1,000 square feet of floor area is calculated using a cost of \$384.76 per job multiplied by a demand unit of 2.12 jobs per 1,000 square feet.

**Figure CA8: Proposed County Administration Impact Fees**

| Fee Component                    | Cost per Person | Cost per Job    |
|----------------------------------|-----------------|-----------------|
| County Administration Facilities | \$693.27        | \$454.92        |
| Impact Fee Report                | \$0.86          | \$0.64          |
| Principal Payment Credit         | (\$108.09)      | (\$70.80)       |
| <b>Total</b>                     | <b>\$586.04</b> | <b>\$384.76</b> |

| Residential Fees per Unit |                                       |               |              |                     |
|---------------------------|---------------------------------------|---------------|--------------|---------------------|
| Development Type          | Persons per Housing Unit <sup>1</sup> | Proposed Fees | Current Fees | Increase / Decrease |
| Single Family             | 2.48                                  | \$1,453       | \$57         | \$1,396             |
| Multi-Family              | 1.75                                  | \$1,026       | \$40         | \$986               |

| Nonresidential Fees per 1,000 Square Feet |                                         |               |              |                     |
|-------------------------------------------|-----------------------------------------|---------------|--------------|---------------------|
| Development Type                          | Jobs per 1,000 Square Feet <sup>1</sup> | Proposed Fees | Current Fees | Increase / Decrease |
| Light Industrial                          | 1.57                                    | \$604         | \$0          | \$604               |
| Business Park                             | 3.08                                    | \$1,185       | \$0          | \$1,185             |
| Manufacturing                             | 1.89                                    | \$728         | \$0          | \$728               |
| Warehousing                               | 0.34                                    | \$130         | \$0          | \$130               |
| Commercial/Shopping Center                | 2.12                                    | \$817         | \$0          | \$817               |
| Office/Institutional                      | 3.26                                    | \$1,252       | \$0          | \$1,252             |
| Hotel (per room)                          | 0.13                                    | \$51          | n/a          | n/a                 |
| Nursing Home (per bed)                    | 0.92                                    | \$356         | n/a          | n/a                 |

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 CA8. 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 is projected, the demand for infrastructure will also decrease, along with impact fee revenue. Projected impact fee revenue over the next 10 years equals \$8.74 million and total projected expenditures equal \$35.06 million, meaning the County will need to fund \$26.32 million from non-impact fee revenue.

**Figure CA9: Projected County Administration Impact Fee Revenue**

| Fee Component                    | Growth Share        | Existing Share      | Total               |
|----------------------------------|---------------------|---------------------|---------------------|
| County Administration Facilities | \$10,350,792        | \$24,701,208        | \$35,052,000        |
| Impact Fee Report                | \$7,200             | \$0                 | \$7,200             |
| <b>Total</b>                     | <b>\$10,357,992</b> | <b>\$24,701,208</b> | <b>\$35,059,200</b> |

|                   |      | Single Family<br>\$1,453<br>per unit | Multi-Family<br>\$1,026<br>per unit | Industrial<br>\$604<br>per 1,000 sq ft | Comm/Shop<br>\$817<br>per 1,000 sq ft | Office/Inst<br>\$1,252<br>per 1,000 sq ft |
|-------------------|------|--------------------------------------|-------------------------------------|----------------------------------------|---------------------------------------|-------------------------------------------|
| Year              |      | Hsg Unit                             | Hsg Unit                            | KSF                                    | KSF                                   | KSF                                       |
| Base              | 2024 | 21,162                               | 3,552                               | 2,679                                  | 3,495                                 | 4,813                                     |
| Year 1            | 2025 | 21,597                               | 3,624                               | 2,730                                  | 3,561                                 | 4,905                                     |
| Year 2            | 2026 | 22,032                               | 3,696                               | 2,773                                  | 3,617                                 | 4,982                                     |
| Year 3            | 2027 | 22,466                               | 3,767                               | 2,816                                  | 3,673                                 | 5,059                                     |
| Year 4            | 2028 | 22,901                               | 3,839                               | 2,859                                  | 3,729                                 | 5,136                                     |
| Year 5            | 2029 | 23,336                               | 3,911                               | 2,902                                  | 3,785                                 | 5,214                                     |
| Year 6            | 2030 | 23,771                               | 3,983                               | 2,945                                  | 3,841                                 | 5,291                                     |
| Year 7            | 2031 | 24,206                               | 4,055                               | 2,986                                  | 3,896                                 | 5,366                                     |
| Year 8            | 2032 | 24,640                               | 4,126                               | 3,028                                  | 3,950                                 | 5,440                                     |
| Year 9            | 2033 | 25,075                               | 4,198                               | 3,069                                  | 4,004                                 | 5,515                                     |
| Year 10           | 2034 | 25,510                               | 4,270                               | 3,111                                  | 4,059                                 | 5,590                                     |
| 10-Year Increase  |      | 4,348                                | 718                                 | 432                                    | 564                                   | 777                                       |
| Projected Revenue |      | \$6,314,664                          | \$735,820                           | \$261,063                              | \$460,583                             | \$972,006                                 |

|                            |                     |
|----------------------------|---------------------|
| Projected Fee Revenue      | \$8,744,136         |
| Existing Development Share | \$26,315,064        |
| <b>Total Expenditures</b>  | <b>\$35,059,200</b> |

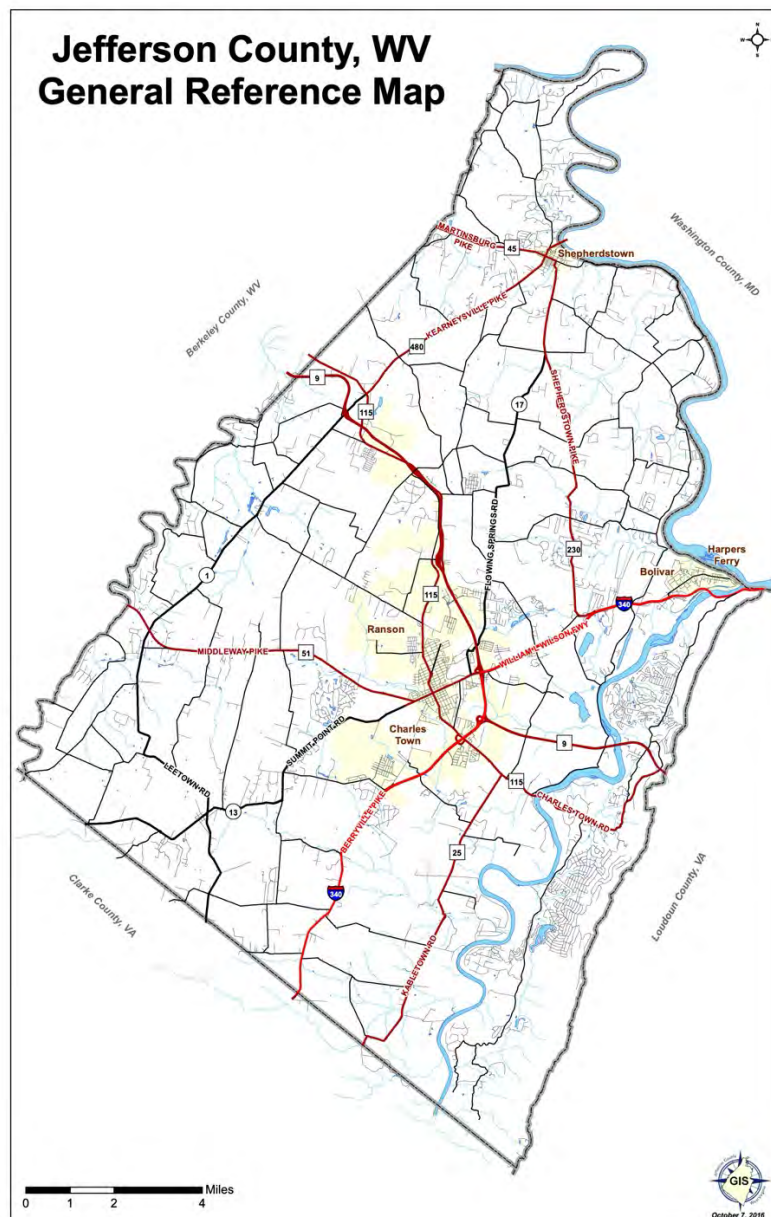
## EMS IMPACT FEES

### METHODOLOGY

The EMS impact fees include components for EMS facilities, EMS vehicles and equipment, and the cost of preparing the Impact Fee Study. The plan-based methodology is used for future stations, and the incremental expansion methodology is used for EMS vehicles and equipment. The plan-based methodology is used for the Impact Fee Study.

### SERVICE AREA

Jefferson County provides EMS services throughout Jefferson County; therefore, there is a single service area for the EMS impact fees.



## PROPORTIONATE SHARE

Impact fees should not exceed a proportionate share of the capital cost needed to provide capital facilities to the development. The EMS impact fees allocate the cost of capital facilities between residential and nonresidential development using functional population. Based on 2021 estimates (the latest data available at the time of this study) from the U.S. Census Bureau's OnTheMap web application, residential development accounts for approximately 78 percent of functional population and nonresidential development is responsible for the remaining 22 percent.

Figure E1: Proportionate Share

| Demand Units in 2021                       |        |  |                     |                 |
|--------------------------------------------|--------|--|---------------------|-----------------|
| Residential                                |        |  | Demand<br>Hours/Day | Person<br>Hours |
| Population                                 | 58,473 |  |                     |                 |
| Residents Not Working                      | 32,571 |  | 20                  | 651,425         |
| Employed Residents                         | 25,902 |  |                     |                 |
| Employed in Jefferson County, WV           | 6,814  |  | 14                  | 95,396          |
| Employed outside Jefferson County, WV      | 19,088 |  | 14                  | 267,232         |
| Residential Subtotal                       |        |  |                     | 1,014,053       |
| Residential Share                          |        |  |                     | 78%             |
| Nonresidential                             |        |  |                     |                 |
| Non-working Residents                      | 32,571 |  | 4                   | 130,285         |
| Jobs Located in Jefferson County, WV       | 16,053 |  |                     |                 |
| Residents Employed in Jefferson County, WV | 6,814  |  | 10                  | 68,140          |
| Non-Resident Workers (inflow commuters)    | 9,239  |  | 10                  | 92,390          |
| Nonresidential Subtotal                    |        |  |                     | 290,815         |
| Nonresidential Share                       |        |  |                     | 22%             |
| Total                                      |        |  |                     | 1,304,869       |

Source: TischlerBise calculation (population); U.S. Census Bureau, OnTheMap 6.23.5 Application and LEHD Origin-Destination Employment Statistics (employment).

The proportionate share of costs attributable to residential development will be allocated to population and then converted to an appropriate amount by type of housing unit, based on housing unit size. Since nonresidential calls for service were unavailable by specific nonresidential use (i.e. retail, office, industrial, etc.), TischlerBise recommends using average weekday nonresidential vehicle trips as the best demand indicator for EMS facilities. Trip generation rates are highest for commercial development, such as a shopping center, and lowest for industrial/warehouse development. Office/institutional trip rates fall between the other two categories. This ranking of trip rates is consistent with the relative demand for law enforcement protection from nonresidential development. Other possible nonresidential demand indicators, such as employment or floor area, do not accurately reflect the demand for fire and emergency medical services. If employees per 1,000 square feet of building area were used as the demand indicator, EMS impact fees would be too high for office/institutional development.

## IMPACT FEE COMPONENTS

### EMS Facilities

The Emergency Service Agency currently occupies 7,148 square feet of building space. Jefferson County plans to construct a new 34,000 square foot Public Safety building, of which the Emergency Services Authority will occupy 14,000 square feet. This new Public Safety building is estimated to cost \$10.2 million, with the Sheriff and Emergency Services Agency splitting the cost evenly.

A plan-based approach is used to calculate the EMS station impact fee with the level of service set to the projected residential and nonresidential demand base in 2034. This ensures existing and new development are treated equally, and new development does not pay for a higher level of service than what is currently provided. The planned level of service for residential development is 0.3066 square feet per person (29,000 square feet X 78 percent residential share / 73,768 County residents in 2034). The planned nonresidential level of service is 0.0730 square feet per vehicle trip (29,000 square feet X 22 percent nonresidential share / 87,443 vehicle trips in 2034). Using a construction cost of \$383 per square foot (based on the planned Public Safety building costs of \$11.1 million divided by 29,000 square feet), the weighted average facilities cost is \$117.37 per person (0.3066 square feet per person X \$383 per square foot) and \$27.93 per vehicle trip (0.0730 square feet per vehicle trip X \$383 per square foot).

**Figure E2: EMS Station Level of Service and Cost Allocation**

| Cost                                | Square Feet   | Cost/ SF     | Cost                |
|-------------------------------------|---------------|--------------|---------------------|
| EMS Share of Public Safety Building | 14,000        | \$364        | \$5,100,000         |
| Blue Ridge Mountain Station         | 15,000        | \$400        | \$6,000,000         |
| <b>TOTAL</b>                        | <b>29,000</b> | <b>\$383</b> | <b>\$11,100,000</b> |

| Cost Factors         |       |
|----------------------|-------|
| Cost per Square Foot | \$383 |

| Level-of-Service (LOS) Standards |        |
|----------------------------------|--------|
| 2034 Square Feet                 | 29,000 |

| Residential               |                 |
|---------------------------|-----------------|
| Residential Share         | 78%             |
| 2034 Population           | 73,768          |
| Square Feet per Person    | 0.3066          |
| <b>Cost per Person</b>    | <b>\$117.37</b> |
| Nonresidential            |                 |
| Nonresidential Share      | 22%             |
| 2034 Nonresidential Trips | 87,443          |
| Square Feet per Trip      | 0.0730          |
| <b>Cost per Job</b>       | <b>\$27.93</b>  |

Source: Jefferson County EMS Department

## EMS Vehicles and Equipment

Jefferson County plans to expand its current inventory of EMS vehicles and equipment to serve future development. The current inventory includes 235 units with a total replacement value of \$6,883,500, so this analysis uses the average cost of \$29,291 per unit.

This analysis uses functional population to allocate the proportionate share of demand to residential and nonresidential development. The existing level of service for residential development is 0.0030 units per person (235 units X 78 percent residential share / 61,728 persons). The existing nonresidential level of service is 0.0007 units per nonresidential vehicle trip (235 units X 22 percent nonresidential share / 75,294 nonresidential vehicle trips). Using the average cost of \$29,291 per unit, the EMS vehicles and equipment cost is \$86.98 per person (0.0030 units per person X \$29,291 per unit) and \$20.11 per nonresidential vehicle trip (0.0007 units per trip X \$29,291 per unit).

**Figure E3: Level of Service and Cost Allocation**

| Description                          | Units      | Unit Cost       | Total Cost         |
|--------------------------------------|------------|-----------------|--------------------|
| Ambulances                           | 10         | \$400,000       | \$4,000,000        |
| Lifepak Cardiac Monitor              | 13         | \$60,000        | \$780,000          |
| LUCAS CPR Device                     | 12         | \$18,000        | \$216,000          |
| Field Chase Vehicles                 | 3          | \$85,000        | \$255,000          |
| Staff Vehicles                       | 3          | \$65,000        | \$195,000          |
| Deceased Transport Van               | 1          | \$40,000        | \$40,000           |
| CAD Tablets                          | 20         | \$2,500         | \$50,000           |
| Structural Fire Turnout PPE Ensemble | 75         | \$4,500         | \$337,500          |
| 3 Body Mortuary Refrigerator         | 1          | \$10,000        | \$10,000           |
| JCESA Owned Mobile Radios            | 28         | \$5,000         | \$140,000          |
| JCESA Owned Portable Radios          | 37         | \$5,000         | \$185,000          |
| Fire Engine for Training             | 1          | \$100,000       | \$100,000          |
| Stair Chairs for Ambulances          | 10         | \$10,000        | \$100,000          |
| Stretchers for Ambulances            | 11         | \$25,000        | \$275,000          |
| Power Loads for Ambulances           | 10         | \$20,000        | \$200,000          |
| <b>Total</b>                         | <b>235</b> | <b>\$29,291</b> | <b>\$6,883,500</b> |

| Cost Factors          |          |
|-----------------------|----------|
| Average Cost per Unit | \$29,291 |

| Level-of-Service (LOS) Standards  |                |
|-----------------------------------|----------------|
| Existing Units                    | 235            |
| <b>Residential</b>                |                |
| Residential Share                 | 78%            |
| 2024 Population                   | 61,728         |
| Units per Person                  | 0.0030         |
| <b>Cost per Person</b>            | <b>\$86.98</b> |
| <b>Nonresidential</b>             |                |
| Nonresidential Share              | 22%            |
| 2024 Nonresidential Vehicle Trips | 75,294         |
| Units per Job                     | 0.0007         |
| <b>Cost per Job</b>               | <b>\$20.11</b> |

Source: Jefferson County EMS Department

## Impact Fee Study

The cost to prepare the EMS impact fees equals \$7,900, and Jefferson County plans to update its impact fees every five years. Based on this cost, proportionate share, and five-year projections of future residential and nonresidential development, the cost is \$1.02 per person and \$0.77 per nonresidential vehicle trip.

**Figure E4: Impact Fee Study**

| Infrastructure Category | Cost    | Proportionate Share |     | Service Unit  | 2024   | 2029   | 5-Year Change | Cost per Service Unit |
|-------------------------|---------|---------------------|-----|---------------|--------|--------|---------------|-----------------------|
| EMS                     | \$7,900 | Residential         | 78% | Population    | 61,728 | 67,748 | 6,020         | \$1.02                |
|                         |         | Nonresidential      | 22% | Vehicle Trips | 27,302 | 29,572 | 2,270         | \$0.77                |

## PROJECTED DEMAND

### EMS Facilities

Based on a projected population increase of 12,040 persons over the next 10 years, future residential development accounts for 3,692 square feet of the planned 29,000 square feet of EMS facility space (12,040 additional persons X 0.3066 square feet per person). With the projected increase of 12,149 nonresidential vehicle trips over the next 10 years, future nonresidential development accounts for 886 square feet of the planned 29,000 square feet of EMS space (12,149 additional nonresidential trips X 0.0730 square per trip). Total demand is approximately 4,578 square feet of the planned 29,000 square feet at a cost of approximately \$1.75 million.

**Figure E5: Projected Demand for EMS Facilities**

| Type of Infrastructure | Level of Service   | Demand Unit      | Total Cost |
|------------------------|--------------------|------------------|------------|
| EMS Facilities         | 0.3066 Square Feet | per Person       | \$383      |
|                        | 0.0730 Square Feet | per Vehicle Trip |            |

| Demand for EMS Facilities |            |               |             |                |        |
|---------------------------|------------|---------------|-------------|----------------|--------|
| Year                      | Population | Vehicle Trips | Square Feet |                |        |
|                           |            |               | Residential | Nonresidential | Total  |
| 2024                      | 61,728     | 75,294        | 18,928      | 5,494          | 24,422 |
| 2025                      | 62,932     | 76,725        | 19,297      | 5,598          | 24,895 |
| 2026                      | 64,136     | 77,932        | 19,667      | 5,686          | 25,353 |
| 2027                      | 65,340     | 79,139        | 20,036      | 5,774          | 25,810 |
| 2028                      | 66,544     | 80,347        | 20,405      | 5,862          | 26,267 |
| 2029                      | 67,748     | 81,554        | 20,774      | 5,950          | 26,724 |
| 2030                      | 68,952     | 82,761        | 21,143      | 6,038          | 27,182 |
| 2031                      | 70,156     | 83,932        | 21,512      | 6,124          | 27,636 |
| 2032                      | 71,360     | 85,102        | 21,882      | 6,209          | 28,091 |
| 2033                      | 72,564     | 86,273        | 22,251      | 6,295          | 28,545 |
| 2034                      | 73,768     | 87,443        | 22,620      | 6,380          | 29,000 |
| 10-Yr Increase            | 12,040     | 12,149        | 3,692       | 886            | 4,578  |

|                             |             |           |             |
|-----------------------------|-------------|-----------|-------------|
| Growth-Related Expenditures | \$1,413,065 | \$339,287 | \$1,752,352 |
|-----------------------------|-------------|-----------|-------------|

### EMS Vehicles and Equipment

Based on a projected population increase of 12,040 persons over the next 10 years, future residential development demands an additional 35.8 units (12,040 additional persons X 0.0030 units per person). With projected growth of 12,149 nonresidential vehicle trips over the next 10 years, future nonresidential development demands an additional 8.3 units (12,149 additional nonresidential trips X 0.0007 units per trip). Total demand is approximately 44 units of EMS vehicles and equipment at a cost of approximately \$1.29 million.

**Figure E6: Projected Demand for EMS Vehicles and Equipment**

| Type of Infrastructure     | Level of Service | Demand Unit | Cost per Unit |
|----------------------------|------------------|-------------|---------------|
| EMS Vehicles and Equipment | 0.0030 Units     | per Person  | \$29,291      |
|                            | 0.0007 Units     | per Trip    |               |

| Demand for EMS Vehicles and Equipment |            |                      |             |                |       |
|---------------------------------------|------------|----------------------|-------------|----------------|-------|
| Year                                  | Population | Nonresidential Trips | Units       |                |       |
|                                       |            |                      | Residential | Nonresidential | Total |
| 2024                                  | 61,728     | 75,294               | 183.3       | 51.7           | 235.0 |
| 2025                                  | 62,932     | 76,725               | 186.9       | 52.7           | 239.6 |
| 2026                                  | 64,136     | 77,932               | 190.5       | 53.5           | 244.0 |
| 2027                                  | 65,340     | 79,139               | 194.0       | 54.3           | 248.4 |
| 2028                                  | 66,544     | 80,347               | 197.6       | 55.2           | 252.8 |
| 2029                                  | 67,748     | 81,554               | 201.2       | 56.0           | 257.2 |
| 2030                                  | 68,952     | 82,761               | 204.8       | 56.8           | 261.6 |
| 2031                                  | 70,156     | 83,932               | 208.3       | 57.6           | 266.0 |
| 2032                                  | 71,360     | 85,102               | 211.9       | 58.4           | 270.3 |
| 2033                                  | 72,564     | 86,273               | 215.5       | 59.2           | 274.7 |
| 2034                                  | 73,768     | 87,443               | 219.1       | 60.0           | 279.1 |
| 10-Yr Increase                        | 12,040     | 12,149               | 35.8        | 8.3            | 44.1  |

|                                    |                    |                  |                    |
|------------------------------------|--------------------|------------------|--------------------|
| <b>Growth-Related Expenditures</b> | <b>\$1,047,205</b> | <b>\$244,354</b> | <b>\$1,291,559</b> |
|------------------------------------|--------------------|------------------|--------------------|

### PROPOSED EMS IMPACT FEES

Infrastructure components and cost factors for EMS impact fees are summarized in the upper portion of Figure E7. For EMS impact fees, the capital cost is \$205.37 per person and \$48.81 per job.

EMS impact fees for residential development are assessed according to the number of persons per housing unit. The single-family fee of \$509 is calculated using a cost of \$205.37 per person multiplied by a demand unit of 2.48 persons per housing unit.

Nonresidential impact fees are assessed according to the number of nonresidential vehicle trips per 1,000 square feet of floor area (per room for Hotel and per bed Nursing Home). The commercial/shopping center fee of \$596 per 1,000 square feet of floor area is derived from a cost of \$48.81 per job multiplied by a demand unit of 12.21 average daily trips per 1,000 square feet.

**Figure E7: Proposed Impact Fees**

| Fee Component              | Cost per Person | Cost per Trip |
|----------------------------|-----------------|---------------|
| EMS Facilities             | \$117.37        | \$27.93       |
| EMS Vehicles and Equipment | \$86.98         | \$20.11       |
| Impact Fee Report          | \$1.02          | \$0.77        |
| Total                      | \$205.37        | \$48.81       |

| Residential Fees per Unit |                                       |               |              |                     |
|---------------------------|---------------------------------------|---------------|--------------|---------------------|
| Development Type          | Persons per Housing Unit <sup>1</sup> | Proposed Fees | Current Fees | Increase / Decrease |
| Single Family             | 2.48                                  | \$509         | \$119        | \$390               |
| Multi-Family              | 1.75                                  | \$359         | \$86         | \$273               |

| Nonresidential Fees per 1,000 Square Feet |                                        |               |              |                     |
|-------------------------------------------|----------------------------------------|---------------|--------------|---------------------|
| Development Type                          | Avg Weekday Vehicle Trips <sup>1</sup> | Proposed Fees | Current Fees | Increase / Decrease |
| Light Industrial                          | 2.44                                   | \$119         | \$0          | \$119               |
| Business Park                             | 6.22                                   | \$304         | \$0          | \$304               |
| Manufacturing                             | 2.38                                   | \$116         | \$0          | \$116               |
| Warehousing                               | 0.86                                   | \$42          | \$0          | \$42                |
| Commercial/Shopping Center                | 12.21                                  | \$596         | \$0          | \$596               |
| Office/Institutional                      | 5.42                                   | \$265         | \$0          | \$265               |
| Hotel (per room)                          | 1.68                                   | \$82          | \$0          | \$82                |
| Nursing Home (per bed)                    | 1.53                                   | \$75          | \$0          | \$75                |

1. See Land Use Assumptions

## PROJECTED EMS IMPACT FEE REVENUE

Projected fee revenue shown below is based on the development projections, shown in Appendix A, and the proposed EMS impact fees shown in Figure E7. 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 is projected, the demand for infrastructure will also decrease, along with impact fee revenue. Projected impact fee revenue over the next 10 years equals \$3.06 million and total projected expenditures equal \$6.39 million, meaning the County will need to fund \$3.3 million from non-impact fee revenue.

**Figure E8: Projected EMS Impact Fee Revenue**

| Fee Component              | Growth Share       | Existing Share     | Total              |
|----------------------------|--------------------|--------------------|--------------------|
| EMS Facilities             | \$1,752,352        | \$3,347,648        | \$5,100,000        |
| EMS Vehicles and Equipment | \$1,291,559        | \$0                | \$1,291,559        |
| Impact Fee Report          | \$7,900            | \$0                | \$7,900            |
| <b>Total</b>               | <b>\$3,051,811</b> | <b>\$3,347,648</b> | <b>\$6,399,459</b> |

|                   |      | Single Family<br>\$509<br>per unit | Multi-Family<br>\$359<br>per unit | Industrial<br>\$119<br>per 1,000 sq ft | Comm/Shop<br>\$596<br>per 1,000 sq ft | Office/Inst<br>\$265<br>per 1,000 sq ft |
|-------------------|------|------------------------------------|-----------------------------------|----------------------------------------|---------------------------------------|-----------------------------------------|
| Year              |      | Hsg Unit                           | Hsg Unit                          | KSF                                    | KSF                                   | KSF                                     |
| Base              | 2024 | 21,162                             | 3,552                             | 2,678,869                              | 3,494,705                             | 4,813,460                               |
| Year 1            | 2025 | 21,597                             | 3,624                             | 2,729,773                              | 3,561,112                             | 4,904,926                               |
| Year 2            | 2026 | 22,032                             | 3,696                             | 2,772,730                              | 3,617,150                             | 4,982,111                               |
| Year 3            | 2027 | 22,466                             | 3,767                             | 2,815,687                              | 3,673,189                             | 5,059,297                               |
| Year 4            | 2028 | 22,901                             | 3,839                             | 2,858,643                              | 3,729,228                             | 5,136,482                               |
| Year 5            | 2029 | 23,336                             | 3,911                             | 2,901,600                              | 3,785,267                             | 5,213,667                               |
| Year 6            | 2030 | 23,771                             | 3,983                             | 2,944,556                              | 3,841,305                             | 5,290,853                               |
| Year 7            | 2031 | 24,206                             | 4,055                             | 2,986,198                              | 3,895,629                             | 5,365,676                               |
| Year 8            | 2032 | 24,640                             | 4,126                             | 3,027,840                              | 3,949,953                             | 5,440,499                               |
| Year 9            | 2033 | 25,075                             | 4,198                             | 3,069,482                              | 4,004,276                             | 5,515,322                               |
| Year 10           | 2034 | 25,510                             | 4,270                             | 3,111,123                              | 4,058,600                             | 5,590,145                               |
| 10-Year Increase  |      | 4,348                              | 718                               | 432,254                                | 563,895                               | 776,685                                 |
| Projected Revenue |      | \$2,214,543                        | \$258,051                         | \$51,369                               | \$336,122                             | \$205,452                               |

|                            |             |
|----------------------------|-------------|
| Projected Fee Revenue      | \$3,065,537 |
| Total Expenditures         | \$6,399,459 |
| Existing Development Share | \$3,347,648 |

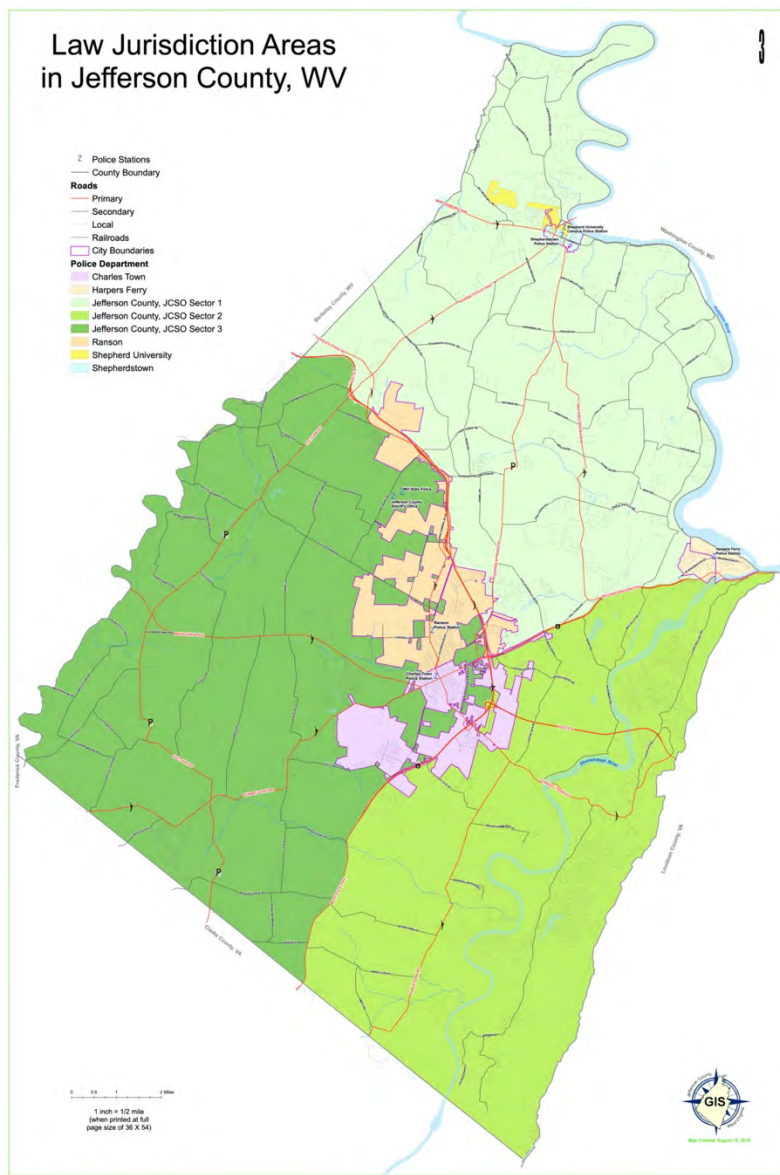
## LAW ENFORCEMENT IMPACT FEES

### METHODOLOGY

The Law Enforcement impact fees include components for Sheriff facilities, Sheriff vehicles, law enforcement equipment, and the cost of preparing the Impact Fee Study. The incremental expansion methodology is used for Sheriff facilities and vehicles/equipment. A plan-based methodology is used for the Impact Fee Study.

### SERVICE AREA

Jefferson County provides law enforcement services in unincorporated areas of Jefferson County; therefore, there is a single service area for the Law Enforcement impact fees (unincorporated areas only).



## PROPORTIONATE SHARE

Impact fees should not exceed a proportionate share of the capital cost needed to provide capital facilities to the development. The Law Enforcement impact fees allocate the cost of capital facilities between residential and nonresidential development using functional population. Based on 2021 estimates (the latest data available at the time of this study) from the U.S. Census Bureau's OnTheMap web application, residential development accounts for approximately 78 percent of functional population and nonresidential development is responsible for the remaining 22 percent.

Figure L1: Proportionate Share

| Demand Units in 2021                       |        |    |                     |                 |
|--------------------------------------------|--------|----|---------------------|-----------------|
| Residential                                |        |    | Demand<br>Hours/Day | Person<br>Hours |
| Population                                 | 58,473 |    |                     |                 |
| Residents Not Working                      | 32,571 |    | 20                  | 651,425         |
| Employed Residents                         | 25,902 |    |                     |                 |
| Employed in Jefferson County, WV           | 6,814  | 14 |                     | 95,396          |
| Employed outside Jefferson County, WV      | 19,088 | 14 |                     | 267,232         |
| Residential Subtotal                       |        |    |                     | 1,014,053       |
| Residential Share                          |        |    |                     | 78%             |
| Nonresidential                             |        |    |                     |                 |
| Non-working Residents                      | 32,571 | 4  |                     | 130,285         |
| Jobs Located in Jefferson County, WV       | 16,053 |    |                     |                 |
| Residents Employed in Jefferson County, WV | 6,814  | 10 |                     | 68,140          |
| Non-Resident Workers (inflow commuters)    | 9,239  | 10 |                     | 92,390          |
| Nonresidential Subtotal                    |        |    |                     | 290,815         |
| Nonresidential Share                       |        |    |                     | 22%             |
| Total                                      |        |    |                     | 1,304,869       |

Source: TischlerBise calculation (population); U.S. Census Bureau, OnTheMap 6.23.5 Application and LEHD Origin-Destination Employment Statistics (employment).

The proportionate share of costs attributable to residential development will be allocated to population and then converted to an appropriate amount by type of housing unit, based on housing unit size. Since nonresidential calls for service were unavailable by specific nonresidential use (i.e. retail, office, industrial, etc.), TischlerBise recommends using average weekday nonresidential vehicle trips as the best demand indicator for law enforcement facilities. Trip generation rates are highest for commercial development, such as a shopping center, and lowest for industrial/warehouse development. Office/institutional trip rates fall between the other two categories. This ranking of trip rates is consistent with the relative demand for law enforcement protection from nonresidential development. Other possible nonresidential demand indicators, such as employment or floor area, do not accurately reflect the demand for law enforcement services. If employees per 1,000 square feet of building area were used as the demand indicator, Law Enforcement impact fees would be too high for office/institutional development.

## IMPACT FEE COMPONENTS

### Sheriff Facilities

The Sheriff currently occupies two separate buildings totaling 16,660 square feet. Jefferson County plans to construct a new 34,000 square foot Public Safety building, of which the Sheriff will occupy 20,000 square feet. The Sheriff's Office would vacate their present space as part of this construction plan. This new Public Safety building is estimated to cost \$10.2 million, with the Sheriff and Emergency Services Agency splitting the cost evenly.

To determine the existing level of service for the Sheriff's Office, this analysis uses functional population to allocate the proportionate share of demand to residential and nonresidential development. Since law enforcement services are provided primarily to unincorporated County areas, unincorporated County population and nonresidential vehicle trips are used as the demand base. The existing level of service for residential development is 0.2833 square feet per person (16,660 square feet X 78 percent residential share / 45,864 unincorporated County residents). The existing nonresidential level of service is 0.0870 square feet per vehicle trip (16,660 square feet X 22 percent nonresidential share / 42,114 unincorporated County vehicle trips). Using a construction cost of \$255 per square foot (based on the planned Public Safety building cost of \$5.1 million divided by 20,000 square feet), the Sheriff facilities cost is \$72.25 per person (0.2833 square feet per person X \$255 per square foot) and \$22.19 per vehicle trip (0.0870 square feet per vehicle trip X \$255 per square foot).

**Figure L2: Level of Service and Cost Allocation for Sheriff Facilities**

| Description                   | Square Feet   |
|-------------------------------|---------------|
| Sheriff's Building            | 15,660        |
| Blue Ridge Community Facility | 1,000         |
| <b>Total</b>                  | <b>16,660</b> |

| Cost Factors                      |       |
|-----------------------------------|-------|
| Cost per Square Foot <sup>1</sup> | \$255 |

| Level-of-Service (LOS) Standards |                |
|----------------------------------|----------------|
| Existing Square Feet             | 16,660         |
| <b>Residential</b>               |                |
| Residential Share                | 78%            |
| 2024 Unincorporated Population   | 45,864         |
| Square Feet per Person           | 0.2833         |
| <b>Cost per Person</b>           | <b>\$72.25</b> |
| <b>Nonresidential</b>            |                |
| Nonresidential Share             | 22%            |
| 2024 Uninc. Nonresidential Trips | 42,114         |
| Square Feet per Vehicle Trip     | 0.0870         |
| <b>Cost per Vehicle Trip</b>     | <b>\$22.19</b> |

Source: Jefferson County Sheriff's Office

### Sheriff Vehicles

Jefferson County plans to expand its current inventory of Sheriff vehicles to serve future development. The current inventory includes 64 units with a total replacement value of \$4,983,597, which equates to a weighted average cost of \$77,869 per unit.

This analysis uses functional population to allocate the proportionate share of demand to residential and nonresidential development. The existing level of service for residential development is 0.0011 units per person (64 units X 78 percent residential share/45,864 residents). The existing nonresidential level of service is 0.0003 units per vehicle trip (64 units X 22 percent nonresidential share/42,114 vehicle trips). Using the average cost of \$77,869 per unit, the Sheriff vehicles cost is \$84.76 per person (0.0011 units per person X \$77,869 per unit) and \$26.03 per vehicle trip (0.0003 units per vehicle trip X \$77,869 per unit).

**Figure L3: Level of Service and Cost Allocation for Sheriff Vehicles**

| Description   | Units     | Unit Cost       | Total Cost         |
|---------------|-----------|-----------------|--------------------|
| SUV           | 59        | \$80,000        | \$4,720,000        |
| Ford E350 Van | 1         | \$56,000        | \$56,000           |
| GMC Van       | 1         | \$56,000        | \$56,000           |
| Ford Taurus   | 1         | \$48,880        | \$48,880           |
| Chevy Equinox | 1         | \$53,837        | \$53,837           |
| Chevy Malibu  | 1         | \$48,880        | \$48,880           |
| <b>Total</b>  | <b>64</b> | <b>\$77,869</b> | <b>\$4,983,597</b> |

| Cost Factors          |          |
|-----------------------|----------|
| Average Cost per Unit | \$77,869 |

| Level-of-Service (LOS) Standards |                |
|----------------------------------|----------------|
| Existing Units                   | 64             |
| Residential                      |                |
| Residential Share                | 78%            |
| 2024 Unincorporated Population   | 45,864         |
| Units per Person                 | 0.0011         |
| <b>Cost per Person</b>           | <b>\$84.76</b> |
| Nonresidential                   |                |
| Nonresidential Share             | 22%            |
| 2024 Uninc.Nonresidential Trips  | 42,114         |
| Units per Vehicle Trip           | 0.0003         |
| <b>Cost per Vehicle Trip</b>     | <b>\$26.03</b> |

Source: Jefferson County Sheriff's Office

## Impact Fee Study

The cost to prepare the Law Enforcement impact fees equals \$7,200, and Jefferson County plans to update its impact fees every five years. Based on this cost, proportionate share, and five-year projections of future residential and nonresidential development, the cost is \$1.76 per person and \$0.45 per vehicle trip.

**Figure L4: Impact Fee Study**

| Infrastructure Category | Cost    | Proportionate Share |     | Service Unit            | 2024   | 2029   | 5-Year Change | Cost per Service Unit |
|-------------------------|---------|---------------------|-----|-------------------------|--------|--------|---------------|-----------------------|
| Law Enforcement         | \$7,200 | Residential         | 78% | Unincorp. Population    | 45,864 | 49,061 | 3,198         | \$1.76                |
|                         |         | Nonresidential      | 22% | Unincorp. Vehicle Trips | 42,114 | 45,616 | 3,502         | \$0.45                |

## PROJECTED DEMAND

### Sheriff Facilities

Based on a 10-year projected population increase of 6,395 persons in unincorporated areas, future residential development demands an additional 1,812 square feet of Sheriff space (6,395 additional persons X 0.2833 square feet per person). With projected growth of 6,795 vehicle trips in unincorporated areas, future nonresidential development demands an additional 591 square feet (6,795 additional vehicle trips X 0.0870 square feet per vehicle trip). This additional space (2,403 square feet) has an estimated cost of approximately \$612,861. This demand of 2,403 square feet is less than the increase in Sheriff space as part of the planned Public Safety building (3,340 square feet), so new development has not corrected any existing deficiencies through the fee calculation.

**Figure L5: Projected Demand for Sheriff Space**

| Type of Infrastructure | Level of Service   | Demand Unit      | Cost per Sq Ft |
|------------------------|--------------------|------------------|----------------|
| Sheriff Facilities     | 0.2833 Square Feet | per Person       | \$255          |
|                        | 0.0870 Square Feet | per Vehicle Trip |                |

| Demand for Sheriff Facilities |            |               |             |                |        |
|-------------------------------|------------|---------------|-------------|----------------|--------|
| Year                          | Population | Vehicle Trips | Square Feet |                |        |
|                               |            |               | Residential | Nonresidential | Total  |
| 2024                          | 45,864     | 42,114        | 12,995      | 3,665          | 16,660 |
| 2025                          | 46,503     | 42,915        | 13,176      | 3,735          | 16,911 |
| 2026                          | 47,143     | 43,590        | 13,357      | 3,794          | 17,151 |
| 2027                          | 47,782     | 44,265        | 13,538      | 3,852          | 17,391 |
| 2028                          | 48,422     | 44,941        | 13,720      | 3,911          | 17,631 |
| 2029                          | 49,061     | 45,616        | 13,901      | 3,970          | 17,871 |
| 2030                          | 49,701     | 46,291        | 14,082      | 4,029          | 18,111 |
| 2031                          | 50,341     | 46,946        | 14,263      | 4,086          | 18,349 |
| 2032                          | 50,980     | 47,601        | 14,444      | 4,143          | 18,587 |
| 2033                          | 51,620     | 48,255        | 14,626      | 4,200          | 18,825 |
| 2034                          | 52,259     | 48,910        | 14,807      | 4,257          | 19,063 |
| 10-Yr Increase                | 6,395      | 6,795         | 1,812       | 591            | 2,403  |

|                                    |                  |                  |                  |
|------------------------------------|------------------|------------------|------------------|
| <b>Growth-Related Expenditures</b> | <b>\$462,053</b> | <b>\$150,808</b> | <b>\$612,861</b> |
|------------------------------------|------------------|------------------|------------------|

### Sheriff Vehicles

Based on a projected population increase of 6,395 persons in the unincorporated areas between 2024 and 2034, future residential development demands an additional 7 units (6,395 additional persons X 0.0011 units per person). With projected growth of 6,795 vehicle trips in unincorporated areas between 2024 and 2034, future nonresidential development demands an additional 2.3 units (6,795 additional vehicle trips X 0.0003 units per vehicle trip). Future development in unincorporated areas demands an additional 9.2 Sheriff vehicles at a cost of \$718,935 (9.2 vehicles X \$77,869 per unit).

**Figure L6: Projected Demand for Sheriff Vehicles**

| Type of Infrastructure | Level of Service | Demand Unit      | Cost per Unit |
|------------------------|------------------|------------------|---------------|
| Sheriff Vehicles       | 0.0011 Units     | per Person       | \$77,869      |
|                        | 0.0003 Units     | per Vehicle Trip |               |

| Demand for Sheriff Vehicles |            |               |             |                |       |
|-----------------------------|------------|---------------|-------------|----------------|-------|
| Year                        | Population | Vehicle Trips | Units       |                |       |
|                             |            |               | Residential | Nonresidential | Total |
| 2024                        | 45,864     | 42,114        | 49.9        | 14.1           | 64.0  |
| 2025                        | 46,503     | 42,915        | 50.6        | 14.3           | 65.0  |
| 2026                        | 47,143     | 43,590        | 51.3        | 14.6           | 65.9  |
| 2027                        | 47,782     | 44,265        | 52.0        | 14.8           | 66.8  |
| 2028                        | 48,422     | 44,941        | 52.7        | 15.0           | 67.7  |
| 2029                        | 49,061     | 45,616        | 53.4        | 15.3           | 68.7  |
| 2030                        | 49,701     | 46,291        | 54.1        | 15.5           | 69.6  |
| 2031                        | 50,341     | 46,946        | 54.8        | 15.7           | 70.5  |
| 2032                        | 50,980     | 47,601        | 55.5        | 15.9           | 71.4  |
| 2033                        | 51,620     | 48,255        | 56.2        | 16.1           | 72.3  |
| 2034                        | 52,259     | 48,910        | 56.9        | 16.4           | 73.2  |
| 10-Yr Increase              | 6,395      | 6,795         | 7.0         | 2.3            | 9.2   |

|                                    |                  |                  |                  |
|------------------------------------|------------------|------------------|------------------|
| <b>Growth-Related Expenditures</b> | <b>\$542,025</b> | <b>\$176,910</b> | <b>\$718,935</b> |
|------------------------------------|------------------|------------------|------------------|

## PROPOSED LAW ENFORCEMENT IMPACT FEES

Infrastructure components and cost factors for Law Enforcement impact fees are summarized in the upper portion of Figure L7. For Law Enforcement impact fees, the capital cost is \$158.76 per person and \$48.68 per trip.

Law Enforcement impact fees for residential development are assessed according to the number of persons per housing unit. The single-family fee of \$394 is calculated using a cost of \$158.76 per person multiplied by demand units of 2.48 persons per housing unit.

Nonresidential impact fees are assessed according to the number of jobs per 1,000 square feet of floor area (per room for Hotel and per bed Nursing Home). The commercial/shopping center fee of \$595 per 1,000 square feet of floor area is derived from a cost of \$48.68 per trip multiplied by a demand unit of 12.21 average weekday vehicle trips per 1,000 square feet.

**Figure L7: Proposed Impact Fees**

| Fee Component      | Cost per Person | Cost per Trip  |
|--------------------|-----------------|----------------|
| Sheriff Facilities | \$72.25         | \$22.19        |
| Sheriff Vehicles   | \$84.76         | \$26.03        |
| Impact Fee Report  | \$1.76          | \$0.45         |
| <b>Total</b>       | <b>\$158.76</b> | <b>\$48.68</b> |

| Residential Fees per Unit |                                       |               |              |                     |
|---------------------------|---------------------------------------|---------------|--------------|---------------------|
| Development Type          | Persons per Housing Unit <sup>1</sup> | Proposed Fees | Current Fees | Increase / Decrease |
| Single Family             | 2.48                                  | \$394         | \$636        | (\$242)             |
| Multi-Family              | 1.75                                  | \$278         | \$455        | (\$177)             |

| Nonresidential Fees per 1,000 Square Feet |                                        |               |              |                     |
|-------------------------------------------|----------------------------------------|---------------|--------------|---------------------|
| Development Type                          | Avg Weekday Vehicle Trips <sup>1</sup> | Proposed Fees | Current Fees | Increase / Decrease |
| Light Industrial                          | 2.44                                   | \$119         | \$0          | \$119               |
| Business Park                             | 6.22                                   | \$303         | \$0          | \$303               |
| Manufacturing                             | 2.38                                   | \$116         | \$0          | \$116               |
| Warehousing                               | 0.86                                   | \$42          | \$0          | \$42                |
| Commercial/Shopping Center                | 12.21                                  | \$595         | \$0          | \$595               |
| Office/Institutional                      | 5.42                                   | \$264         | \$0          | \$264               |
| Hotel (per room)                          | 1.68                                   | \$82          | n/a          | n/a                 |
| Nursing Home (per bed)                    | 1.53                                   | \$74          | n/a          | n/a                 |

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 is projected, the demand for infrastructure will also decrease, along with impact fee revenue. Projected impact fee revenue over the next 10 years equals \$1.34 million and total projected expenditures equal \$5.8 million, meaning the County will need to fund \$4.48 million from non-impact fee revenue.

**Figure L8: Projected Law Enforcement Impact Fee Revenue**

| Fee Component      | Growth Share       | Existing Share     | Total              |
|--------------------|--------------------|--------------------|--------------------|
| Sheriff Facilities | \$612,861          | \$4,487,139        | \$5,100,000        |
| Sheriff Vehicles   | \$718,935          | \$0                | \$718,935          |
| Impact Fee Report  | \$7,200            | \$0                | \$7,200            |
| <b>Total</b>       | <b>\$1,338,996</b> | <b>\$4,487,139</b> | <b>\$5,826,135</b> |

|                   |      | Single Family<br>\$394<br>per unit | Multi-Family<br>\$278<br>per unit | Industrial<br>\$119<br>per 1,000 sq ft | Comm/Shop<br>\$595<br>per 1,000 sq ft | Office/Inst<br>\$264<br>per 1,000 sq ft |
|-------------------|------|------------------------------------|-----------------------------------|----------------------------------------|---------------------------------------|-----------------------------------------|
| Year              |      | Hsg Unit                           | Hsg Unit                          | KSF                                    | KSF                                   | KSF                                     |
| Base              | 2024 | 15,813                             | 2,314                             | 1,498                                  | 1,955                                 | 2,692                                   |
| Year 1            | 2025 | 16,070                             | 2,316                             | 1,527                                  | 1,992                                 | 2,743                                   |
| Year 2            | 2026 | 16,326                             | 2,318                             | 1,551                                  | 2,023                                 | 2,787                                   |
| Year 3            | 2027 | 16,583                             | 2,319                             | 1,575                                  | 2,055                                 | 2,830                                   |
| Year 4            | 2028 | 16,839                             | 2,321                             | 1,599                                  | 2,086                                 | 2,873                                   |
| Year 5            | 2029 | 17,096                             | 2,323                             | 1,623                                  | 2,117                                 | 2,916                                   |
| Year 6            | 2030 | 17,353                             | 2,325                             | 1,647                                  | 2,149                                 | 2,959                                   |
| Year 7            | 2031 | 17,609                             | 2,327                             | 1,670                                  | 2,179                                 | 3,001                                   |
| Year 8            | 2032 | 17,866                             | 2,328                             | 1,694                                  | 2,209                                 | 3,043                                   |
| Year 9            | 2033 | 18,122                             | 2,330                             | 1,717                                  | 2,240                                 | 3,085                                   |
| Year 10           | 2034 | 18,379                             | 2,332                             | 1,740                                  | 2,270                                 | 3,127                                   |
| 10-Year Increase  |      | 2,566                              | 18                                | 242                                    | 315                                   | 434                                     |
| Projected Revenue |      | \$1,010,309                        | \$5,001                           | \$28,658                               | \$187,517                             | \$114,618                               |

|                            |             |
|----------------------------|-------------|
| Projected Fee Revenue      | \$1,346,103 |
| Total Expenditures         | \$5,826,135 |
| Existing Development Share | \$4,480,033 |

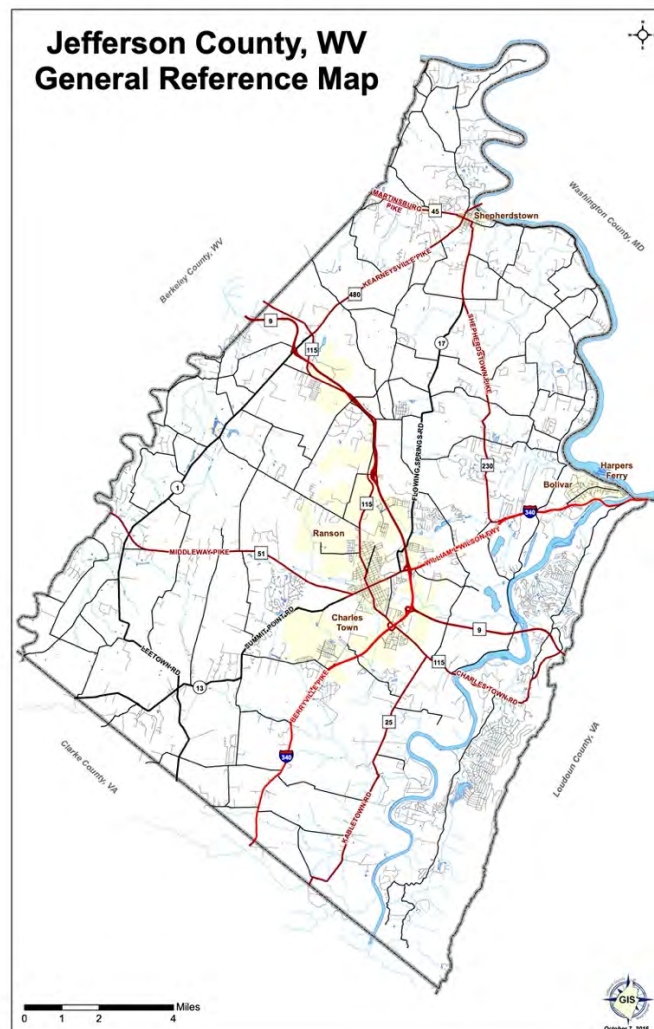
## PARKS AND RECREATION IMPACT FEES

### METHODOLOGY

The Parks and Recreation impact fees include components for park land, park improvements, park facilities, park vehicles and equipment, and the cost of preparing the Impact Fee Study. The incremental expansion methodology is used for park land, park improvements, park facilities, and park vehicles and equipment. A plan-based methodology is used for the Impact Fee Study. The Parks and Recreation impact fees allocate 100 percent of the cost of capital facilities to residential development.

### SERVICE AREA

Jefferson County provides park and recreation amenities throughout Jefferson County; therefore, there is a single service area for the Parks and Recreation impact fees.



## IMPACT FEE COMPONENTS

### Park Land

Jefferson County plans to expand its current inventory of park land to serve future development. The current inventory includes 470.9 acres.

This analysis allocates 100 percent of demand to residential development. The existing level of service for residential development is 0.0076 acres per person (470.9 acres X 100 percent residential share / 61,728 persons). Based on recent land acquisition costs provided by staff, the analysis uses a cost of \$10,500 per acre. The park land cost is \$80.10 per person (0.0076 acres per person X \$10,500 per acre).

**Figure P1: Park Land Level of Service and Cost Allocation for Park Land**

| Description          | Acres        |
|----------------------|--------------|
| Bolivar Nature Park  | 6.80         |
| Harvest Hills Park   | 21.77        |
| Heather Marriot Park | 11.00        |
| James Hite Park      | 119.73       |
| Leetown Park         | 10.87        |
| Moulton Park         | 88.88        |
| Mount Mission Park   | 3.50         |
| Sam Michael's Park   | 137.24       |
| South Jefferson Park | 71.11        |
| <b>Total</b>         | <b>470.9</b> |

| Cost Factors  |          |
|---------------|----------|
| Cost per Acre | \$10,500 |

| Level-of-Service (LOS) Standards |                |
|----------------------------------|----------------|
| Existing Acres                   | 470.9          |
| Residential                      |                |
| Residential Share                | 100%           |
| 2024 Population                  | 61,728         |
| Acres per Person                 | 0.0076         |
| <b>Cost per Person</b>           | <b>\$80.10</b> |

Source: Jefferson County Parks Department

## Park Improvements

Jefferson County plans to expand its current inventory of park improvements to serve future development. The current inventory includes 270 units with a total cost of \$19,932,712, which equates to a weighted average cost per improvement of \$73,825.

**Figure P2: Existing Inventory of Park Improvements**

| Description                     | Improvements | Unit Cost       | Total Cost          |
|---------------------------------|--------------|-----------------|---------------------|
| Amphitheatre                    | 1            | \$650,000       | \$650,000           |
| Baseball Field                  | 2            | \$400,000       | \$800,000           |
| Baseball Field w Lights         | 2            | \$500,000       | \$1,000,000         |
| Basketball Court                | 1            | \$100,000       | \$100,000           |
| Benches                         | 36           | \$500           | \$18,000            |
| Bleachers                       | 22           | \$1,300         | \$28,600            |
| Boat Ramp                       | 1            | \$21,530        | \$21,530            |
| Camping Pads                    | 11           | \$1,002         | \$11,022            |
| Concession Stand                | 4            | \$300,000       | \$1,200,000         |
| Cross Country Trail             | 1            | \$32,300        | \$32,300            |
| Dog Park                        | 1            | \$350,000       | \$350,000           |
| Dugouts                         | 6            | \$15,000        | \$90,000            |
| Electric/Solar Gates            | 2            | \$3,200         | \$6,400             |
| Fence                           | 5            | \$12,920        | \$64,600            |
| Football Field                  | 1            | \$400,000       | \$400,000           |
| Gazebo                          | 1            | \$56,250        | \$56,250            |
| Horseshoe Pits                  | 2            | \$6,250         | \$12,500            |
| Maintenance Building (Michaels) | 1            | \$192,500       | \$192,500           |
| Maintenance Building (S Jeff.)  | 1            | \$48,450        | \$48,450            |
| Nature Trail                    | 1            | \$1,080         | \$1,080             |
| Old Church Bldg. (Storage)      | 1            | \$22,050        | \$22,050            |
| Parking Lot                     | 11           | \$21,530        | \$236,830           |
| Pavilion                        | 5            | \$55,000        | \$275,000           |
| Grills                          | 20           | \$800           | \$16,000            |
| Picnic Tables                   | 76           | \$6,480         | \$492,480           |
| Playground                      | 6            | \$260,000       | \$1,560,000         |
| Restrooms                       | 9            | \$150,000       | \$1,350,000         |
| Sign                            | 11           | \$7,920         | \$87,120            |
| Soccer / Multi-Use Field        | 17           | \$500,000       | \$8,500,000         |
| Softball Fields with Lights     | 3            | \$500,000       | \$1,500,000         |
| Tennis Courts                   | 4            | \$100,000       | \$400,000           |
| Volleyball Court                | 1            | \$50,000        | \$50,000            |
| Walking Trail                   | 4            | \$90,000        | \$360,000           |
| <b>Total</b>                    | <b>270</b>   | <b>\$73,825</b> | <b>\$19,932,712</b> |

This analysis allocates 100 percent of demand for park improvements to residential development. The existing residential level of service is 0.0044 improvements per person (270 improvements X 100 percent residential share / 61,728 persons). Using the average cost of \$73,825 per improvement, the park improvement cost is \$322.91 per person (0.0044 improvements per person X \$73,825 per unit).

**Figure P3: Level of Service and Cost Allocation for Park Improvements**

| Cost Factors          |          |
|-----------------------|----------|
| Average Cost per Unit | \$73,825 |

| Level-of-Service (LOS) Standards |                 |
|----------------------------------|-----------------|
| Existing Improvements            | 270             |
| Residential                      |                 |
| Residential Share                | 100%            |
| 2020 Population                  | 61,728          |
| Improvements per Person          | 0.0044          |
| <b>Cost per Person</b>           | <b>\$322.91</b> |

Source: Jefferson County Parks Department

## Recreation

Jefferson County plans to expand or construct new recreation center space to serve future development. The current inventory includes 18,571 square feet. This analysis allocates 100 percent of demand to residential development. The existing level of service for residential development is 0.3009 square feet per person (18,571 square feet X 100 percent residential share / 61,728 persons). Using an estimated construction cost of \$205 per square foot, the recreation center cost is \$61.67 per person (0.3009 square feet per person X \$205 per square foot).

**Figure P4: Level of Service and Cost Allocation for Recreation**

| Description                       | Square Feet |
|-----------------------------------|-------------|
| Jefferson County Community Center | 18,571      |

| Cost Factors          |        |
|-----------------------|--------|
| Total Square Feet     | 18,571 |
| Cost per Square Foot* | \$205  |

| Level-of-Service (LOS) Standards |                |
|----------------------------------|----------------|
| Existing Square Feet             | 18,571         |
| Residential                      |                |
| Residential Share                | 100%           |
| 2024 Population                  | 61,728         |
| Square Feet per Person           | 0.3009         |
| <b>Cost per Person</b>           | <b>\$61.67</b> |

Source: Jefferson County Parks Department

\*RS Means Construction Index

### Park Vehicles and Equipment

Jefferson County plans to expand its current inventory of park vehicles and equipment to serve future development. The current inventory includes 27 units with a total cost of \$525,600, which equates to a weighted average cost per unit of \$19,467.

This analysis allocates 100 percent of demand to residential development. The existing level of service for residential development is 0.0004 units per person (27 units X 100 percent residential share / 61,728 persons). Using the average cost of \$19,467 per unit, the park vehicles and equipment cost is \$8.51 per person (0.0004 units per person X \$19,467 per unit).

**Figure P5: Level of Service and Cost Allocation for Park Vehicles and Equipment**

| Description                 | Units     | Unit Cost       | Total Cost       |
|-----------------------------|-----------|-----------------|------------------|
| Dump Truck                  | 1         | \$50,000        | \$50,000         |
| Pick-Up Truck               | 3         | \$40,000        | \$120,000        |
| Scag Mowers                 | 2         | \$9,000         | \$18,000         |
| Tractors                    | 3         | \$17,000        | \$51,000         |
| Trailers                    | 4         | \$4,000         | \$16,000         |
| Miscellaneous Tools         | 1         | \$10,000        | \$10,000         |
| Mobile Recreation Van       | 1         | \$55,000        | \$55,000         |
| John Deere Gator            | 1         | \$12,000        | \$12,000         |
| Golf Cart                   | 1         | \$12,000        | \$12,000         |
| John Deere Zero Turn Mowers | 8         | \$22,500        | \$180,000        |
| Troy Built Snowblower       | 1         | \$900           | \$900            |
| Backpack Blower             | 1         | \$700           | \$700            |
| <b>Total</b>                | <b>27</b> | <b>\$19,467</b> | <b>\$525,600</b> |

| Cost Factors          |          |
|-----------------------|----------|
| Average Cost per Unit | \$19,467 |

| Level-of-Service (LOS) Standards |        |
|----------------------------------|--------|
| Existing Units                   | 27     |
| Residential                      |        |
| Residential Share                | 100%   |
| 2024 Population                  | 61,728 |
| Units per Person                 | 0.0004 |
| Cost per Person                  | \$8.51 |

Source: Jefferson County Parks Department

## Impact Fee Study

The cost to prepare the Parks and Recreation impact fees equals \$12,500, and Jefferson County plans to update its impact fees every five years. Based on this cost, proportionate share, and five-year projections of future residential development, the cost is \$2.08 per person.

**Figure P6: Impact Fee Study**

| Infrastructure Category | Cost     | Proportionate Share |      | Service Unit | 5-Year Change | Cost per Service Unit |
|-------------------------|----------|---------------------|------|--------------|---------------|-----------------------|
| Parks and Recreation    | \$12,500 | Residential         | 100% | Population   | 6,020         | \$2.08                |
|                         |          | Nonresidential      | 0%   |              |               | \$0.00                |

## PROJECTED DEMAND

### Park Land

Based on a projected population increase of 12,040 persons over the next 10 years, future residential development demands an additional 91.8 acres (12,040 additional persons X 0.0076 acres per person). The park land cost is \$964,374 (91.8 acres X \$10,500 per acre).

**Figure P7: Projected Demand for Park Land**

| Type of Infrastructure | Level of Service | Demand Unit | Cost per Acre |
|------------------------|------------------|-------------|---------------|
| Park Land              | 0.0076 Acres     | per Person  | \$10,500      |

| Demand for Park Land |            |        |             |                |       |
|----------------------|------------|--------|-------------|----------------|-------|
| Year                 | Population | Jobs   | Acres       |                |       |
|                      |            |        | Residential | Nonresidential | Total |
| 2024                 | 61,728     | 27,302 | 470.9       | 0.0            | 470.9 |
| 2025                 | 62,932     | 27,821 | 480.1       | 0.0            | 480.1 |
| 2026                 | 64,136     | 28,259 | 489.3       | 0.0            | 489.3 |
| 2027                 | 65,340     | 28,697 | 498.5       | 0.0            | 498.5 |
| 2028                 | 66,544     | 29,134 | 507.6       | 0.0            | 507.6 |
| 2029                 | 67,748     | 29,572 | 516.8       | 0.0            | 516.8 |
| 2030                 | 68,952     | 30,010 | 526.0       | 0.0            | 526.0 |
| 2031                 | 70,156     | 30,434 | 535.2       | 0.0            | 535.2 |
| 2032                 | 71,360     | 30,859 | 544.4       | 0.0            | 544.4 |
| 2033                 | 72,564     | 31,283 | 553.6       | 0.0            | 553.6 |
| 2034                 | 73,768     | 31,708 | 562.7       | 0.0            | 562.7 |
| 10-Yr Increase       | 12,040     | 4,405  | 91.8        | 0.0            | 91.8  |

|                             |           |     |           |
|-----------------------------|-----------|-----|-----------|
| Growth-Related Expenditures | \$964,374 | \$0 | \$964,374 |
|-----------------------------|-----------|-----|-----------|

### Park Improvements

Based on a projected population increase of 12,040 persons over the next 10 years, future residential development demands an additional 52.7 park improvements (12,040 additional persons X 0.0044 improvements per person). The park improvement cost is \$3,887,712 (52.7 improvements X \$73,825 per unit).

**Figure P8: Projected Demand for Park Improvements**

| Type of Infrastructure | Level of Service    | Demand Unit | Cost per Unit |
|------------------------|---------------------|-------------|---------------|
| Park Improvements      | 0.0044 Improvements | per Person  | \$73,825      |

| Demand for Park Improvements |            |        |              |                |       |
|------------------------------|------------|--------|--------------|----------------|-------|
| Year                         | Population | Jobs   | Improvements |                |       |
|                              |            |        | Residential  | Nonresidential | Total |
| 2024                         | 61,728     | 27,302 | 270.0        | 0.0            | 270.0 |
| 2025                         | 62,932     | 27,821 | 275.3        | 0.0            | 275.3 |
| 2026                         | 64,136     | 28,259 | 280.5        | 0.0            | 280.5 |
| 2027                         | 65,340     | 28,697 | 285.8        | 0.0            | 285.8 |
| 2028                         | 66,544     | 29,134 | 291.1        | 0.0            | 291.1 |
| 2029                         | 67,748     | 29,572 | 296.3        | 0.0            | 296.3 |
| 2030                         | 68,952     | 30,010 | 301.6        | 0.0            | 301.6 |
| 2031                         | 70,156     | 30,434 | 306.9        | 0.0            | 306.9 |
| 2032                         | 71,360     | 30,859 | 312.1        | 0.0            | 312.1 |
| 2033                         | 72,564     | 31,283 | 317.4        | 0.0            | 317.4 |
| 2034                         | 73,768     | 31,708 | 322.7        | 0.0            | 322.7 |
| 10-Yr Increase               | 12,040     | 4,405  | 52.7         | 0.0            | 52.7  |

|                                    |                    |            |                    |
|------------------------------------|--------------------|------------|--------------------|
| <b>Growth-Related Expenditures</b> | <b>\$3,887,712</b> | <b>\$0</b> | <b>\$3,887,712</b> |
|------------------------------------|--------------------|------------|--------------------|

### Recreation Center Space

Based on a projected population increase of 12,040 persons over the next 10 years, future residential development demands an additional 3,622 square feet of recreation center space (12,040 additional persons X 0.3009 square feet per person). The recreation center space cost is \$742,535 (3,622 square feet X \$205 per square foot).

**Figure P9: Projected Demand for Recreation Center Space**

| Type of Infrastructure  | Level of Service   | Demand Unit | Cost per Sq Ft |
|-------------------------|--------------------|-------------|----------------|
| Recreation Center Space | 0.3009 Square Feet | per Person  | \$205          |

| Demand for Recreation Center |            |        |             |                |          |
|------------------------------|------------|--------|-------------|----------------|----------|
| Year                         | Population | Jobs   | Square Feet |                |          |
|                              |            |        | Residential | Nonresidential | Total    |
| 2024                         | 61,728     | 27,302 | 18,571.0    | 0.0            | 18,571.0 |
| 2025                         | 62,932     | 27,821 | 18,933.2    | 0.0            | 18,933.2 |
| 2026                         | 64,136     | 28,259 | 19,295.4    | 0.0            | 19,295.4 |
| 2027                         | 65,340     | 28,697 | 19,657.6    | 0.0            | 19,657.6 |
| 2028                         | 66,544     | 29,134 | 20,019.8    | 0.0            | 20,019.8 |
| 2029                         | 67,748     | 29,572 | 20,382.1    | 0.0            | 20,382.1 |
| 2030                         | 68,952     | 30,010 | 20,744.3    | 0.0            | 20,744.3 |
| 2031                         | 70,156     | 30,434 | 21,106.5    | 0.0            | 21,106.5 |
| 2032                         | 71,360     | 30,859 | 21,468.7    | 0.0            | 21,468.7 |
| 2033                         | 72,564     | 31,283 | 21,830.9    | 0.0            | 21,830.9 |
| 2034                         | 73,768     | 31,708 | 22,193.1    | 0.0            | 22,193.1 |
| 10-Yr Increase               | 12,040     | 4,405  | 3,622.1     | 0.0            | 3,622.1  |

|                                    |                  |            |                  |
|------------------------------------|------------------|------------|------------------|
| <b>Growth-Related Expenditures</b> | <b>\$742,535</b> | <b>\$0</b> | <b>\$742,535</b> |
|------------------------------------|------------------|------------|------------------|

### Park Vehicles and Equipment

Based on a projected population increase of 12,040 persons over the next 10 years, future residential development demands an additional 5.3 units of vehicles/equipment (12,040 additional persons X 0.0004 units per person). The park vehicles and equipment cost is approximately \$102,500 (5.3 units X \$19,467 per unit).

**Figure P10: Projected Demand for Park Vehicles and Equipment**

| Type of Infrastructure      | Level of Service | Demand Unit | Cost per Unit |
|-----------------------------|------------------|-------------|---------------|
| Park Vehicles and Equipment | 0.0004 Units     | per Person  | \$19,467      |

| Demand for Park Vehicles and Equipment |            |        |             |                |       |
|----------------------------------------|------------|--------|-------------|----------------|-------|
| Year                                   | Population | Jobs   | Units       |                |       |
|                                        |            |        | Residential | Nonresidential | Total |
| 2024                                   | 61,728     | 27,302 | 27.0        | 0.0            | 27.0  |
| 2025                                   | 62,932     | 27,821 | 27.5        | 0.0            | 27.5  |
| 2026                                   | 64,136     | 28,259 | 28.1        | 0.0            | 28.1  |
| 2027                                   | 65,340     | 28,697 | 28.6        | 0.0            | 28.6  |
| 2028                                   | 66,544     | 29,134 | 29.1        | 0.0            | 29.1  |
| 2029                                   | 67,748     | 29,572 | 29.6        | 0.0            | 29.6  |
| 2030                                   | 68,952     | 30,010 | 30.2        | 0.0            | 30.2  |
| 2031                                   | 70,156     | 30,434 | 30.7        | 0.0            | 30.7  |
| 2032                                   | 71,360     | 30,859 | 31.2        | 0.0            | 31.2  |
| 2033                                   | 72,564     | 31,283 | 31.7        | 0.0            | 31.7  |
| 2034                                   | 73,768     | 31,708 | 32.3        | 0.0            | 32.3  |
| 10-Yr Increase                         | 12,040     | 4,405  | 5.3         | 0.0            | 5.3   |

|                                    |                  |            |                  |
|------------------------------------|------------------|------------|------------------|
| <b>Growth-Related Expenditures</b> | <b>\$102,514</b> | <b>\$0</b> | <b>\$102,514</b> |
|------------------------------------|------------------|------------|------------------|

### PROPOSED PARKS AND RECREATION IMPACT FEES

Infrastructure components and cost factors for Parks and Recreation impact fees are summarized in the upper portion of Figure P11. For Parks and Recreation impact fees, the capital cost is \$475.28 per person.

Parks and Recreation impact fees for residential development are assessed according to the number of persons per housing unit. The single-family fee of \$1,179 is calculated using a cost of \$475.28 per person multiplied by a demand unit of 2.48 persons per housing unit.

Jefferson County will not assess Parks and Recreation impact fees on nonresidential development.

**Figure P11: Proposed Parks and Recreation Impact Fees**

| Fee Component               | Cost per Person | Cost per Job |
|-----------------------------|-----------------|--------------|
| Park Land                   | \$80.10         | \$0.00       |
| Park Improvements           | \$322.91        | \$0.00       |
| Recreation Center Space     | \$61.67         | \$0.00       |
| Park Vehicles and Equipment | \$8.51          | \$0.00       |
| Impact Fee Report           | \$2.08          | \$0.00       |
| Total                       | \$475.28        | \$0.00       |

| Residential Fees per Unit |                                       |               |              |                     |
|---------------------------|---------------------------------------|---------------|--------------|---------------------|
| Development Type          | Persons per Housing Unit <sup>1</sup> | Proposed Fees | Current Fees | Increase / Decrease |
| Single Family             | 2.48                                  | \$1,179       | \$1,131      | \$48                |
| Multi-Family              | 1.75                                  | \$832         | \$810        | \$22                |

| Nonresidential Fees per 1,000 Square Feet |                                   |               |              |                     |
|-------------------------------------------|-----------------------------------|---------------|--------------|---------------------|
| Development Type                          | Jobs per 1,000 Sq Ft <sup>1</sup> | Proposed Fees | Current Fees | Increase / Decrease |
| Light Industrial                          | 1.57                              | \$0           | \$0          | \$0                 |
| Business Park                             | 3.08                              | \$0           | \$0          | \$0                 |
| Manufacturing                             | 1.89                              | \$0           | \$0          | \$0                 |
| Warehousing                               | 0.34                              | \$0           | \$0          | \$0                 |
| Commercial/Shopping Center                | 2.12                              | \$0           | \$0          | \$0                 |
| Office/Institutional                      | 3.26                              | \$0           | \$0          | \$0                 |
| Hotel (per room)                          | 0.13                              | \$0           | \$0          | \$0                 |
| Nursing Home (per bed)                    | 0.92                              | \$0           | \$0          | \$0                 |

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 P11. 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 is projected, the demand for infrastructure will also decrease, along with impact fee revenue. Projected impact fee revenue equals \$5,709,635 and projected expenditures equal \$5,709,635.

**Figure P12: Projected Parks and Recreation Impact Fee Revenue**

| Fee Component               | Growth Share       | Existing Share | Total              |
|-----------------------------|--------------------|----------------|--------------------|
| Park Land                   | \$964,374          | \$0            | \$964,374          |
| Park Improvements           | \$3,887,712        | \$0            | \$3,887,712        |
| Recreation Center Space     | \$742,535          | \$0            | \$742,535          |
| Park Vehicles and Equipment | \$102,514          | \$0            | \$102,514          |
| Impact Fee Report           | \$12,500           | \$0            | \$12,500           |
| <b>Total</b>                | <b>\$5,709,635</b> | <b>\$0</b>     | <b>\$5,709,635</b> |

|                   |      | Single Family<br>\$1,179<br>per unit | Multi-Family<br>\$832<br>per unit | Industrial<br>\$0<br>per 1,000 sq ft | Comm/Shop<br>\$0<br>per 1,000 sq ft | Office/Inst<br>\$0<br>per 1,000 sq ft |
|-------------------|------|--------------------------------------|-----------------------------------|--------------------------------------|-------------------------------------|---------------------------------------|
| Year              |      | Hsg Unit                             | Hsg Unit                          | KSF                                  | KSF                                 | KSF                                   |
| Base              | 2024 | 21,162                               | 3,552                             | 0                                    | 0                                   | 0                                     |
| Year 1            | 2025 | 21,597                               | 3,624                             | 0                                    | 0                                   | 0                                     |
| Year 2            | 2026 | 22,032                               | 3,696                             | 0                                    | 0                                   | 0                                     |
| Year 3            | 2027 | 22,466                               | 3,767                             | 0                                    | 0                                   | 0                                     |
| Year 4            | 2028 | 22,901                               | 3,839                             | 0                                    | 0                                   | 0                                     |
| Year 5            | 2029 | 23,336                               | 3,911                             | 0                                    | 0                                   | 0                                     |
| Year 6            | 2030 | 23,771                               | 3,983                             | 0                                    | 0                                   | 0                                     |
| Year 7            | 2031 | 24,206                               | 4,055                             | 0                                    | 0                                   | 0                                     |
| Year 8            | 2032 | 24,640                               | 4,126                             | 0                                    | 0                                   | 0                                     |
| Year 9            | 2033 | 25,075                               | 4,198                             | 0                                    | 0                                   | 0                                     |
| Year 10           | 2034 | 25,510                               | 4,270                             | 0                                    | 0                                   | 0                                     |
| 10-Year Increase  |      | 4,348                                | 718                               | 0                                    | 0                                   | 0                                     |
| Projected Revenue |      | \$5,113,752                          | \$595,883                         | \$0                                  | \$0                                 | \$0                                   |

|                            |                    |
|----------------------------|--------------------|
| Projected Fee Revenue      | \$5,709,635        |
| Existing Development Share | \$0                |
| <b>Total Expenditures</b>  | <b>\$5,709,635</b> |

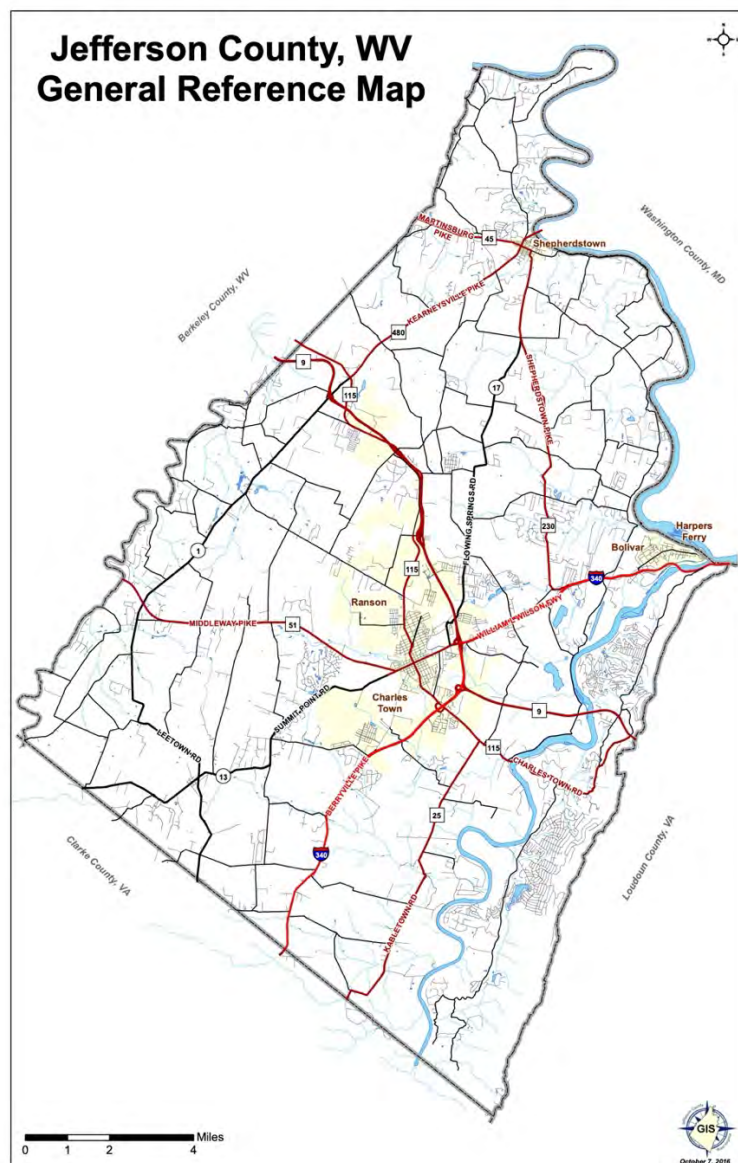
## SCHOOL IMPACT FEES

### METHODOLOGY

The School impact fees include components for high school classroom space and the cost of preparing the Impact Fee Study. A land component is not included because the County already owns land for a future high school. The incremental expansion methodology is used for high school classroom space. A plan-based methodology is used for the Impact Fee Study.

### SERVICE AREA

Jefferson County Schools provide public school facilities throughout Jefferson County; therefore, there is a single service area for the 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. The 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 Jefferson County. Public school students are a subset of school-aged children, which includes students in 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 Jefferson County using demographic data from survey responses published by the U.S. Census Bureau in files known as Public Use Microdata Samples (PUMS) and 2021-2022 school year enrollment data from the Jefferson 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 Jefferson County is included in West Virginia Public Use Microdata Area (PUMA) 00400. As shown in Appendix E, PUMA 00400 includes Berkeley County, Hampshire County, Jefferson County, Mineral County, and Morgan 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 local enrollment and housing unit estimates for Jefferson County.

### **Public School Students and Housing Units – PUMA 00400**

Given demographic characteristics and potential for future development in Jefferson County, student generation rates are calculated for the following housing unit types: (1) Single-Family and (2) Multi-Family. Student generation rates are calculated for three school levels: (1) elementary (grades Pre-K to 5), (2) middle (grades 6 to 8), and (3) high (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 reflects all public school students who live 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 for PUMA Region 400**

|            | Public School Students |              | Total  |
|------------|------------------------|--------------|--------|
|            | Single-Family          | Multi-Family |        |
| Elementary | 12,944                 | 976          | 13,920 |
| Middle     | 7,827                  | 582          | 8,409  |
| High       | 10,815                 | 200          | 11,015 |
| Total      | 31,586                 | 1,758        | 33,344 |

|               | Housing Units |              | Total   |
|---------------|---------------|--------------|---------|
|               | Single-Family | Multi-Family |         |
| Housing Units | 92,815        | 9,703        | 102,518 |

Source: Cross tabulation by TischlerBise using U. S. Census Bureau, 2018-2022 ACS  
5-Year Estimates Weighted Public Use Microdata Sample for West Virginia PUMA 400.

**Unadjusted Student Generation Rates – PUMA 00400**

Next, using the totals shown in Figure S1, student generation rates by housing unit type are calculated by dividing the number of students in each type of housing unit by the total number of housing units. 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 Student Generation Rates**

**Unadjusted Public School Students per Dwelling**

|            | Housing Unit Type |              | Weighted<br>Average |
|------------|-------------------|--------------|---------------------|
|            | Single-Family     | Multi-Family |                     |
| Elementary | 0.139             | 0.101        | 0.136               |
| Middle     | 0.084             | 0.060        | 0.082               |
| High       | 0.117             | 0.021        | 0.107               |
| Total      | 0.340             | 0.181        | 0.325               |

Source: Cross tabulation by TischlerBise using U. S. Census Bureau, 2018-2022 ACS  
5-Year Estimates Weighted Public Use Microdata Sample for West Virginia PUMA 400.

### Public School Students and Housing Units – Jefferson County

To reflect demand for public school facilities in Jefferson County, this analysis applies the unadjusted student generation rates in Figure S2 to housing unit estimates from 2018-2022 American Community Survey (ACS) 5-year estimates shown at the bottom of Figure S3. For example, applying the unadjusted student generation rate 0.021 high school students in multi-family units (shown above in Figure S2) to the local estimate of 3,535 multi-family units provides an estimate of 73 high school students in existing multi-family units. This analysis compares the enrollment estimates from the previous step, equaling 7,577 students, to the actual enrollment of 8,659 students for the 2021-2022 school year.

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

#### Estimated Public School Students by Housing Unit Type

|            | Public School Students |              | Total | Jefferson County<br>2021-2022 |
|------------|------------------------|--------------|-------|-------------------------------|
|            | Single-Family          | Multi-Family |       |                               |
| Elementary | 2,843                  | 356          | 3,198 | 3,795                         |
| Middle     | 1,719                  | 212          | 1,931 | 2,074                         |
| High       | 2,375                  | 73           | 2,448 | 2,790                         |
| Total      | 6,937                  | 640          | 7,577 | 8,659                         |

|               | Housing Units |              | Total  | 2022<br>Housing Units |
|---------------|---------------|--------------|--------|-----------------------|
|               | Single-Family | Multi-Family |        |                       |
| Housing Units | 20,383        | 3,535        | 23,918 | 23,918                |

Source: TischlerBise estimates for Jefferson County using U.S. Census Bureau, 2018-2022 ACS 5-Year Estimates Weighted PUMS for West Virginia PUMA 400 (calibrated to JCS enrollment for 2021-2022 and 2018-2022 ACS housing unit estimate.)

### Adjusted Student Generation Rates – Jefferson County Schools

By adjusting estimated enrollment to actual enrollment, the adjusted student generation rate for all housing units in Jefferson County is 0.363 students per housing unit – 0.389 students per single-family unit and 0.206 students per multi-family 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, Jefferson County should expect 100 new housing units to generate approximately 36 additional public school students (100 units X 0.363 public school students per unit). Continuing the example, those 100 housing units are expected to generate 16 elementary school students (100 units X 0.159 students per unit), 9.0 middle school students (100 units X 0.087 students per unit), and 12 high school students (100 units X 0.117 students per unit).

Figure S4: Adjusted Student Generation Rates by Housing Unit Type

**Jefferson County Public School Students  
Per Housing Unit**

**Public School Students per Dwelling**

|            | Housing Types |              | Weighted<br>Average |
|------------|---------------|--------------|---------------------|
|            | Single-Family | Multi-Family |                     |
| Elementary | 0.165         | 0.119        | 0.159               |
| Middle     | 0.091         | 0.064        | 0.087               |
| High       | 0.133         | 0.023        | 0.117               |
| Total      | 0.389         | 0.206        | 0.363               |

Source: TischlerBise tabulation of U.S. Census Bureau 2018-2022 5-Year Estimates  
ACS Weighted PUMS for West Virginia PUMA 400 (Calibrated to JCS enrollment  
for 2021-2022 and 2018-2022 ACS housing unit estimates.)

**STUDENT ENROLLMENT**

**Historical Enrollment**

Since the 2013-2014 school year, overall enrollment in Jefferson County has decreased by a total of 825 students. However, what is more telling is that the majority of this decline in enrollment has occurred over the last five years. Since the 2019-2020 school year overall enrollment has declined by 706 students. The largest decreases have been at the elementary school level, although middle school enrollment has been declining as well. Over the last five years, high school enrollment has increased by 12 students.

Figure S5: Historical Enrollment

| Historical Enrollment |            |        |       |       |
|-----------------------|------------|--------|-------|-------|
| School Year           | Elementary | Middle | High  | Total |
| 2013-2014             | 4,418      | 2,147  | 2,496 | 9,061 |
| 2014-2015             | 4,432      | 2,088  | 2,546 | 9,066 |
| 2015-2016             | 4,367      | 2,084  | 2,687 | 9,138 |
| 2016-2017             | 4,363      | 2,058  | 2,781 | 9,202 |
| 2017-2018             | 4,363      | 2,065  | 2,745 | 9,173 |
| 2018-2019             | 4,210      | 2,080  | 2,744 | 9,034 |
| 2019-2020             | 4,108      | 2,068  | 2,766 | 8,942 |
| 2020-2021             | 3,695      | 2,080  | 2,718 | 8,493 |
| 2021-2022             | 3,795      | 2,074  | 2,790 | 8,659 |
| 2022-2023             | 3,665      | 1,954  | 2,773 | 8,392 |
| 2023-2024             | 3,552      | 1,906  | 2,778 | 8,236 |
| 10- Year Increase     | (866)      | (241)  | 282   | (825) |
| 5-Year Increase       | (556)      | (162)  | 12    | (706) |

Source: Jefferson County Schools

## Projected Enrollment

Enrollment projections are based on student generation rates shown in Figure S4 and projected housing unit growth shown in Appendix A. As Figure S6 indicates, this methodology projects an additional 1,833 students over the next ten years. In reality, as Figure S5 indicated, enrollment has been declining, which suggests that while new housing units are generating school-age children, it is evident that as the City's existing development base ages in place, the influx of new school age children generated by new residential development is being more than offset by the loss of school age children by the existing development base.

**Figure S6: Projected Enrollment**

|                            | 2024          | 2025          | 2026          | 2027          | 2028          | 2029          | 2034          | 10-Year Increase |
|----------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|------------------|
|                            | Base Year     | 1             | 2             | 3             | 4             | 5             | 10            |                  |
| <b>Housing Units</b>       |               |               |               |               |               |               |               |                  |
| Single Family              | 21,162        | 21,597        | 22,032        | 22,466        | 22,901        | 23,336        | 25,510        | 4,348            |
| Multi-Family               | 3,552         | 3,624         | 3,696         | 3,767         | 3,839         | 3,911         | 4,270         | 718              |
| <b>Total Housing Units</b> | <b>24,714</b> | <b>25,221</b> | <b>25,727</b> | <b>26,234</b> | <b>26,740</b> | <b>27,247</b> | <b>29,780</b> | <b>5,066</b>     |
|                            |               |               |               |               |               |               |               |                  |
|                            | 2024          | 2025          | 2026          | 2027          | 2028          | 2029          | 2034          |                  |
| Elementary                 | 3,552         | 3,583         | 3,663         | 3,744         | 3,824         | 3,905         | 4,307         | 755              |
| Middle                     | 1,906         | 1,961         | 2,005         | 2,049         | 2,093         | 2,137         | 2,357         | 451              |
| High                       | 2,778         | 2,870         | 2,929         | 2,989         | 3,048         | 3,108         | 3,405         | 627              |
| <b>Total Enrollment</b>    | <b>8,236</b>  | <b>8,413</b>  | <b>8,597</b>  | <b>8,781</b>  | <b>8,965</b>  | <b>9,149</b>  | <b>10,069</b> | <b>1,833</b>     |

## COST OF CONSTRUCTION

Construction costs were provided by Jefferson County Schools, based on estimated costs for a future high school. As shown below in Figure S7, the estimated cost of a new high school is \$75,480,000. The County estimates the local share of the cost will be 85%, or \$63,986,699. When compared to the square footage (170,000), the weighted average construction cost is \$376 per square foot.

**Figure S7: Local Cost of Construction**

| Project         | Square Feet | Total        | Local Share  | Local Cost per SF |
|-----------------|-------------|--------------|--------------|-------------------|
| New High School | 170,000     | \$75,480,000 | \$63,986,699 | \$376             |

Source: Jefferson County Schools. Local share assumed to be 85%

## IMPACT FEE COMPONENTS

### High Schools – Incremental Expansion

Shown below, Figure S8 includes the current inventory for high schools in Jefferson County. High schools include 122.6 acres and 397,124 square feet of floor area with capacity to serve 2,716 students. Total enrollment for the 2023-2024 school year of 2,778 students represents a utilization rate of 102 percent.

**Figure S8: High School Inventory**

| High School | Acres <sup>1</sup> | Facility Square Feet <sup>1</sup> | Student Capacity <sup>1</sup> | 2023-2024 Enrollment <sup>2</sup> | Utilization |
|-------------|--------------------|-----------------------------------|-------------------------------|-----------------------------------|-------------|
| Jefferson   | 64.6               | 188,124                           | 1,406                         | 1,394                             | 99%         |
| Washington  | 58.0               | 209,000                           | 1,310                         | 1,384                             | 106%        |
| Total       | 122.6              | 397,124                           | 2,716                         | 2,778                             | 102%        |

1. Jefferson County Schools
2. West Virginia Department of Education

For high school facilities, the existing LOS is 142.95 square feet per student (397,124 square feet / 2,778 students). Since enrollment at the high school level exceeds capacity, enrollment rather than capacity is used to determine the level of service. Using the local share of construction cost estimate of \$376 per square foot provided by the School Building Authority of West Virginia, the facilities cost is \$53,806.49 per student (142.95 square feet per student X \$376 per square foot).

**Figure S9: High School Level of Service and Cost Allocation**

| Cost Allocation Factors           |       |
|-----------------------------------|-------|
| Cost per Square Foot <sup>1</sup> | \$376 |

| Level-of-Service (LOS) Standards |             |
|----------------------------------|-------------|
| Existing Enrollment              | 2,778       |
| Existing Square Feet             | 397,124     |
| Square Feet per Student          | 142.95      |
| Cost per Student                 | \$53,806.49 |

1. Jefferson County and School Building Authority of West Virginia

### Impact Fee Study – Plan-Based

The cost to prepare the Schools impact fees totals \$28,600. Jefferson County plans to update its impact fees every five years. Based on this cost, proportionate share, and five-year projections of new residential development, the cost is \$31.32 per student.

**Figure S10: Impact Fee Study**

| Infrastructure Category | Cost     | Proportionate Share |      | Service Unit | 5-Year Change | Cost per Service Unit |
|-------------------------|----------|---------------------|------|--------------|---------------|-----------------------|
| School                  | \$28,600 | Residential         | 100% | Students     | 913           | \$31.32               |
|                         |          | Nonresidential      | 0%   |              |               | \$0.00                |

## CREDITS

### Series 2021 Credit

Jefferson County Schools, through the Jefferson County Building Commission, will issue debt to finance future school facilities. This analysis includes a credit for future principal payments related to the Series 2021 debt. A credit is necessary since future residential units will pay for 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 interest costs are not included in the impact fee.

As shown in Figure S11, planned debt for future school facilities will be repaid through 2036. The remaining principal balance will be \$36,555,000. Annual principal payments are divided by projected student enrollment to determine the credit per student. To account for the time value of money, annual payments per student are discounted using a net present value formula based on a discount rate of 5.00 percent. The net present value of future principal payments is \$2,845.11 per student.

**Figure S11: Credit for Future Principal Payments (Series 2021)**

| Year         | Principal           | Enrollment | Credit            |
|--------------|---------------------|------------|-------------------|
| 2025         | \$2,605,000         | 8,413      | \$309.63          |
| 2026         | \$2,660,000         | 8,597      | \$309.41          |
| 2027         | \$2,715,000         | 8,781      | \$309.19          |
| 2028         | \$2,795,000         | 8,965      | \$311.77          |
| 2029         | \$2,905,000         | 9,149      | \$317.52          |
| 2030         | \$3,020,000         | 9,333      | \$323.58          |
| 2031         | \$3,145,000         | 9,517      | \$330.46          |
| 2032         | \$3,205,000         | 9,701      | \$330.38          |
| 2033         | \$3,270,000         | 9,885      | \$330.81          |
| 2034         | \$3,340,000         | 10,069     | \$331.72          |
| 2035         | \$3,410,000         | 10,253     | \$332.59          |
| 2036         | \$3,485,000         | 10,437     | \$333.92          |
| <b>Total</b> | <b>\$36,555,000</b> |            | <b>\$3,870.98</b> |

|                          |                   |
|--------------------------|-------------------|
| Discount Rate            | 5.00%             |
| <b>Net Present Value</b> | <b>\$2,845.11</b> |

## PROPOSED SCHOOL IMPACT FEES

Infrastructure components and cost factors for School impact fees are summarized in Figure S12. For School impact fees, the net cost is \$50,992.70 per high school student. School impact fees are assessed according to the number of students per housing unit.

The single-family fee of \$6,772 is the sum of the high school components – Jefferson County will not assess fees related to elementary and middle schools. The high school component of \$6,772 is calculated using a cost of \$50,992.70 per high school student multiplied by a demand unit of 0.133 high school students per housing unit.

**Figure S6: Proposed School Impact Fees**

| Fee Component                   | Elementary              | Middle                  | High                    |
|---------------------------------|-------------------------|-------------------------|-------------------------|
| School Facilities (Local Share) | <del>\$40,419.91</del>  | <del>\$55,860.84</del>  | \$53,806.49             |
| Impact Fee Study                | <del>\$31.32</del>      | <del>\$31.32</del>      | \$31.32                 |
| Series 2021 Credit              | <del>(\$2,845.11)</del> | <del>(\$2,845.11)</del> | <del>(\$2,845.11)</del> |
| <b>Total</b>                    |                         |                         | <b>\$50,992.70</b>      |

| Development Type | Students per Housing Unit |                  |       | Proposed Fees  | Current Fees | Increase / Decrease |
|------------------|---------------------------|------------------|-------|----------------|--------------|---------------------|
|                  | Elementary                | Middle           | High  |                |              |                     |
| Single Family    | <del>0.165</del>          | <del>0.091</del> | 0.133 | <b>\$6,772</b> | \$1          | \$6,771             |
| Multi-Family     | <del>0.119</del>          | <del>0.064</del> | 0.023 | <b>\$1,198</b> | \$1          | \$1,197             |

## PROJECTED SCHOOL IMPACT FEE REVENUE

Projected fee revenue shown in Figure S13 is based on the development projections, shown in Appendix A, and the maximum allowable School impact fees. 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 is projected, the demand for infrastructure will also decrease, along with impact fee revenue. Projected impact fee revenue equals \$30.3 million and projected expenditures equal \$75,480,000. The School Building Authority contribution is projected to be approximately \$11.5 million. It is important to note that additional revenue will be realized between years 11-20.

**Figure S13: Projected School Impact Fee Revenue**

| Fee Component     | Total               |
|-------------------|---------------------|
| School Facilities | \$75,480,000        |
| <b>Total</b>      | <b>\$75,480,000</b> |

|                          |      | Single Family<br>\$6,772<br>per unit | Multi-Family<br>\$1,198<br>per unit | Industrial<br>\$0<br>per 1,000 sq ft | Comm/Shop<br>\$0<br>per 1,000 sq ft | Office/Inst<br>\$0<br>per 1,000 sq ft |
|--------------------------|------|--------------------------------------|-------------------------------------|--------------------------------------|-------------------------------------|---------------------------------------|
| Year                     |      | Hsg Unit                             | Hsg Unit                            | KSF                                  | KSF                                 | KSF                                   |
| Base                     | 2024 | 21,162                               | 3,552                               | 0                                    | 0                                   | 0                                     |
| Year 1                   | 2025 | 21,597                               | 3,624                               | 0                                    | 0                                   | 0                                     |
| Year 2                   | 2026 | 22,032                               | 3,696                               | 0                                    | 0                                   | 0                                     |
| Year 3                   | 2027 | 22,466                               | 3,767                               | 0                                    | 0                                   | 0                                     |
| Year 4                   | 2028 | 22,901                               | 3,839                               | 0                                    | 0                                   | 0                                     |
| Year 5                   | 2029 | 23,336                               | 3,911                               | 0                                    | 0                                   | 0                                     |
| Year 6                   | 2030 | 23,771                               | 3,983                               | 0                                    | 0                                   | 0                                     |
| Year 7                   | 2031 | 24,206                               | 4,055                               | 0                                    | 0                                   | 0                                     |
| Year 8                   | 2032 | 24,640                               | 4,126                               | 0                                    | 0                                   | 0                                     |
| Year 9                   | 2033 | 25,075                               | 4,198                               | 0                                    | 0                                   | 0                                     |
| Year 10                  | 2034 | 25,510                               | 4,270                               | 0                                    | 0                                   | 0                                     |
| 10-Year Increase         |      | 4,348                                | 718                                 | 0                                    | 0                                   | 0                                     |
| <b>Projected Revenue</b> |      | <b>\$29,444,920</b>                  | <b>\$860,124</b>                    | <b>\$0</b>                           | <b>\$0</b>                          | <b>\$0</b>                            |

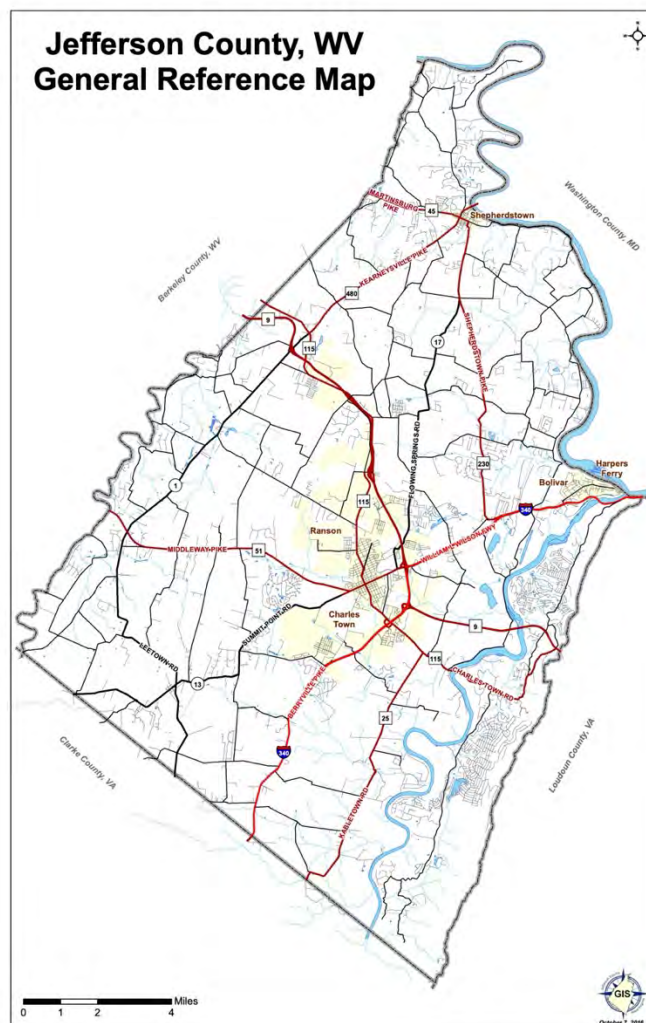
|                           |              |
|---------------------------|--------------|
| Projected Fee Revenue     | \$30,305,044 |
| Total Expenditures        | \$75,480,000 |
| School Building Authority | \$11,493,301 |

## APPENDIX A: LAND USE ASSUMPTIONS

Jefferson County, West Virginia, retained TischlerBise to analyze the impacts of development on its capital facilities 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 for January 1, 2024 are used in calculating levels of service (LOS) provided to existing development in Jefferson County. TischlerBise utilized a variety of data sources to estimate current and project future population, housing units, employment by type, and nonresidential floor area. These sources include the US Census Bureau, Esri, Inc., Institute of Transportation Engineers (ITE), and the Metro Washington Council of Governments.

The estimates and projections of residential and nonresidential development in this *Land Use Assumptions* document are for areas within the boundaries of Jefferson County, West Virginia. The map below illustrates the areas within the Countywide Service Area for EMS, Municipal Facilities, Parks and Recreation, and School impact fees. Appendix C includes a map of the Law Enforcement Service Area.

**Figure A1: Impact Fee Service Area**



## RESIDENTIAL DEMAND FACTORS

### Housing Unit Size

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 Jefferson 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 Jefferson County, detached stick-built units and attached are included in the “Single-Family” category. The second residential category includes duplexes and all other structures with two or more units on an individual parcel of land. This is referred to as the “Multi-Family” category. The “Multi-Family” category also includes mobile homes, boats, RV, vans, and all other units.

Figure A2 below shows the occupancy estimates for Jefferson County. Single-family units average 2.48 persons per housing unit and multi-family units average 1.75 persons per housing unit.

**Figure A2: Persons per Housing Unit**

| Housing Type                     | Persons | Households | Persons per Household | Housing Units | Persons per Housing | Housing Mix | Vacancy Rate |
|----------------------------------|---------|------------|-----------------------|---------------|---------------------|-------------|--------------|
| Single-Family Units <sup>1</sup> | 50,489  | 18,348     | 2.75                  | 20,383        | 2.48                | 85.2%       | 10.00%       |
| Multi-Family Units <sup>2</sup>  | 6,182   | 3,124      | 1.98                  | 3,535         | 1.75                | 14.8%       | 11.60%       |
| Total                            | 56,671  | 21,472     | 2.64                  | 23,918        | 2.37                | 100.0%      | 10.20%       |

Source: U.S. Census Bureau, 2018-2022 American Community Survey 5-Year Estimates, Tables B25024, B25032, B25033.

1. Includes detached and attached (i.e. townhouses) units.

2. Includes dwellings in structures with two or more units, mobile homes, and all other units.

### Residential Construction Trends

The Jefferson County Office of Impact Fees provided data on recent housing unit permitting trends. As shown below in Figure A3, the County issued building permits for 2,533 units from 2019 to 2023. This is an annual average of 507 housing units. Figure A3 also shows that the distribution of units between the municipalities and the unincorporated County is almost equal, with the municipalities receiving 1,241 units and the unincorporated County receiving 1,292 units. These annual averages are much higher than the housing unit growth assumed in the Metro Washington Council of Governments, Round 10.0 Cooperative Forecasts. Therefore, the recent annual average housing permits are used to project future housing unit growth, to which the persons per housing unit factors shown above in Figure A2 are applied

to estimate annual population. The actual number of residential permits shown in Figure A3 for 2022 and 2023 are also added to the housing units in Figure A2 to estimate the current number of housing units in Jefferson County as of January 1, 2024.

**Figure A3: 5-Year Housing Unit Trends in the County**

| Countywide     |              |            |              | Municipalities |            |            |              | Unincorporated County |              |          |              |
|----------------|--------------|------------|--------------|----------------|------------|------------|--------------|-----------------------|--------------|----------|--------------|
| Year           | SF           | MF         | Total        | Year           | SF         | MF         | Total        | Year                  | SF           | MF       | Total        |
| 2019           | 214          | 11         | 225          | 2019           | 66         | 11         | 77           | 2019                  | 148          | 0        | 148          |
| 2020           | 288          | 313        | 601          | 2020           | 115        | 313        | 428          | 2020                  | 173          | 0        | 173          |
| 2021           | 443          | 1          | 444          | 2021           | 52         | 1          | 53           | 2021                  | 391          | 0        | 391          |
| 2022           | 450          | 17         | 467          | 2022           | 199        | 14         | 213          | 2022                  | 251          | 3        | 254          |
| 2023           | 779          | 17         | 796          | 2023           | 459        | 11         | 470          | 2023                  | 320          | 6        | 326          |
| <b>Total</b>   | <b>2,174</b> | <b>359</b> | <b>2,533</b> | <b>Total</b>   | <b>891</b> | <b>350</b> | <b>1,241</b> | <b>Total</b>          | <b>1,283</b> | <b>9</b> | <b>1,292</b> |
| <b>Average</b> | <b>435</b>   | <b>72</b>  | <b>507</b>   | <b>Average</b> | <b>178</b> | <b>70</b>  | <b>248</b>   | <b>Average</b>        | <b>257</b>   | <b>2</b> | <b>258</b>   |

Source: Jefferson County building permit data

Source: Jefferson County building permit data

Source: Jefferson County building permit data

## NONRESIDENTIAL DEMAND FACTORS

TischlerBise uses the term jobs to refer to employment by place of work. In Figure A4, 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, 11<sup>th</sup> Edition (2021).

The prototype for industrial development is Light Industrial (110) which generates 4.87 average weekday vehicle trip ends per 1,000 square feet of floor area and has 637 square feet of floor area per employee. For office and institutional 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 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 A4: Nonresidential Demand Units**

| ITE Code | Land Use / Size            | Demand Unit | Wkdy Trip Ends Per Dmd Unit <sup>1</sup> | Wkdy Trip Ends Per Employee <sup>1</sup> | Emp Per Dmd Unit | Sq Ft 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           |
| 254      | Assisted Living            | 1,000 Sq Ft | 4.19                                     | 4.24                                     | 0.99             | n/a           |
| 310      | Hotel                      | room        | 7.99                                     | 14.34                                    | 0.56             | 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           |
| 550      | University/College         | student     | 1.56                                     | 8.89                                     | 0.18             | na            |
| 565      | Day Care                   | student     | 4.09                                     | 21.38                                    | 0.19             | na            |
| 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           |
| 620      | Nursing Home               | 1,000 Sq Ft | 6.75                                     | 3.31                                     | 2.04             | 490           |
| 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           |
| 750      | Office Park                | 1,000 Sq Ft | 11.07                                    | 3.54                                     | 3.13             | 320           |
| 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).

## SUMMARY OF COUNTYWIDE GROWTH INDICATORS

Key land use assumptions for the Jefferson County Impact Fee Study are population, housing units, and employment. TischlerBise utilized the Metro Washington Council of Governments, Round 10.0 Cooperative Forecasts to estimate base year population. Base year housing units are estimated by adding permits in calendar years 2022 and 2023 to the 2018-2022 American Community Survey 5-Year Estimates. As stated previously, TischlerBise utilized building permit trend data provided by the Jefferson County Office of Impact Fees to project future residential development. These housing unit increases were then converted to population using the average persons per housing unit factors from the 2018-2022 American Community Survey 5-Year Estimates. For nonresidential development, the base year employment estimate, as well as future employment, is also calculated based on data used in the Metro Washington Council of Governments, Round 10.0 Cooperative Forecasts. TischlerBise converts employment estimates and projections to nonresidential floor area based on average square feet per job multipliers published by the Institute of Transportation Engineers (ITE). The projections contained in this document provide the foundation for the Impact Fee Study. These metrics are the service units and demand indicators used in the Impact Fee Study.

Development projections, summarized below, 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 is faster than anticipated, Jefferson County will receive an increase in fee revenue, but will also need to accelerate infrastructure improvements to keep pace with the actual rate of development. During the next 10 years, countywide development projections indicate an increase of 5,066 housing units and approximately 1.77 million square feet of nonresidential floor area.

**Figure A5: Summary of Growth Indicators - Countywide**

| Jefferson County, WV            | 2024              | 2025              | 2026              | 2027              | 2028              | 2029              | 2030              | 2031              | 2032              | 2033              | 2034              | 10-Year Increase |
|---------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------|
| Base Year                       | 1                 | 2                 | 3                 | 4                 | 5                 | 6                 | 7                 | 8                 | 9                 | 10                |                   |                  |
| <b>Population</b>               | <b>61,728</b>     | <b>62,932</b>     | <b>64,136</b>     | <b>65,340</b>     | <b>66,544</b>     | <b>67,748</b>     | <b>68,952</b>     | <b>70,156</b>     | <b>71,360</b>     | <b>72,564</b>     | <b>73,768</b>     | <b>12,040</b>    |
| <b>Housing Units</b>            |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                  |
| Single Family                   | 21,162            | 21,597            | 22,032            | 22,466            | 22,901            | 23,336            | 23,771            | 24,206            | 24,640            | 25,075            | 25,510            | 4,348            |
| Multi-Family                    | 3,552             | 3,624             | 3,696             | 3,767             | 3,839             | 3,911             | 3,983             | 4,055             | 4,126             | 4,198             | 4,270             | 718              |
| <b>Total Housing Units</b>      | <b>24,714</b>     | <b>25,221</b>     | <b>25,727</b>     | <b>26,234</b>     | <b>26,740</b>     | <b>27,247</b>     | <b>27,754</b>     | <b>28,260</b>     | <b>28,767</b>     | <b>29,273</b>     | <b>29,780</b>     | <b>5,066</b>     |
| <b>Employment</b>               |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                  |
| Industrial                      | 4,208             | 4,288             | 4,356             | 4,423             | 4,491             | 4,558             | 4,626             | 4,691             | 4,757             | 4,822             | 4,887             | 679              |
| Commercial                      | 7,425             | 7,566             | 7,685             | 7,804             | 7,923             | 8,042             | 8,161             | 8,277             | 8,392             | 8,507             | 8,623             | 1,198            |
| Office & Institutional          | 15,669            | 15,967            | 16,218            | 16,469            | 16,721            | 16,972            | 17,223            | 17,467            | 17,710            | 17,954            | 18,197            | 2,528            |
| <b>Total Employment</b>         | <b>27,302</b>     | <b>27,821</b>     | <b>28,259</b>     | <b>28,697</b>     | <b>29,134</b>     | <b>29,572</b>     | <b>30,010</b>     | <b>30,434</b>     | <b>30,859</b>     | <b>31,283</b>     | <b>31,708</b>     | <b>4,405</b>     |
| <b>Nonres. Floor Area</b>       |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                  |
| Industrial                      | 2,678,869         | 2,729,773         | 2,772,730         | 2,815,687         | 2,858,643         | 2,901,600         | 2,944,556         | 2,986,198         | 3,027,840         | 3,069,482         | 3,111,123         | 432,254          |
| Commercial                      | 3,494,705         | 3,561,112         | 3,617,150         | 3,673,189         | 3,729,228         | 3,785,267         | 3,841,305         | 3,895,629         | 3,949,953         | 4,004,276         | 4,058,600         | 563,895          |
| Office & Institutional          | 4,813,460         | 4,904,926         | 4,982,111         | 5,059,297         | 5,136,482         | 5,213,667         | 5,290,853         | 5,365,676         | 5,440,499         | 5,515,322         | 5,590,145         | 776,685          |
| <b>Total Nonres. Floor Area</b> | <b>10,987,034</b> | <b>11,195,811</b> | <b>11,371,992</b> | <b>11,548,172</b> | <b>11,724,353</b> | <b>11,900,534</b> | <b>12,076,715</b> | <b>12,247,503</b> | <b>12,418,291</b> | <b>12,589,080</b> | <b>12,759,868</b> | <b>1,772,834</b> |

The projections for unincorporated Jefferson County are summarized below. During the next 10 years, unincorporated County development projections are for an increase of 2,584 housing units and approximately 991,600 square feet of nonresidential floor area.

**Figure A6: Summary of Growth Indicators – Unincorporated County**

| Unincorporated Jefferson County, WV | 2024             | 2025             | 2026             | 2027             | 2028             | 2029             | 2030             | 2031             | 2032             | 2033             | 2034             | 10-Year Increase |
|-------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Base Year                           | 1                | 2                | 3                | 4                | 5                | 6                | 7                | 8                | 9                | 10               |                  |                  |
| <b>Population</b>                   | <b>45,864</b>    | <b>46,503</b>    | <b>47,143</b>    | <b>47,782</b>    | <b>48,422</b>    | <b>49,061</b>    | <b>49,701</b>    | <b>50,341</b>    | <b>50,980</b>    | <b>51,620</b>    | <b>52,259</b>    | <b>6,395</b>     |
| <b>Housing Units</b>                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Single Family                       | 15,813           | 16,070           | 16,326           | 16,583           | 16,839           | 17,096           | 17,353           | 17,609           | 17,866           | 18,122           | 18,379           | 2,566            |
| Multi-Family                        | 2,314            | 2,316            | 2,318            | 2,319            | 2,321            | 2,323            | 2,325            | 2,327            | 2,328            | 2,330            | 2,332            | 18               |
| <b>Total Housing Units</b>          | <b>18,127</b>    | <b>18,385</b>    | <b>18,644</b>    | <b>18,902</b>    | <b>19,161</b>    | <b>19,419</b>    | <b>19,677</b>    | <b>19,936</b>    | <b>20,194</b>    | <b>20,453</b>    | <b>20,711</b>    | <b>2,584</b>     |
| <b>Employment</b>                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Industrial                          | 2,354            | 2,399            | 2,436            | 2,474            | 2,512            | 2,550            | 2,587            | 2,624            | 2,661            | 2,697            | 2,734            | 380              |
| Commercial                          | 4,153            | 4,232            | 4,298            | 4,365            | 4,432            | 4,498            | 4,565            | 4,629            | 4,694            | 4,758            | 4,823            | 670              |
| Office & Institutional              | 8,764            | 8,931            | 9,071            | 9,212            | 9,352            | 9,493            | 9,633            | 9,770            | 9,906            | 10,042           | 10,178           | 1,414            |
| <b>Total Employment</b>             | <b>15,271</b>    | <b>15,561</b>    | <b>15,806</b>    | <b>16,051</b>    | <b>16,296</b>    | <b>16,541</b>    | <b>16,786</b>    | <b>17,023</b>    | <b>17,260</b>    | <b>17,498</b>    | <b>17,735</b>    | <b>2,464</b>     |
| <b>Nonres. Floor Area (x1,000)</b>  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Industrial                          | 1,498,385        | 1,526,857        | 1,550,884        | 1,574,911        | 1,598,938        | 1,622,965        | 1,646,993        | 1,670,284        | 1,693,576        | 1,716,868        | 1,740,159        | 241,775          |
| Commercial                          | 1,954,710        | 1,991,853        | 2,023,198        | 2,054,542        | 2,085,887        | 2,117,231        | 2,148,575        | 2,178,961        | 2,209,346        | 2,239,731        | 2,270,116        | 315,406          |
| Office & Institutional              | 2,692,335        | 2,743,495        | 2,786,668        | 2,829,840        | 2,873,013        | 2,916,185        | 2,959,358        | 3,001,209        | 3,043,060        | 3,084,911        | 3,126,762        | 434,427          |
| <b>Total Nonres. Floor Area</b>     | <b>6,145,429</b> | <b>6,262,205</b> | <b>6,360,750</b> | <b>6,459,294</b> | <b>6,557,838</b> | <b>6,656,382</b> | <b>6,754,926</b> | <b>6,850,453</b> | <b>6,945,981</b> | <b>7,041,509</b> | <b>7,137,037</b> | <b>991,608</b>   |

### AVERAGE WEEKDAY VEHICLE TRIPS

Jefferson County will use average weekday vehicle trips (AWVT) as the nonresidential demand units for Fire/Emergency Medical Services and Law Enforcement fees.

### Nonresidential Trip Generation Rates

For nonresidential development, TischlerBise uses trip generation rates published in Trip Generation, Institute of Transportation Engineers, 11<sup>th</sup> Edition (2021). The prototype for industrial development is Light Industrial (110) which generates 4.87 average weekday vehicle trip ends per 1,000 square feet of

floor area. For office and institutional 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. 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 A7: Average Weekday Vehicle Trip Ends by Land Use**

| Development Type       | Dev. Unit | ITE Code | Weekday VTE | Trip Adj |
|------------------------|-----------|----------|-------------|----------|
| Industrial             | KSF       | 110      | 4.87        | 50%      |
| Commercial             | KSF       | 820      | 37.01       | 33%      |
| Office & Institutional | KSF       | 710      | 10.84       | 50%      |

### **Trip Rate Adjustments**

Average Weekday Vehicle Trips (AWVT) are used as a measure of demand by land use. Vehicle trips are estimated using average weekday vehicle trip ends from the reference book, *Trip Generation, 11<sup>th</sup> Edition*, published by the Institute of Transportation Engineers (ITE) in 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 development, the trip adjustment factor is less than 50 percent because this type of development attracts 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.

## NONRESIDENTIAL VEHICLE TRIP PROJECTIONS

### Countywide

Provided below are Countywide summaries of nonresidential vehicle trip projections used in the Impact Fee Study.

**Figure A8: Countywide Nonresidential Vehicle Trip Projections Summary**

| Development Type       | Dev. Unit | ITE Code | Weekday VTE | Trip Adj |
|------------------------|-----------|----------|-------------|----------|
| Industrial             | KSF       | 110      | 4.87        | 50%      |
| Commercial             | KSF       | 820      | 37.01       | 33%      |
| Office & Institutional | KSF       | 710      | 10.84       | 50%      |

| Jefferson County, WV         | Base   | 1      | 2      | 3      | 4      | 5      | 10     | 10-Year Increase |
|------------------------------|--------|--------|--------|--------|--------|--------|--------|------------------|
|                              | 2024   | 2025   | 2026   | 2027   | 2028   | 2029   | 2034   |                  |
| Industrial KSF               | 2,679  | 2,730  | 2,773  | 2,816  | 2,859  | 2,902  | 2,945  | 266              |
| Commercial KSF               | 3,495  | 3,561  | 3,617  | 3,673  | 3,729  | 3,785  | 3,841  | 347              |
| Office & Institutional KSF   | 4,813  | 4,905  | 4,982  | 5,059  | 5,136  | 5,214  | 5,291  | 477              |
| Industrial Trips             | 6,523  | 6,647  | 6,752  | 6,856  | 6,961  | 7,065  | 7,170  | 647              |
| Commercial Trips             | 42,682 | 43,493 | 44,177 | 44,862 | 45,546 | 46,231 | 46,915 | 4,233            |
| Office & Institutional Trips | 26,089 | 26,585 | 27,003 | 27,421 | 27,840 | 28,258 | 28,676 | 2,587            |
| Nonresidential Trips         | 75,294 | 76,725 | 77,932 | 79,139 | 80,347 | 81,554 | 82,761 | 7,468            |

### Unincorporated Jefferson County

Provided below are unincorporated County summary of nonresidential vehicle trip projections used in the Impact Fee Study.

**Figure A9: Unincorporated Nonresidential Vehicle Trip Projections Summary**

| Development Type       | Dev. Unit | ITE Code | Weekday VTE | Trip Adj |
|------------------------|-----------|----------|-------------|----------|
| Industrial             | KSF       | 110      | 4.87        | 50%      |
| Commercial             | KSF       | 820      | 37.01       | 33%      |
| Office & Institutional | KSF       | 710      | 10.84       | 50%      |

| Unincorporated Jefferson County, WV | Base   | 1      | 2      | 3      | 4      | 5      | 10     | 10-Year Increase |
|-------------------------------------|--------|--------|--------|--------|--------|--------|--------|------------------|
|                                     | 2024   | 2025   | 2026   | 2027   | 2028   | 2029   | 2034   |                  |
| Industrial KSF                      | 898    | 912    | 925    | 937    | 950    | 963    | 1,024  | 126              |
| Commercial KSF                      | 1,171  | 1,189  | 1,206  | 1,223  | 1,240  | 1,257  | 1,336  | 165              |
| Office & Institutional KSF          | 1,613  | 1,638  | 1,661  | 1,685  | 1,708  | 1,731  | 1,840  | 227              |
| Industrial Trips                    | 2,186  | 2,220  | 2,251  | 2,283  | 2,314  | 2,346  | 2,493  | 308              |
| Commercial Trips                    | 14,303 | 14,525 | 14,731 | 14,937 | 15,143 | 15,349 | 16,315 | 2,012            |
| Office & Institutional Trips        | 8,743  | 8,878  | 9,004  | 9,130  | 9,256  | 9,382  | 9,973  | 1,230            |
| Nonresidential Trips                | 25,232 | 25,623 | 25,986 | 26,350 | 26,713 | 27,077 | 28,781 | 3,550            |

## **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. Jefferson 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. 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.
3. 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.

## NONRESIDENTIAL DEVELOPMENT

The proposed general nonresidential development categories (defined below) can be used for all new construction within Jefferson 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, movie theaters, hotels, and motels.

**Industrial:** Establishments primarily engaged in the production, transportation, or storage of goods. By way of example, *Industrial* includes manufacturing plants, distribution warehouses, trucking companies, utility substations, power generation facilities, and telecommunications buildings.

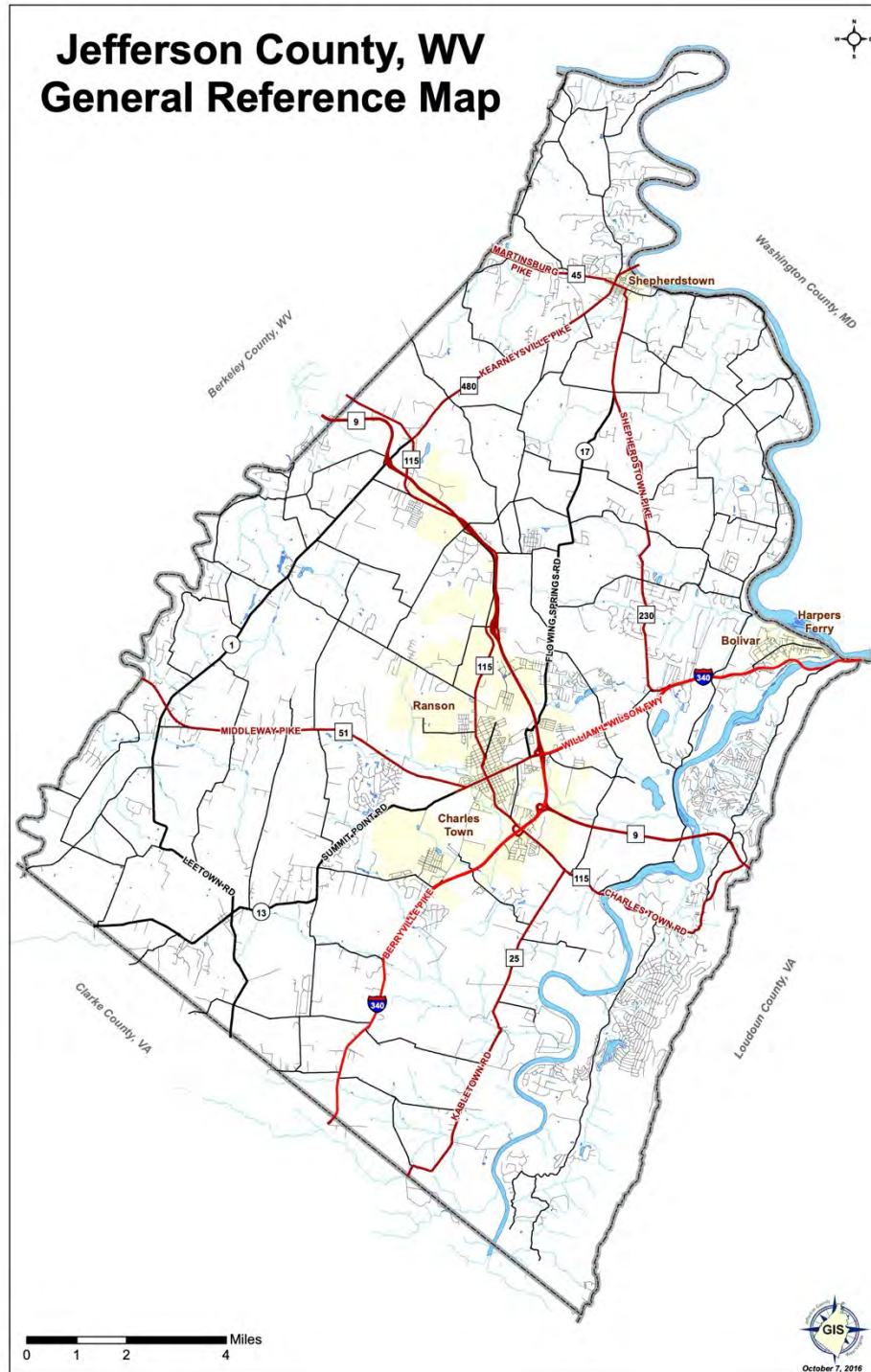
**Institutional:** Public and quasi-public buildings providing educational, social assistance, or religious services. By way of example, *Institutional* includes schools, universities, churches, daycare facilities, hospitals, government buildings, assisted living facilities, and nursing home facilities.

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

## APPENDIX C: SERVICE AREA MAPS

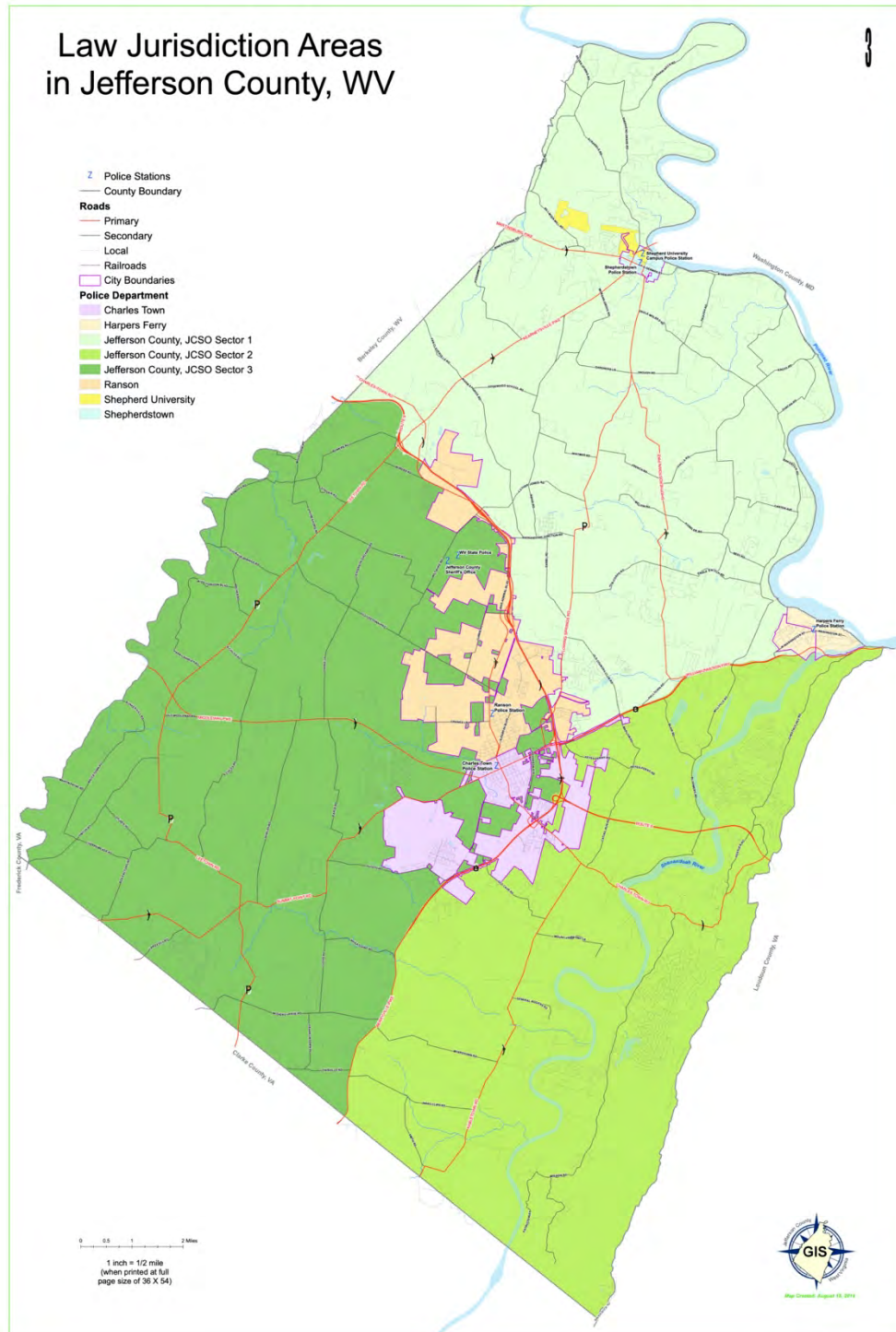
### COUNTYWIDE SERVICE AREA

The map below represents the Countywide Service Area for County Administration, EMS, Parks and Recreation, and School impact fees.



## LAW ENFORCEMENT SERVICE AREA

The map below represents the Law Enforcement Service Area. All development located within the Jefferson County Sheriff Office Jurisdiction will pay Law Enforcement impact fees. Development located in areas served by a local police department will not pay Law Enforcement impact fees.



## APPENDIX D: PUBLIC USE MICRODATA AREA MAP

