

Capital Improvement Plan and Development Impact Fee Study

Submitted to:
Homedale Rural Fire Protection District

January 27, 2025

Prepared by:



999 W Main Street
Suite 100
Boise, Idaho 83702
208.515.7480
www.tischlerbise.com



TischlerBiseGalena
999 W Main Street
Suite 100
Boise, Idaho 83702
208.515.7480

www.tischlerbise.com

Development Impact Fee Study
Homedale Rural Fire Protection District

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EXECUTIVE SUMMARY

The Homedale Rural Fire Protection District (“Fire District”) retained TischlerBise to prepare a Capital Improvement Plan and Development Impact Fee Study in order to meet the new demands generated by new development within the Fire District. This report presents the methodology and calculation used to generate current levels of service and updated maximum supportable impact fees. It is intended to serve as supporting documentation for establishing impact fees in the Fire District.

The purpose of this study is to demonstrate the Fire District’s compliance with Idaho Statutes as authorized by the Idaho Legislature. Consistent with the authorization (Idaho Code 67-8202(1-4)), it is the intent of the Fire District to:

1. Collect impact fees to ensure that adequate public facilities are available to serve new growth and development;
2. Promote orderly growth and development by establishing uniform standards by which local governments may require that those who benefit from new growth and development pay a proportionate share of the cost of new public facilities needed to serve new growth and development;
3. Establish minimum standards for the adoption of development impact fee ordinances by government entities;
4. Ensure that those who benefit from new growth and development are required to pay no more than their proportionate share of the cost of public facilities needed to serve new growth and development and to prevent duplicate and ad hoc development requirements;

Impact fees are one-time payments used to construct system improvements needed to accommodate new development. An impact fee represents new growth’s fair share of capital facility needs. By law, impact fees can only be used for capital improvements, not operating or maintenance costs. Impact fees are subject to legal standards, which require fulfillment of three key elements: need, benefit and proportionality.

- First, to justify a fee for public facilities, it must be demonstrated that new development will create a need for capital improvements.
- Second, new development must derive a benefit from the payment of the fees (i.e., in the form of public facilities constructed within a reasonable timeframe).
- Third, the fee paid by a particular type of development should not exceed its proportional share of the capital cost for system improvements.

TischlerBise evaluated possible methodologies and documented appropriate demand indicators by type of development for the levels of service and fees. Local demographic data and improvement costs were used to identify specific capital costs attributable to growth. This report includes summary tables

indicating the specific factors, referred to as level of service standards, used to derive the impact fees. The service area for the analysis and fee collection is districtwide. Lastly, the fees are calculated for both residential and nonresidential development.

IDAHO DEVELOPMENT IMPACT FEE ENABLING LEGISLATION

The Enabling Legislation governs how development fees are calculated for municipalities in Idaho. All requirements of the Idaho Development Impact Fee Act have been met in the supporting documentation prepared by TischlerBise. There are four requirements of the Idaho Act that are not common in the development impact fee enabling legislation of other states. This overview offers further clarification of these unique requirements.

First, as specified in 67-8204(2) of the Idaho Act, “development impact fees shall be calculated on the basis of levels of service for public facilities . . . applicable to existing development as well as new growth and development.”

Second, Idaho requires a Capital Improvements Plan (CIP) [see 67-8208]. The CIP requirements are summarized in this report, with detailed documentation provided in the discussion on infrastructure.

Third, the Idaho Act also requires documentation of any existing deficiencies in the types of infrastructure to be funded by development impact fees [see 67-8208(1)(a)]. The intent of this requirement is to prevent charging new development to cure existing deficiencies. In the context of development impact fees for the Fire District, the term “deficiencies” means a shortage or inadequacy of current system improvements when measured against the levels of service to be applied to new development. It does not mean a shortage or inadequacy when measured against some “hoped for” level of service.

TischlerBise used the current infrastructure cost per service unit (i.e., existing standards), or future levels of service where appropriate, multiplied by the projected increase in service units over an appropriate planning timeframe, to yield the cost of growth-related system improvements. The relationship between these three variables can be reduced to a mathematical formula, expressed as $A \times B = C$. In section 67-8204(16), the Idaho Act simply reorganizes this formula, stating the cost per service unit (i.e., development impact fee) may not exceed the cost of growth-related system improvements divided by the number of projected service units attributable to new development (i.e., $A = C \div B$). By using existing infrastructure standards to determine the need for growth-related capital improvements, the Fire District ensures the same level-of-service standards are applicable to existing and new development. Using existing infrastructure standards also means there are no existing deficiencies in the current system that must be corrected from non-development impact fee funding.

Fourth, Idaho requires a proportionate share determination [see 67-8207]. Basically, local government must consider various types of applicable credits and/or other revenues that may reduce the capital costs

attributable to new development. The development impact fee methodologies and the cash flow analysis have addressed the need for credits to avoid potential double payment for growth-related infrastructure.

Importantly, stated in [67-8204A], “Governmental entities . . . that are jointly affected by development are authorized to enter into intergovernmental agreements with each other or with . . . fire districts, ambulance districts . . . for the purpose of developing joint plans for capital improvements or for the purpose of agreeing to collect and expend development impact fees for system improvements, or both, provided that such agreement complies with any applicable state laws.” Thus, the impact fees for the Homedale Rural Fire Protection District will be collected by the City of Homedale, Canyon County, and Owyhee County. To ensure that the Fire District captures the full potential revenue of the impact fees an intergovernmental agreement (IGA) is necessary for the City and Counties to collect the impact fees on the District’s behalf. Those revenues would be remitted to the Fire District periodically.

SUMMARY OF CAPITAL IMPROVEMENT PLANS AND DEVELOPMENT IMPACT FEES

Development impact fees can be calculated by any one of several legitimate methods. The choice of a particular method depends primarily on the service characteristics and planning requirements for each facility type. Each method has advantages and disadvantages in a particular situation, and to some extent can be interchangeable, because each allocates facility costs in proportion to the needs created by development.

Reduced to its simplest terms, the process of calculating development impact fees involves two main steps: (1) determining the cost of development-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. The following paragraphs discuss three basic methods for calculating development impact fees, and how each method can be applied.

Cost Recovery. The rationale for the cost recovery approach 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 systems that were oversized such as sewer and water facilities.

Incremental Expansion. The incremental expansion method documents the current level of service (LOS) for each type of public facility in both quantitative and qualitative measures, based on an existing service standard (such as park land acres per 1,000 residents). This approach ensures that there are no existing infrastructure deficiencies or surplus capacity in infrastructure. New development is only paying its proportionate share for growth-related infrastructure. An incremental expansion cost method is best suited for public facilities that will be expanded in regular increments, with LOS standards based on current conditions in the community.

Plan-Based. The plan-based method allocates costs for a specified set of improvements to a specified amount of development. Facility plans identify needed improvements, and land use plans identify development. In this method, the total cost of relevant facilities is divided by total demand to calculate a cost per unit of demand. Then, the cost per unit of demand is multiplied by the amount of demand per unit of development (e.g., housing units or square feet of building area) in each category to arrive at a cost per specific unit of development (e.g., single family detached unit).

Credits. Regardless of the methodology, a consideration of “credits” is integral to the development of a legally valid impact fee methodology. There are two types of “credits,” each with specific and distinct characteristics, but both of which should be addressed in the calculation of development impact fees. The first is a credit due to possible double payment situations. This could occur when contributions are made by the property owner toward the capital costs of the public facility covered by the impact fee. This type of credit is integrated into the impact fee calculation. The second is a credit toward the payment of a fee for dedication of public sites or improvements provided by the developer and for which the facility fee is imposed. This type of credit is addressed in the administration and implementation of a facility fee program.

PROPOSED FEE METHODS AND COST COMPONENTS

Figure 1 lists impact fee service area, the components to the impact fee, and the methodologies used in the analysis.

Figure 1. Summary of Impact Fee Methodologies

Fee Category	Service Area	Cost Recovery	Incremental Expansion	Plan-Based	Cost Allocation
Fire	Districtwide	Impact Fee Study	Fire Stations, Fire Apparatus, and Fire Equipment		Equivalent Dwelling Units (EDUs)

CAPITAL IMPROVEMENT PLAN

Below in Figure 2 is the ten-year capital improvement plan the Fire District is anticipating to accommodate future demand. In the Plan, there are facility expansion, apparatus, and equipment that is consistent with the projected need to serve growth at the current level of service. The capital improvement plan is to be updated annually and will be revised to reflect any shift in demand, market, and costs.

Figure 2. Capital Improvement Plan

10-Year Growth-Related Capital Needs	Current Cost
Station Expansion: Office & Bunk House	\$700,000
Station Expansion: Additional Bays	\$500,000
Fire Engine & Brush Truck	\$550,000
New Equipment (15 units)	\$90,000
	\$1,840,000

MAXIMUM SUPPORTABLE DEVELOPMENT IMPACT FEES

Figure 3 provides a schedule of the maximum supportable development impact fees by type of land use for the Fire District. The fees represent the highest supportable amount for each type of applicable land use and represent new growth’s fair share of the cost for capital facilities. The Fire Board 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 expenditures, and/or a decrease in levels of service.

The service unit for the Fire Impact Fee is an equivalent dwelling unit, or EDU. The functional population is based factors by residential and nonresidential land use type for fire services are converted into EDUs. The description of the functional population methodology, the calculation of the EDU factors, and the determination of existing and projected EDUs in each service area are presented below.

Figure 3. Summary of Maximum Supportable Development Impact Fee

Residential	
Housing Type	Maximum Supportable Fee
Residential (per housing unit)	
Single Family	\$1,349
Multifamily	\$769

Nonresidential	
Development Type	Maximum Supportable Fee
Nonresidential (per 1,000 square feet)	
Retail	\$1,362
Office	\$985
Industrial	\$472
Institutional	\$971

CAPITAL IMPROVEMENT PLAN

The following section provides a summary of the Capital Improvement Plans depicting growth-related capital demands. First, Figure 4 lists the projected growth over the next ten years in the Fire District. Overall, there is an estimated 20 percent increase in population (1,133 new residents) a 22 percent increase in housing development (440 housing units) and a 20 percent increase in nonresidential development (221 new jobs and 99,000 square feet of development). Further details on the growth projections can be found in Appendix B. Demographic Assumptions

Figure 4. Ten-Year Growth Projections

	Base Year 2023	5-Year Increment						Total Increase
		1 2024	2 2025	3 2026	4 2027	5 2028	10 2033	
Population [1]	5,702	5,816	5,929	6,042	6,155	6,269	6,835	1,133
Housing Units by Type [1]								
Single Family	1,932	1,965	1,998	2,031	2,064	2,097	2,262	330
Multifamily	83	94	105	116	127	138	193	110
Total Housing Units	2,015	2,059	2,103	2,147	2,191	2,235	2,455	440
Jobs [1]								
Retail	465	474	484	493	502	511	557	92
Office	141	144	147	149	152	155	169	28
Industrial	201	205	209	213	217	221	241	40
Institutional	305	311	317	323	329	335	366	61
Total Jobs	1,112	1,134	1,156	1,178	1,200	1,223	1,333	221
Nonresidential Floor Area (1,000 sq. ft.) [2]								
Retail	219	223	228	232	236	241	263	44
Office	43	44	45	46	47	48	52	9
Industrial	128	131	133	136	138	141	153	25
Institutional	107	109	111	113	115	117	128	21
Total Floor Area	497	507	517	527	537	546	596	99
Vehicle Trips [2]								
Single Family Trips	11,476	11,674	11,870	12,066	12,262	12,458	13,438	1,963
Multifamily Trips	238	269	300	332	363	395	552	314
<i>Residential Subtotal</i>	11,714	11,943	12,170	12,398	12,625	12,853	13,990	2,277
<i>Nonresidential Subtotal</i>	4,201	4,285	4,369	4,452	4,536	4,619	5,036	835
Total Vehicle Trips	15,915	16,228	16,539	16,850	17,161	17,472	19,026	3,111

[1] Source: U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates; ESRI Business Analyst; TischlerBise analysis

[2] Source: Institute of Transportation Engineers, Trip Generation, 2021

The Idaho Development Fee Act requires Capital Improvement Plans to be updated regularly, at least once every five years (Idaho Code 67-8208(2)). This report projects revenue and fees based on ten-year forecast in an effort to provide the public and elected officials with illustrative guidance of probable growth demands based on current trends however, per Idaho Code, it is expected that an update to all Capital Improvement Plans included in this study will occur within five years.

The development impact fee is based on the existing level of service provided for fire facilities. To serve projected growth at current levels of service, the following infrastructure is projected over the next ten years:

- 1,547 square feet of new station space
- 1.8 new apparatus units
- 14.5 new equipment units
- \$590,000 growth-related costs

Below in Figure 5 is the ten-year capital improvement plan the Fire District is anticipating to accommodate future demand. In the plan are facility expansion and equipment that is consistent with the projected need to serve growth at the current level of service. The capital improvement plan is to be updated annually and will be revised to reflect any shift in demand, market, and costs.

Figure 5. Capital Improvement Plan

10-Year Growth-Related Capital Needs	Current Cost
Station Expansion: Office & Bunk House	\$700,000
Station Expansion: Additional Bays	\$500,000
Fire Engine & Brush Truck	\$550,000
New Equipment (15 units)	\$90,000
	\$1,840,000

FUNDING SOURCES FOR CAPITAL IMPROVEMENTS

In determining the proportionate share of capital costs attributable to new development, the Idaho Development Fee Act states that local governments must consider historical, available, and alternative sources of funding for system improvements (Idaho Code 67-8209(2)). Currently, there are no dedicated revenues being collected by the Fire District to fund growth-related projects.

Furthermore, the maximum supportable impact fees are constructed to offset all growth-related capital costs for facilities. Evidence is given in in the specific chapters of this report that the projected capital costs from new development will be entirely offset by the development impact fees. Thus, no general tax dollars are assumed to be used to fund growth-related capital costs, requiring no further revenue credits.

FIRE PROTECTION DEVELOPMENT IMPACT FEES

The Fire Development Impact Fee is based on the cost per service unit method specified in Idaho Code 67-8204(16), also referred to as the incremental expansion method elsewhere in this report.

The Fire infrastructure components included in the impact fee analysis are:

- Fire stations
- Fire apparatus
- Fire equipment
- Cost of development impact fee study

The service unit for the Fire Impact Fee is an equivalent dwelling unit, or EDU. The functional population is based factors by residential and nonresidential land use type for fire services are converted into EDUs. For residential land uses, the impact of a dwelling unit on the need for capital facilities is generally proportional to the number of persons residing in the dwelling unit. This can be measured for different housing types and in this analysis, average household size is used to develop the functional population factors. The functional population methodology for nonresidential land uses is based on trip generation and employee density data. Functional population per 1,000 square feet is derived by dividing the total number of hours spent by employees and visitors during a weekday by 24 hours. The description of the functional population methodology, the calculation of the EDU factors, and the determination of existing and projected EDUs in each service area are presented below.

Specified in Idaho Code 67-8209(2), local governments must consider historical, available, and alternative sources of funding for system improvements. Currently, there are no dedicated revenues being collected by the Fire District to fund growth-related projects for fire facilities. Furthermore, the maximum supportable impact fees are constructed to offset all growth-related capital costs for facilities. Evidence is given in this chapter that the projected capital costs from new development will be entirely offset by the development impact fees. Thus, no general tax dollars are assumed to be used to fund growth-related capital costs, requiring no further revenue credits.

COST ALLOCATION FOR FIRE PROTECTION INFRASTRUCTURE

RESIDENTIAL FUNCTIONAL POPULATION

For residential land uses, the impact of a dwelling unit on the need for capital facilities is generally proportional to the number of persons residing in the dwelling unit. This can be measured for different housing types and in this analysis, average household size is used to develop the functional population factors.

It is estimated that residents, on average, spend 14 hours, or 58 percent, of each 24-hour weekday at their place of residence. Shown in Figure 6 is the functional population for single family and multifamily units in Homedale Rural Fire Protection District.

Figure 6. Residential Functional Population per Housing Unit

Development Type	Unit	Persons per Household [1]	Percent of Day at Home	Functional Population/Unit
Single Family	dwelling	2.88	58%	1.68
Multifamily	dwelling	1.65	58%	0.96

Source: U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates

NONRESIDENTIAL FUNCTIONAL POPULATION

The functional population methodology for nonresidential land uses is based on trip generation and employee density data. Functional population per 1,000 square feet is derived by dividing the total number of hours spent by employees and visitors during a weekday by 24 hours. Employees are estimated to spend eight hours per day at their place of employment and visitors are estimated to spend one hour per visit.

Using this formula and information on trip generation rates, vehicle occupancy rates, and employee density, nonresidential functional population estimates per 1,000 square feet of floor area is calculated in Figure 7.

Figure 7. Nonresidential Functional Population per 1,000 Square Feet

Development Type	Unit	Vehicle Trips/ Unit [1]	Persons/ Trip [2]	Employee/ Unit [1]	Visitors/ Unit [3]	Functional Population/Unit [4]
Retail	1,000 sq. ft.	14.06	1.82	2.12	23.46	1.69
Office	1,000 sq. ft.	5.42	1.18	3.26	3.14	1.22
Industrial	1,000 sq. ft.	2.44	1.18	1.57	1.31	0.58
Institutional	1,000 sq. ft.	5.39	1.67	2.86	6.14	1.21

[1] Source: *Trip Generation*, Institute of Transportation Engineers, 10th Edition (2017)

[2] Source: *Summary of Travel Trends 2017 National Household Travel Survey*, US Department of Transportation Federal Highway Administration, 2017

[3] The visitors per unit factor is found by multiplying vehicles trips and persons per trip then subtracting employees per unit.

[4] Functional population is found by multiplying the employee per unit by 8 hours and visitors for unit by 1 hour and then dividing the total by 24 hours.

EQUIVALENT DWELLING UNIT FACTORS

In each service area an equivalent dwelling unit (EDU) is set to the functional population of a single family unit. For example, in the District an EDU is set to a functional population of 1.68. This is compared to the functional population factors for the other development types to calculate its equivalent EDU. For example, a multifamily unit in the district has a functional population of 0.96, which results in 0.57 EDUs (0.96 functional population / 1.68 functional population per EDU = 0.57 EDUs).

Figure 8. Homedale Rural Fire Protection District EDU Factors

Development Type	Unit	Functional Population/Unit	EDUs/Unit
Single Family	dwelling	1.68	1.00
Multifamily	dwelling	0.96	0.57
Retail	1,000 sq. ft.	1.69	1.01
Office/Service	1,000 sq. ft.	1.22	0.73
Industrial	1,000 sq. ft.	0.58	0.35
Institutional	1,000 sq. ft.	1.21	0.72

SERVICE AREA BASE YEAR EDUs

To calculate the current level of service of fire facilities, it is necessary to determine the base year EDUs in each service area. This is done by applying the EDU factors to the base year housing and nonresidential floor area estimates. Shown at the bottom of Figure 9, there are a total of 2,354 EDUs in the Homedale Rural Fire Protection District.

Figure 9. Homedale Rural Fire Protection District Base Year EDUs

Development Type	Base Year Housing Units	EDUs/Unit	Base Year EDUs
Single Family	1,932	1.00	1,932
Multifamily	83	0.57	47
Residential Subtotal	2,015		1,979

Development Type	Base Year 1,000 Sq. Ft.	EDUs/Unit	Base Year EDUs
Retail	219	1.01	221
Office	43	0.73	32
Industrial	128	0.35	45
Institutional	107	0.72	77
Nonresidential Subtotal	497		375

Development Type	Base Year EDUs	Percent of Total EDUs
Residential EDUs	1,979	84%
Nonresidential EDUs	375	16%
Total	2,354	100%

FIRE PROTECTION LEVEL OF SERVICE AND COST ANALYSIS

As shown in Figure 10, Homedale Rural Fire Protection District has two stations, totaling 7,800 square feet. To determine the level of service, the floor area is divided by the base year demand factor (EDUs) then multiplied by 1,000. As a result, there are 3,314 square feet per 1,000 EDUs.

Based on the District’s CIP, the average cost per square foot is \$113. To find the capital cost per EDU, the level of service standard is applied to the average cost per square foot. This results in a capital cost of \$375 per EDU (3,314 square feet per 1,000 EDUs x \$113 per square foot = \$375 per EDU, rounded).

Figure 10. Fire Station Level of Service and Cost Analysis

Fire Stations	Square Feet	Construction Cost
Fire Station	4,000	\$453,119
Ambulance Station	3,800	\$430,463
Total	7,800	\$883,583

<i>Level-of-Service Standards</i>	EDU
Proportionate Share	100%
Share of Square Feet	7,800
2023 Equivalent Dwelling Unit (EDU)	2,354
Square Feet per 1,000 EDUs	3,314

<i>Cost Analysis</i>	EDU
Square Feet per 1,000 EDUs	3,314
Average Cost per Square Foot [1]	\$113
Capital Cost per EDU	\$375

[1] Source: Homedale Rural Fire Protection District Capital Improvement Plan

As shown in Figure 11, Homedale Rural Fire Protection District has nine vehicles to provided fire services. To determine the level of service, the fleet is divided by the base year demand factor (EDUs) then multiplied by 1,000. As a result, there are 3.82 vehicles per 1,000 EDUs.

Based on the District’s expectation to replace the fleet, the average cost per vehicle is \$184,000. To find the capital cost per EDU, the level of service standard is applied to the average cost. This results in a capital cost of \$703 per EDU (3.82 vehicles per 1,000 EDUs x \$184,000 per vehicle = \$703 per EDU, rounded).

Figure 11. Fire Apparatus Level of Service and Cost Analysis

Apparatus	Units	Total Replacement
Fire Engine	2	\$577,500
Tanker	2	\$440,000
Ambulance	3	\$445,000
Command Vehicle	2	\$190,000
Total	9	\$1,652,500

Level-of-Service Standards	EDU
Proportionate Share	100%
Share of Units	9.0
2023 Equivalent Dwelling Unit (EDU)	2,354
Units per 1,000 EDUs	3.82

Cost Analysis	EDU
Units per 1,000 EDUs	3.82
Average Cost per Unit	\$184,000
Capital Cost per EDU	\$703

As shown in Figure 12, Homedale Rural Fire Protection District has 73 units of equipment to provided fire services. To determine the level of service, the equipment is divided by the base year demand factor (EDUs). As a result, there are 31.01 equipment units per 1,000 EDUs.

To find the capital cost per EDU, the level of service standard is applied to the average cost. This results in a capital cost of \$186 per EDU (31.01 units per 1,000 EDUs x \$6,000 per unit = \$186 per EDU, rounded).

Figure 12. Fire Equipment Level of Service and Cost Analysis

Equipment Type	Units	Current Cost per Unit	Total Replacement Cost
Fleet Equipment	7	\$16,629	\$116,400
Turnout Gear	25	\$3,600	\$90,000
Air Packs	14	\$10,500	\$147,000
Air Bottles	24	\$1,200	\$28,800
Truck Hoses	3	\$8,333	\$25,000
Total	73		\$407,200

Level-of-Service Standards	EDU
Proportionate Share	100%
Share of Units	73.0
2023 Equivalent Dwelling Unit (EDU)	2,354
Units per 1,000 EDUs	31.01

Cost Analysis	EDU
Units per 1,000 EDUs	31.01
Average Cost per Unit	\$6,000
Capital Cost per EDU	\$186

SHARE OF THE DEVELOPMENT IMPACT FEE STUDY

Under the Idaho enabling legislation, the Fire District is able to recover the cost of the study through the collection of future fees. An impact fee study must be completed every five years, so the study cost is compared to the five-year projected increase in equivalent dwelling units (EDUs). As a result, the cost per EDU is \$85.

Figure 13. Share of the Development Impact Fee Study

Study Cost	Five-Year EDU Increase	Capital Cost per EDU
\$19,720	233	\$85

CAPITAL IMPROVEMENTS NEEDED TO SERVE GROWTH

Needs due to future growth were calculated using the levels of service and cost factors for the infrastructure components. Growth-related needs are a projection of the amount of infrastructure and estimated costs over the next ten years needed to maintain levels of service.

To estimate the 10-year growth needs for fire facilities in Homedale Fire Protection District, the current level of service (3,314 square feet per 1,000 EDUs) is applied to the projected growth of EDUs in the district. The district is projected to increase by 467 EDUs over the next ten years. Listed in Figure 14, there will need to be a total of 1,547 square feet of additional fire station space in the district to accommodate the growth. By applying the average cost (\$113 per square feet), the total expenditure for the growth is calculated (1,547 square feet x \$113 = \$175,243).

Similarly, the current level of service for apparatus (3.82 units per 1,000 EDUs) is applied to the projected growth of EDUs in the district. There will be a need for 1.8 new units to accommodate growth. By applying the average cost (\$184,000 per unit), the total expenditure for the growth is calculated.

Lastly, the current level of service for equipment (31.01 units per 1,000 EDUs) is applied to the projected growth of EDUs in the district. There will be a need for 14.5 new units of equipment to accommodate growth. By applying the average cost (\$6,000 per unit), the total expenditure for the growth is calculated. Overall, the combined projected need for growth is \$593,443.

Figure 14. Projected Demand for Fire Facilities & Equipment

Level of Service		Demand Unit	Unit Cost
3,314	Fire Station Square Feet	per 1,000 EDUs	\$113
3.82	Fire Apparatus Units	per 1,000 EDUs	\$184,000
31.01	Fire Equipment Units	per 1,000 EDUs	\$6,000

Year		Equivalent Dwelling	Fire Station Square Feet	Fire Apparatus Units	Fire Equipment Units
Base	2023	2,354	7,800	9.0	73.0
Year 1	2024	2,401	7,954	9.2	74.4
Year 2	2025	2,447	8,109	9.3	75.9
Year 3	2026	2,494	8,264	9.5	77.3
Year 4	2027	2,541	8,418	9.7	78.8
Year 5	2028	2,587	8,573	9.9	80.2
Year 6	2029	2,634	8,728	10.1	81.7
Year 7	2030	2,681	8,883	10.2	83.1
Year 8	2031	2,727	9,037	10.4	84.6
Year 9	2032	2,774	9,192	10.6	86.0
Year 10	2033	2,821	9,347	10.8	87.5
Ten-Year Increase		467	1,547	1.8	14.5
Growth-Related Expenditures			\$175,243	\$331,200	\$87,000

Homedale Fire Growth-Related Capital Cost	\$593,443
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SUMMARY OF INPUT VARIABLES AND MAXIMUM SUPPORTABLE IMPACT FEES

Figure 15 provides a summary of the input variables (described in the chapter sections above) used to calculate the net cost per EDU. The residential Fire Development Impact Fees are the product of equivalent dwelling unit by type multiplied by the total net capital cost per EDU. For example, the multifamily maximum impact fee is \$769 per unit (\$1,349 per EDU x 0.57 EDUs per housing unit = \$769, rounded). The nonresidential fees are the product of equivalent dwelling unit by type multiplied by the total net capital cost per EDU.

The Fire Board 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 expenditures, and/or a decrease in levels of service.

Figure 15. Summary of Input Variables and Maximum Supportable Impact Fees

Fee Component	Cost per EDU
Fire Stations	\$375
Fire Apparatus	\$703
Fire Equipment	\$186
Impact Fee Study	\$85
Gross Total	\$1,349
Net Total	\$1,349

Residential		
Housing Type	EDUs per Housing Unit	Maximum Supportable Fee
Residential (per housing unit)		
Single Family	1.00	\$1,349
Multifamily	0.57	\$769

Nonresidential		
Development Type	EDUs per 1,000 Sq. Ft.	Maximum Supportable Fee
Nonresidential (per 1,000 square feet)		
Retail	1.01	\$1,362
Office	0.73	\$985
Industrial	0.35	\$472
Institutional	0.72	\$971

CASH FLOW PROJECTIONS FOR MAXIMUM SUPPORTABLE IMPACT FEE

This section summarizes the potential cash flow to the Fire District if the development impact fees are implemented at the maximum supportable amounts. The cash flow projections are based on the assumptions detailed in this chapter and the development projections discussed in Appendix B, Demographic Assumptions.

The summary provides an indication of the impact fee revenue generated by new development. Shown at the bottom of the figure, the maximum supportable fire impact fee is estimated to generate \$630,000 in revenue while there is a growth-related cost of \$633,000. The gap in funding is the result of rounding, thus the revenue is able to mitigate 100 percent of growth-related costs.

Figure 16. Cash Flow Summary for Maximum Supportable Impact Fees

Infrastructure Costs for Fire Facilities

	Total Cost	Growth Cost
Fire Stations	\$175,243	\$175,243
Fire Apparatus	\$331,200	\$331,200
Fire Equipment	\$87,000	\$87,000
Impact Fee Study	\$39,440	\$39,440
Total Expenditures	\$632,883	\$632,883

Projected Development Impact Fee Revenue

		Single Family \$1,349 per unit	Multifamily \$769 per unit	Retail \$1,362 per KSF	Office \$985 per KSF	Industrial \$472 per KSF	Institutional \$971 per KSF
Year		Housing Units	Housing Units	KSF	KSF	KSF	KSF
Base	2023	1,932	83	219	43	128	107
1	2024	1,965	94	223	44	131	109
2	2025	1,998	105	228	45	133	111
3	2026	2,031	116	232	46	136	113
4	2027	2,064	127	236	47	138	115
5	2028	2,097	138	241	48	141	117
6	2029	2,130	149	245	48	143	119
7	2030	2,163	160	249	49	146	122
8	2031	2,196	171	254	50	148	124
9	2032	2,229	182	258	51	151	126
10	2033	2,262	193	263	52	153	128
Ten-Year Increase		330	110	44	9	25	21
Projected Revenue		\$445,643	\$84,465	\$59,255	\$8,470	\$12,005	\$20,590
							Projected Revenue => \$630,000
							Projected Expenditures => \$633,000
							Non-Impact Fee Funding => \$3,000

PROPORTIONATE SHARE ANALYSIS

Development impact fees for Homedale Rural Fire Protection District are based on reasonable and fair formulas or methods. The fees do not exceed a proportionate share of the costs incurred or to be incurred by the District in the provision of system improvements to serve new development. The District will fund non-growth-related improvements with non-development impact fee funds as it has in the past. Specified in the Idaho Development Impact Fee Act (Idaho Code 67-8207), several factors must be evaluated in the development impact fee study and are discussed below.

- 1) The development impact fees for Homedale Rural Fire Protection District are based on new growth's share of the costs of previously built projects along with planned public facilities as provided by the Fire District. Projects are included in the District's capital improvements plan and will be included in annual capital budgets.
- 2) TischlerBise estimated development impact fee revenue based on the maximum supportable development impact fees for the one, districtwide service area; results are shown in the cash flow analyses in this report. Existing and future development impact fee revenue will entirely fund growth-related improvements.
- 3) TischlerBise has evaluated the extent to which new development may contribute to the cost of public facilities.
- 4) The relative extent to which properties will make future contributions to the cost of existing public facilities has also been evaluated in regards to existing debt.
- 5) The District will evaluate the extent to which newly developed properties are entitled to a credit for system improvements that have been provided by property owners or developers. These "site-specific" credits will be available for system improvements identified in the annual capital budget and long-term Capital Improvement Plans. Administrative procedures for site-specific credits should be addressed in the development impact fee ordinance.
- 6) Extraordinary costs, if any, in servicing newly developed properties should be addressed through administrative procedures that allow independent studies to be submitted to the District. These procedures should be addressed in the development impact fee ordinance.
- 7) The time-price differential inherent in fair comparisons of amounts paid at different times has been addressed. All costs in the development impact fee calculations are given in current dollars with no assumed inflation rate over time. Necessary cost adjustments can be made as part of the annual evaluation and update of development impact fees.

IMPLEMENTATION AND ADMINISTRATION

The Idaho Development Impact Fee Act (hereafter referred to as the Idaho Act) requires jurisdictions to form a Development Impact Fee Advisory Committee (DIFAC). The committee must have at least five members with a minimum of two members active in the business of real estate, building, or development. The committee acts in an advisory capacity and is tasked to do the following:

- Assist the governmental entity in adopting land use assumptions;
- Review the capital improvements plan, and proposed amendments, and file written comments;
- Monitor and evaluate implementation of the capital improvements plan;
- File periodic reports, at least annually, with respect to the capital improvements plan and report to the governmental entity any perceived inequities in implementing the plan or imposing the development impact fees; and
- Advise the governmental entity of the need to update or revise land use assumptions, the capital improvements plan, and development impact fees.

Furthermore, it is the collecting jurisdiction that is required to form the DIFAC. In this case, Homedale Rural Fire Protection Impact Fees will be collected by the City of Homedale, Canyon County, and Owyhee County. Thus, those jurisdictions will form separate DIFACs.

Per the above, each jurisdiction has formed a DIFAC. TischlerBise has met with each DIFAC during the process and provided information on land use assumptions, level of service and cost assumptions, and draft development impact fee schedules. This report reflects comments and feedback received from the DIFACs.

The Fire District must develop and adopt a capital improvements plan (CIP) that includes those improvements for which fees were developed. The Idaho Act defines a capital improvement as an “improvement with a useful life of ten years or more, by new construction or other action, which increases the service capacity of a public facility.” Requirements for the CIP are outlined in Idaho Code 67-8208. Certain procedural requirements must be followed for adoption of the CIP and the development impact fee ordinance. Requirements are described in detail in Idaho Code 67-8206. The Fire District has a CIP that meets the above requirements.

TischlerBise recommends that development impact fees be updated annually to reflect recent data. One approach is to adjust for inflation in construction costs by means of an index like the RSMeans or Engineering News Record (ENR). This index can be applied against the calculated development impact fee. If cost estimates change significantly the Fire District should evaluate an adjustment to the CIP and development impact fees.

Idaho's enabling legislation requires an annual development impact fees report that accounts for fees collected and spent during the preceding year (Idaho Code 67-8210). Development impact fees must be deposited in interest-bearing accounts earmarked for the associated capital facilities as outlined in capital improvements plans. Also, fees must be spent within eight years of when they are collected (on a first in, first out basis) unless the local governmental entity identifies in writing (a) a reasonable cause why the fees should be held longer than eight years; and (b) an anticipated date by which the fees will be expended but in no event greater than eleven years from the date they were collected.

Credits must be provided for in accordance with Idaho Code Section 67-8209 regarding site-specific credits or developer reimbursements for system improvements that have been included in the development impact fee calculations. Project improvements normally required as part of the development approval process are not eligible for credits against development impact fees. Specific policies and procedures related to site-specific credits or developer reimbursements for system improvements should be addressed in the ordinance that establishes the fees.

The general concept is that developers may be eligible for site-specific credits or reimbursements only if they provide system improvements that have been included in CIP and development impact fee calculations. If a developer constructs a system improvement that was included in the fee calculations, it is necessary to either reimburse the developer or provide a credit against the fees in the area that benefits from the system improvement. The latter option is more difficult to administer because it creates unique fees for specific geographic areas. Based on TischlerBise's experience, it is better for a reimbursement agreement to be established with the developer that constructs a system improvement. For example, if a developer elects to construct a system improvement, then a reimbursement agreement can be established to payback the developer from future development impact fee revenue. The reimbursement agreement should be based on the actual documented cost of the system improvement, if less than the amount shown in the CIP. However, the reimbursement should not exceed the CIP amount that has been used in the development impact fee calculations.

APPENDIX A. LAND USE DEFINITIONS

RESIDENTIAL DEVELOPMENT

As discussed below, residential development categories are based on data from the U.S. Census Bureau, American Community Survey.

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.
3. 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.

Multifamily Units:

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

NONRESIDENTIAL DEVELOPMENT CATEGORIES

Nonresidential development categories used throughout this study are based on land use classifications from the book *Trip Generation* (ITE, 2021). A summary description of each development category is provided below.

Retail: Establishments primarily selling merchandise, eating/drinking places, and entertainment uses. By way of example, *Retail* includes shopping centers, banks, restaurants, and movie theaters.

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

Industrial: Establishments primarily engaged in the production and transportation of goods. By way of example, *Industrial* includes manufacturing plants, distribution facilities, warehousing facilities.

Institutional: Public and quasi-public buildings providing educational, social assistance, or religious services. By way of example, *Institutional* includes schools, churches, daycare facilities, and health care facilities.

APPENDIX B. DEMOGRAPHIC ASSUMPTIONS

POPULATION AND HOUSING CHARACTERISTICS

Impact fees often use per capita standards and persons per housing unit or persons per household to derive proportionate share fee amounts. Housing types have varying household sizes and, consequently, a varying demand on District infrastructure and services. Thus, it is important to differentiate between housing types and size.

When persons per housing unit (PPHU) is used in the development impact fee calculations, infrastructure standards are derived using year-round population. In contrast, when persons per household (PPHH) is used in the development impact fee calculations, the fee methodology assumes all housing units will be occupied, thus requiring seasonal or peak population to be used when deriving infrastructure standards. TischlerBise recommends that fees for residential development in Homedale Rural Fire Protection District be imposed according to persons per housing unit.

Based on housing characteristics, TischlerBise recommends using two housing unit categories for the Impact Fee study: (1) Single Family and (2) Multifamily. Each housing type has different characteristics which results in a different demand on District facilities and services.

The boundaries of the Fire District are not contiguous with available US Census geographies. In this case, geographies have been chosen that best represent the demographics of each area. The estimates in Figure 17 are for PPHU calculations for Homedale CCD. A map of the Homedale CCD geography can be found in Figure 30 at the end of the report.

Homedale CCD is a US Census defined geography that is larger than the City of Homedale, including portions of unincorporated areas surrounding the city. This provides a better sample of demographics in the Homedale Rural Fire Protection District. As a result, single family units have an average household size of 2.88 persons and multifamily units have an average household size of 1.65 persons. Additionally, there is a housing mix of 96 percent single family and 4 percent multifamily.

Figure 17. Persons per Housing Unit

Housing Type	Persons	Housing Units	Persons per Housing Unit	Households	Persons per Household	Housing Unit Mix
Single Family [1]	4,415	1,533	2.88	1,480	2.98	96%
Multifamily [2]	109	66	1.65	66	1.65	4%
Total	4,524	1,599	2.83	1,546	2.93	

[1] Includes attached and detached single family homes and mobile homes

[2] Includes all other types

Source: U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates

BASE YEAR HOUSING UNITS AND POPULATION

Base year population is derived from 2021 U.S Census Bureau data for the City of Homedale and Owyhee County sections of the District, PPHU factors, and Canyon County Parcel Data. Based off of this data, the base year population estimate for Homedale Rural Fire Protection District is 5,702. PPHU data shown in Figure 17 is used to convert this total population number to a total housing unit number, which is estimated to be 2,015 units. Then the housing unit mix percentage is applied to this total housing unit estimate to get a breakdown between single and multifamily units.

Figure 18. Base Year Housing Units and Population

Homedale Rural Fire Protection District	Base Year 2023
Population [1]	5,702
Housing Units [2]	
Single Family	1,932
Multifamily	83
Total Housing Units	2,015

[1] U.S Census Bureau, 2021 American Community Survey 5-Year Estimates, TischlerBise Analysis, Canyon County Parcel Data

[2] U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates, TischlerBise analysis

NEW RESIDENTIAL CONSTRUCTION TREND

To illustrate residential development trends in the District, Figure 19 lists the past five years of new construction in Homedale Rural Fire Protection District which includes sections of Canyon County, Owyhee County, and City of Homedale. As seen in Figure 19, over the past five years in the Homedale Rural Fire Protection District there has been a total of 220 housing units added with 165 being single family homes and 55 being multifamily homes. This leads to a five-year average of 44 housing units added annually.

Figure 19. Annual New Construction Estimates by Housing Type

Housing Type	2018	2019	2020	2021	2022	Total	5-Year Average
Single Family	32	41	35	33	24	165	33
Multifamily	3	3	5	39	5	55	11
Total	35	44	40	72	29	220	44

HOUSING UNIT AND POPULATION PROJECTIONS

Past housing construction trends are assumed to continue through the next ten years, so the five-year annual average totals are included in the projections to estimate housing growth in the Fire District. Population growth is estimated based on housing development and PPHU by housing type.

As a result, there are 440 new housing units projected in the Fire District over the next ten years, 330 units single family and 110 units multifamily. Based on the housing development, population in the Fire District is estimated to grow by 1,133 residents or 20 percent.

Figure 20. Residential Development Projections

Homedale Rural Fire Protection District	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
Population [1]	5,702	5,816	5,929	6,042	6,155	6,269	6,382	6,495	6,608	6,721	6,835	1,133
Housing Units [2]												
Single Family	1,932	1,965	1,998	2,031	2,064	2,097	2,130	2,163	2,196	2,229	2,262	330
Multifamily	83	94	105	116	127	138	149	160	171	182	193	110
Total Housing Units	2,015	2,059	2,103	2,147	2,191	2,235	2,279	2,323	2,367	2,411	2,455	440

[1] Population projections are based on housing growth and PPHU factors

[2] Housing projections are based on building permit trends

CURRENT EMPLOYMENT AND NONRESIDENTIAL FLOOR AREA

The impact fee study will include nonresidential development as well. Utilizing ESRI Business Analyst data, 2023 total employment in the district is estimated at 1,112 jobs. Listed in Figure 21, there are an estimated 465 retail jobs, 141 office jobs, 201 industrial jobs, and 305 institutional jobs located in the district.

To estimate the nonresidential floor area, employee density factors from the Institute of Transportation Engineers (ITE) *Trip Generation* Manual (2021) are applied to job estimated. Figure 22 lists the land use type and density factors that are included in the analysis. Overall, there is 497,089 square feet estimated in the district. Retail and industrial development make up the majority of this with a combined 70 percent of the total floor area.

Figure 21. Base Year Employment and Nonresidential Floor Area

Employment Industries	Base Year Jobs [1]	Sq. Ft. per job [2]	Floor Area (sq. ft.)	Percent of Total
Retail	465	471	219,015	44%
Office	141	307	43,287	9%
Industrial	201	637	128,037	26%
Institutional	305	350	106,750	21%
Total	1,112		497,089	100%

[1] Source: ESRI Business Analyst

[2] Source: *Trip Generation*, Institute of Transportation Engineers, 11th Edition (2021)

Figure 22. Institute of Transportation Engineers (ITE) Employment Density Factors

Employment Industry	ITE Code	Land Use	Demand Unit	Emp per Dmd Unit	Sq. Ft. per Emp
Retail	820	Shopping Center	1,000 Sq Ft	2.12	471
Office	710	General Office	1,000 Sq Ft	3.26	307
Industrial	110	Light Industrial	1,000 Sq Ft	1.57	637
Institutional	610	Hospital	1,000 Sq Ft	2.86	350

Source: *Trip Generation*, Institute of Transportation Engineers, 11th Edition (2021)

EMPLOYMENT AND NONRESIDENTIAL FLOOR AREA PROJECTIONS

Job growth is projected using a jobs per resident factor shown in Figure 23 which is calculated by dividing base year jobs by base year population (1,112 jobs / 5,702 residents = 0.20 jobs per resident).

Figure 23. Jobs per Resident Factor Homedale Rural Fire Protection District

Homedale Rural Fire Protection District	Base Year 2023
Jobs [1]	1,112
Population [2]	5,702
Jobs per Resident	0.20

[1] ESRI Business Analyst, TischlerBise analysis

[2] U.S Census Bureau, 2021 American Community Survey 5-Year Estimates, TischlerBise Analysis, Canyon County Parcel Data

Job and nonresidential floor area projections for the next ten years are provided in Figure 24. Job growth is converted into nonresidential floor area using the ITE square feet per employee averages shown in Figure 22. Over the next ten years, the nonresidential floor area is projected to increase by approximately 99,000 square feet. Additionally, there is a projected increase of 221 jobs in the district, a 20 percent increase from the base year. Retail and institutional developments account for the greatest share of the increase.

Figure 24. Employment and Nonresidential Floor Area Projections

Homedale Rural Fire Protection District	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
Jobs [1]												
Retail	465	474	484	493	502	511	520	530	539	548	557	92
Office	141	144	147	149	152	155	158	161	163	166	169	28
Industrial	201	205	209	213	217	221	225	229	233	237	241	40
Institutional	305	311	317	323	329	335	341	347	353	360	366	61
Total	1,112	1,134	1,156	1,178	1,200	1,223	1,245	1,267	1,289	1,311	1,333	221
Nonresidential Floor Area (1,000 sq. ft.) [2]												
Retail	219	223	228	232	236	241	245	249	254	258	263	44
Office	43	44	45	46	47	48	48	49	50	51	52	9
Industrial	128	131	133	136	138	141	143	146	148	151	153	25
Institutional	107	109	111	113	115	117	119	122	124	126	128	21
Total	497	507	517	527	537	546	556	566	576	586	596	99

[1] ESRI Business Analyst; TischlerBise analysis

[2] Source: Institute of Transportation Engineers, *Trip Generation*, 2021

FUNCTIONAL POPULATION

Both residential and nonresidential developments increase the demand on District services and facilities. To calculate the proportional share between residential and nonresidential demand on service and facilities, a functional population approach is used. The functional population approach allocates the cost of the facilities to residential and nonresidential development based on the activity of residents and workers in the district through the 24 hours in a day. As mentioned, the analysis uses the US Census Homedale CCD geography instead of the City of Homedale to provide a more accurate sample of the Fire District’s boundary.

Residents that do not work are assigned 20 hours per day to residential development and 4 hours per day to nonresidential development (annualized averages). Residents that work in the Homedale Rural Fire Protection District are assigned 14 hours to residential development and 10 hours to nonresidential development. Residents that work outside the district are assigned 14 hours to residential development, the remaining hours in the day are assumed to be spent outside of the district working. Inflow commuters are assigned 10 hours to nonresidential development. Based on the most recent functional population data (2020), residential development accounts for 79 percent of the functional population, while nonresidential development accounts for 21 percent.

Figure 25. Homedale Rural Fire Protection District Functional Population

Homedale CCD (2020)			
		Demand Hours/Day	Person Hours
Residential			
Population*	4,376		
Residents Not Working	2,459	20	49,180
Employed Residents	1,917		
Employed in Homedale CCD	351	14	4,914
Employed outside Homedale CCD	1,566	14	21,924
			Residential Subtotal
			76,018
			Residential Share =>
			79%
Nonresidential			
Non-working Residents	2,459	4	9,836
Jobs Located in Homedale CCD	1,069		
Residents Employed in Homedale CCD	718	10	7,180
Non-Resident Workers (inflow commuters)	351	10	3,510
			Nonresidential Subtotal
			20,526
			Nonresidential Share =>
			21%
			TOTAL
			96,544

Source: U.S. Census Bureau, OnTheMap 6.1.1 Application and LEHD Origin-Destination Employment Statistics.

* Source: U.S. Census Bureau, 2020 American Community Survey 5-Year Estimates

VEHICLE TRIP GENERATION

RESIDENTIAL VEHICLE TRIPS ADJUSTMENT FACTORS

A vehicle trip end is the out-bound or in-bound leg of a vehicle trip. As a result, so as not to double count trips, a standard 50 percent adjustment is applied to trip ends to calculate a vehicle trip. For example, the out-bound trip from a person’s home to work is attributed to the housing unit and the trip from work back home is attributed to the employer.

However, an additional adjustment is necessary to capture District residents’ work bound trips that are outside of the district. The trip adjustment factor includes two components. According to the National Household Travel Survey, home-based work trips are typically 31 percent of out-bound trips (which are 50 percent of all trip ends). Also, utilizing the most recent data from the Census Bureau's web application "OnTheMap", 82 percent of Homedale CCD workers travel outside the district for work. In combination, these factors account for 13 percent of additional production trips ($0.31 \times 0.50 \times 0.82 = 0.13$). Shown in Figure 26, the total adjustment factor for residential housing units includes attraction trips (50 percent of trip ends) plus the journey-to-work commuting adjustment (13 percent of production trips) for a total of 63 percent.

Figure 26. Residential Trip Adjustment Factor for Commuters

Employed Homedale Residents (2020)	1,917
Residents Working in Homedale (2020)	351
Residents Commuting Outside of Homedale for Work	1,566
Percent Commuting Out of Homedale	82%
Additional Production Trips	13%
Standard Trip Adjustment Factor	50%
Residential Trip Adjustment Factor	63%

Source: U.S. Census, OnTheMap Application, 2020

NONRESIDENTIAL VEHICLE TRIPS

Vehicle trip generation for nonresidential land uses are calculated by using ITE’s average daily trip end rates and adjustment factors found in their recently published 11th edition of *Trip Generation*. To estimate the trip generation in the Homedale Rural Fire Protection District, the weekday trip end per 1,000 square feet factors listed in Figure 27 are used.

Figure 27. Institute of Transportation Engineers Nonresidential Factors

Employment Industry	ITE Code	Land Use	Demand Unit	Wkdy Trip Ends per Dmd Unit	Wkdy Trip Ends per Employee
Retail	820	Shopping Center	1,000 Sq Ft	37.01	17.42
Office	710	General Office	1,000 Sq Ft	10.84	3.33
Industrial	110	Light Industrial	1,000 Sq Ft	4.87	3.10
Institutional	610	Hospital	1,000 Sq Ft	10.77	3.77

Source: *Trip Generation*, Institute of Transportation Engineers, 11th Edition (2021)

For nonresidential land uses, the standard 50 percent adjustment is applied to office, industrial, and institutional. A lower vehicle trip adjustment factor is used for retail 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 their way home from work, the convenience store is not their primary destination.

In Figure 28, the Institute for Transportation Engineers’ land use code, daily vehicle trip end rate, and trip adjustment factor is listed for each land use.

Figure 28. Daily Vehicle Trip Factors

Land Use	ITE Codes	Daily Vehicle Trip Ends	Trip Adj. Factor	Daily Vehicle Trips
Residential (per housing unit)				
Single Family	210	9.43	65%	6.13
Multifamily	220	6.74	65%	4.38
Nonresidential (per 1,000 square feet)				
Retail	820	37.01	38%	14.06
Office	710	10.84	50%	5.42
Industrial	110	4.87	50%	2.44
Institutional	610	10.77	50%	5.39

Source: *Trip Generation*, Institute of Transportation Engineers, 11th Edition (2021); *National Household Travel Survey*, 2009

VEHICLE TRIP PROJECTIONS

The base year vehicle trip totals and vehicle trip projections are calculated by combining the vehicle trip end factors, the trip adjustment factors, and the residential and nonresidential assumptions for housing stock and floor area. Districtwide, residential land uses account for 11,714 vehicle trips and nonresidential land uses account for 4,201 vehicle trips in the base year (Figure 29).

Through 2033, it is projected that daily vehicle trips will increase by 3,112 trips with the majority of the growth being generated by single family (63 percent) and retail (20 percent) development which leads to a 20 percent increase in vehicle trips from the base year through 2033.

Figure 29. Homedale Rural Fire Protection District Vehicle Trip Projections

Homedale Rural Fire Protection District	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
Residential Trips												
Single Family	11,476	11,674	11,870	12,066	12,262	12,458	12,654	12,850	13,046	13,242	13,438	1,963
Multifamily	238	269	300	332	363	395	426	458	489	521	552	314
Subtotal	11,714	11,943	12,170	12,398	12,625	12,853	13,080	13,308	13,535	13,763	13,990	2,277
Nonresidential Trips												
Retail	3,080	3,142	3,203	3,264	3,325	3,386	3,447	3,509	3,570	3,631	3,692	612
Office	235	239	244	249	253	258	263	267	272	277	281	47
Industrial	312	318	324	330	337	343	349	355	361	368	374	62
Institutional	575	586	598	609	621	632	643	655	666	678	689	114
Subtotal	4,201	4,285	4,369	4,452	4,536	4,619	4,702	4,786	4,869	4,953	5,036	835
Vehicle Trips												
Grand Total	15,915	16,228	16,539	16,850	17,161	17,472	17,783	18,094	18,404	18,715	19,026	3,112

Source: Institute of Transportation Engineers, *Trip Generation*, 11th Edition (2021)

Figure 30. Homedale CCD Census Map

