Transportation Capital Expansion Fee Study

Submitted to:
City of Fort Collins, Colorado

August 21, 2025

Prepared by:

4701 Sangamore Road
Suite S240
Bethesda, Maryland 20816
800.424.4318
www.tischlerbise.com

[Page Intentionally left blank]

Transportation Capital Expansion Fee Study

City of Fort Collins, Colorado

[Page Intentionally left blank]

EXECUTIVE SUMMARY

The City of Fort Collins currently collects Transportation Capital Expansion Fee (TCEF) based on a 2017 study completed by TischlerBise. The City has retained TischlerBise to update its TCEF program.

The updated TCEF study uses a combination of incremental expansion and plan-based methodologies to provide improvements for all modes of travel. Figure 1 provides an overview of the methodology and cost components used in the Fort Collins study.

Figure 1. TCEF Methods and Cost Components

Types of Improvement	Cost Allocation	Service Area	Cost Recovery	Incremental Expansion	Plan-Based
Capacity Roadway Expansion	Vehicle Miles of Travel (VMT)	Citywide	-	Roadway Capacity	-
Active Modes	Person and Jobs	Citywide	-	-	Bike Lanes, Ped/Bike Intersections, Signals

Transportation Capital Expansion Fees by Type of Land Use

As documented in this report, the City of Fort Collins has complied with applicable legal precedents and Colorado's Impact Fee enabling legislation (discussed below). The TCEF schedule is proportionate and reasonably related to the cost of capital improvements needed to accommodate new development. Specific costs have been identified using local data and current dollars. With input from City staff, TischlerBise determined demand indicators for transportation capacity and calculated proportionate share factors to allocate costs by type of development. The TCEF methodology also identifies the extent to which new development is entitled to various types of credits to avoid potential double payment of growth-related capital costs.

Figure 2 shows the maximum supportable TCEF schedules. For residential development, updated amounts are based on a revised fee schedule structure. The updated structure adjusts the size groupings to be consistent with the Larimier County TCEF fee schedule and adds three housing types (single family detached, single family attached, and multifamily). Assessing the TCEF by housing type (along with square footage) improves the proportionality and equity of the fee program.

For nonresidential development, TCEFs are stated per thousand square feet of floor area, using three broad categories. The TCEF schedule for nonresidential development is designed to provide a reasonable fee amount for general types of development.

Active modes improvements and expansions were included in the 2017 analysis. There has been further emphasis on active modes and to provide further clarity the maximum supportable fee schedule is broken down by roadway capacity and active modes.

Lastly, given that much of this study was completed in 2023 and based on the inventory of data at that time, an inflationary factor is applied to align with 2025 costs. Consistent with the City's annual inflation adjustment applied during the interim years between TCEF study updates, the inflationary factor applied

to the results is the Engineering News-Record (ENR) Denver Construction Cost Index (CCI). Between August 2023 and August 2025, the CCI has decreased by 1.9 percent. The negative inflation (or deflation) factor has been incorporated to account for the overall decrease in infrastructure construction costs during the study period.

Figure 2. Maximum Supportable TCEF

Square Feet of Finished Living Space	Roadway Capacity	Active Modes	Maximum Supportable Fee	Current Fees	Increase/ Decrease
Single Family Detached (per dwelling unit)					
less than 900	$3,307	$729	**$4,036**	$2,958	$1,078
901 to 1,300	$5,374	$791	**$6,165**	$5,493	$672
1,301 to 1,800	$6,934	$885	**$7,819**	$7,133	$686
1,801 to 2,400	$8,323	$965	**$9,288**	$8,341	$947
2,401 to 3,000	$9,472	$1,037	**$10,509**	$8,941	$1,568
3,001 to 3,600	$10,384	$1,093	**$11,477**	$8,941	$2,536
over 3,601	$11,143	$1,137	**$12,280**	$8,941	$3,339
Single Family Attached (per dwelling unit)					
less than 900	$2,524	$579	**$3,103**	$2,958	$145
901 to 1,300	$4,105	$666	**$4,771**	$5,493	($722)
1,301 to 1,800	$5,291	$795	**$6,086**	$7,133	($1,047)
1,801 to 2,400	$6,351	$909	**$7,260**	$8,341	($1,081)
2,401 to 3,000	$7,232	$1,012	**$8,244**	$8,941	($697)
3,001 to 3,600	$7,926	$1,090	**$9,016**	$8,941	$75
over 3,601	$8,509	$1,153	**$9,662**	$8,941	$721
Multifamily/ADU (per dwelling unit)					
Up to 750	$1,559	$464	**$2,023**	$2,958	($935)
751 to 1,300	$2,538	$650	**$3,188**	$5,493	($2,305)
Over 1,300	$3,276	$719	**$3,995**	$7,133	($3,138)

Development Type	Roadway Capacity	Active Modes	Maximum Supportable Fee	Current Fees	Increase/ Decrease
Nonresidential (per 1,000 square feet)					
Commercial	$10,859	$795	**$11,654**	$10,885	$769
Office & Other Services	$6,341	$1,217	**$7,558**	$8,019	($461)
Industrial	$2,849	$1,068	**$3,917**	$2,588	$1,329

GENERAL IMPACT FEE REQUIREMENTS

For local governments, the first step in evaluating funding options for transportation improvements is to determine basic options and requirements established by state law. Some states have more conservative legal parameters that basically restrict local government to specifically authorized actions. In contrast, "home-rule" states grant local governments broader powers that may or may not be precluded or preempted by state statutes depending on the circumstances and on the state's particular laws. Home rule municipalities in Colorado, like Fort Collins, have the authority to impose impact fees based on both their home rule power granted in the Colorado Constitution and the impact fee enabling legislation enacted in 2001 by the Colorado General Assembly.

Impact fees (also known as capital expansion fees) are one-time payments imposed on new development that must be used solely to fund growth-related capital projects, typically called "system improvements". An impact fee represents new growth's proportionate share of capital facility needs. In contrast to project-level improvements, impact fees fund infrastructure that will benefit multiple development projects, or even the entire service area, as long as there is a reasonable relationship between the new development and the need for the growth-related infrastructure. Project-level improvements, typically specified in a development agreement, are usually limited to transportation improvements near a proposed development, such as ingress/egress lanes.

According to Colorado Revised Statute Section 29-20-104.5, impact fees must be legislatively adopted at a level no greater than necessary to defray impacts generally applicable to a broad class of property. The purpose of impact fees is to defray capital costs directly related to proposed development. The statutes of other states allow impact fee schedules to include administrative costs related to impact fees and the preparation of capital improvement plans, but this is not specifically authorized in Colorado's statute. Impact fees do have limitations, and should not be regarded as the total solution for infrastructure funding. Rather, they are one component of a comprehensive portfolio to ensure adequate provision of public facilities. Because system improvements are larger and more costly, they may require bond financing and/or funding from other revenue sources. To be funded by impact fees, Section 29-20-104.5 requires that the capital improvements must have a useful life of at least five years. By law, impact fees can only be used for capital improvements, not operating or maintenance costs. Also, development impact fees cannot be used to repair or correct existing deficiencies in existing infrastructure.

Impact Fee Methodologies

In contrast to project-level improvements, impact fees fund growth-related infrastructure that will benefit multiple development projects, or the entire jurisdiction (referred to as system improvements). There are three general methods for calculating one-time charges for public facilities needed to accommodate new development. The choice of a particular method depends primarily on the timing of infrastructure construction (past, concurrent, or future) and service characteristics of the facility type being addressed. Each method 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 infrastructure costs for new development 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, TCEF calculations can become quite complicated because of many variables involved in defining the relationship between development and the need for facilities within the designated service area. The following sections discuss three basic methods.

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 method documents current level-of-service (LOS) standards for each type of public facility, using both quantitative and qualitative measures. New development is only paying its proportionate share for growth-related infrastructure needed to maintain current standards. Revenue will be used to expand or provide additional facilities, as needed to keep pace with new development.

PLAN-BASED (FUTURE IMPROVEMENTS)

The plan-based method allocates costs for a specified set of improvements to a specified amount of development. Improvements are typically identified in a capital improvements plan and development potential is identified by land use assumptions. There are two options for determining the cost per service unit: 1) total cost of a public facility can be divided by total service units (average cost), or 2) the growth-share of the capital facility cost can be divided by the net increase in service units over the planning timeframe (marginal cost).

CREDITS

Regardless of the methodology, a consideration of "credits" is integral to a legally defensible impact fee study. There are two types of "credits" with specific characteristics, both of which should be addressed in studies and ordinances.

First, a revenue credit might be necessary if there is a double payment situation and other revenues are contributing to the capital costs of infrastructure to be funded by TCEF revenue. This type of credit is integrated into the TCEF calculation, thus reducing the gross amount. In contrast to some studies that only provide general costs, with credits at the back-end of the analysis, Fort Collins's transportation TCEF update uses growth shares to provide an up-front reduction in total costs. Also, the update provides TCEF revenue projections to verify that new development will fully fund the growth cost of future infrastructure (i.e., only TCEF revenue will pay for growth costs).

Second, a site-specific credit or developer reimbursement might be necessary for dedication of land or construction of system improvements to be funded by TCEF revenue. This type of credit is addressed in the administration and implementation of the TCEF program.

TRANSPORTATION CAPITAL EXPANSION FEE – ROADWAY CAPACITY COMPONENT

The City of Fort Collins Transportation Capital Expansion Fees (TCEF) are calculated using an incremental approach for roadway capacity improvements. Transportation improvements that provide additional vehicular capacity, account for approximately 89 percent of the growth-related cost in the analysis while active modes represent 11 percent.

The roadway capacity component of the TCEF is derived from custom trip generation rates (see Appendix A – Land Use Assumptions), trip rate adjustment factors, and the capital cost per vehicle miles of travel (VMT). The latter is a function of average trip length, trip-length weighting factor by type of development, and the growth cost of transportation improvements.

Existing Levels of Service for Transportation

There are currently 497 lane miles of arterial streets in the City of Fort Collins. The steps to calculate the current level of service for the City's arterial street network involve calibrating existing development to the system network. To do so, development units by type are multiplied by adjusted vehicle trip ends per development unit. The factors used to calculate the current level of service expressed in vehicle miles of travel (VMT) are discussed below, and shown in Figure 5 after the discussion.

VEHICLE MILES OF TRAVEL

VMT is a measurement unit equal to one vehicle traveling one mile[1]. In the aggregate, VMT is the product of vehicle trips multiplied by the average trip length. For the TCEF update, the average trip length is calibrated to lane miles of existing City arterials within Fort Collins.

TRIP GENERATION RATES

The TCEF update is based on average weekday vehicle trip ends (AWVTE). For residential development, trip rates are customized using demographic data for Fort Collins, as documented in Appendix A – Land Use Assumptions. For nonresidential development, trip generation rates are from the reference book Trip Generation published by the Institute of Transportation Engineers (ITE 11th Edition, 2021). A vehicle trip end represents a vehicle either entering or exiting a development (as if a traffic counter were placed across a driveway). To calculate transportation fees, trip generation rates require an adjustment factor to avoid double counting each trip at both the origin and destination points. Therefore, the basic trip adjustment factor is 50 percent for industrial, institutional, and office development. As discussed further below, the TCEF methodology includes additional adjustments to make the fees proportionate to the infrastructure demand for particular types of development.

[1] Typical VMT calculations for development-specific traffic studies, along with most transportation models of an entire urban area, are derived from traffic counts on particular road segments multiplied by the length of that road segment. For the purpose of the TCEF study, VMT calculations are based on attraction (inbound) trips to development located in the service area, with trip length limited to the road network considered to be system improvements (arterials and collectors). This refinement eliminates pass-through or external- external trips, and travel on roads that are not system improvements (e.g., state highways).

Adjustment for Pass-By Trips

For retail development, the trip adjustment factor is less than 50 percent because such development attract vehicles as they pass by on arterial 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 indicates that 25 percent of the vehicles that enter are passing by on their way to some other primary destination. The remaining 75 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 75 percent multiplied by 50 percent, or approximately 38 percent of the trip ends.

Trip Length Weighting Factor by Type of Land Use

The transportation fee methodology includes a percentage adjustment, or weighting factor, to account for trip length variation by type of land use. TischlerBise derived the weighting factors using household survey results provided by North Front Range Metropolitan Planning Organization (NRFMPO, 2010). As shown in Figure 3, trips associated with residential development are approximately 110 percent of the average trip length. Conversely, trips associated with commercial development (i.e., retail and restaurants) are approximately 66 percent of the average trip length while other nonresidential development typically accounts for trips that are 100 percent of the average for all trips.

Figure 3. Average Trip Length by Trip Purpose in North Front Range

Type of Development	Trip Purpose	Trips	Average Miles Per Trip	Weighting Factor	
1-Residential	All other at home activities	4,920	5.30	3.469	
1-Residential	Dropped off passenger	566	4.36	0.328	
1-Residential	Picked up passenger	557	3.47	0.257	
1-Residential	Indoor recreation/entertainment	516	4.80	0.330	
1-Residential	Change transportation mode	354	9.37	0.441	
1-Residential	Outdoor recreation/entertainment	254	6.60	0.223	
1-Residential	Service private vehicle	160	5.44	0.116	
1-Residential	Working at home	127	4.06	0.069	
1-Residential	Loop Trip and Other travel related	55	2.71	0.020	
1-Residential	School at home	7	2.03	0.002	
1-Residential Total		***7,516***		***5.255***	***1.10***
2-Retail/Restaurant	Routine shopping	1,236	2.76	1.571	
2-Retail/Restaurant	Eat meal outside home	577	3.10	0.824	
2-Retail/Restaurant	Other	180	5.37	0.445	
2-Retail/Restaurant	Major purchase / specialty item	91	6.15	0.258	
2-Retail/Restaurant	Drive through	88	1.80	0.073	
2-Retail/Restaurant Total		***2,172***		***3.170***	***0.66***
3-Other Nonresidential	Attend a class	790	2.59	0.756	
3-Other Nonresidential	Work/business related	618	8.48	1.937	
3-Other Nonresidential	Errands (bank, dry cleaning, etc.)	475	2.34	0.411	
3-Other Nonresidential	Personal business (attorney, accountant)	241	5.50	0.490	
3-Other Nonresidential	Health care	224	6.39	0.529	
3-Other Nonresidential	Civic/religious	196	5.13	0.372	
3-Other Nonresidential	Other activities at school	92	3.72	0.126	
3-Other Nonresidential	All other activities at work	70	5.82	0.151	
3-Other Nonresidential Total		***2,706***		***4.771***	***1.00***
		TOTAL 12,394	4.784		

Data Source: Table R-27, NFRMPO Household Survey, 2010. Analysis excludes "Visit friends/relatives" because the average distance of 22.43 miles traveled is an outlier, approximately four times the overall average. "Work/job" travel was also excluded because trip origns and destinations can not be allocated between residential and type of nonresidential development.

Lane Capacity

The TCEF roadway capacity component is based on established daily per lane capacities for arterial roads. According to City staff, arterial roads were established to have a daily per lane capacity of 7,700, assuming 12 feet travel lanes, with no additional shoulder width, in an urban area.

Average Vehicle Trip Length

The City of Fort Collins recently completed a travel diary study which surveyed residents on their daily travel including modes, distance, and purpose. Based on the results of the study, the average vehicle trip length in Fort Collins is 4.90 miles.

Origin & Destination Trip Analysis

Lastly, there is a demand on Fort Collins transportation network that is not associated with any development within city limits. Specifically, there are vehicle trips that originate and end outside of Fort Collins. The nature of these trips means there is a demand that is not Fort Collins growth-related thus not eligible for TCEF funding. Therefore, TischlerBise partnered with transportation engineers at Felsburg Holt & Ullevig to identify the thru-trips (external – external) in Fort Collins. Based on analysis of the Fort Collins travel demand model, seven percent of trips were identified as external – external. As a result, a seven percent reduction is included in the demand calculation.

Figure 4. Origin & Destination Trip Analysis

Origin/Destination	Internal	External
Internal	50%	15%
External	28%	7%

Source: Felsburg Holt & Ullevig analysis of Fort Collins travel demand model

Development Prototypes and Projected Vehicle Miles of Travel

The relationship between the amount of development within Fort Collins and vehicle miles of travel (VMT) is documented in Figure 5. In the table below DU means dwelling unit; KSF means 1,000 square feet of nonresidential development; Institute of Transportation Engineers is abbreviated ITE; VTE means vehicle trip ends. Trip generation rates by bedroom range are documented in Appendix A – Land Use Assumptions.

Projected development over the next ten years and the corresponding need for additional lane miles is shown in the lower section of Figure 5. Fort Collins has a current infrastructure standard of 1.62 arterial lane miles per 10,000 VMT. Based on the detailed demand factors and projected growth, VMT is projected to increase from 3.06 million to 3.5 million over the next ten years (or 14 percent). To accommodate projected development over the next ten years, Fort Collins will need 57.6 additional lane miles of complete streets to maintain current levels of service.

Figure 5. Projected VMT Increase to Development within Fort Collins

Development Type	*Weekday VTE*	*Development Unit*	*Primary Trip Adjustment*	*Trip Length Wtg Factor*
Single Family Units	9.48	DU	58%	1.10
Multifamily Units	6.12	DU	58%	1.10
Commercial	37.01	KSF	38%	0.66
Office & Other Services	10.84	KSF	50%	1.00
Industrial	4.87	KSF	50%	1.00

Avg Trip Length (miles) [1] 4.90

Vehicle Capacity Per Lane 7,700

		5-Year Increment						
Fort Collins Travel Model	**Base Year 2023**	**1 2024**	**2 2025**	**3 2026**	**4 2027**	**5 2028**	**10 2033**	**10-Year Increase**
Single Family Units	47,183	47,769	48,354	49,009	49,663	50,318	54,271	7,087
Multifamily Units	25,406	26,087	26,768	27,529	28,291	29,052	33,649	8,243
Commercial KSF	10,024	10,060	10,097	10,135	10,173	10,211	10,393	370
Office & Other Services KSF	21,999	22,215	22,430	22,627	22,823	23,019	23,950	1,951
Industrial KSF	10,944	10,979	11,014	11,049	11,083	11,117	11,378	434
Single Family Trips	259,433	262,651	265,870	269,469	273,068	276,667	298,402	38,969
Multifamily Trips	90,183	92,599	95,015	97,718	100,420	103,123	119,442	29,259
Commercial Trips	140,970	141,485	142,000	142,535	143,071	143,607	146,169	5,199
Office & Other Services Trips	119,232	120,403	121,573	122,637	123,700	124,764	129,808	10,576
Industrial Trips	26,650	26,735	26,820	26,904	26,987	27,071	27,706	1,057
Total Inbound Vehicle Trips	636,467	643,873	651,278	659,263	667,247	675,231	721,527	85,060
Vehicle Miles of Travel (VMT)	3,055,146	3,093,335	3,131,525	3,172,844	3,214,163	3,255,483	3,496,709	441,563
Arterial Lane Miles	497	502.0	507.0	512.4	517.8	523.2	554.6	57.6
						Ten-Year VMT Increase =>		**14%**

Capital Cost per Vehicle Miles of Travel

As indicated by the travel demand model above, there is a need for 57.6 new lane miles to continue providing the current level of service to projected future demand. Furthermore, seven percent of the demand on the Fort Collins transportation network is from external – external trips. As a result, 53.2 miles is attributed to future growth in Fort Collins (57.6 lane miles x [1 - 0.07] = 53.2 lane miles).

Additionally, Fort Collins staff estimates the construction cost of a new lane mile being $2,000,500. By combining the projected need in lane miles and cost per lane mile results in a growth-related capital cost per $107.5 million. Over the next ten years, there is a projected increase of 441,563 VMT. Comparing the growth-related capital cost and growth in VMT, the study finds a capital cost of $243.38 per VMT ($107,468,000 / 441,563 VMT = $243.38 per VMT, rounded).

Figure 6. Capital Cost per VMT

10-Year Need in Roadway Lane Miles	57.6
Lane Miles Attributed to External - External Trips (7%)	4.0
Fort Collins 10-Year Growth-Related Lane Miles	**53.6**

Construction Cost per Lane Mile	$2,005,000
Fort Collins Growth-Related Construction Cost	$107,468,000
10-Year Increase in Vehicle Miles Traveled (VMT)	441,563
Capital Cost per VMT	**$243.38**

Vehicle Trip Ends by Housing Type and Square Footage of Unit

The TCEF update includes adjusting the size groupings and adding three housing types into the residential fee schedule. The adjustment to size groupings is to be consistent with Larimier County's TCEF program along with improving the demand estimate for smaller and larger sized homes. The City is pursuing assessing the TCEF by housing type as well to further the proportionality of the fee and address equity concerns. Figure 7 summarizes the vehicle trip end rates for single family detached, single family attached, and multifamily development by square footage. Details on the calculations to estimate the vehicle trip ends can be found in Appendix A – Land Use Assumptions.

Figure 7. Vehicle Trip Ends for Residential Development

Vehicle Trip Ends per Unit				
Square Feet of Finished Living Space	SF Detached	SF Attached	Square Feet of Finished Living Space	Multifamily
less than 900	4.43	3.38	Up to 750	2.09
901 to 1,300	7.20	5.50	751 to 1,300	3.40
1,301 to 1,800	9.29	7.09	Over 1,300	4.39
1,801 to 2,400	11.15	8.51		
2,401 to 3,000	12.69	9.69		
3,001 to 3,600	13.91	10.62		
over 3,601	14.93	11.40		

Source: American Community Survey, Public Use Microdata; Trip Generation, Institute of Transportation Engineers, 11th Edition (2021); TischlerBise analysis

Revenue Credit Evaluation

A credit for other revenues is only necessary if there is potential double payment for system improvements. In Fort Collins, Road & Bridge Fund property taxes and gas tax revenue will be used for maintenance of existing facilities, correcting existing deficiencies, and for capital projects that are not TCEF system improvements. As shown later in Figure 9, TCEF revenue over the next ten years mitigates the growth-related share of the roadway capacity needs. Thus, there is no potential double payment from other revenues to fund the growth cost of roadway capacity projects.

Importantly, seven percent of the future need is attributed to external – external trips which represents $8 million. This is not attributed to Fort Collins development, thus, it is not eligible for TCEF funding nor is a credit necessary for the revenue. Fort Collins will have to identify other revenues (i.e., grants) to support this external cost.

Inflation Adjustment

Lastly, given that much of this study was completed in 2023 and based on the inventory of data at that time, an inflationary factor is applied to align with 2025 costs. Consistent with the City's annual inflation adjustment applied during the interim years between TCEF study updates, the inflationary factor applied to the results is the Engineering News-Record (ENR) Denver Construction Cost Index (CCI). Between August 2023 and August 2025, the CCI has decreased by 1.9 percent. The negative inflation (or deflation) factor has been incorporated to account for the overall change in infrastructure costs during the study period. Details on the CCI index can be found at the end of this report.

Input Variables for TCEF – Roadway Capacity

A summary of inputs for the roadway capacity component of the TCEF program are detailed in Figure 8. Residential fees are based on the housing type (single family detached, single family attached, and multifamily/ADU) and square footage of the dwelling unit. While there are three nonresidential development types in the fee schedule (consistent with the current Fort Collins TCEF schedule) which are assessed the fee based on 1,000 square feet of development.

Shown in Figure 8, unadjusted TCEF amount is found by multiplying the cost per VMT and VMT demand factor by land use type. The inflation factor (-1.90 percent) is applied to the unadjusted amount to find the maximum supportable fee. For example, the roadway component for a 2,200 square foot single family detached housing unit is $8,323 (34.86 VMT per unit x $243.38 per VMT x [1 - .019] = $8,323 per unit).

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 City may adopt fees that are less than the amounts shown. However, a reduction in TCEF revenue will necessitate an increase in other revenues, a decrease in planned capital expenditures, and/or a decrease in levels of service.

Figure 8. Maximum Supportable TCEF – Roadway Capacity

Fee Component	Cost per VMT
Roadway Capacity	$243.38
Gross Total	**$243.38**
Net Total	**$243.38**

Square Feet of Finished Living Space	VMT per Unit	Unadjusted TCEF (2025)	2023 Inflation Factor	Maximum Supportable Fee
Single Family Detached (per dwelling unit)				
less than 900	13.85	$3,371	-1.90%	$3,307
901 to 1,300	22.51	$5,478	-1.90%	$5,374
1,301 to 1,800	29.04	$7,068	-1.90%	$6,934
1,801 to 2,400	34.86	$8,484	-1.90%	$8,323
2,401 to 3,000	39.67	$9,655	-1.90%	$9,472
3,001 to 3,600	43.49	$10,585	-1.90%	$10,384
over 3,601	46.67	$11,359	-1.90%	$11,143
Single Family Attached (per dwelling unit)				
less than 900	10.57	$2,573	-1.90%	$2,524
901 to 1,300	17.19	$4,184	-1.90%	$4,105
1,301 to 1,800	22.16	$5,393	-1.90%	$5,291
1,801 to 2,400	26.60	$6,474	-1.90%	$6,351
2,401 to 3,000	30.29	$7,372	-1.90%	$7,232
3,001 to 3,600	33.20	$8,080	-1.90%	$7,926
over 3,601	35.64	$8,674	-1.90%	$8,509
Multifamily/ADU (per dwelling unit)				
Up to 750	6.53	$1,589	-1.90%	$1,559
751 to 1,300	10.63	$2,587	-1.90%	$2,538
Over 1,300	13.72	$3,339	-1.90%	$3,276

Development Type	VMT per KSF	Unadjusted TCEF (2025)	2023 Inflation Factor	Maximum Supportable Fee
Nonresidential (per 1,000 square feet)				
Commercial	45.48	$11,069	-1.90%	$10,859
Office & Other Services	26.56	$6,464	-1.90%	$6,341
Industrial	11.93	$2,904	-1.90%	$2,849

Revenue Projection from the Maximum Supportable Fee Amounts

This section summarizes the potential cash flow to the City of Fort Collin if the TCEF is 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 A – Land Use Assumptions.

At the top of Figure 9, the cost of growth over the next ten years is listed. The summary provides an indication of the TCEF revenue generated by new development. Since the residential fee schedule structure has been adjusted to account for housing type and square footage, the fee amounts used in the revenue projections are based on VMT averages for single family and multifamily units in Fort Collins. Shown at the bottom of the figure, the maximum supportable TCEF is estimated to generate $106 million in revenue compared to the inflation adjusted growth-related cost of $106 million and a total cost of $115.5 million. The remaining funding gap represents the external – external share of future demand on the transportation network.

Figure 9. Projected Revenue from Maximum Supportable TCEF – Roadway Capacity

Infrastructure Costs for Transportation Facilities

	Total Cost	Growth Cost	Inflation Adj. Cost
Roadway Capacity	$115,488,000	$107,468,000	$105,426,108
Total Expenditures	**$115,488,000**	**$107,468,000**	**$105,426,108**

Projected Development Impact Fee Revenue

Year		Single Family $9,472 per unit	Multifamily $2,538 per unit	Commercial $10,859 per KSF	Office $6,341 per KSF	Industrial $2,849 per KSF
		Housing Units	Housing Units	KSF	KSF	KSF
Base	2023	47,183	25,406	10,024	21,999	10,944
1	2024	47,769	26,087	10,060	22,215	10,979
2	2025	48,354	26,768	10,097	22,430	11,014
3	2026	49,009	27,529	10,135	22,627	11,049
4	2027	49,663	28,291	10,173	22,823	11,083
5	2028	50,318	29,052	10,211	23,019	11,117
6	2029	50,972	29,813	10,249	23,215	11,152
7	2030	51,627	30,575	10,287	23,412	11,186
8	2031	52,508	31,599	10,323	23,591	11,250
9	2032	53,389	32,624	10,358	23,770	11,314
10	2033	54,271	33,649	10,393	23,950	11,378
Ten-Year Increase		7,087	8,243	370	1,951	434
Projected Revenue		$67,131,272	$20,920,437	$4,014,456	$12,373,080	$1,236,356

Projected Revenue	**$105,676,000**
Total Expenditures	**$115,488,000**
Non-Impact Fee Funding	**$9,812,000**

TRANSPORTATION CAPITAL EXPANSION FEE – ACTIVE MODES COMPONENT

The City of Fort Collins TCEF are calculated using a plan-based approach for active mode expansions. Transportation improvements that provide additional vehicular capacity, account for approximately 89 percent of the growth-related cost in the analysis while active modes represent 11 percent.

The active modes component of the TCEF is based on the demand from residential and nonresidential development and is allocated based on the percentage of commuters who walk or bike to work. Person per housing unit and employee density factors are then applied to find the proportionate demand from the development types.

Active Modes Capital Plan

The 2022 Active Modes Plan is the guiding document for the capital expansion plans for bike and pedestrian infrastructure in Fort Collins. The Plan identified High, Medium, and Low priority/readiness projects needed in the coming future to address existing demand and future demand from development. Since the TCEF study examines infrastructure needs over the next ten years, City staff has advised that the high and medium project lists are a realistic plan over that planning horizon. Between the two lists there are 200 projects ranging from small spot treatments addressing signage and side paths to extensive separated bike lane expansion projects. Pages from the Plan listing the projects are provided in the appendix of this report.[2] Overall, the capital plans for active mode expansion totals $93,789,000 (adjusting for inflation) over the next ten years.

Persons per Housing Unit by Housing Type and Square Footage

The TCEF update includes adjusting the size groupings and adding three housing types into the residential fee schedule. The adjustment to size groupings is to be consistent with Larimier County's TCEF program along with improving the demand estimate for smaller and larger sized homes. The City is pursuing assessing the TCEF by housing type as well to further the proportionality of the fee and address equity concerns. Figure 10 summarizes the persons per housing unit (PPHU) for single family detached, single family attached, and multifamily development by square footage. Details on the calculations to estimate the PPHU can be found in Appendix A – Land Use Assumptions.

Figure 10. Persons per Housing Unit for Residential Development

Persons per Housing Unit				
Square Footage per Housing Unit	SF Detached	SF Attached	Square Footage per Housing Unit	Multifamily
900 and less	2.34	1.86	Up to 750	1.49
901 to 1,300	2.54	2.14	751 to 1,300	2.09
1,301 to 1,800	2.84	2.55	Over 1,300	2.31
1,801 to 2,400	3.10	2.92		
2,401 to 3,000	3.33	3.25		
3,001 to 3,600	3.51	3.50		
over 3,601	3.65	3.70		

Source: 2023 American Housing Survey, Division 8 (Mountain Region), U.S. Census Bureau; Economic & Planning Systems

[2] The Active Modes Plan can be found at https://www.fcgov.com/fcmoves/active-modes-plan.

Active Modes Capital Plan Cost Analysis

Based on the projected growth in demand on the Fort Collins transportation network, 14 percent ($13.1 million) of the total capital cost of the High and Medium priority projects in the Active Modes Plan is attributed to development over the next ten years. As shown in Figure 11, the cost is allocated to residential and nonresidential demand based on the data from the Travel Diary Study Report (2022). From the survey, 22 percent of commuters in Fort Collins use active modes to travel to work. This factor is used to allocate the active modes capital cost to nonresidential demand while the remaining 78 percent is allocated to residential demand. The allocated costs are compared to the 10-year projected increase in population and jobs to find capital cost per unit factors. For example, the capital cost per person is $317.46 ($13,130,508 x 78 percent / 32,262 population increase = $317.46 per person).

Figure 11. Active Modes Cost Analysis

High and Medium Priority Projects (2022)	$87,554,000
Inflation Since 2022 (ENR CCI)	7.12%
Current Estimated Cost	**$93,789,345**

Current Estimated Cost	$93,789,345
Growth-Share of Project List	14%
Growth-Related Cost of Active Modes Plan	**$13,130,508**

	Residential	*Nonresidential*
Proportionate Share [1]	78.0%	22.0%
Attributed Capital Cost	$10,241,796	$2,888,712
10-Year Population/Jobs Increase	32,262	7,580
Capital Cost per Person/Job	**$317.46**	**$381.12**

[1] Source: Fort Collins Travel Diary Study Report (2022)

Revenue Credit Evaluation

A credit for other revenues is only necessary if there is potential double payment for system improvements. In Fort Collins, there are general revenues and grants for maintenance of existing facilities and addressing existing demand. However, there are no other revenues available to address future demand on active mode infrastructure. As shown later in Figure 13, TCEF revenue over the next ten years mitigates the growth-related share of the active modes plan. Thus, there is no potential double payment from other revenues to fund the growth cost of active modes projects.

Inflation Adjustment

Lastly, given that much of this study was completed in 2023 and based on the inventory of data at that time, an inflationary factor is applied to align with 2025 costs. Consistent with the City's annual inflation adjustment applied during the interim years between TCEF study updates, the inflationary factor applied to the results is the Engineering News-Record (ENR) Denver Construction Cost Index (CCI). Between August 2023 and August 2025, the CCI has decreased by 1.9 percent. The negative inflation (or deflation) factor has been incorporated to account for the overall change in infrastructure costs during the study period. Details on the CCI index can be found at the end of this report.

Input Variables for TCEF – Active Modes

A summary of inputs for the active modes component of the TCEF program is detailed in Figure 12. Residential fees are based on the housing type and the square footage of the dwelling unit. While there are three nonresidential development types in the fee schedule (consistent with the current Fort Collins TCEF schedule).

Shown in Figure 12, the unadjusted TCEF amount is found by multiplying the cost per person/job and demand factor by land use type. The inflation factor (-1.90 percent) is applied to the unadjusted amount to find the maximum supportable fee. For example, the active modes component for a 2,200 square foot single family detached housing unit is $965 (3.10 persons per unit x $317.46 per person x [1 - .019] = $965 per unit).

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 City may adopt fees that are less than the amounts shown. However, a reduction in TCEF revenue will necessitate an increase in other revenues, a decrease in planned capital expenditures, and/or a decrease in levels of service.

Figure 12. Maximum Supportable TCEF – Active Modes

Fee Component	Cost per Person	Cost per Job
Active Modes	$317.46	$381.12
Gross Total	**$317.46**	**$381.12**
Net Total	**$317.46**	**$381.12**

Square Feet of Finished Living Space	Persons per Unit	Unadjusted TCEF (2025)	2023 Inflation Factor	Maximum Supportable Fee
Single Family Detached (per dwelling unit)				
less than 900	2.34	$743	-1.90%	$729
901 to 1,300	2.54	$806	-1.90%	$791
1,301 to 1,800	2.84	$902	-1.90%	$885
1,801 to 2,400	3.10	$984	-1.90%	$965
2,401 to 3,000	3.33	$1,057	-1.90%	$1,037
3,001 to 3,600	3.51	$1,114	-1.90%	$1,093
over 3,601	3.65	$1,159	-1.90%	$1,137
Single Family Attached (per dwelling unit)				
less than 900	1.86	$590	-1.90%	$579
901 to 1,300	2.14	$679	-1.90%	$666
1,301 to 1,800	2.55	$810	-1.90%	$795
1,801 to 2,400	2.92	$927	-1.90%	$909
2,401 to 3,000	3.25	$1,032	-1.90%	$1,012
3,001 to 3,600	3.50	$1,111	-1.90%	$1,090
over 3,601	3.70	$1,175	-1.90%	$1,153
Multifamily/ADU (per dwelling unit)				
Up to 750	1.49	$473	-1.90%	$464
751 to 1,300	2.09	$663	-1.90%	$650
Over 1,300	2.31	$733	-1.90%	$719

Development Type	Jobs per KSF	Unadjusted TCEF (2025)	2023 Inflation Factor	Maximum Supportable Fee
Nonresidential (per 1,000 square feet)				
Commercial	2.12	$810	-1.90%	$795
Office & Other Services	3.26	$1,241	-1.90%	$1,217
Industrial	2.86	$1,089	-1.90%	$1,068

Revenue Projection from the Maximum Supportable Fee Amounts

This section summarizes the potential cash flow to the City of Fort Collins if the TCEF is 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 A – Land Use Assumptions.

At the top of Figure 13, the cost of growth over the next ten years is listed. The summary provides an indication of the TCEF revenue generated by new development. Since the residential fee schedule structure has been adjusted to account for housing type and square footage, the fee amounts used in the revenue projections are based on persons per housing unit averages for single family and multifamily units in Fort Collins. Shown at the bottom of the figure, the maximum supportable TCEF is estimated to generate $13 million in revenue while there is a growth-related cost of $13 million, offsetting all growth-related costs. The remaining funding gap represents the existing demand in Fort Collins and will be funded through other revenues.

Figure 13. Projected Revenue from Maximum Supportable TCEF – Active Modes Component

	Total Cost	Growth Cost	Inflation Adj. Cost
Active Modes	$93,789,345	$13,130,508	$12,881,029
Total Expenditures	**$93,789,345**	**$13,130,508**	**$12,881,029**

Projected Development Impact Fee Revenue

Year		Single Family $791 per unit	Multifamily $539 per unit	Commercial $795 per KSF	Office $1,217 per KSF	Industrial $1,068 per KSF
		Housing Units	Housing Units	KSF	KSF	KSF
Base	2023	47,183	25,406	10,024	21,999	10,944
1	2024	47,769	26,087	10,060	22,215	10,979
2	2025	48,354	26,768	10,097	22,430	11,014
3	2026	49,009	27,529	10,135	22,627	11,049
4	2027	49,663	28,291	10,173	22,823	11,083
5	2028	50,318	29,052	10,211	23,019	11,117
6	2029	50,972	29,813	10,249	23,215	11,152
7	2030	51,627	30,575	10,287	23,412	11,186
8	2031	52,508	31,599	10,323	23,591	11,250
9	2032	53,389	32,624	10,358	23,770	11,314
10	2033	54,271	33,649	10,393	23,950	11,378
Ten-Year Increase		7,087	8,243	370	1,951	434
Projected Revenue		$5,606,282	$4,441,025	$293,903	$2,374,710	$463,471

Projected Revenue	**$13,179,000**
Total Expenditures	**$93,789,000**
Non-Impact Fee Funding	**$80,610,000**

INFLATION ADJUSTMENT FACTOR

The City of Fort Collins annually updates the TCEF fee schedule to account for inflation in construction costs. The inflationary factor used is the Engineering News-Record (ENR) Denver Construction Cost Index (CCI). The CCI compares the historical cost of construction labor, steel, cement, and lumber. Given that much of this study was completed in 2023 and based on the inventory of data at that time, an inflationary factor is applied to align with 2025 costs. Between August 2023 and August 2025, the CCI has decreased by 1.9 percent ([9,190 / 9,368] – 1 = -0.019). The negative inflation (or deflation) factor has been incorporated to account for the overall change in infrastructure costs during the study period.

Figure 14. Inflation Adjustment Factor

Inflation Factor	August '23	August '24	August '25	Change
Denver CCI Index	9,368	9,543	9,190	-1.90%

Source: Engineering News-Record

IMPLEMENTATION AND ADMINISTRATION

Development impact fees (in this case TCEF) should be periodically evaluated and updated to reflect recent data. Fort Collins has consistently annually updated the TCEF schedule based on local inflation data. If cost estimates or demand indicators change significantly, the City should redo the fee calculations.

Colorado's enabling legislation allows local governments to "waive an impact fee or other similar development charge on the development of low- or moderate-income housing, or affordable employee housing, as defined by the local government."

Credits and Reimbursements

A general requirement that is common to impact fee methodologies is the evaluation of credits. A revenue credit may be necessary to avoid potential double payment situations arising from one-time impact fees plus on-going payment of other revenues that may also fund growth-related capital improvements. The determination of revenue credits is dependent upon the impact fee methodology used in the cost analysis and local government policies.

Policies and procedures related to site-specific credits should be addressed in the resolution or ordinance that establishes the impact fees. Project-level improvements, required as part of the development approval process, are not eligible for credits against impact fees. If a developer constructs a system improvement included in the fee calculations, it will be necessary to either reimburse the developer or provide a credit against the fees due from that particular development. The latter option is more difficult to administer because it creates unique fees for specific geographic areas.

Based on national experience, TischlerBise typically recommends reimbursement agreements with developers that construct system improvements. The reimbursement agreement should be limited to a payback period of no more than ten years and the City should not pay interest on the outstanding balance. The developer must provide sufficient documentation of the actual cost incurred for the system improvement. The City should only agree to pay the lesser of the actual construction cost or the estimated cost used in the impact fee analysis. If the City pays more than the cost used in the fee analysis, there will be insufficient fee revenue for other capital improvements. Reimbursement agreements should only obligate the City to reimburse developers annually according to actual fee collections from the applicable Benefit District.

Citywide Service Area

The TCEF service area is defined as the entire incorporated area within Fort Collins. The infrastructure funded through the TCEF is citywide benefiting and can be attributed to demand throughout the city.

Expenditure Guidelines

Fort Collins will distinguish system improvements (funded by transportation capital expansion fees) from project-level improvements, such as local streets within a residential subdivision. TischlerBise recommends limiting transportation fee expenditures to arterials and collectors, and should be

consistent with Fort Collins City Code. System improvements that are eligible for transportation fee funding could include:

- Constructing an arterial or collector street.
- A carrying-capacity enhancement to existing arterials or collectors, such reconstruction to add greater street width, including additional vehicular travel lanes, bike lanes, and/or shoulders.
- Adding turn lanes, traffic signals, or roundabouts at the intersection of a State Highway with a City arterial or collector, or a City arterial with another City arterial or collector.

Development Categories

Proposed transportation fees for residential development are by square feet of finished living space, excluding unfinished basement, attic, and garage floor area. Appendix A provides further documentation of demographic data by size threshold.

The three general nonresidential development categories in the proposed TCEF schedule can be used for all new construction within the Service Area. Nonresidential development categories represent general groups of land uses that share similar average weekday vehicle trip generation rates, as documented in Appendix A.

- "Industrial" includes the processing or production of goods, along with warehousing, transportation, communications, and utilities.
- "Commercial" includes retail development and eating/drinking places, along with entertainment uses often located in a shopping center (i.e., movie theater).
- "Office & Other Services" includes offices, health care and personal services, business services (i.e., banks) and lodging. Public and quasi-public buildings that provide educational, social assistance, or religious services are also included in this category.

APPENDIX A – LAND USE ASSUMPTIONS

Development-related capital expansion 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 City 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. Thus, TischlerBise recommends that fees for residential development in Fort Collins be imposed according to persons per housing unit.

Based on housing characteristics, TischlerBise recommends using two housing unit categories for the TCEF study: (1) Single Family and (2) Multifamily. Each housing type has different characteristics which results in a different demand on City facilities and services. Figure 15 shows the US Census American Community Survey 2021 5-Year Estimates data for the City of Fort Collins. Single family units have a household size of 2.54 persons and multifamily units have a household size of 1.73 persons

Figure 15. Fort Collins Persons per Housing Unit

Units in Structure	Persons	House-holds	Persons per Household	Housing Units	Persons per Housing Unit	Housing Mix	Vacancy Rate
Single Family	115,988	44,342	2.62	45,625	**2.54**	65%	3%
Multifamily	42,457	22,862	1.86	24,496	**1.73**	35%	7%
Subtotal	158,445	67,204	2.36	70,121	2.26		4%
Group Quarters	8,197						
TOTAL	166,642						

Source: U.S. Census Bureau, 2021 5-Year Estimate American Community Survey
Single unit includes detached and attached (i.e. townhouse) and mobile homes

Base Year Population and Housing Units

The City of Fort Collins has provided its own 2023 base year household population estimate which is what will be used to calculate base year housing units.

Figure 16. Base Year Household Population

Fort Collins, CO	Base Year 2023
Household Population [1]	164,053

[1] Source: City of Fort Collins Population Estimate

In 2023, there are an estimated 72,590 housing units in Fort Collins. The housing mix and PPHU factors in Figure 15 are applied to the household population to estimate single family and multifamily units. Overall, single family housing is 65 percent of the total, while multifamily is 35 percent.

Figure 17. Base Year Housing Units

Fort Collins, CO	2023 Housing Units [1]
Single Family	47,183
Multifamily	25,406
Total	72,590

[1] Source: City of Fort Collins Population Estimate; PPHU Factors

However, recent trends over the last three years show multifamily housing growing at a greater rate than single family at 54 percent vs 46 percent of total housing growth respectively as shown in Figure 18. This is the trend that will be used for housing and population growth projections.

Figure 18. Building Permit History

Fort Collins, CO	2020-2023 Building Permits	Percent of Total
Single Family	1,104	46%
Multifamily	1,284	54%
Total	2,388	

Source: City of Fort Collins

In 2023, the household population in Fort Collins is estimated to be 164,053. To estimate the total residents, the group quarters population of 10,392 is applied to the household population. As a result, the 2023 population is estimated at 174,445 residents and will be used for housing and population projections.

Figure 19. Base Year Population

Fort Collins, CO	2023 Household Population	2023 Group Quarters Population	2023 Total Population
Population	164,053	10,392	174,445

Source: City of Fort Collins Population Estimate

Population and Housing Unit Projections

From the 2023 base year housing unit totals, there is a projected increase of 21 percent in housing stock over the next ten years. Following the trend that there is more multifamily development (54 percent) than single family development (46 percent), there is an estimated 8,243 multifamily units and 7,087 single family units projected. Population growth is assumed to continue with housing development based on the PPHU factors by housing type. As a result, there is a projected increase of 32,262 residents over the next ten years. This is an 18.5 percent increase from the base year, slightly lower than housing development at 21 percent since there is a shift in multifamily development and smaller household sizes.

Figure 20. Residential Development Projections

City of Fort Collins, CO	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
Population [1]	174,445	177,109	179,774	182,753	185,733	188,713	191,693	194,673	198,684	202,696	206,707	32,262
Percent Increase		*1.5%*	*1.5%*	*1.7%*	*1.6%*	*1.6%*	*1.6%*	*1.6%*	*2.1%*	*2.0%*	*2.0%*	*18.5%*
Housing Units [2]												
Single Family	47,183	47,769	48,354	49,009	49,663	50,318	50,972	51,627	52,508	53,389	54,271	7,087
Multifamily	25,406	26,087	26,768	27,529	28,291	29,052	29,813	30,575	31,599	32,624	33,649	8,243
Total	72,590	73,856	75,122	76,538	77,954	79,370	80,786	82,202	84,108	86,014	87,920	15,330

[1] Source: City of Fort Collins Population Estimate; Population growth is projected based on housing development and PPHU factors by type of home

[2] Source: Housing growth is projected based on housing development and PPHU factors

Current Employment and Nonresidential Floor Area

The impact fee study will include nonresidential development as well. Job estimates are from North Front Range MPO Traffic TAZ database. The model forecasts employment growth for the entire city from 2020 to 2045 in five-year increments. To find the total employment in the base year, 2023, a straight-line approach from 2020 to 2025 was used. Listed in Figure 21, 107,677 jobs are estimated in the City of Fort Collins. Nearly half the employment is in the office industry. However, retail, industrial, and institutional industries have a significant presence as well.

Figure 21. Base Year Employment by Industry

Employment Industries	Base Year 2023	Percent of Total
Industrial	17,181	16%
Institutional	17,433	16%
Retail	21,282	20%
Office	51,782	48%
Total Jobs	107,677	100%

Source: North Front Range MPO TAZ employment database

The base year nonresidential floor area for the industry sectors is calculated with the Institution of Transportation Engineers' (ITE) square feet per employee averages, Figure 22. For industrial the Light Industrial factors are used; for institutional the Hospital factors are used; for retail the Shopping Center factors are used; for office the General Office factors are used.

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
Industrial	110	Light Industrial	1,000 Sq Ft	1.57	637
Institutional	610	Hospital	1,000 Sq Ft	2.86	350
Retail	820	Shopping Center	1,000 Sq Ft	2.12	471
Office	710	General Office	1,000 Sq Ft	3.26	307

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

By combining the base year job totals and the ITE square feet per employee factors, the nonresidential floor area is calculated in Figure 23. There is an estimated total of 43 million square feet of nonresidential floor area in Fort Collins. The office and industrial industries account for almost two-thirds of the total floor area at 37 percent and 25 percent respectively, while retail accounts for 23 percent and institutional accounts for 14 percent of the total.

Figure 23. Base Year Nonresidential Floor Area

Employment Industries	Base Year Jobs [1]	Sq. Ft. per Job [2]	Base Year Floor Area (Sq. Ft.)
Industrial	17,181	637	10,944,355
Institutional	17,433	350	6,101,592
Retail	21,282	471	10,023,588
Office	51,782	307	15,896,963
Total	107,677		42,966,498

[1] Source: North Front Range MPO TAZ employment database
[2] Source: Trip Generation, Institute of Transportation Engineers, 11th Edition (2021)

Employment and Nonresidential Floor Area Projections

Based on the TAZ employment database, over the ten-year projection period, it is estimated that there will be an increase of 7,580 jobs. The majority of the increase comes from the office sector (58 percent); however, the institutional sector (23 percent) has a significant impact as well.

The nonresidential floor area projections are calculated by applying the ITE square feet per employee factors to the job growth. In the next ten years, the nonresidential floor area is projected to increase by 2.8 million square feet, a 6 percent increase from the base year. The office and institutional sectors have the greatest increase.

Figure 24. Employment and Nonresidential Floor Area Projections

City of Fort Collins, CO	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
Jobs [1]												
Industrial	17,181	17,236	17,291	17,345	17,399	17,453	17,507	17,560	17,661	17,762	17,862	681
Institutional	17,433	17,621	17,809	17,980	18,152	18,323	18,495	18,666	18,832	18,999	19,165	1,732
Retail	21,282	21,359	21,437	21,518	21,599	21,680	21,760	21,841	21,916	21,991	22,066	785
Office	51,782	52,271	52,760	53,204	53,648	54,091	54,535	54,979	55,374	55,768	56,163	4,381
Total Jobs	107,677	108,487	109,297	110,047	110,797	111,547	112,297	113,047	113,784	114,520	115,257	7,580
Nonresidential Floor Area (1,000 square feet) [2]												
Industrial	10,944	10,979	11,014	11,049	11,083	11,117	11,152	11,186	11,250	11,314	11,378	434
Institutional	6,102	6,167	6,233	6,293	6,353	6,413	6,473	6,533	6,591	6,650	6,708	606
Retail	10,024	10,060	10,097	10,135	10,173	10,211	10,249	10,287	10,323	10,358	10,393	370
Office	15,897	16,047	16,197	16,334	16,470	16,606	16,742	16,879	17,000	17,121	17,242	1,345
Total Floor Area	42,966	43,254	43,542	43,810	44,079	44,348	44,616	44,885	45,164	45,443	45,721	2,755

[1] Source: North Front Range MPO TAZ employment database

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

Vehicle Trip Generation

The following provides details on the vehicle trip generation rates used in the vehicle miles of travel (VMT) rates for development types and projections for needed roadway expansion. Additionally, details on the VMT factors can be found in the body of the report.

RESIDENTIAL TRIP GENERATION BY HOUSING UNIT SIZE (SQ. FT.)

As an alternative to simply using average trip generation rates for residential development by housing type, TischlerBise has derived custom trip rates using demographic data for Fort Collins. Key inputs needed for the analysis (i.e., average number of persons and vehicles available per housing unit) are available from the U.S. Census Bureau's American Community Survey (ACS).

As previously shown in Figure 15, Fort Collins averages 2.26 residents per housing unit. Single family includes detached and attached dwellings and manufactured housing. Duplexes and apartments are combined as multifamily. The average number of persons per housing unit in Fort Collins will be compared to national averages derived from traffic studies tabulated by the Institute of Transportation Engineers (ITE). Trip generation rates are also dependent upon the average number of vehicles available per dwelling. Figure 25 indicates vehicles available by housing type within Fort Collins. As expected, single family housing has more vehicles available per dwelling (1.95) than multifamily housing (1.67).

Figure 25. Vehicles Available per Housing Unit

Tenure	Vehicles Available [1]	Single Family [2]	Multifamily [2]	Total	Vehicles per Household
Owner-occupied	74,579	33,116	2,493	35,609	2.09
Renter-occupied	55,237	11,226	20,369	31,595	1.75
Total	129,816	44,342	22,862	67,204	1.93

Housing Type	Vehicles Available	Housing Units [3]	Vehicles per Housing Unit
Single Family	88,984	45,625	1.95
Multifamily	40,832	24,496	1.67
Total	129,816	70,121	**1.85**

[1] Vehicles available by tenure from Table B25046, American Community Survey, 2021
[2] Households by tenure and units in structure from Table B25032, ACS, 2021
[3] Housing units from Table B25024, ACS, 2021

Custom tabulations of demographic data by bedroom range can be created from individual survey responses provided by the U.S. Census Bureau, in files known as Public Use Microdata Samples (PUMS). Because PUMS files are available for areas of roughly 100,000 persons, Fort Collins is included in Public Use Microdata Area (PUMA) 103 that covers the northern portion of Larimer County. At the top of Figure 26 with yellow shading indicates the survey results, which yield the unadjusted number of persons and vehicles available per dwelling. These multipliers are adjusted to match the control totals for Fort Collins, as documented in Figure 15 and Figure 25.

In comparison to the national averages based on ITE traffic studies, Fort Collins has fewer persons per dwelling, but a greater number of vehicles available per dwelling. Rather than rely on one methodology,

the recommended multipliers shown below with grey shading and bold numbers are an average of trip rates based on persons and vehicles available (all types of housing units combined). In Fort Collins, the average housing unit is estimated to yield an 8.40 average weekday vehicle trip ends (AWVTE).

Figure 26. Average Weekday Vehicle Trips Ends by Bedroom Range

Fort Collins 2021 Data

Bedroom Range	Persons[1]	Vehicles Available[1]	Housing Units[1]	Housing Mix	Unadjusted Persons/HU	Adjusted Persons/HU[2]	Unadjusted VehAvl/HU	Adjusted VehAvl/HU[2]
0-1	457	386	388	8.6%	1.18	1.17	0.99	0.97
2	1,885	1,678	1,117	24.6%	1.69	1.68	1.50	1.47
3	3,585	3,217	1,542	34.0%	2.32	2.30	2.09	2.05
4+	4,410	3,630	1,487	32.8%	2.97	2.94	2.44	2.39
Total	10,337	8,911	4,534		2.28	2.26	1.97	1.93

National Averages According to ITE (Trip Generation Manual, 11th Edition, 2021)

ITE Code	AWVTE per Person	AWVTE per Vehicle Available	AWVTE per Household	Housing Mix	Persons per Household	Veh Avl per Household
221 Apt	1.84	5.10	4.54	35%	2.47	0.89
210 SFD	2.65	6.36	9.43	65%	3.56	1.48
Wgtd Avg	2.37	5.92	7.72		3.18	1.27

Recommended AWVTE per Dwelling Unit by Bedroom Range

Bedroom Range	AWVTE per HU Based on Persons[3]	AWVTE per HU Based on Vehicles Available[4]	AWVTE per Housing Unit[5]
0-1	2.77	5.74	**4.26**
2	3.98	8.70	**6.34**
3	5.45	12.14	**8.80**
4+	6.97	14.15	**10.56**
Total	5.36	11.43	**8.40**

1. American Community Survey, Public Use Microdata Sample for CO PUMA 00103 (2017-2021 5-Year).
2. Adjusted multipliers are scaled to make the average PUMS values match control totals for Fort Collins, based on American Community Survey (2017-2021 5-Year).
3. Adjusted persons per housing unit multiplied by national weighted average trip rate per person.
4. Adjusted vehicles available per housing unit multiplied by national weighted average trip rate per vehicle available.
5. Average of trip rates based on persons and vehicles available per housing unit.

AWVTE per Dwelling by House Type

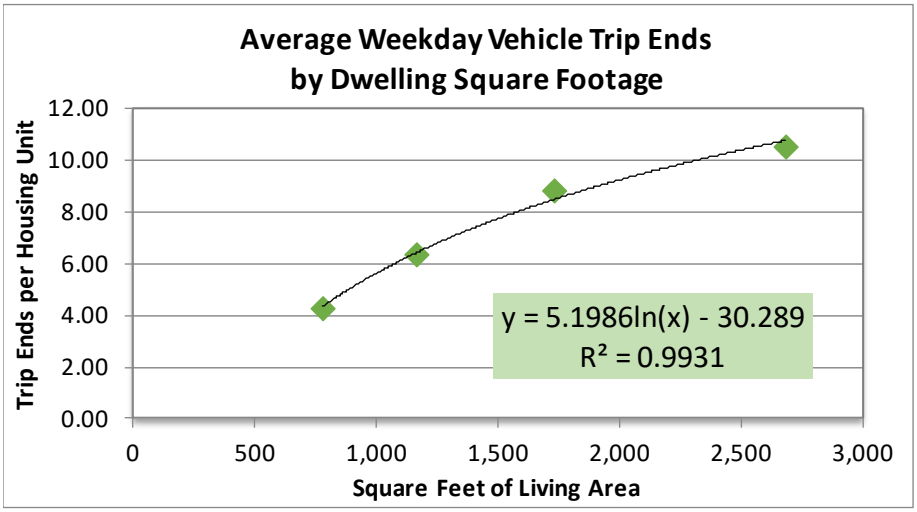
ITE Code	AWVTE per HU Based on Persons[3]	AWVTE per HU Based on Vehicles Available[4]	AWVTE per Housing Unit[5]	Fort Collins Persons/HU	Fort Collins VehAvl/HU
221 Apt	4.10	9.89	7.00	1.73	1.67
210 SFD	6.02	11.54	8.78	2.54	1.95
All Types	5.36	11.44	8.40	2.26	1.93

To derive average weekday vehicle trip ends by dwelling size, TischlerBise matched trip generation rates and average floor area, by bedroom range, as shown in Figure 27. Floor area averages were calculated with certificate of occupancies issued from 2020 through 2022. The logarithmic trend line formula is derived from the four actual averages in Fort Collins. The trend line is then used to derive estimated trip ends by dwelling size thresholds. For example, the vehicle trip ends for a housing unit less than 900 square feet is 3.77.

Figure 27. Residential Vehicle Trip Ends by Dwelling Size

Actual Averages per Hsg Unit			*Fitted-Curve Values*	
Bedrooms	*Square Feet*	*Trip Ends*	*Sq Ft Range*	*Trip Ends*
0-1	781	4.26	less than 900	3.77
2	1,162	6.34	901 to 1,300	6.12
3	1,729	8.80	1,301 to 1,800	7.90
4+	2,684	10.56	1,801 to 2,400	9.48
			2,401 to 3,000	10.79
			3,001 to 3,600	11.83
			over 3,601	12.70

Unit size ranges are based on current fee schedule and consistent with residential certificates of occupancy issued from 2020-2022. Average weekday vehicle trip ends per housing unit are derived from 2021 ACS PUMS data for the area that includes Fort Collins.



Importantly, the vehicle trip ends in Figure 27 are for all housings units in Fort Collins. The City is pursuing assessing the TCEF by housing types, along with square footage. Thus, further analysis is required and completed below.

Custom vehicle trip end rates for all existing single family and multifamily units in Fort Collins are listed in Figure 28. The calibrating factor for the housing types are found by comparing the trip rates by to the overall average in Fort Collins. As a result, single family housing units are 118 percent of the city average and multifamily housing units are 56 percent of the city average. These calibrating factors are applied to the citywide trip rates size groupings to estimate the trips rates for single family detached and multifamily units.

Figure 28. Single Family Detached and Multifamily Calibrating Factor

Housing Type	Local Trip Ends per Unit [1]	Calibrating Factor
Single Family	12.70	118%
Multifamily	6.00	56%
Fort Collins Average	10.80	

[1] Source: US Census American Community Survey; Trip Generation, Institute of Transportation Engineers, 11th Edition (2021); TischlerBise analysis

Furthermore, to calculate the single family attached trip end rates the ITE national averages for single family detached and single family attached are compared. Shown in Figure 29, single family attached units generate 76 percent of the single family detached units. This factor is applied to single family detached trip rates by size to estimate trip rates for single family attached units.

Figure 29. Single Family Attached Calibrating Factor

ITE Code	Land Use Group	Wkdy Trip Ends Per Dmd Unit
210	Single-Family Detached	9.43
215	Single-Family Attached	7.20

SF Attached Calibrating Factor ***76%***

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

Figure 30 summarizes the vehicle trip ends for single family detached, single family attached, and multifamily units by square footage by multiplying the citywide averages with the calibrating factors.

Figure 30. Vehicle Trip Ends by Housing Type and Square Footage

Vehicle Trip Ends per Unit				
Square Feet of Finished Living Space	SF Detached	SF Attached	Square Feet of Finished Living Space	Multifamily
less than 900	4.43	3.38	Up to 750	2.09
901 to 1,300	7.20	5.50	751 to 1,300	3.40
1,301 to 1,800	9.29	7.09	Over 1,300	4.39
1,801 to 2,400	11.15	8.51		
2,401 to 3,000	12.69	9.69		
3,001 to 3,600	13.91	10.62		
over 3,601	14.93	11.40		

Source: American Community Survey, Public Use Microdata; Trip Generation, Institute of Transportation Engineers, 11th Edition (2021); TischlerBise analysis

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 to not 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 City residents' work bound trips that are outside of the city. The trip adjustment factor includes two components. According to the National Household Travel Survey (2009), 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", 51 percent of Fort Collins workers travel outside the city for work. In combination, these factors account for 8 percent of additional production trips (0.31 x 0.50 x 0.51 = 0.08). Shown in Figure 31, the total adjustment factor for residential housing units includes attraction trips (50 percent of trip ends) plus the journey-to-work commuting adjustment (8 percent of production trips) for a total of 58 percent.

Figure 31. Residential Trip Adjustment Factor for Commuters

Employed Fort Collins Residents (2019)	73,469
Residents Working in the City (2019)	36,223
Residents Commuting Outside of the City for Work	37,246
Percent Commuting Out of the City	51%
Additional Production Trips	**8%**

Standard Trip Adjustment Factor	**50%**
Residential Trip Adjustment Factor	**58%**

Source: U.S. Census, OnTheMap Application, 2019

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 Fort Colins, the weekday trip end per 1,000 square feet factors highlighted in Figure 32 are used.

Figure 32. 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
Industrial	110	Light Industrial	1,000 Sq Ft	4.87	3.10
Retail	820	Shopping Center	1,000 Sq Ft	37.01	17.42
Office	710	General Office	1,000 Sq Ft	10.84	3.33

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

For retail development, the trip adjustment factor is less than 50 percent because such development attracts vehicles as they pass by on arterial 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 indicates that 25 percent of the vehicles that enter are passing by on their way to some other primary destination. The remaining 75 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 75 percent multiplied by 50 percent, or approximately 38 percent of the trip ends.

Persons per Housing Unit by Housing Type and Square Footage

In a parallel study, Economic & Planning Systems (EPS) is preparing an update to other capital expansion fees for the City of Fort Collins. In that effort, EPS has estimated the PPHU for the expanded size groupings and housing types based on an analysis of the 2023 American Housing Survey Mountain Region and calibrated it for Fort Collins. Figure 33 summarizes those PPHU factors.

Figure 33. Persons per Housing Unit by Housing Type and Square Footage

Persons per Housing Unit				
Square Footage per Housing Unit	SF Detached	SF Attached	Square Footage per Housing Unit	Multifamily
900 and less	2.34	1.86	Up to 750	1.49
901 to 1,300	2.54	2.14	751 to 1,300	2.09
1,301 to 1,800	2.84	2.55	Over 1,300	2.31
1,801 to 2,400	3.10	2.92		
2,401 to 3,000	3.33	3.25		
3,001 to 3,600	3.51	3.50		
over 3,601	3.65	3.70		

Source: 2023 American Housing Survey, Division 8 (Mountain Region), U.S. Census Bureau; Economic & Planning Systems

APPENDIX B – ACTIVE MODES PROJECT LISTS

Below are pages from the Fort Collins Active Modes Plan (2022) listing the high and medium priority/readiness projects.

Figure 34. High Priority/Readiness Projects

High Priority/Readiness Projects

In the near term, to achieve the goals of improving safety and increasing mode share, the focus is placed on quick wins—projects that can be readily implemented and will have immediate impact.

Project Focus	PID	Street	Cross-Street or Extents	Treatment	Length (mi)	Outcomes Score	Imple. Score	Cost Opinion (2022)
Pedestrian	7	Drake	Timberline	Signal Operations	Spot	44	8	$ 206,000
			Lemay	Geometric Redesign	Spot			
			Shields	Signal Operations	Spot			
		Shields St	Casa Grande	Signal Operations	Spot			
Pedestrian	46	Harmony Rd	Mason	Signal Operations	Spot	44	8	$ 206,000
			Boardwalk	Signal Operations	Spot			
			Lemay	Signal Operations	Spot			
			Starflower	Geometric Redesign	Spot			
Pedestrian	1	College Ave	Willow	Signal Operations	Spot	44	7	$ 109,000
			Laporte	Signal Operations	Spot			
			Mountain	Signal Operations	Spot			
			Olive	Signal Operations	Spot			
			Magnolia	Signal Operations	Spot			
Pedestrian	4	Mulberry St	College	Signal Operations	Spot	44	7	$ 453,000
			Mason	Signal Operations	Spot			
			Loomis	Geometric Redesign	Spot			
			Shields	Signal Operations	Spot			
			Taft Hill	Signal Operations	Spot			
			Whitcomb / Canyon	Geometric Redesign	Spot			
Pedestrian	11	Willow St	Linden	High-Visibility Crosswalk	Spot	46	3	$ 50,000
			Lincoln	Beacon / RRFB	Spot			
Pedestrian	29	Taft Hill Rd	Prospect	Signal Operations	Spot	40	8	$ 153,000
			Valley Forge	Geometric Redesign	Spot	40	8	
Pedestrian	3	College Ave	Monroe	Signal Operations	Spot	42	6	$ 303,000
			Rutgers	Geometric Redesign	Spot			
			Columbia	Geometric Redesign	Spot			
Pedestrian	9*	Shields St	Plum	Geometric Redesign	Spot	44	4	$ 600,000
		Elizabeth St	Shields	Geometric Redesign	Spot			
			Taft Hill	Geometric Redesign	Spot			
			Constitution	Geometric Redesign	Spot			
Bicycle	61	Taft Hill Rd	Glenmoor	Signals	Spot	45	2	$ 600,000
Pedestrian	2	College Ave	Laurel	Signal Operations	Spot	44	3	$ 343,000
			Prospect	Geometric Redesign	Spot			
		Mason Trail	Prospect	Geometric Redesign	Spot			
Pedestrian	10	Mason St	Mountain	Signal Operations	Spot	38	7	$ 6,000
			Olive	Signal Operations	Spot			
Bicycle	51	W Prospect Rd	Sheely Dr	Signals	Spot	40	5	$ 600,000
Bicycle	33	E Magnolia St	Remington St	Signs & Markings	Spot	40	4	$ 3,000

*Project includes a partner such as Colorado DOT, Larimer County, or Colorado State University

Figure 35. High Priority/Readiness Projects cont.

Fort Collins Active Modes Plan | Chapter 7: Implementing The Vision

Project Focus	PID	Street	Cross-Street or Extents	Treatment	Length (mi)	Outcomes Score	Imple. Score	Cost Opinion (2022)
Pedestrian	5	Mulberry St	Stover	Beacon / RRFB	Spot	40	4	$ 1,302,000
			Remington	Median / Diverter	Spot			
			Peterson	New Crossing	Spot			
Bicycle	30	Mountain Ave, Lincoln Ave	N Howes St - Willow St	Buffered Bike Lane, Separated Bike Lane	0.5	38	6	$ 193,000
Pedestrian	31	Harmony Rd	Corbett	Geometric Redesign	Spot	37	7	$ 200,000
			Timberline	Signal Operations	Spot			
Bicycle	52	W Lake St	S Shields St - S Mason St	Separated Bike Lane	1.2	39	5	$ 251,000
Bicycle	50	E Vine Dr	Jerome St	Signals	Spot	42	2	$ 600,000
Pedestrian	22	Lemay Ave	Prospect	Signal Operations	Spot	36	7	$ 100,000
			Stuart	Signal Operations	Spot			
Bicycle	39	S Shields St	W Mulberry St - Davidson Dr	Separated Bike Lane	1.6	38	5	$ 1,489,000
Bicycle	32	Magnolia St	S Sherwood St - Whedbee St	Bike Boulevard	0.8	37	5	$ 29,000
Bicycle	41	S Shields St	W Lake St	Two-Way Sidepath	Spot	34	8	$ 29,000
Pedestrian	21	Lemay	Mulberry	Geometric Redesign	Spot	39	3	$ 150,000
Bicycle	2	E Elizabeth St	S College Ave	Intersection redesign	Spot	37	4	$ 585,000
Bicycle	7	S Taft Hill Rd	W Elizabeth St - W Horsetooth Rd	Separated Bike Lane	2.5	34	7	$ 707,000
Bicycle	52	City Park Ave	W Mulberry St	Signals	Spot	35	6	$ 600,000
Bicycle	6	S Taft Hill Rd	Laporte Ave - W Elizabeth St	Separated Bike Lane	1.1	34	6	$ 279,000
Bicycle	12	Birch St	S Shields St	Signs & Markings	Spot	34	6	$ 3,000
Bicycle	28	Jefferson St	N College Ave - E Mountain Ave	Separated Bike Lane	0.5	35	5	$ 116,000
Pedestrian	40	Shields	Stuart	Geometric Redesign	Spot	36	4	$ 150,000
Pedestrian	15	Mason	Maple	Geometric Redesign	Spot	38	2	$ 150,000
Bicycle	35	Birch St, Crestmore Pl, Skyline Dr	Orchard Pl - City Park Ave	Bike Boulevard	1.4	32	7	$ 6,000
Bicycle	36	Glenmoor Dr, W Plum St	S Taft Hill Rd - Skyline Dr	Bike Boulevard	1.1	32	7	$ 3,000
Bicycle	50	Springfield Dr	Castlerock Dr - S Shields St	Bike Boulevard	0.6	32	7	$ 6,000
Bicycle	12	S Shields St	W Mountain Ave - W Mulberry St	Separated Bike Lane	2.2	31	7	$ 111,000
Pedestrian	67	Horsetooth	Platte	Median / Diverter	Spot	33	6	$ 234,000
			Auntie Stone	Median / Diverter				
Bicycle	47	Castlerock Dr, Lake St, Skyline Dr, Clearview Ave	S Taft Hill Rd - W Elizabeth St	Bike Boulevard	3.5	34	5	$ 5,000
Bicycle	58*	Gillette Dr	Phemister Rd - W Drake Rd	Separated Bike Lane	3.0	34	5	$ 135,000
Bicycle	76	E Horsetooth Rd	S Lemay Ave - Ziegler Rd	Separated Bike Lane	0.7	34	5	$ 561,000
Bicycle	11	Conifer St	N College Ave	Intersection redesign	Spot	34	5	$ 585,000
Bicycle	57	Centre Ave	S Shields St - Phemister Rd	Separated Bike Lane	1.0	35	4	$ 347,000
Bicycle	40	S Shields St	Davidson Dr - Hilldale Dr	Separated Bike Lane	0.1	32	6	$ 777,000

*Project includes a partner such as Colorado DOT, Larimer County, or Colorado State University

69

Figure 36. High Priority/Readiness Projects cont.

Project Focus	PID	Street	Cross-Street or Extents	Treatment	Length (mi)	Outcomes Score	Imple. Score	Cost Opinion (2022)
Bicycle	11	Laporte Ave	Fishback Ave - N Washington Ave	Bike Lane	1.7	33	5	$ 61,000
Bicycle	104	Boardwalk Dr	JFK - Harmony	Buffered Bike Lane	0.3	33	5	$ 51,000
Pedestrian	72	Riverside Ave	Prospect Rd	Geometric Redesign	Spot	33	5	$ 150,000
Bicycle	64	Drake Rd	S Taft Hill Rd - Tulane Dr	Separated Bike Lane	0.3	34	3	$ 1,312,000
Bicycle	74	W Horsetooth Rd	Richmond Dr - S Mason St	Sidepath (both sides)	0.8	34	3	$ 2,594,000
Bicycle	51*	W Pitkin St	S Shields St - S College Ave	Separated Bike Lane	0.7	33	4	$ 1,314,000
Pedestrian	13	Magnolia	Sherwood	Geometric Redesign	Spot	33	3	$ 903,000
			Loomis	Geometric Redesign	Spot			
			Meldrum	Geometric Redesign	Spot			
			Washington	High-Visibility Crosswalk	Spot			
Pedestrian	12	Olive	Remington	Geometric Redesign	Spot	34	2	$ 300,000
			Mathews	Geometric Redesign	Spot			
Bicycle	40	N Roosevelt Ave	Laporte Ave	Signals	Spot	30	5	$ 600,000
Pedestrian	60	Ziegler	Saber Cat	Beacon / RRFB	Spot	29	6	$ 32,000
Bicycle	44	Centre Ave	W Lake St	Intersection redesign	Spot	35	0	$ 585,000
Bicycle	59	Booth Rd	Tietz Dr - Bay Rd	Sidepath (one side)	0.5	32	3	$ 130,000
Bicycle	62	S Lemay Ave	E Stuart St - E Horsetooth Rd	Sidepath (both sides)	0.2	32	3	$ 4,439,000
Bicycle	62	Spring Creek Trail	Taft Hill Rd	New connection	Spot	32	3	$ 320,000
Pedestrian	30	Taft Hill	Lake	New Crossing	Spot	32	2	$ 585,000
Bicycle	7	E Horsetooth Rd	Kingsley Dr	Signals	Spot	27	6	$ 600,000
Bicycle	1	E Prospect St	Stover St	Two-Way Sidepath	Spot	27	6	$ 29,000
Bicycle	48	S Howes St	W Laurel St	Signs & Markings	Spot	29	4	$ 3,000
Bicycle	39	S College Ave	Rutgers Ave	New connection	Spot	32	1	$ 320,000
Bicycle	26	W Stuart St	S Taft Hill Rd (Project #1)	Two-Way Sidepath	Spot	26	5	$ 29,000
Bicycle	34	Riverside Ave	E Mulberry St	Intersection redesign	Spot	29	2	$ 585,000
Bicycle	46	Jackson Ave	W Mulberry St	Two-Way Sidepath	Spot	23	6	$ 29,000
Pedestrian	48	Cinquefoil	Kechter	Median / Diverter	Spot	21	4	$ 32,000
Bicycle	20	S Timberline Rd	E Lincoln Ave	Intersection redesign	Spot	21	2	$ 585,000
Pedestrian	25	Frey	Laporte	Geometric Redesign	Spot	21	2	$ 150,000
Pedestrian	75	Mason Trail	Prospect Rd	Beacon / RRFB	Spot	18	3	$ 600,000
Pedestrian	34	Timberline	Horsetooth	Geometric Redesign	Spot	17	3	$ 150,000
Bicycle	8	E Horsetooth Rd	Caribou Dr	Signals	Spot	18	2	$ 600,000

High-Priority/Readiness Phase, Opinion of Probable Cost: $30,400,000 over five years (2022 costs)

Figure 37. Medium Priority/Readiness Projects

Medium Priority/Readiness Projects

In the medium priority/readiness phase of implementation, program resources and capacity grow to deliver more and more complex projects.

Project Type	PID	Street	Cross-Street or Extents	Treatment	Length (mi)	Outcomes Score	Imple. Score	Cost Opinion (2022)
Bicycle	24	Timberline Rd	Annabel Ave - E Prospect Rd	Separated Bike Lane	1.8	31	6	$ 605,000
Bicycle	65	E Drake Rd	Tulane Dr - Rigden Pkwy	Sidepath (both sides)	0.5	34	2	$ 5,817,000
Bicycle	75	E Horsetooth Rd	Mitchell Dr - S Lemay Ave	Sidepath (both sides)	0.3	34	2	$ 2,941,000
Bicycle	46	Clearview Ave	Ponderosa Dr - Skyline Dr	Bike Boulevard	1.0	30	6	$ 4,000
Bicycle	48	W Lake St	S Overland Tr - S Taft Hill Rd	Bike Boulevard	1.1	30	6	$ 7,000
Bicycle	69	Worthington Ave	W Drake Rd - W Swallow Rd	Bike Boulevard	1.6	30	6	$ 4,000
Pedestrian	19	3rd St	Lincoln	Beacon / RRFB	Spot	30	6	$ 32,000
Pedestrian	20	Riverside	Lemay	Geometric Redesign	Spot	31	5	$ 150,000
Bicycle	67	Water Blossom Ln, Willow Fern Way	W Drake Rd - Marshwood Dr	Bike Boulevard	1.0	28	7	$ 2,000
Bicycle	56*	Rolland Moore Dr, Phemister Rd	S Shields St - Bay Rd	Separated Bike Lane, Bike Lane	1.7	30	5	$ 331,000
Bicycle	85	Harmony Rd	S Taft Hill Rd - S Lemay Ave	Separated Bike Lane	2.6	30	5	$ 1,218,000
Bicycle	29	Linden St	Walnut St - Jefferson St	Bike Route	1.0	30	5	$ 7,000
Bicycle	80	John F Kennedy Pkwy, E Troutman Pkwy	E Horsetooth Rd - E Harmony Rd	Separated Bike Lane, Buffered Bike Lane	1.2	26	8	$ 383,000
Bicycle	66	E Drake Rd, Ziegler Rd	Rigden Pkwy - William Neal Pkwy	Separated Bike Lane	1.4	27	7	$ 195,000
Bicycle	38	Laurel St	S Shields St - S Howes St	Separated Bike Lane, Buffered Bike Lane	0.2	28	6	$ 371,000
Bicycle	42	Pennock Pl	all	Bike Boulevard	1.4	28	6	$ 1,000
Pedestrian	65	Center	Phemister	Beacon / RRFB	Spot	28	6	$ 32,000
Bicycle	99	Howes St	W Mountain Ave - W Laurel St	Buffered Bike Lane	0.5	30	4	$ 58,000
Bicycle	14	Mcmurry Ave	E Harmony Rd	Intersection redesign	Spot	30	4	$ 585,000
Bicycle	60	East Spring Creek Trail	Lemay Ave	Two-Way Sidepath	Spot	30	4	$ 29,000
Bicycle	54	E Suniga Rd	Jerome St	Signs & Markings	Spot	31	3	$ 3,000
Bicycle	2	N Shields St	W Willox Ln - W Mountain Ave	Separated Bike Lane	0.9	27	6	$ 433,000
Bicycle	26	S Timberline Rd	Vermont Dr - Battlecreek Dr	Separated Bike Lane	2.0	27	6	$ 708,000
Bicycle	63	W Drake Rd	S Overland Tr - S Taft Hill Rd	Separated Bike Lane	1.1	27	6	$ 299,000
Bicycle	27	Skyline Dr	W Prospect Rd	Signals	Spot	28	5	$ 600,000
Pedestrian	16	College	Myrtle	Geometric Redesign	Spot	30	3	$ 117,000
Pedestrian	43	College	Willox	Signal Operations	Spot	30	3	$ 50,000

*Project includes a partner such as Colorado DOT, Larimer County, or Colorado State University

72

Figure 38. Medium Priority/Readiness Projects cont.

Fort Collins Active Modes Plan | Chapter 7: Implementing The Vision

Project Type	PID	Street	Cross-Street or Extents	Treatment	Length (mi)	Outcomes Score	Imple. Score	Cost Opinion (2022)
Bicycle	25	S Timberline Rd	E Prospect Rd - Vermont Dr	Separated Bike Lane	0.4	25	7	$ 414,000
Bicycle	10	West St, Maple St	N Roosevelt Ave - N Shields St	Bike Boulevard	0.5	26	6	$ 5,000
Bicycle	21	Redwood St, Linden St	Conifer St - Linden Center Dr	Buffered Bike Lane	0.8	26	6	$ 41,000
Bicycle	60	Purdue Rd, Tulane Dr, Mathews St, Rutgers Ave	S College Ave - E Swallow Rd	Bike Boulevard	0.6	26	6	$ 9,000
Pedestrian	55	Redwood	Conifer	High-Visibility Crosswalk	Spot	27	5	$ 36,000
			Suniga	High-Visibility Crosswalk	Spot			
Bicycle	37	W Elizabeth St	S Overland Tr - CSU Transit Center	Separated Bike Lane	6.8	28	4	$ 4,062,000
Bicycle	28	Heatheridge Rd	W Prospect Rd	Signals	Spot	28	4	$ 600,000
Pedestrian	14	Sherwood	Cherry	High-Visibility Crosswalk	Spot	30	2	$ 168,000
			Maple	Geometric Redesign	Spot			
Bicycle	58	Willox Ln	Blue Spruce	Signals	Spot	31	1	$ 600,000
Pedestrian	41	Timberline	Mulberry	Geometric Redesign	Spot	31	1	$ 150,000
Bicycle	44	S Lemay Ave	Riverside Ave - E Stuart St	Separated Bike Lane	1.6	25	6	$ 740,000
Bicycle	45	E Elizabeth St	S College Ave - S Lemay Ave	Buffered Bike Lane, Bike Lane	1.9	26	5	$ 90,000
Bicycle	98	Loomis Ave	Laporte Ave - W Mulberry St	Buffered Bike Lane	0.6	26	5	$ 31,000
Pedestrian	61	Timberline	International	New Crossing	Spot	26	5	$ 632,000
			Sykes	Beacon / RRFB	Spot			
Pedestrian	56	Willox	Bramblebush	Beacon / RRFB	Spot	27	4	$ 32,000
Bicycle	43*	Phemister Rd	Mason Trail	New connection	Spot	28	3	$ 320,000
Bicycle	103	E Lincoln Ave	Lemay - Timberline	Separated Bike Lane	0.9	30	1	$ 3,019,000
Bicycle	27	N Loomis Ave	Cherry St - Laporte Ave	Bike Boulevard	1.0	24	6	$ 2,000
Bicycle	34	Ponderosa Dr, Fuqua Dr, Clearview Ave	W Mulberry St - W Prospect Rd	Bike Boulevard	0.6	24	6	$ 8,000
Bicycle	49	Underhill Dr, Skyline Dr	Springfield Dr - Westbridge Dr	Bike Boulevard	1.4	24	6	$ 3,000
Bicycle	53	Emigh St, McHugh St, Welch St	E Elizabeth St - E Prospect Rd	Bike Boulevard	1.0	24	6	$ 4,000
Bicycle	61	Brookwood Dr, Rollingwood Ln, Silverwood Dr, Oxborough Ln	E Stuart St - Centennial Rd	Bike Boulevard	3.1	24	6	$ 10,000
Bicycle	89	S Lemay Ave	E Harmony Rd - Carpenter Rd	Separated Bike Lane	1.1	25	5	$ 830,000
Bicycle	49*	S College Ave	W/E Swallow Rd	Signs & Markings	Spot	25	5	$ 3,000
Bicycle	41*	Meridian Ave	W Plum St - Hughes Way	Separated Bike Lane	2.5	26	4	$ 682,000

*Project includes a partner such as Colorado DOT, Larimer County, or Colorado State University

73

Figure 39. Medium Priority/Readiness Projects cont.

Project Type	PID	Street	Cross-Street or Extents	Treatment	Length (mi)	Outcomes Score	Imple. Score	Cost Opinion (2022)
Pedestrian	53	JFK	Monroe	Geometric Redesign	Spot	26	4	$ 150,000
Pedestrian	74	Troutman Pkwy	Boardwalk	Geometric Redesign	Spot	26	4	$ 150,000
Bicycle	73	W Horsetooth Rd	Horsetooth Ct - Richmond Dr	Sidepath (both sides)	3.6	28	2	$ 3,599,000
Bicycle	20	Conifer St	N College Ave - N Lemay Ave	Buffered Bike Lane	0.4	24	5	$ 97,000
Bicycle	18*	Turnberry Rd	Country Club Rd - Mountain Vista Dr	Separated Bike Lane	0.9	25	4	$ 1,254,000
Pedestrian	63	Lake	West of Whitcomb	Beacon / RRFB	Spot	25	4	$ 32,000
Pedestrian	66	Prospect	Whedbee	New Crossing	Spot	25	4	$ 600,000
Bicycle	23	E Vine Dr	Linden St - I-25	Sidepath (one side)	0.1	27	2	$ 4,447,000
Bicycle	83	S Lemay Ave	E Horsetooth Rd - E Harmony Rd	Sidepath (both sides)	3.0	27	2	$ 2,689,000
Pedestrian	44*	College Ave	Palmer	Beacon / RRFB	Spot	27	2	$ 1,200,000
			Saturn	Beacon / RRFB	Spot			
Bicycle	45	Red St	Canal Crossing	New connection	Spot	28	1	$ 320,000
Bicycle	56	Horsetooth	Seneca	Signals	Spot	24	4	$ 600,000
Pedestrian	69	Mason	Boardwalk	High-Visibility Crosswalk	Spot	24	4	$ 18,000
Bicycle	81	W County Road 38E	Red Fox Rd - S Taft Hill Rd	Sidepath (both sides)	0.4	25	3	$ 1,600,000
Bicycle	97	Overland Trail	W Vine Dr - W Drake Rd	Separated Bike Lane	0.3	25	3	$ 7,624,000
Pedestrian	71	JFK Pkwy	Pavilion	New Crossing	Spot	23	4	$ 585,000
Pedestrian	45*	College	Fossil Creek	Geometric Redesign	Spot	25	2	$ 190,000
Bicycle	64	Willox Ln	Lemay Ave	Intersection redesign	Spot	26	1	$ 585,000
Pedestrian	62	Shields	Laurel	Beacon / RRFB	Spot	21	5	$ 600,000
Pedestrian	6	Shields	Laporte	Geometric Redesign	Spot	17	8	$ 50,000
Pedestrian	33	Timberline	Vermont	Geometric Redesign	Spot	19	6	$ 117,000
Pedestrian	52	Harmony	Silvergate	Beacon / RRFB	Spot	21	4	$ 117,000
Pedestrian	59	Laporte	Impala	High-Visibility Crosswalk	Spot	19	5	$ 32,000
Pedestrian	42	Airpark	Lincoln	New Crossing	Spot	20	1	$ 585,000
Pedestrian	27	Overland Trail	Mulberry	Beacon / RRFB	Spot	16	4	$ 1,185,000
			Rampart	New Crossing	Spot			
Pedestrian	35	Miles House	Drake	New Crossing	Spot	11	6	$ 600,000
Pedestrian	49	Lemay	Brittany	New Crossing	Spot	17	2	$ 632,000
		Trilby		Beacon / RRFB	Spot			

Medium Priority/Readiness Projects, Opinion of Probable Cost: $57,100,000 over five years (2022 costs)