CITY OF

Greeley

Development Impact Fee and Plant Investment Fee Study

Final Report / November 9, 2020

RAFTELIS

City of Greeley Colorado

RAFTELIS

November 9, 2020

Mr. Brad Mueller
Director, Community Development Department
City of Greeley
1000 10th Street
Greeley, CO 80631

Subject: Development Impact Fees Report

Dear Mr. Miller,

Raftelis Financial Consultants, Inc. (Raftelis) is pleased to provide the 2020 impact fee update for the City of Greeley. Our study included the following:

- Updated development projections and land use assumptions based on Greeley data
- Documentation of current infrastructure standards and projected need for additional facilities
- Calculation of proportionate fees for three types of nonresidential development and four size thresholds for residential development
- Outreach workshops with the development community to solicit feedback on proposed fees and structures

Our report summarizes key findings and recommendations related to the growth cost of capital improvements to be funded by impact fees.

It has been a pleasure working with you and we thank City staff for engaging with quality information and insight regarding best practices for the City of Greeley.

Sincerely,

Todd Cristiano
Senior Manager

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Executive Summary

Impact 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, if there is a reasonable relationship between the new development and the need for 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. By law, impact fees can only be used for capital improvements, not operating or maintenance costs. Impact fees are subject to legal standards that satisfy three key tests: need, benefit, and proportionality.

- First, to justify a fee for public facilities, local government must demonstrate 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 should not exceed a development's proportionate share of the capital cost.

As documented in this report, the City of Greeley has complied with applicable legal precedents. Impact fees are proportionate and reasonably related to the capital improvement demands of new development, with the projects identified in this study consistent with Greeley's long-range comprehensive plan and master plans for infrastructure. Specific costs have been identified using local data and current dollars. With input from City staff, Raftelis determined service units for each type of infrastructure and calculated proportionate share factors to allocate costs by type of development. This report documents the formulas and input variables used to calculate the impact fees for each type of public facility. Impact fee methodologies also identify the extent to which new development is entitled to various types of credits to avoid potential double payment of growth-related capital costs.

Unique Requirements of the Colorado Impact Fee Act

For local governments, the first step in evaluating funding options for capital improvements is to determine basic 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 unless precluded or preempted by state statutes. Although Colorado is a "home-rule" state and home-rule municipalities were already collecting "impact fees" under their home-rule authority granted in the Colorado Constitution, the Colorado Legislature passed enabling legislation in 2001, as discussed further below.

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.

Maximum Supportable Impact Fees

There are three general methods for calculating development fees. The choice of 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/disadvantages and can be used simultaneously for different cost components. 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, development fees are complicated due to many variables involved in defining the relationship between development and the need for facilities within the service area. The following paragraphs discuss three basic methods for calculating development fees and how those methods can be applied.

- 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.
- The incremental expansion method documents current infrastructure standards for each type of public facility, using both quantitative and qualitative measures. If current standards are used, there is no existing infrastructure deficiency or surplus capacity and new development is only paying its proportionate share to maintain current standards for growth-related infrastructure. Fee revenue will be used to expand or provide additional facilities, as needed to keep pace with new development.
- The plan-based method allocates costs for a specified set of improvements to a specified amount of service units. Improvements are typically identified in an infrastructure master 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 demand units (average cost approach), or 2) the growth-share of the public facility cost can be divided by the net increase in demand units over the planning timeframe (marginal cost approach).

Figure 1 summarizes the methods and cost components used for each type of public facility in Greeley's 2020 impact fee study. Non-utility impact fees are consistent with the general method and cost allocations used in the 2014 impact fee study, with recommended refinements based on current best practices.

Figure 1: Proposed Methods and Cost Components for Non-utility Impact Fees

Type of Infrastructure	Service Area	Incremental Expansion (current standards)	Cost Allocation
Parks and Trails	Citywide	Improvements to Parks and Trails	Population
Police Facilities	Citywide	Police Buildings and Vehicles	Functional Population
Fire Facilities	Citywide	Fire Stations and Apparatus	Functional Population
Transportation	Citywide	Multimodal Improvements to Arterials	Vehicle Miles of Travel

Figure 2 summarizes maximum supportable 2020 impact fees for new development in the City of Greeley. As discussed in Appendix A, Raftelis recommends that residential fees be imposed by dwelling size, based on floor area of living space (i.e., excludes garages, outdoor patios/porches/balconies, and unfinished basements). In contrast, existing fees use a "one size fits all" approach by type of housing. If Greeley makes a legislative policy decision to continue collecting impact fees by type of housing, the maximum supportable impact fee for Single Family, would be $13,686 per dwelling. The maximum supportable impact fee for Multifamily (i.e., all other housing types) would be $11,253 per dwelling.

Fees for nonresidential development are listed per thousand square feet of floor area. Industrial includes all buildings used for goods production, warehousing, transportation, communications and utilities. Retail/Restaurant includes all shopping centers, establishments that sell merchandise and all eating/drinking places. Office & Other Services includes business services such as banks, plus personal services, such as health care.

Figure 2: Maximum Supportable Impact Fee Schedule for Non-utilities

Citywide Service Greeley CO	Parks and Trails	Police	Fire	Transportation	Maximum Supportable	Current Total	Increase or Decrease	
Residential (per dwelling) by Size Range (square feet of heated living space)								
1,200 or less	$2,773	$125	$325	$3,027	$6,250	$6,088	$162	
1,201 to 1500	$4,873	$219	$571	$5,590	$11,253	$6,088	$5,165	<= Multifamily
1,501 to 1,800	$5,525	$249	$647	$6,401	$12,822	$8,711	$4,111	
1,801 or more	$5,892	$265	$690	$6,839	$13,686	$8,711	$4,975	<= Single Family
Nonresidential (per 1,000 square foot of building)								
Industrial		$218	$486	$2,600	$3,304	$1,915	$1,389	
Retail/Restaurant		$797	$1,775	$7,915	$10,487	$6,618	$3,869	
Office & Other Services		$428	$954	$5,105	$6,487	$5,469	$1,018	

Parks and Trails Impact Fee

Impact fees for parks and trails are currently collected and spent in separate funds. The draft report combines both types of infrastructure, but all fee calculations remain separate. Based on direction from City Council, the final report can disaggregate these fees. As a general rule, minimizing the number of impact fee funds provides greatly flexibility for planning and spending fees.

Parks

In 2016, Greeley completed a master plans for Parks, Trails, and Open Lands. All parks and trails facilities included in the impact fees have a citywide service area. Cost components are allocated 100% percent to residential development. As shown in Figure PT1, Greeley current standard is 5.07 acres of improved parks per thousand residents. Based on the average cost of recent capital projects, Greeley is spending an average of $350,000 per acre for park improvements. The projected population increase shown below will require an additional 117 acres of improved parks over the next ten years, with an estimated cost of $40.95 million.

Figure PT1: Current Standard and Projected Need for Park Improvements

Type of Park	Acres
Neighborhood Parks	308
Community Parks	115
Sports Complex	137
Dog Parks	7
Total =>	567

Source: 2016 Master Plan for Parks, Trails, and Open Lands.

Cost Allocation Factors for Parks

Improvements Cost per Acre	$350,000
Residential Proportionate Share	100%
	Service Units
Population in 2020	111,748

Infrastructure Standards for Parks

		Acres
Residential (per person)		0.00507

		Park Needs	
	Year	Population	Improved Acres
Base	2020	111,748	567
Year 1	2021	114,229	580
Year 2	2022	116,519	591
Year 3	2023	118,809	603
Year 4	2024	121,099	614
Year 5	2025	123,389	626
Year 6	2026	125,679	638
Year 7	2027	127,969	649
Year 8	2028	130,259	661
Year 9	2029	132,549	673
Year 10	2030	134,839	684
	Ten-Yr Increase	23,091	117
		Growth Cost of Parks =>	$40,950,000

Trails

Figure PT2 documents Greeley current standard for trails, which is 1.41 linear feet per person. According to staff, recent trails constructed in Greeley have an average cost of $189 per linear foot, which is $1,000,000 per mile. This cost factor is based on a concrete trail with landscaping, lighting, signs, and professional fees. Projected population over the next ten years will need approximately six miles of additional trails to maintain Greeley's current standard for trails. Maximum supportable impact fees would cover the total projected cost of additional trails, which is approximately $6.15 million over the next ten years.

Figure PT2: Current Standard and Project Need for Trails

Trails	Miles	Linear Feet
Off-Street Trails	29.8	157,080

Source: 2016 PTOL Master Plan, updated by staff.

Cost Allocation Factors for Trails

Cost per Linear Foot*	$189
Residential Proportionate Share	100%
2020 Population	111,748

* $1,000,000 per mile is $189 per linear foot.

	Linear Feet
Residential (per person)	1.41

		Trail Needs	
	Year	Population	Linear Feet
Base	2020	111,748	157,080
Year 1	2021	114,229	160,567
Year 2	2022	116,519	163,786
Year 3	2023	118,809	167,005
Year 4	2024	121,099	170,224
Year 5	2025	123,389	173,443
Year 6	2026	125,679	176,662
Year 7	2027	127,969	179,881
Year 8	2028	130,259	183,100
Year 9	2029	132,549	186,319
Year 10	2030	134,839	189,538
	Ten-Yr Increase	23,091	32,458
		Growth Cost for Trails =>	$6,147,000

Revenue Credit Evaluation

Currently the City of Greeley does not have any outstanding debt related to parks and trails facilities. Therefore, a revenue credit for bond payments is not applicable. As shown in the cash flow analysis below, projected impact fee revenue matches the growth cost of new facilities. Because impact fees fully fund expected growth costs, there is no potential double-payment from other revenue sources.

Maximum Supportable and Current Impact Fees

At the top of Figure PT3 is a summary of parks and trails infrastructure needs due to growth. The net growth cost of $47.10 million divided by the projected increase in population from 2020 to 2030, yields a cost of $2,039 per service unit. Impact fees are derived using the cost per service unit multiplied by the average number of service units per dwelling. Please see Appendix A for supporting documentation on the average number of persons by dwelling size in Greeley. If Greeley makes a legislative policy decision to continue collecting impact fees by type of housing, the maximum supportable impact fee for Single Family, would be $5,892 per dwelling. The maximum supportable impact fee for Multifamily (i.e., all other housing types) would be $4,873 per dwelling.

Figure PT3: Parks and Trails Impact Fee Schedule

Infrastructure Type	Infrastructure Units	Growth Quantity Over Ten Years	Cost Factor per Unit	Growth Cost (rounded)
Parks	acres	117	$350,000	$40,950,000
Trails	linear feet	32,458	$189	$6,147,000
			Total =>	$47,097,000

Population Increase 2020 to 2030	23,091
Cost per Service Unit	$2,039

Residential Impact Fees (per dwelling) for Parks & Trails

Square Feet of Living Space	Persons per Housing Unit	Maximum Supportable Parks & Trails Fee	Current Fees	Increase or Decrease	
1,200 or less	1.36	$2,773	$2,743	$30	
1,201 to 1500	2.39	$4,873	$2,743	$2,130	<= Multifamily
1,501 to 1,800	2.71	$5,525	$3,655	$1,870	
1,801 or more	2.89	$5,892	$3,655	$2,237	<= Single Family

Forecast of Revenues for Parks and Trails

Figure PT4 indicates Greeley should receive approximately $46.69 million in parks and trails impact fee revenue over the next 10 years, if actual development matches the projections documented in Appendix A. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the need for infrastructure and impact fee revenue. To simplify the revenue forecast, Raftelis used the fee amount for a unit with an average of 2.71 residents, which is the blended, or overall average for all housing units in Greeley (see Figure A2 and related text for more information). This approach does not require an accurate forecast of the annual increase in Multifamily verses Single-Family housing units.

Figure PT4: Projected Impact Fee Revenue

Growth Cost Over 10 years =>		$47,097,000
Parks and Trails Impact Fee Revenue	Year	Average Residential $5,525 per housing unit
		Hsg Units
Base	2020	41,306
Year 1	2021	42,151
Year 2	2022	42,996
Year 3	2023	43,841
Year 4	2024	44,686
Year 5	2025	45,531
Year 6	2026	46,376
Year 7	2027	47,221
Year 8	2028	48,066
Year 9	2029	48,911
Year 10	2030	49,756
	Ten-Yr Increase	8,450
	Projected Revenue =>	$46,690,000

Capital Improvements Plans Parks and Trails

Figure PT5 provides a listing of CIP projects eligible for impact fee funding. Line items with Page and Project numbers are in Greeley latest CIP. Each year, the City will remove completed projects and identify additional future projects that are needed to accommodate new development within Greeley.

Figure PT5: Summary of Ten-Year CIP for Parks

CIP Page	CIP Project	Description	Years 1-5	Years 6-10
518	318.16	Centennial Park Improvements	$3,700,000	
522	318.3	New Community Park - South of 10th, West of 83rd	$400,000	
530	893	Design Build Promontory Park	$1,575,000	
532	369	Park South of 10th St, West of 71st Ave	$2,575,000	
556	318.19	Island Grove Pavillions and Pathways	$500,000	
558	318.29	Centennial Village Parking Extension	$575,000	
560	318.28	Event Center Landscape Improvements/Promenade	$900,000	
562	318.27	Pond Improvemens and Off-Leash Dog Park	$3,150,000	
564	889	71st Ave & Sheepdraw Park		$1,425,000
568	253	Parking Lot for Balsam Sports Park		$312,575
569	525	Kiwanis Park Expansion		$192,385
		Other Future Projects		$25,645,040
		Subtotal =>	$13,375,000	$27,575,000
		Total Impact Fee Funding Over Ten Years =>		$40,950,000

If maximum supportable fees are approved, Greeley will spend approximately $6.15 million on additional trails over the next ten years.

Figure PT6: Summary of Ten-Year CIP for Trails

CIP Page	CIP Project	Description	Years 1-5	Years 6-10
500	800	Broadview Acres Trail Phases 2&3	$80,800	
504	316.1701	#3 Ditch Trail Connect Larson Ditch Trail to Poudre Trail	$208,000	
506	316.1702	Larson Trail to Poudre River Trail		$800,000
		Other Future Projects		$5,058,200
		Subtotal =>	$288,800	$5,858,200
		Total Impact Fee Funding Over Ten Years =>		$6,147,000

Police Impact Fees

The City of Greeley will use an incremental expansion cost method to maintain existing infrastructure standards for police buildings and vehicles.

Proportionate Share

In Greeley, public safety standards, projected needs, and development fees are based on both residential and nonresidential development. As shown in Figure P1, functional population was used to allocate police and fire infrastructure and costs to residential and nonresidential development. Functional population is like the U.S. Census Bureau's "daytime population," by accounting for people living and working in a jurisdiction. It also considers commuting patterns and time spent at residential versus nonresidential locations. Residents that don't work are assigned 20 hours per day to residential development and four hours per day to nonresidential development (annualized averages). Residents that work in Greeley are assigned 14 hours to residential development and 10 hours to nonresidential development. Residents that work outside Greeley are assigned 14 hours to residential development. Inflow commuters are assigned 10 hours to nonresidential development. Based on 2017 functional population data for Greeley, the cost allocation for residential development is 72% while nonresidential development accounts for 28% of the demand for public safety infrastructure.

Figure P1: Functional Population

		Service Units in 2017			Demand Hours/Day	Person Hours
Residential						
Population*		105,353				
50.4%	Residents Not Working		53,077		20	1,061,540
49.6%	Working Residents**		52,276			
36.6%	Resident Workers**			19,149	14	268,086
63.4%	Outflow Commuters**			33,127	14	463,778
Residential Subtotal						1,793,404
					Residential Share =>	72%
Nonresidential						
Residents Not Working			53,077		4	212,308
Jobs in Greeley**		48,467				
39.5%	Resident Workers**			19,149	10	191,490
60.5%	Inflow Commuters			29,318	10	293,180
Nonresidential Subtotal						696,978
					Nonresidential Share =>	28%
					Total	2,490,382

* 2017 City of Greeley estimate.

** 2017 Inflow/Outflow Analysis, OnTheMap web application, U.S. Census Bureau data for all jobs.

Police Facilities, Service Units, and Standards

Greeley has determined that future development will require additional police building space and vehicles to accommodate growth. Police impact fees in Greeley are based on the same level of service provided to existing development. Figure P2 inventories police buildings in Greeley. For residential development, Greeley will use year-round population within the service areas to derive current infrastructure standards. For nonresidential development, Greeley will use average weekday primary vehicle trips as the service units. Figure P2 indicates the allocation of police building space to residential and nonresidential development. Based on 2020 service units, the standard in Greeley is 0.50 square feet of police building floor area per person. For nonresidential development, Greeley's standard is 0.19 square feet of police building per average weekday primary vehicle trip to nonresidential development.

Figure P2: Police Buildings Standard

Police Buildings	Square Feet
Police Headquarters	49,922
Annex	26,450
West Substation	750
TOTAL	77,122

Source: City of Greeley Police Department.

Police Buildings Standards	Residential	Nonresidential
Proportionate Share (based on functional population)	72%	28%
Growth Indicator	Population	Average Weekday Primary Vehicle Trips to Nonres Dev
2020 Service Units	111,748	111,281
Square Feet per Service Unit	0.50	0.19

For additional police building space, Greeley will use a cost factor of $256 per square foot (provided by City staff) as shown in Figure P3. As shown in below, projected increases in population and average weekday primary vehicle trips to nonresidential development will need 13,646 additional square feet of police buildings over the next ten years. The ten-year, growth-related capital cost of police buildings is approximately $3.49 million.

Figure P3: Police Building Space Needed to Accommodate Growth

Police Building Standards and Capital Costs

Buildings - Residential	0.50	Sq Ft per person
Buildings - Nonresidential	0.19	Sq Ft per trip
Police Buildings Cost	$256	per square foot

	Year	Population	Primary Vehicle Trips to Nonres Dev	Infrastructure Needed: Police Buildings (sq ft)
Base	2020	111,748	111,281	77,122
Year 1	2021	114,229	112,402	78,572
Year 2	2022	116,519	113,565	79,936
Year 3	2023	118,809	114,638	81,282
Year 4	2024	121,099	115,759	82,637
Year 5	2025	123,389	116,832	83,984
Year 6	2026	125,679	117,995	85,347
Year 7	2027	127,969	119,116	86,703
Year 8	2028	130,259	120,189	88,049
Year 9	2029	132,549	121,352	89,412
Year 10	2030	134,839	122,473	90,768
Ten-Yr Increase		23,091	11,192	13,646
			Growth Cost of Police Buildings =>	$3,493,000

The inventory of police vehicles (see Figure P$) excludes fully depreciated vehicles and rolling stock that does not meet Colorado's Impact Fee Act requirement that capital items have at least five years of useful life. Raftelis grouped vehicles that have a similar acquisition cost. Greeley's Police Department is currently using 92 vehicles with an average unit cost of $43,875.

Figure P4: Police Vehicles and Current Standard

Type of Police Vehicle	Count	Average Acquisition Cost
Heavy Duty Trucks	2	$187,500
Patrol Vehicles	56	$52,433
Motorcycles and Support Vehicles	34	$21,331
TOTAL	92	$43,875

Source: City of Greeley Police Department.

Police Vehicle Standards	Residential	Nonresidential
Proportionate Share (based on functional population)	72%	28%
Growth Indicator	Population	Average Weekday Primary Vehicle Trips to Nonres Dev
2020 Service Units	111,748	111,281
Vehicles per Service Unit	0.00059	0.00023

Over the next ten years, Greeley will need to add 16 vehicles to accommodate new development, at an estimated cost of $702,000 (see Figure P5).

Figure P5: Police Vehicles Needed to Accommodate Growth

Police Vehicle Standards and Capital Costs

Vehicles - Residential	0.00059	per person
Vehicles - Nonresidential	0.00023	per trip
Average Cost with Accessorie	$43,875	per vehicle

	Year	Population	Primary Vehicle Trips to Nonres Dev	Infrastructure Needed: Police Vehicles
Base	2020	111,748	111,281	92
Year 1	2021	114,229	112,402	94
Year 2	2022	116,519	113,565	95
Year 3	2023	118,809	114,638	97
Year 4	2024	121,099	115,759	99
Year 5	2025	123,389	116,832	100
Year 6	2026	125,679	117,995	102
Year 7	2027	127,969	119,116	103
Year 8	2028	130,259	120,189	105
Year 9	2029	132,549	121,352	107
Year 10	2030	134,839	122,473	108
Ten-Yr Increase		23,091	11,192	16
			Growth Cost of Police Vehicless =>	$702,000

Revenue Credit Evaluation

As shown in Figure P6, Greeley has for more years of outstanding debt payments for existing police buildings. Annual principal payments were allocated 72% to residential development and 28% to nonresidential development. The proportionate share of future principal payments, divided by the respective service units, yield annual credits per person and vehicle trip. A credit is not required for interest because the cost analysis for police impact fees does not include interest costs.

Figure P6: Police Revenue Credit

	Principal Payments for Police Building	Population	Primary Vehicle Trips to Nonres Dev	Credit per Person	Credit per Trip
2021	$1,425,000	114,229	112,402	$9	$4
2022	$1,495,000	116,519	113,565	$9	$4
2023	$1,570,000	118,809	114,638	$10	$4
2024	$1,655,000	121,099	115,759	$10	$4
TOTAL	$6,145,000			$38	$16

Police Development Impact Fees

Growth-related infrastructure needs and cost factors for police are summarized in the upper portion of Figure P7. The conversion of infrastructure needs and costs per service unit into a cost per development unit is also shown in the table below. For residential development, average number of persons in a housing unit provides the necessary conversion. Persons per housing unit, by size threshold are documented in Appendix A.

For nonresidential development, trip generation rates per thousand square feet of floor area (abbreviated KSF) are from the Institute of Transportation Engineers (ITE 2017). In contrast to the "one size fits all" flat fee by type of housing, the updated methodology proposes lower impact fees for smaller, more affordable units. If Greeley makes a legislative policy decision to continue collecting impact fees by type of housing, the maximum supportable police impact fee for Single Family, would be $265 per dwelling. The maximum supportable police impact fee for Multifamily (i.e., all other housing types) would be $219 per dwelling.

Figure P7: Police Impact Fees per Development Unit

Input Variables

Infrastructure Type	Infrastructure Units	Growth Quantity Over Ten Years	Cost Factor per Unit	Growth Cost (rounded)
Police Buildings	square feet	13,646	$256	$3,493,000
Police Vehicles (5+ years of useful life)	count	16	$43,875	$702,000
			Total =>	$4,195,000

Cost Allocation

Residential	72%
Nonresidential	28%

Growth 2020 to 2030		Cost per Service Unit	Bond Principal Credit per Service Unit	Net Cost per Service Unit
Residential (persons)	23,091	$130	$38	$92
Nonresidential (vehicle trips)	11,192	$104	$16	$88

Residential Impact Fees (per housing unit) for Police

Square Feet of Living Space	Persons per Housing Unit	Maximum Supportable Police Impact Fees	Current Fees	Increase or Decrease	
1,200 or less	1.36	$125	$105	$20	
1,201 to 1500	2.39	$219	$105	$114	<= Multifamily
1,501 to 1,800	2.71	$249	$138	$111	
1,801 or more	2.89	$265	$138	$127	<= Single Family

Nonresidential Impact Fees (per 1,000 square feet of building floor area) for Police

Type	Avg Wkdy Veh Trip Ends per KSF	Trip Adjustment Factors	Maximum Supportable Police Impact Fees	Current Fees	Increase or Decrease
Industrial	4.96	50%	$218	$33	$185
Retail/Restaurant	37.75	24%	$797	$169	$628
Office & Other Services	9.74	50%	$428	$80	$348

Projected Impact Fee Revenue for Police

Over the next ten years, police impact fee revenue is projected to yield approximately $3.09 million, which is less than the projected ten-year growth cost of police facilities. The revenue shortfall is due to the revenue credit for future bond principal used to construct existing police buildings.

To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the need for infrastructure and development fee revenue. To simplify the revenue forecast, Raftelis used the fee amount for a unit with an average of 2.71 residents, which is the blended, or overall average for all housing units in Greeley (see Figure A2 and related text for more information). This approach does not require an accurate forecast of the annual increase in Multifamily verses Single-Family housing units.

Figure P8: Police Fee Revenue

Ten-Year Growth Cost of Police Facilities => $4,195,000

Police Impact Fee Revenue

		Average Residential $249 per housing unit	Industrial $218 per 1000 Sq Ft	Retail / Restaurant $797 per 1000 Sq Ft	Office & Other Services $428 per 1000 Sq Ft
	Year	Hsg Units	KSF	KSF	KSF
Base	2020	41,306	8,970	4,280	10,320
Year 1	2021	42,151	9,060	4,320	10,430
Year 2	2022	42,996	9,150	4,370	10,530
Year 3	2023	43,841	9,240	4,410	10,630
Year 4	2024	44,686	9,330	4,450	10,740
Year 5	2025	45,531	9,420	4,490	10,840
Year 6	2026	46,376	9,510	4,540	10,940
Year 7	2027	47,221	9,600	4,580	11,050
Year 8	2028	48,066	9,690	4,620	11,150
Year 9	2029	48,911	9,780	4,670	11,250
Year 10	2030	49,756	9,870	4,710	11,360
Ten-Yr Increase		8,450	900	430	1,040
Projected Revenue =>		$2,104,000	$196,000	$343,000	$445,000

Total Projected Revenues (rounded) => $3,088,000

Greeley expects to expand the police fleet using impact fee revenue and identify future police building needs to accommodate new development. Specific projects will be identified in Greeley's CIP.

Figure P9: Summary of Ten-Year CIP for Police

CIP Page	CIP Project	Description	Years 1-5	Years 6-10
		Additional Police Vehicles	$351,000	$351,000
		Future Building Projects		$3,493,000
		Subtotal =>	$351,000	$3,844,000
		Total Impact Fee Funding Over Ten Years =>		$4,195,000

Fire Impact Fees

Raftelis recommends functional population to allocate the cost of additional fire infrastructure to residential and nonresidential development (see Figure P1 above and related text). Fire development fees in Greeley are based on the same level of service currently provided to existing development.

Existing Standards for Fire Facilities

Figure F1 inventories Greeley fire stations and square feet of building space. The standard for fire buildings is 0.55 square feet per person and 0.22 square feet per vehicle trip to nonresidential development.

Figure F1: Existing Fire Stations

Fire Stations	Square Feet
Fire Station # 1	19,080
Fire Station # 2	12,381
Fire Station # 3	11,500
Fire Station # 4	6,273
Fire Station # 5	9,196
Fire Station # 6	18,471
Fire Station # 7	8,833
TOTAL	85,734

Allocation Factors for Fire Stations		
Residential Share	72%	Functional
Nonresidential Share	28%	Population
Population in 2020	111,748	
Average Weekday Primary Vehicle Trips to Nonres Dev	111,281	

Infrastructure Standards for Fire Stations	Square Feet
Residential (per person)	0.55
Nonresidential (per trip)	0.22

Fire Vehicles, Service Units, and Standards

Figure F2 inventories fire apparatus, with a unit cost for each major type of vehicle. For residential development, Greeley will use year-round population to derive current infrastructure standards. For nonresidential development, Greeley will use inbound, primary vehicle trips on an average weekday as the service unit. Figure F2 indicates the allocation of fire vehicles to residential and nonresidential development, along with 2020 service units in Greeley.

Figure F2: Current Fire Apparatus

Type of Fire Apparatus	Count	Unit Cost	Total
Pumper Truck	9	$900,000	$8,100,000
Ladder Truck	2	$1,500,000	$3,000,000
Rescue Truck	1	$650,000	$650,000
Tanker/Tender	2	$300,000	$600,000
Other Vehicles (Useful Life = 5+ Yrs)	23	$65,000	$1,495,000
TOTAL	37	$374,000	$13,845,000

Allocation Factors for Fire Apparatus and Communications		
Residential Share	72%	Functional
Nonresidential Share	28%	population
Population	111,748	
Average Weekday Primary Vehicle Trips to Nonres Dev	111,281	

Infrastructure Standards for Fire Apparatus	
Residential (per person)	0.00024
Nonresidential (per trip)	0.00009

For additional fire stations, Greeley will use a cost factor of $397 per square foot, based on the cost of Fire Station #6. The cost factor includes design, construction management, fixtures and furniture. As shown in Figure F3, projected population and vehicle trips to nonresidential development drive the need for fire stations and apparatus. Greeley will need 15,170 additional square feet of fire station building space over the next ten years. The ten-year, growth-related capital cost of public buildings is approximately $6.02 million. Additionally, Greeley will need to add seven vehicles to the fire fleet, at an estimated cost of approximately $2.62 million.

Figure F3: Growth-Related Need for Fire Facilities

Fire Infrastructure Standards and Capital Costs

Fire Stations - Residential	0.55	Sq Ft per Person
Fire Stations - Nonresidential	0.22	Sq Ft per Trip
Fire Station Cost (based on #6)	$397	per square foot
Fire Apparatus - Residential	0.00024	Apparatus per person
Fire Apparatus - Nonres	0.00009	Apparatus per Trips
Fire Apparatus Cost	$374,000	Cost per Vehicle

	Year	Population	Primary Vehicle Trips to Nonres Dev	Fire Facilities Needed: Sq Ft of Fire Stations	Fire Facilities Needed: Fire Apparatus
Base	2020	111,748	111,281	85,734	37
Year 1	2021	114,229	112,402	87,346	38
Year 2	2022	116,519	113,565	88,862	38
Year 3	2023	118,809	114,638	90,359	39
Year 4	2024	121,099	115,759	91,865	40
Year 5	2025	123,389	116,832	93,362	40
Year 6	2026	125,679	117,995	94,878	41
Year 7	2027	127,969	119,116	96,384	42
Year 8	2028	130,259	120,189	97,881	42
Year 9	2029	132,549	121,352	99,397	43
Year 10	2030	134,839	122,473	100,904	44
Ten -Yr Increase		23,091	11,192	15,170	7
			Cost of Fire Stations =>	$6,022,000	
				Cost of Fire Apparatus =>	$2,618,000
				Total Growth Cost =>	$8,640,000

Revenue Credit Evaluation

As shown in Figure F4, Greeley will debt finance approximately $5.8 million for Fire Station #6 over 20 years. Estimated annual principal payments were allocated 72% to residential development and 28% to nonresidential development. The proportionate share of future principal payments, divided by the respective service units, yield annual credits per person and vehicle trip. A credit is not required for interest because the cost analysis for fire impact fees does not include interest costs.

Figure F4: Revenue Credit for Fire Debt

	Estimated Principal Payments for Fire Station #6	Population	Primary Vehicle Trips to Nonres Dev	Credit per Person	Credit per Trip	Estimated Interest Payments
2021	$200,914	114,229	112,402	$1	$1	$214,600
2022	$208,348	116,519	113,565	$1	$1	$207,166
2023	$216,057	118,809	114,638	$1	$1	$199,457
2024	$224,051	121,099	115,759	$1	$1	$191,463
2025	$232,341	123,389	116,832	$1	$1	$183,173
2026	$240,938	125,679	117,995	$1	$1	$174,577
2027	$249,852	127,969	119,116	$1	$1	$165,662
2028	$259,097	130,259	120,189	$1	$1	$156,417
2029	$268,683	132,549	121,352	$1	$1	$146,831
2030	$278,625	134,839	122,473	$1	$1	$136,890
2031	$288,934	137,129	123,570	$2	$1	$126,580
2032	$299,624	139,419	124,686	$2	$1	$115,890
2033	$310,710	141,709	125,802	$2	$1	$104,804
2034	$322,207	143,999	126,918	$2	$1	$93,308
2035	$334,128	146,289	128,034	$2	$1	$81,386
2036	$346,491	148,579	129,150	$2	$1	$69,023
2037	$359,311	150,869	130,266	$2	$1	$56,203
2038	$372,606	153,159	131,382	$2	$1	$42,908
2039	$386,392	155,449	132,498	$2	$1	$29,122
2040	$385,863	157,739	133,614	$2	$1	$14,825
TOTAL	$5,785,175			$30	$20	$2,510,286

Fire Development Fees

Infrastructure needs and cost factors for fire facilities are summarized in the upper portion of Figure F5. The conversion of infrastructure needs and costs per service unit into a cost per development unit is also shown in the table below. For residential development, average number of persons in a housing unit provides the necessary conversion. Persons per housing unit, by size threshold are documented in Appendix A.

For nonresidential development, trip generation rates per thousand square feet of floor area (abbreviated KSF) are from the Institute of Transportation Engineers (ITE 2017). In contrast to the "one size fits all" flat fee by type of housing, the updated methodology proposes lower impact fees for smaller, more affordable units. If Greeley makes a legislative policy decision to continue collecting impact fees by type of housing, the maximum supportable fire impact fee for Single Family, would be $690 per dwelling. The maximum supportable fire impact fee for Multifamily (i.e., all other housing types) would be $571 per dwelling.

Figure F5: Fire Impact Fees per Development Unit

Input Variables

Infrastructure Type	Infrastructure Units	Growth Quantity Over Ten Years	Cost Factor per Unit	Growth Cost (rounded)
Fire Stations	square feet	15,170	$397	$6,022,000
Fire Apparatus	count	7	$374,000	$2,618,000
			Total =>	$8,640,000

Cost Allocation

Residential	72%
Nonresidential	28%

Growth 2020 to 2030		Cost per Service Unit	Bond Principal Credit per Service Unit	Net Cost per Service Unit
Residential (persons)	23,091	$269	$30	$239
Nonresidential (vehicle trips)	11,192	$216	$20	$196

Residential Impact Fees (per housing unit) for Fire

Square Feet of Living Space	Persons per Hsg Unit	Maximum Supportable Fire Impact Fees	Current Fees	Increase or Decrease	
1,200 or less	1.36	$325	$463	($138)	
1,201 to 1500	2.39	$571	$463	$108	<= Multifamily
1,501 to 1,800	2.71	$647	$618	$29	
1,801 or more	2.89	$690	$618	$72	<= Single Family

Nonresidential Impact Fees (per 1,000 square feet of building floor area) for Fire

Type	Avg Wkdy Veh Trip Ends per KSF	Trip Adjustment Factors	Maximum Supportable Fire Impact Fees	Current Fees	Increase or Decrease
Industrial	4.96	50%	$486	$140	$346
Retail/Restaurant	37.75	24%	$1,775	$757	$1,018
Office & Other Services	9.74	50%	$954	$355	$599

Projected Revenue for Fire Facilities

Over the next ten years, fire impact fee revenue is projected to be $7.66 million, as shown in Figure F6. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the need for infrastructure and development fee revenue. To simplify the revenue forecast, Raftelis used the fee amount for a unit with an average of 2.71 residents, which is the blended, or overall average for all housing units in Greeley (see Figure A2 and related text for more information). This approach does not require an accurate forecast of the annual increase in Multifamily verses Single-Family housing units.

Figure F6: Fire Impact Fee Revenue

			Ten-Year Cost of Growth-Related Fire Facilities =>		$8,640,000
Fire Impact Fee Revenue					
	Year	Average Residential $647 per housing unit	Industrial $486 per 1000 Sq Ft	Retail / Restaurant $1,775 per 1000 Sq Ft	Office & Other Services $954 per 1000 Sq Ft
		Hsg Units	KSF	KSF	KSF
Base	2020	41,306	8,970	4,280	10,320
Year 1	2021	42,151	9,060	4,320	10,430
Year 2	2022	42,996	9,150	4,370	10,530
Year 3	2023	43,841	9,240	4,410	10,630
Year 4	2024	44,686	9,330	4,450	10,740
Year 5	2025	45,531	9,420	4,490	10,840
Year 6	2026	46,376	9,510	4,540	10,940
Year 7	2027	47,221	9,600	4,580	11,050
Year 8	2028	48,066	9,690	4,620	11,150
Year 9	2029	48,911	9,780	4,670	11,250
Year 10	2030	49,756	9,870	4,710	11,360
Ten-Yr Increase		8,450	900	430	1,040
Projected Revenue =>		$5,470,000	$440,000	$760,000	$990,000
				Total Projected Revenues (rounded) =>	$7,660,000

Greeley expects to construct Fire Station #8 within the next ten years. If the maximum supportable fees are implemented, new development will fully fund the additional station, plus its apparatus.

Figure F7: Ten-Year CIP for Fire

CIP Page	CIP Project	Description	Years 1-5	Years 6-10
394	169	Fire Station 8 plus Apparatus		$7,593,269
		Other Future Projects		$1,046,731
		Subtotal =>	$0	$8,640,000

Transportation Impact Fees

In the 2020 impact fee study, transportation fees are derived using the incremental expansion cost method. As shown in the formula below, the transportation fee is the product of Vehicle Miles of Travel (VMT) per development unit multiplied by the capital cost per VMT.

Road Fee = VMT (vehicle miles of travel) x Capital Cost per VMT (for multimodal improvements)

VMT is the product of trip generation rate per development unit, multiplied by trip rate adjustment factor, average trip length (in miles) and trip-length weighting factor. The capital cost per VMT is based on the projected need for additional arterial lane miles, multiplied by Greeley current capital cost per lane mile, divided by the increase in projected VMT over the planning timeframe. Each component is described below.

Trip Generation Rates

Transportation impact fees in Greeley are based on Average Weekday Vehicle Trip Ends (AWVTE). Trip generation rates are from Trip Generation published by the Institute of Transportation Engineers (ITE 10th Edition 2017). 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 impact 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%. As discussed further below, the impact fee methodology includes additional adjustments to make the fees proportionate to infrastructure demand by type of development.

Adjustment for Pass-By Trips

For retail and restaurants, the trip adjustment factor is less than 50% because retail stores and restaurants 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, the ITE data indicates that 34% of the vehicles that enter are passing by on their way to some other primary destination. The remaining 66% of attraction trips have the commercial site as their primary destination. Because attraction trips are half of all trips, the trip adjustment factor for an average size shopping center is 66% multiplied by 50%, or approximately 33% of the trip ends. Pass-by percentages increase as commercial building size decrease. In other words, small convenience stores and fast food restaurants have the highest pass-by percentages. Based on recent building permit activity in Greeley, typical retail/restaurants are smaller than the average shopping center in ITE national database. Therefore, Raftelis recommends a pass-by adjustment factor of 24% for retail/restaurant development in Greeley.

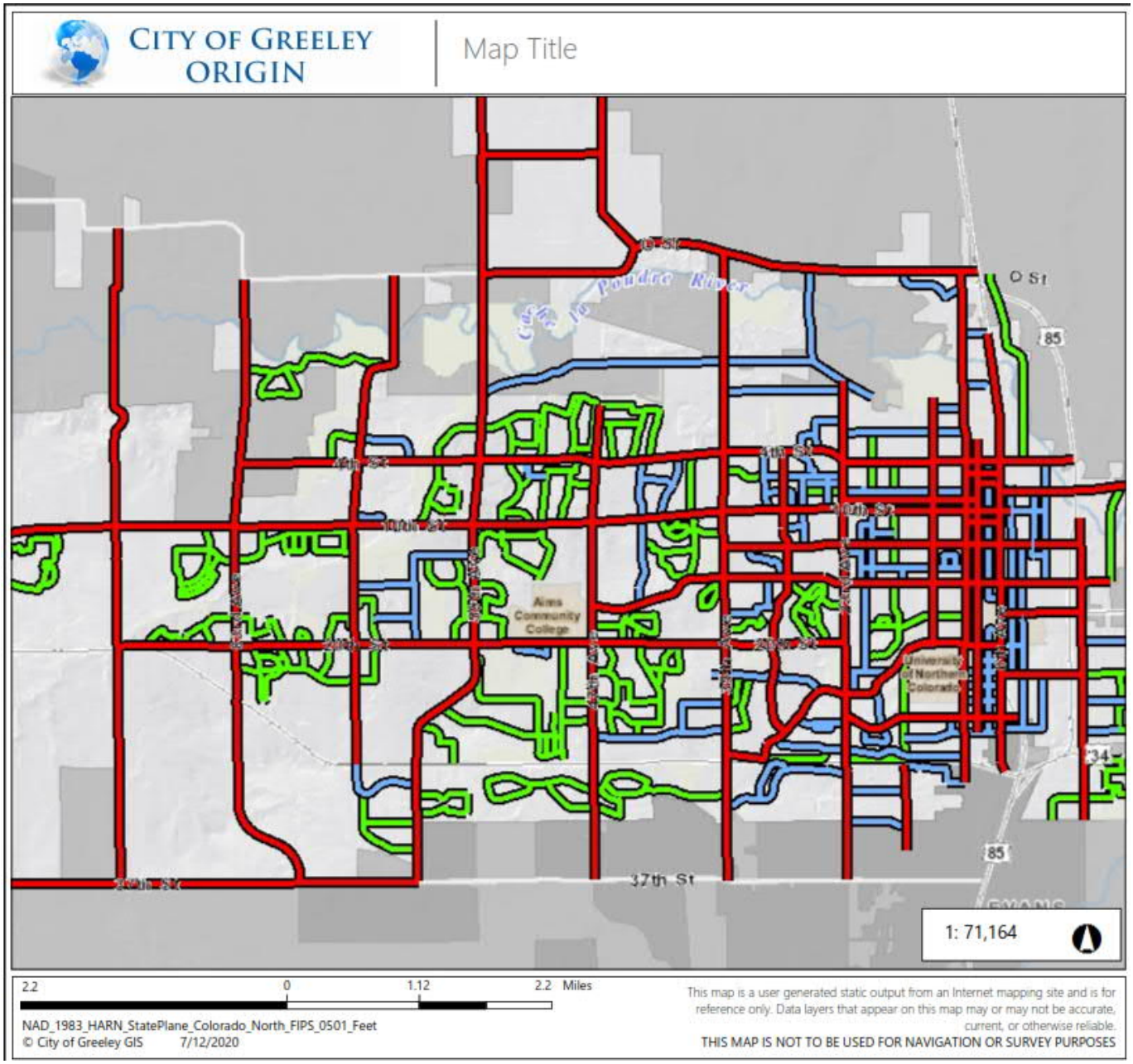
Vehicle Miles of Travel

A Vehicle Mile 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. The average trip length

[1] Typical VMT calculations for development-specific traffic studies, along with most transportation models of an entire service area, are derived from traffic counts on individual road segments multiplied by the length of that road segment. For the purpose of the transportation impact fee 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. interstate highways).

in Greeley is calibrated using existing lane miles of arterials that are designated as Priority 1 snow-plow routes. The essential network of arterials shown in red (see Figure T1) represents the type of system improvements that will be funded with impact fee revenue.

Figure T1: Priority 1 Snow-Plow Routes in Greeley



Lane Capacity

Transportation impact fees are based on the annualized average day lane capacity standard of 5,650 vehicles per lane. City staff provided this standard after analyzing traffic counts and design characteristics of arterial streets in Greeley.

Trip Length Weighting Factor by Type of Land Use

The transportation impact fee methodology includes a percentage adjustment, or weighting factor, to account for trip length variation by type of land use. As shown in Figure T2, vehicle trips from residential development are approximately 114% of the average trip length. The residential trip length adjustment factor includes trips to work, social/recreational purposes and home. Conversely, shopping trips associated with commercial development are roughly 75% of the average trip length while other nonresidential development typically accounts for trips that are 90% of the average for all trips.

Figure T2: Average Trip Length and Weighting Factors

Trip purpose summary	Travel Day Vehicle Trips	Trip Length Mean Miles		Percent of Trips	Average Trip Length	Weighting Factor
Home	205,743	9.93	Residential			
Work	92,392	11.98	Residential			
Social/Recreational	52,877	12.60	Residential			
Subtotal	351,012		Subtotal	57%	10.87	1.14
Shopping/Errands	134,048	7.08	Commercial			
Meals	43,347	7.49	Commercial			
Subtotal	177,395		Subtotal	29%	7.18	0.75
School/Daycare/Religious activity	16,288	9.11	Other			
Medical/Dental services	11,568	10.14	Other			
Transport someone	44,991	7.25	Other			
Something else	10,045	11.95	Other			
Subtotal	82,892		Subtotal	14%	8.59	0.90
All	611,299	9.55				

Source: Federal Highway Administration, 2017 National Household Travel Survey
Tabulation created on the NHTS website at http://nhts.ornl.gov

Development Prototypes and Projected Travel Demand

The relationship between development in Greeley and the need for system improvements is documented below. Figure T3 summarizes the input variables for an aggregate travel demand model. In the table below HU means housing units, KSF means square feet of nonresidential development, in thousands, Institute of Transportation Engineers is abbreviated ITE, and VTE means vehicle trip ends.

Projected development in Greeley over the next ten years is shown in the middle section of Figure T3. These land use assumptions are documented in Appendix A. Trip generation rates and trip adjustment factors convert projected development into inbound, primary weekday vehicle trips. A typical vehicle trip, such as a person leaving their home and traveling to work, generally begins on a local street that connects to a collector street, which connects to an arterial road and eventually to a state or interstate highway. This progression of travel up and down the functional classification chain limits the average trip length determination, for the purpose of impact fees, to the following question, "What is the average vehicle trip length on impact fee system improvements (i.e. essential arterials in Greeley)?"

With 214 lane miles of City arterials designated as Priority 1 snow-plow routes, and a lane capacity standard of 5,650 vehicles per lane, the existing network has 1,210,430 vehicle miles of capacity (i.e., 5,650 vehicles per

lane traveling the entire 214 lane miles). To derive the average utilization (i.e., average trip length expressed in miles), divide vehicle miles of capacity by the vehicle trips attracted to development in Greeley. As shown in the bottom-left corner of the table below, existing development attracts 310,169 inbound, primary weekday vehicle trips. Dividing 1,210,430 vehicle miles of capacity by inbound weekday vehicle trips yields an un-weighted average trip length of approximately 3.9 miles. However, the calibration of average trip length includes the same adjustment factors used in the impact fee calculations (i.e., commercial pass-by adjustment and average trip length adjustment by type of land use). With these adjustments, Raftelis determined the weighted-average trip length to be 3.77 miles.

Figure T3: Projected Travel Demand

Travel Demand Model — 8/28/2020
Greeley CO

ITE Code	Dev Type	Weekday VTE	Dev Unit	Trip Adj	Trip Length Wt. Factor
210 & 220	Housing Units	9.63	HU	50%	1.14
110	Industrial	4.96	KSF	50%	0.90
820	Retail&Restaurant	37.75	KSF	24%	0.75
710	AllOtherNonres	9.74	KSF	50%	0.90

Avg Trip Length (miles) 3.77
Capacity Per Lane 5,650 <= Based on two-lane arterials in Greeley (provided by City staff).

Year->	Base	1	2	3	4	5	10	10-Year
Greeley CO	2020	2021	2022	2023	2024	2025	2030	Increase
Housing Units	41,306	42,151	42,996	43,841	44,686	45,531	49,756	8,450
Industrial KSF	8,970	9,060	9,150	9,240	9,330	9,420	9,870	900
Retail&Restaurant KSF	4,280	4,320	4,370	4,410	4,450	4,490	4,710	430
AllOtherNonresidential KSF	10,320	10,430	10,530	10,630	10,740	10,840	11,360	1,040
Residential Trips	198,888	202,957	207,026	211,094	215,163	219,232	239,575	
Industrial Trips	22,246	22,469	22,692	22,915	23,138	23,362	24,478	
Retail&Restaurant Trips	38,777	39,139	39,592	39,955	40,317	40,679	42,673	
AllOtherNonresidential Trips	50,258	50,794	51,281	51,768	52,304	52,791	55,323	
Total Vehicle Trips	310,169	315,359	320,591	325,732	330,922	336,064	362,049	
Vehicle Miles of Travel (VMT)	1,210,430	1,231,516	1,252,693	1,273,614	1,294,700	1,315,620	1,421,067	210,637
LANE MILES	214.24	217.97	221.72	225.42	229.15	232.85	251.52	37.28
Lane Miles per 10,000 VMT	1.77	1.77	1.77	1.77	1.77	1.77	1.77	
					Growth Share Based on VMT Increase =>			15%
Res Trips Share of Total Trips	64.1%	64.4%	64.6%	64.8%	65.0%	65.2%	66.2%	
Primary Trips to Nonres Dev	111,281	112,402	113,565	114,638	115,759	116,832	122,473	
Total Nonres KSF	23,570	23,810	24,050	24,280	24,520	24,750	25,940	
Trips per KSF	4.72	4.72	4.72	4.72	4.72	4.72	4.72	
Current Arterial Lane Miles	214.00	<= Travel lanes designated Priorty 1 Snow Plow routes, as provided by Public Works.						

Maximum Supportable Impact Fees for Transportation

Input variables for Greeley's transportation impact fees are shown in the upper section of Figure T4. Inbound, primary vehicle miles of travel by type of development are multiplied by the capacity cost per vehicle mile of travel to yield the impact fees. Given the projected need for 37.28 additional arterial lane miles and the City's current cost factor of $1,750,000 per lane mile, Greeley needs to spend $65.24 million on transportation capacity projects in order to accommodate new development over the next ten years. Allocating $65.24 million for growth-related transportation improvements over the ten-year increase of 210,637 vehicle miles of travel, yields a capital cost is $309 per VMT. An example of the transportation impact fee calculation is shown below using input variables for the average size dwelling unit.

9.64 weekday vehicle trip ends per dwelling unit
x
0.50 adjustment factor for inbound trips
x
3.77 average miles per trip
x
1.14 trip length adjustment factor for residential development
x
$309 growth cost per VMT
=
$6,401 per dwelling unit (truncated)

The text below from Trip Generation supports the consultant's recommendation to use ITE 820 Shopping Center as a reasonable proxy for all retail stores and restaurants. The shopping center trip generation rates are based on 302 studies with an r-squared value of 0.79. The latter is a goodness-of-fit indicator with values ranging from 0 to 1. Higher values indicate the independent variable (floor area) provides a better prediction of the dependent variable (average weekday vehicle tripends). If the r-squared value is less than 0.50, ITE does not publish the value because factors other than floor area provide a better prediction of trip rates.

> "A shopping center is an integrated group of commercial establishments. Shopping centers, including neighborhood, community, regional, and super regional centers, were surveyed for this land use. Some of these centers contained non-merchandising facilities, such as office buildings, movie theaters, restaurants, post offices, banks, and health clubs. Many shopping centers, in addition to the integrated unit of shops in one building or enclosed around a mall, include out parcels (peripheral buildings or pads located on the perimeter of the center adjacent to the streets and major access points). These buildings are typically drive-in banks, retail stores, restaurants, or small offices. Although the data herein do not indicate which of the centers studied include peripheral buildings, it can be assumed that some of the data show their effect."

If Greeley makes a legislative policy decision to continue collecting impact fees by type of housing, the maximum supportable transportation impact fee for Single Family, would be $6,839 per dwelling. The maximum supportable transportation impact fee for Multifamily (i.e., all other housing types) would be $5,590 per dwelling.

Figure T4: Transportation Impact Fees

Input Variables:

Average Miles per Trip	3.77
Projected Need for Additional Lane Miles over 10 Years	37.28
Cost per Lane Mile	$1,750,000
Growth Cost of System Improvements	$65,240,000
Vehicle Miles of Travel Increase 2020 to 2030	210,637
Capital Cost per Addtional VMT	$309

Development Type	Avg Wkdy Veh Trip Ends	Trip Rate Adjustment	Trip Length Adjustment	Maximum Supportable Transportation Fees	Current Fees	Increase or Decrease	
Residential (per housing unit) by Square Feet of Living Space for Transportation							
1,200 or less	4.56	50%	114%	$3,027	$2,777	$250	
1,201 to 1500	8.42	50%	114%	$5,590	$2,777	$2,813	<= Multifamily
1,501 to 1,800	9.64	50%	114%	$6,401	$4,300	$2,101	
1,801 or more	10.30	50%	114%	$6,839	$4,300	$2,539	<= Single Family
Nonresidential (per 1,000 Square Feet of Floor Area) for Transportation							
Industrial	4.96	50%	90%	$2,600	$1,742	$858	
Retail/Restaurant	37.75	24%	75%	$7,915	$5,692	$2,223	
Office & Other Services	9.74	50%	90%	$5,105	$5,034	$71	

Transportation Growth Cost and Funding Strategy

Figure T5 compares the ten-year, growth cost of transportation improvements to projected impact fee revenue. The City expects to collect approximately $65.14 million in transportation impact fee revenue over the next ten years. Projected impact fee revenue will cover the growth cost of improvements if fees are adopted at the maximum supportable level.

The revenue projection shown below is based on the demographic data described in Appendix A and the maximum supportable fee amount for an average-size residential unit. Residential development in Greeley is expected to yield approximately 83% of total transportation impact fee revenue. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the impact fee revenue and capital costs.

To simplify the revenue forecast, Raftelis used the fee amount for a unit with an average of 9.64 average weekday vehicle trip ends, which is the blended, or overall average for all housing units in Greeley (see Figures A3 and A5, plus related text, for more information). This approach does not require an accurate forecast of the annual increase in Multifamily verses Single-Family housing units.

Figure T5: Transportation Impact Fee Revenue

Ten-Year Growth Cost of Transportation Improvements $65,240,000

Ten-Year Projection of Transportation Impact Fee Revenue

		Residential	Industrial	Retail/Restaurant	All Other Nonresidential
		$6,401 per housing unit	$2,600 per 1000 Sq. Ft	$7,915 per 1000 Sq. Ft	$5,105 per 1000 Sq. Ft
	Year	Hsg Units	Sq. Ft x 100 0	Sq. Ft x 100 0	Sq. Ft x 100 0
Base	2020	41,306	8,970	4,280	10,320
Year 1	2021	42,151	9,060	4,320	10,430
Year 2	2022	42,996	9,150	4,370	10,530
Year 3	2023	43,841	9,240	4,410	10,630
Year 4	2024	44,686	9,330	4,450	10,740
Year 5	2025	45,531	9,420	4,490	10,840
Year 6	2026	46,376	9,510	4,540	10,940
Year 7	2027	47,221	9,600	4,580	11,050
Year 8	2028	48,066	9,690	4,620	11,150
Year 9	2029	48,911	9,780	4,670	11,250
Year 10	2030	49,756	9,870	4,710	11,360
Ten-Yr Increase =>		8,450	900	430	1,040
Fee Revenue =>		$54,088,000	$2,340,000	$3,403,000	$5,309,000
				Total Revenue from Transportation Fees =>	$65,140,000

Transportation Improvements Needed to Accommodate Growth

Greeley annually adopts a Capital Improvements Plan (CIP), which includes growth-related projects to expand transportation capacity. Planned transportation improvements over the next ten years are listed in Figure T6.

Figure T6: Transportation Improvements Plan

CIP Page	CIP Project	Description	Years 1-5	Years 6-10
420	312.2	Promontory Parkway and US 34 Bypass Signal	$900,000	
422	312.1504	Intersection Improvements at 35th Ave and O Street	$2,000,000	
424	312.1739	Turn Lanes on 20th St Clubhouse Drive 59th Ave	$3,500,000	
426	312.1603	O Street - 47th to 59th	$6,012,000	
430	882	35th Ave Road Widening - 4th Street to F Street	$10,100,000	
434	312.21	23rd Ave Butch Butler Turn Lane	$600,000	
436	312.22	35th Ave - F to O Street	$7,750,000	
442	312.1727	Widen 83rd Ave - 18th to 10th St	$5,745,000	
444	312.1602	83rd Ave - 18th St to 34 Bypass - Widen and Traffic Signal	$4,888,500	
446	312.1713	Traffic Signal 37th St and Two Rivers Parkway	$750,000	
450	312.23	10th St & 50th Ave Signal	$500,000	
452	312.1806	23rd Ave Turn Lane & 20th St Right-turn Lane	$700,000	
454	312.1512	Traffic Signal at 20th St and 50th Ave	$303,000	
456	312.1706A	CDOT Partnership - 83rd Ave Signal	$600,000	
458	312.1505	Intersection Improvements at 59th Ave and O Steet	$3,000,000	
460	312.2	Widen 20th St - 90th to 95th Ave		$8,100,000
450	312.3	Widen 95th Ave - Hwy 34 Bypass to 20th St		$5,858,000
		Other Future Projects		$3,933,500
		Subtotal =>	$47,348,500	$17,891,500
		Total Impact Fee Funding Over Ten Years =>		$65,240,000

Storm Drainage Plant Investment Fees

The City has assessed Storm drainage PIFs for many years. The PIFs are assessed per dwelling unit for single family residential and multifamily residential of $XXX and $XXX respectively. All other development types (e.g., non-residential) are assessed a Storm drainage PIF per impervious square foot. It has been several years since the storm drainage PIF was comprehensively updated, although the City has increased the storm drainage PIF for inflation in some years, including most recently in 2020. This section summarizes the comprehensive evaluation of the City's storm drainage PIF completed as part of this study. Appendix B contains additional detail and backup summarized in the body of this report.

Existing Storm Drainage Facilities

Figure SW1 summarizes the replacement cost new less (RCNLD) of City storm drainage facilities as of December 31, 2019 totaling $84.1 million. The RCNLD indexes both the original cost and accumulated depreciation of City storm drainage facilities to the Engineering News Record Construction Cost Index (ENR-CCI) for Denver. Land as a non-depreciable asset RCNLD is equal to the original cost.

Figure SW1: Existing City Storm Drainage Facilities RCNLD by Functional Designation

Description	Asset Count	Original Cost	Total RCLND (1)	RCNLD - Contributed (1)	RCNLD - Net (1)
Land	19	$2,596,850	$2,536,233	$1,150,797	$1,385,436
Post 1970 Physical Infrastructure	198	51,116,167	53,772,853	1,914,053	51,858,800
Miscellaneous / Admin	16	739,085	780,304	0	780,304
Vehicles & Equipment	22	2,892,234	1,504,632	0	1,504,632
Lines	32	2,458,414	2,790,164	587,214	2,202,950
1970 Stormwater Assets	22	106,885,343	22,762,955	0	22,762,955
Total	309	$166,688,094	$84,147,140	$3,652,063	$80,495,076
(1) Indexed to ENR-CCI for Denver using December 2019 compared to ratio in year of acquisition.					

Excluded Storm Drainage Facilities

Raftelis excluded two sets of City storm drainage facilities for purposes of PIF calculation. The first are related to City storm drainage facilities constructed before 1970 and reflected as 1970 facilities as reported within City fixed asset information with a RCNLD of $22.8M. While much of this infrastructure is in place, other elements may have been previously replaced and/or are nearing the end of their effective useful life and it's impossible to differentiate facilities in place compared to those that may have been taken out of service and/or replaced. The second are related to assets which were constructed by developers and dedicated or contributed to the City with a RCNLD of $3.7 million as summarized in Figure SW1.

Existing Impervious Area and Storm Drainage Customer Data

Raftelis estimated existing customer impervious area using monthly storm drainage customer billing data aggregating total gross area in square foot grouped by impervious area coefficient factor (C-Factor) and applying the estimated impervious area included within the C-Factor. The City currently provides storm

drainage services to an estimated 217,639,385 impervious square feet and 469,614,592 total square feet of gross area for all customers as summarized in Appendix B.

Equivalent Residential Unit

Raftelis also estimated the storm drainage Equivalent Residential Unit (ERU) using existing customer information. The City tracks residential customers of different types within different C-Factors. The default C-Factor for single family residential detached dwellings is "45" assuming that each customer impervious area is 45% of total gross area. Individual customers may submit alternative measurements consistent with the requirements demonstrating a different measurement of the gross area and/or actual impervious area in lieu of the default classification, but the vast majority of single family residential detached customers are billed with an estimated impervious area of 45% of the gross area.

As of December 31, 2019, 21,992 customers were billed were billed at the rate code 345 (45% impervious) with a total gross area of 187,630,385 square feet reflecting an average gross area of 8,532 square feet. Applying 45% impervious translates to an estimated impervious area of approximately 3,800 square feet for the average or typical single family residential customer connected to the storm drainage system.

Maximum Supportable Storm Drainage Plant Investment Fee

Raftelis calculated the maximum supportable storm drainage PIF using the equity buy-in method. This method calculates the net value of existing storm drainage facilities per impervious square foot of surface area. The maximum supportable storm drainage PIF is $0.25 per impervious square foot. The net value incorporates the following elements.

1. Calculate the RCNLD of existing storm drainage facilities
2. Reduce RCNLD for pre-1970 assets and developer contributed facilities
3. Increase value for the net present value of future interest payments on outstanding debt
4. Reduce value for the outstanding principal of future principal payments on outstanding debt

The net asset value of $53.0 million is then divided by the existing customers estimated impervious area of 217 million square feet yielding $0.25 (rounded to $0.01) per impervious square foot. Figure SW2 summarizes this calculation.

Figure SW2: Maximum Supportable Storm Drainage PIF per Impervious Square Foot

Description	Calculation
Total System Replacement Cost (1)	$61,384,185
Less: Developer Contributed Assets	(3,652,063)
Plus: NPV of Borrowing Cost	1,583,732
Less: Current Outstanding Debt Principal	(6,295,000)
Total Cost for PIF Calculation	$53,020,853
Impervious Area (sq. ft.) (2)	217,339,868
$ per sq. ft.	$0.25

(1) Replacement cost new less depreciation asset valuation using ENR-CCI as of December 2019. Excludes pre-1970 assets.
(2) Total impervious area in the City estimated based on lot size and C-factor used for monthly bills.

Raftelis proposes that the City modify the storm drainage PIF assessment schedule so that all customers are assessed $0.25 per impervious square foot. Currently, single family residential developments are assessed a flat fee of $402 per dwelling unit while multi-family residential development are assessed a flat fee of $298 per dwelling unit. The City collects gross area and impervious area for both types of residential developments and the proposed assessment schedule which would be assessed per impervious square foot does not require any additional data not already collected to administer.

The modification to the assessment schedules provides an incentive to future development to mitigate impacts to the storm drainage system through minimizing impervious area or be assessed the impact per square foot on the storm drainage system facilities.

For an ERU (3,800 impervious square feet), the maximum supportable storm drainage PIF of $0.25 per impervious square foot would total $950 representing an increase of $548 per dwelling unit over the existing fee of $402 per dwelling unit. Since the existing fee is $402 regardless of impervious area, the impact to customers will vary depending on the impervious square feet.

Water and Sewer Plant Investment Fees

The City requested Raftelis to evaluate alternatives to assessing the single-family residential water and wastewater plant investment fees (PIFs). The primary goal of this evaluation was to develop a fee structure that more equitably aligned the potential demand requirements with the cost of capacity required to serve new development. This approach can provide an economic incentive to developers as the PIF is more closely correlated to the specific characteristics of the development.

The City's water and wastewater PIFs are currently based on water meter size. meter size assessment schedule is common among many utilities in Colorado and elsewhere. This schedule is widely accepted, straight forward and are easy to administer. They are both more readily estimated during planning stages of new residential development before the construction is completed. And, the potential capacity required is directly correlated to meter size which can be equated back easily to the unit cost of capacity. However, this traditional method provides only a coarse mechanism for allocating fees in proportion to an anticipated water demand, and this can result in some disconnects in equity between different types and sizes of development.

Raftelis discussed with utility Staff conceptual ideas for PIFs that would more closely align demand with development size. To meet these goals and objectives, Raftelis developed a PIF based on lot size. In theory, there exists a correlation between water demand and lot size – the larger the lot, the higher the demand. To develop this, Raftelis evaluated recent water billing data for all single family residential customers for a 12-month period against the size of lot. Raftelis bifurcated the data for each customer into indoor and outdoor usage. We used linear regression analysis to evaluate the relationship between both indoor and outdoor water usage based on lot size. Our analysis showed little correlation between indoor usage and lot size. Indoor water use averaged approximately 4,000 gallons per month. The regression analysis for outdoor usage did show a closer correlation to water use and lot size. Based on this information, we were able to develop the following equation for assessing a PIF by lot size.

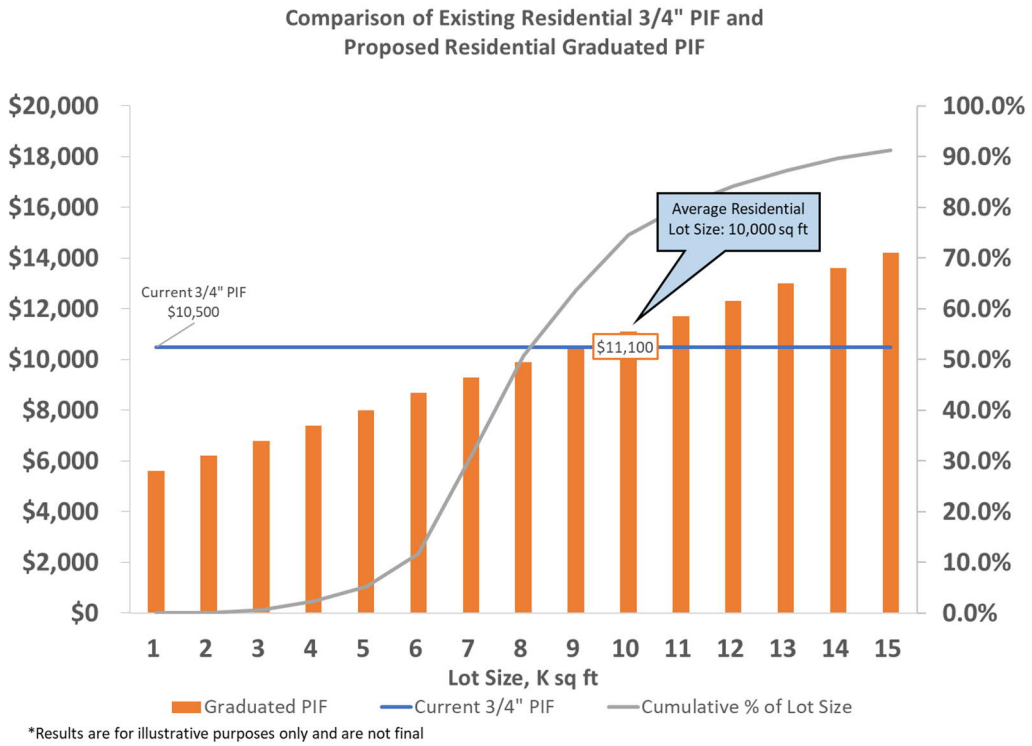
Single Family Residential PIF ($) = Cost of Indoor Demand + Cost of Outdoor Demand

Where:

Cost of indoor demand = customer class average winter consumption (Dec. – Mar) * Unit cost of capacity

Cost of outdoor demand = Unit cost of capacity * per square foot of lot size

Raftelis compared the results of the analysis using the average lot size of 10,000 square feet. The current water PIF is $10,500. Under this proposed methodology, a PIF for a 10,000 square foot home would be $11,100. Based on recent data from the last two year, the average single family lot size is below the current average of 10,000 square feet. These smaller lot sizes would pay a lower fee under this fee structure alternative than under the current fee by meter size. Figure 1 illustrates the potential fees at different lot sizes.



The current single family wastewater PIF is based on indoor water use and serves as a proxy for estimating flows to the treatment plant. Raftelis evaluated relationship of indoor water use to lot size and the number of bedrooms and bathrooms. We found little correlation under both methods. As a result, Raftelis is not proposing any changes to the wastewater PIF.

The City currently has a non-potable PIF that was based off a methodology defined in the last non-potable master plan. However, it was not widely used because it usually resulted in higher costs for the builder than using potable supplies. The City is looking to expand non-potable service because it is significantly more cost efficient for Greeley's water customers. Greeley is nearly complete with an updated non-potable master plan that will outline the path forward to minimize the use of treated water and water rights, and maximize the use of non-potable rights. This will also reduce the need for additional treated water acquisitions.

However, non-potable service is not currently universally available throughout the City but the master plan will provide the roadmap for expanding non-potable service to much of Greeley. The City is developing policies to maximize the use of non-potable water with the intention to make the expansion of non-potable water use financially beneficial for both the building community and Greeley's water customers. Non-potable is being promoted for larger irrigable areas because it is usually cost effective, however, non-potable can be utilized house to house if there is enough irrigable are to make it financially feasible.

Calculating a non-potable PIF would be was needed to assist the City in the development of non-potable policies related to all water related costs builders are responsible for associated with development, i.e. PIFs, raw water/cash-in-lieu, and infrastructure installation. City staff has not yet finalized the suite of policy recommendations to expand non-potable water service for review by the Water and Sewer Board and City Council.

However, the proposed single family water PIF based on lot size can work well with a non-potable PIF. The proposed single family water PIF consists of two components – an indoor (potable) PIF and an outdoor PIF. Should non-potable water be available, the new development would only pay the indoor portion of the treated water PIF. The outdoor portion would be assessed based on the unit cost of the non-potable PIF.

The policies related to how these fees would be implemented are still being refined, but the intent is to make the total cost of development for water (including PIF, raw water/cash-in-lieu/infrastructure) advantageous for the builder/developer to install non-potable service.

Fee Implementation and Administration

Raftelis recommends that Greeley update impact fees every five years. In addition, some jurisdictions make annual adjustments for inflation using a price index like the Engineering News Record (ENR) Construction Cost Index published by McGraw-Hill Companies. This index could be applied to the adopted impact fee schedule, then approved by elected officials. If cost estimates or demand indicators change significantly, the City should redo the fee calculations.

Another best practice is to spend impact fees as soon as possible, tracking funds according to first in, first out accounting, using aggregate rather than project-specific tracking. Impact fees and accrued interest should be maintained in a separate fund that is not comingled with other revenues. Finally, Raftelis recommends publishing an annual report indicating impact fee collections, expenditures, and fund balances by type of infrastructure.

Development Categories

Maximum Supportable impact fees for residential development are by square feet of heated and finished living space, excluding porches, garage and unfinished space, such as basements. For an apartment building, the average size threshold is derived for an entire building. The recommended procedure is to identify the aggregate floor area of living space for the entire building, divided by the number of dwelling units in the building. Apartment complexes and some residential development provide common areas for use by residents, such as exercise rooms and clubhouses. Common areas for the private use of residents are ancillary uses to the dwelling units and not subject to additional impact fees. Raftelis recommends that an addition to an existing residential building, that does not increase the number of dwelling units, should be exempt from additional impact fees.

Three general nonresidential development categories in the maximum supportable impact fee schedule can be used for all new construction within Greeley. Nonresidential development categories represent general groups of land uses that share similar average weekday vehicle trip generation rates and job density (i.e. jobs per 1,000 square feet of floor area), as documented in Appendix A. Industrial includes all buildings used for goods production, warehousing, transportation, communications and utilities. Retail & Restaurant includes all shopping centers, establishments that sell merchandise and all eating/drinking places. Office & Other Services includes general office buildings, lodging, business services and personal services, such as daycare and private schools.

An applicant may submit an independent study to document unique demand indicators (i.e., service units per development unit). The independent study should be prepared by a professional engineer or certified planner and use the same type of input variables as those in Greeley's impact fee study. For residential development, impact fees are based on average persons per dwelling. For nonresidential development, impact fees are based on inbound, primary average weekday vehicle trips per 1,000 square feet of floor area. The independent fee study will be reviewed by City staff and can be accepted as the basis for a unique fee calculation. If staff determines the independent fee study is not reasonable, the applicant may appeal the administrative decision to Greeley's elected officials for their consideration.

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.

Policies and procedures related to site-specific credits should be addressed in the 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. The latter option is more difficult to administer because it creates unique fees for specific geographic areas. Based on national experience, Raftelis recommends a jurisdiction establish a reimbursement agreement with the developer that constructs a system improvement. 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 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. Reimbursement agreements should only obligate the City to reimburse developers annually according to actual fee collections from the benefiting area.

The supporting documentation for each type of impact fee describes the types of infrastructure considered to be system improvements. Site specific credits or developer reimbursements for one type of system improvement does not negate an impact fee for other system improvements.

Appendix A: Demographics and Development Projections

Appendix A contains the land use assumptions for Greeley's 2020 impact fee update. Population and jobs are the service units or demand indicators that will be used to evaluate the need for growth-related infrastructure. Residential dwelling units and nonresidential floor area are the development units that will be used to project vehicular travel demand the projected impact fee revenue over the next ten years.

The demographic data and development projections discussed below will be used to ensure fees are proportionate by type of land use. All land use assumptions are based on Greeley's Comprehensive Plan and Growth & Development Projections Report (dated 2/1/20). In contrast to the Comprehensive Plan, which is more general and has a long-range horizon, development impact fees have a short-range focus. Typically, impact fee studies look out five to ten years, with the expectation that fees will be periodically updated (e.g. every 5 years). Infrastructure standards were calibrated using 2020 data. In Greeley, the fiscal year begins on January 1st.

Key land use assumptions for the City of Greeley are housing units and nonresidential floor area, as shown in Figure A1. These projections will be used to estimate development fee revenue and to indicate the anticipated need for growth-related infrastructure. The goal is to have reasonable projections without being overly concerned with precision. Because impact fee methods are designed to reduce sensitivity to development projections in the determination of the proportionate-share fee amounts, if actual development is slower than projected, fee revenue will decline, but so will the need for growth-related infrastructure. In contrast, if development is faster than anticipated, the City will receive an increase in fee revenue, but will also need to accelerate infrastructure improvements to keep pace with the actual rate of development.

Greeley's 2020 housing unit estimate is from the 2020 Growth & Development Report. Given the economic downturn from COVID-19, staff recommends a more conservative increase of 845 housing units per year. For the impact fee update, Raftelis assumed this same residential increase would continue to 2030. We converted housing units to year-round residents using Greeley's current average of 2.71 persons per housing unit.

Raftelis used annual job estimates from 2010 to 2017 (latest available data by place of work), by type of nonresidential development (see Greeley's Work Area Profile, available through the U.S. Census Bureau web application known as On-The-Map) to derive a linear trend projection of 2020 jobs located in Greeley. The number of jobs in Greeley is based on quarterly workforce reports supplied by employers. To project jobs from 2020 to 2030, Raftelis assumed jobs would increase at a conservative linear growth rate of 1% per year. Nonresidential floor area estimates are derived from the number of jobs, by three types of nonresidential development, and average square feet per job multipliers, as discussed further below (see Figure A6). According to the 2017 OTM job data, Greeley's current job mix is approximately 26% industrial, 18% retail/restaurant jobs, and 56% office and other services (e.g. public administration, business services, health care, educational services). As shown at the bottom of Figure A1, Greeley expects to add an average of 237,000 square feet of nonresidential development per year, from 2020 to 2030.

Figure A1: Land Use Assumptions

Greeley, CO	2017	2020 Base Yr	2021 1	2022 2	2023 3	2024 4	2025 5	2030 10
Year-Round Population								
City of Greeley	105,353	111,748	114,229	116,519	118,809	121,099	123,389	134,839
Annual Growth Rate		2.3%	2.2%	2.0%	2.0%	1.9%	1.9%	1.7%
Housing Units								
Total Housing Units	37,410	41,306	42,151	42,996	43,841	44,686	45,531	49,756
New Units per Year		2,394	845	845	845	845	845	845
Persons per Housing Unit	2.82	2.71	2.71	2.71	2.71	2.71	2.71	2.71
Jobs (by place of work)								
Industrial	12,796	14,594	14,740	14,886	15,032	15,178	15,324	16,054
Retail/Restaurant	8,794	10,030	10,130	10,230	10,331	10,431	10,531	11,033
Office & Other Services	26,877	30,653	30,960	31,267	31,573	31,880	32,187	33,720
Total Jobs	48,467	55,277	55,830	56,383	56,936	57,489	58,042	60,807
Annual Growth Rate		3.6%	1.0%	1.0%	1.0%	1.0%	1.0%	0.9%
Jobs to Housing Ratio	1.30	1.34	1.32	1.31	1.30	1.29	1.27	1.22
Nonresidential Floor Area (sq ft in thousands)								
Industrial	7,870	8,970	9,060	9,150	9,240	9,330	9,420	9,870
Retail/Restaurant	3,750	4,280	4,320	4,370	4,410	4,450	4,490	4,710
Office & Other Services	9,050	10,320	10,430	10,530	10,630	10,740	10,840	11,360
Total KSF	20,670	23,570	23,810	24,050	24,280	24,520	24,750	25,940
Avg Sq Ft Per Job	426	426	426	427	426	427	426	427
Avg Jobs per KSF	2.34	2.35	2.34	2.34	2.34	2.34	2.35	2.34

Annual Increase	20 to 21	21 to 22	22 to 23	23 to 24	24 to 25	29 to 30	2020 to 2030 Avg Anl
Year-Round Population	2,481	2,290	2,290	2,290	2,290	2,290	2,309
Housing Units	845	845	845	845	845	845	845
Jobs	553	553	553	553	553	553	553
Industrial KSF	90	90	90	90	90	90	90
Retail/Restaurant KSF	40	50	40	40	40	40	43
Office & Other Services KSF	110	100	100	110	100	110	104
Total Nonres KSF	240	240	230	240	230	240	237

Population and Housing Characteristics

According to the U.S. Census Bureau, a household is a housing unit that is occupied by year-round residents. Development fees often use per capita standards and persons per housing unit, or persons per household, to derive proportionate-share fee amounts. If Greeley makes a legislative policy decision to continue collecting impact fee by type of residential unit, all Single Units (i.e., Single Family Detached and Single Family Attached) will be based on an average of 2.89 persons per household. Single Family Attached includes townhouses and condominiums that can be individually owned. The All Other category will be based on an average of 2.39 persons per household and includes residential buildings with two or more units per structure, plus mobile homes and recreational vehicles.

Figure A2: Persons per Household by Units in Structure

Greeley Population and Housing Characteristics

Units in Structure	Persons	House-holds	Persons per Household	Housing Units	Persons per Housing Unit	Housing Mix	Vacancy Rate
Single Unit *	67,107	23,235	2.89	23,813	2.82	63%	2%
All Other **	30,413	12,737	2.39	14,010	2.17	37%	9%
Subtotal	97,520	35,972	2.71	37,823	2.58		5%
Group Quarters	6,203						
TOTAL	103,723						

Source: U.S. Census Bureau, 2018 American Community Survey, 5-Year Estimates, Tables B25024, B25032, B25033, and B26001.

* Single unit includes attached and detached.

** All other includes multifamily and mobile homes.

Demand Indicators by Dwelling Size

Raftelis recommends a fee schedule whereby larger units pay higher impact fees and smaller units pay lower impact fees. Benefits of the proposed methodology include: 1) proportionate assessment of infrastructure demand using local demographic data, 2) progressive fee structure (i.e. lower cost for smaller units and higher cost for larger units), 3) more affordable fees for workforce housing, and 4) ease of fee implementation/administration. Under the current fee structure, staff determine fees based on residential types, such as single-family, multifamily and mobile home, with complications due to various forms of ownership (e.g. townhouses, condominiums and Accessory Dwelling Units). Impact fees based on size of dwelling are generally easier to administer when expressed in square feet of heated and finished living space for all types of housing (excluding garages, patios and porches). For a building with more than one residential unit, City staff will determine the average size threshold for the entire building by dividing total heated floor area by total number of dwellings in the building, excluding common areas in apartment buildings (e.g. fitness centers, clubhouses, and property management offices).

Raftelis created custom tabulations of demographic data by bedroom range from individual survey responses provided by the U.S. Census Bureau, in files known as Public-Use Microdata Samples (PUMS). PUMS files are only available for areas of roughly 100,000 persons and Greeley is the primary city in Public Use Microdata Area (PUMA) 300. At the top of Figure A3, cells with yellow shading indicate survey results, yielding the unadjusted number of persons and vehicles available per dwelling by bedroom range. These multipliers are adjusted to match the control totals for the City of Greeley. According to the 2020 population and housing unit data provided by staff, Greeley has an average of 2.71 persons per housing unit. Also, Raftelis used ACS tables to derive the average number of vehicles available per housing unit. In 2018, there was an average of 1.85 vehicles available per housing unit in Greeley.

The middle section of Figure A2 provides nation-wide data from the Institute of Transportation Engineers (ITE). VTE is the acronym for Vehicle Trip Ends, which measures vehicles coming and going from a development. For example, the trip generation rates for a residential subdivision would include all vehicles entering and exiting, thus capturing deliveries and service calls (e.g. landscapers and trash collection), in addition to the trips made by residents and visitors.

Dividing trip ends per household by trip ends per person yields an average of 2.21 persons per multifamily household (i.e. an occupied housing unit) and 3.56 persons per single dwelling, based on ITE's national survey. Applying Greeley's current housing mix of 37% multifamily and 63% single-family dwellings yields a weighted average of 3.06 persons per household. In comparison to the national data, Greeley only has an average of 2.71 residents per household.

Dividing trip ends per household by trip ends per vehicle available yields an average of 1.44 vehicles available per multifamily household and 1.48 vehicles available per single-family household, based on ITE's national survey. Applying Greeley's current housing mix yields a national weighted average of 1.47 vehicles available per household. In comparison to the national data, Greeley has more vehicles available, with an average of 1.94 vehicles available per household.

Rather than rely on one methodology, the recommended trip generation rates shown in the bottom section of Figure A3 are an average derived from persons and vehicles available, by bedroom range. In Greeley, each housing unit is expected to generate an average of 9.63 Average Weekday Vehicle Trip Ends, compared to the national average of 9.44 average weekday trip ends per single-family household.

Figure A3: Demographic Characteristics by Bedroom Range

2018 Public Use Microdata Sample (PUMS)

Bedroom Range	Persons (1)	Vehicles Available (1)	Housing Units (1)	Greeley Hsg Mix	Unadjusted Persons/HU	Adjusted Persons/Hshld (2)	Unadjusted VehAvl/HU	Adjusted VehAvl/Hshld (2)
0-1	416	287	331	8%	1.26	1.34	0.87	0.82
2	1,667	1,328	858	21%	1.94	2.06	1.55	1.47
3	3,857	3,175	1,494	36%	2.58	2.74	2.13	2.02
4+	4,485	3,603	1,413	34%	3.17	3.37	2.55	2.41
Total	10,425	8,393	4,096		2.55	2.71	2.05	1.94

National Averages (ITE 2017)

ITE Code	AWVTE per Person	AWVTE per Veh Avl	AWVTE per Hshld	Greeley Hsg Mix	Persons per Hshld	Veh Avl per Hshld
220 MF	3.31	5.10	7.32	37%	2.21	1.44
210 SFD	2.65	6.36	9.44	63%	3.56	1.48
Wgtd Avg	2.89	5.89	8.65		3.06	1.47

Recommended AWVTE per Housing Unit

Bedroom Range	AWVTE per Housing Unit Based on Persons (3)	AWVTE per Housing Unit Based on Veh Avl (4)	AWVTE per Housing Unit (5)
0-1	3.87	4.83	4.35
2	5.95	8.66	7.31
3	7.92	11.90	9.91
4+	9.74	14.19	11.97
Total	7.83	11.43	9.63

(1) American Community Survey (ACS), Public Use Microdata Sample for CO PUMA 300 (2018 Five-Year unweighted data).
(2) Adjusted multipliers are scaled to make the average PUMS values match control totals for Greeley. Vehicles Available in Greeley is from table B25046, ACS 2018 5-year data.
(3) Adjusted persons per household multiplied by national weighted average trip rate per person.
(4) Adjusted vehicles available per household multiplied by national weighted average trip rate per vehicle available.
(5) Average of trip rates based on persons and vehicles available per household.

Impact fees based on size of dwelling are generally easier to administer when expressed in square feet of heated and finished floor area for all types of housing. The measurement should exclude garages, patios, porches, balconies, and the common areas in apartment buildings (e.g. fitness centers, clubhouses, and

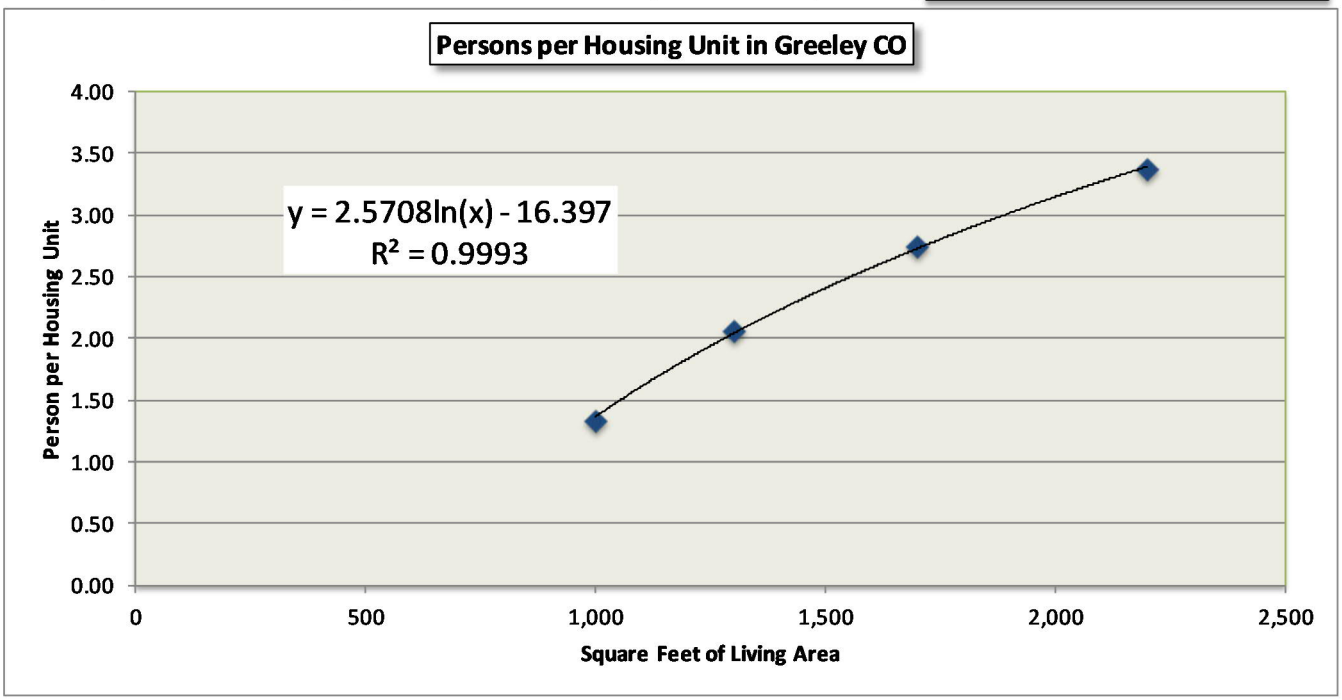
property management offices). Basing fees on floor area rather than the number of bedrooms eliminates the need for criteria to make administrative decisions on whether a room qualifies as a bedroom. To translate dwelling size by number of bedrooms into square feet of heated space, Raftelis used Greeley's building permit records on new residential construction over the past two years.

Average floor area and number of persons by bedroom range are plotted in Figure A4, with a logarithmic trend line derived from actual averages for Greeley. Using the trend line formula shown in the chart, Raftelis derived the estimated average number of persons, by dwelling size, in four size thresholds. The lowest floor area range (1200 square feet or less) has an estimated average of 1.36 persons per household. At the upper end of the floor area range (1801 or more square feet of living space), the average is 2.89 persons per household. For a building with more than one residential unit, City staff will determine the average size threshold for the entire building by dividing total heated living space by the total number of dwellings in the building.

Figure A4: Persons by Square Feet of Living Space

Survey of Construction	*Averages per Household*			*Fitted-Curve Values*	
Square Feet (rounded)	*Bedrooms*	*Sq Ft (rounded)*	*Persons*	*Sq Ft Range*	*Persons*
1,100	0-1	1,000	1.34	1,200 or less	1.36
1,700	2	1,300	2.06	1,201 to 1500	**2.39**
2,200	3	1,700	2.74	1,501 to 1,800	2.71
3,300	4+	2,200	3.37	1,801 or more	**2.89**
2,600	<=Wt Avg				

Source: Average square feet by bedroom range is from Greeley building permit records over the past two years. Average persons per household by bedroom range is based on 2018 ACS PUMS for CO PUMA 300.

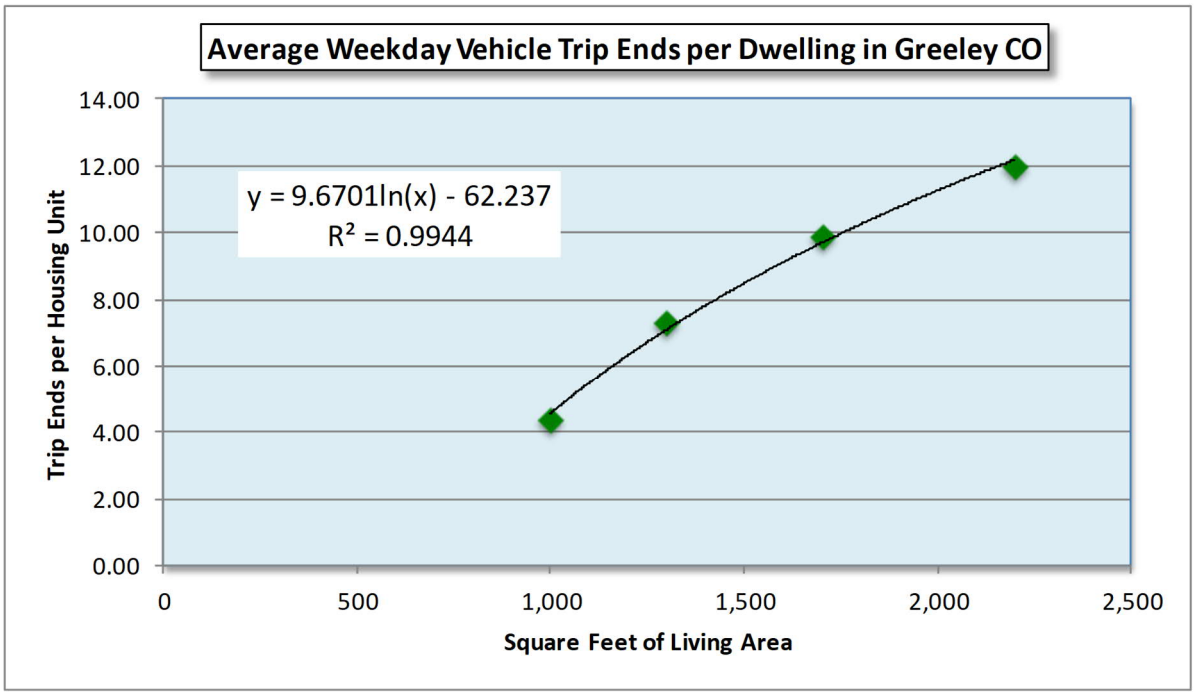


To derive average weekday vehicle trip ends by residential unit size, Raftelis matched trip generation rates and average floor area, by bedroom range, as shown in Figure A5. The logarithmic trend line formula is derived from the four averages graphed in the scatter plot. Floor areas by bedroom range are derived from Greeley building permit records over the past two years. Trip generation rates by bedroom range are derived from ACS PUMS data, as described above. The lowest floor area range (1200 square feet or less) has an estimated average of 4.56 average weekday vehicle trip ends per household. At the upper end of the floor area range (1801 or more square feet of living space), the average is 10.30 average weekday vehicle trip ends per household. For a building with more than one residential unit, City staff will determine the average size threshold for the entire building by dividing total living space by the total number of dwellings in the building.

Figure A5: Vehicle Trip Ends by Dwelling Size

Source: Average square feet by bedroom range is from U.S. Census Bureau 2017 Survey of Construction microdata. Average vehicle trip ends per housing unit by bedroom range is based on 2018 ACS PUMS for CO PUMA 300.

Averages per Household			*Fitted-Curve Values*	
Bedrooms	*Square Feet*	*Trip Ends*	*Sq Ft Range*	*Trip Ends*
0-1	1,000	4.35	1,200 or less	4.56
2	1,300	7.31	1,201 to 1500	**8.42**
3	1,700	9.91	1,501 to 1,800	9.64
4+	2,200	11.97	1,801 or more	**10.30**



Jobs and Nonresidential Development

In addition to data on residential development, the calculation of impact fees requires data on nonresidential development. Raftelis uses the term "jobs" to refer to employment by place of work. In Figure A5, shaded rows indicate the nonresidential development prototypes used by Raftelis to derive average weekday vehicle trips and nonresidential floor area. For future industrial development, Raftelis use Light Industrial (ITE code 110) with an average of 615 square feet of floor area per industrial job. The prototype for future commercial development (i.e., retail stores and eating/drinking places) is an average-size Shopping Center (ITE code 820). Commercial development is assumed to average 427 square feet of floor area per job. For office and all other services, an average-size Office (ITE 710) is the prototype for future development, averaging of 337 square feet of floor area per job.

Figure A6: Average Weekday Vehicle Trip Ends

ITE Code	Land Use / Size	Demand Unit	Wkdy Trip Ends Per Dmd Unit*	Wkdy Trip Ends Per Employee*	Emp Per Dmd Unit	Sq. Ft Per Emp
110	Light Industrial	1,000 Sq. Ft	4.96	3.05	1.63	615
140	Manufacturing	1,000 Sq. Ft	3.93	2.47	1.59	628
150	Warehousing	1,000 Sq. Ft	1.74	5.05	0.34	2,902
520	Elementary School	1,000 Sq. Ft	19.52	21.00	0.93	1,076
530	High School	1,000 Sq. Ft	14.07	22.25	0.63	1,581
610	Hospital	1,000 Sq. Ft	10.72	3.79	2.83	354
620	Nursing Home	1,000 Sq. Ft	6.64	2.91	2.28	438
710	General Office	1,000 Sq. Ft	9.74	3.28	2.97	337
760	Research & Dev Center	1,000 Sq. Ft	11.26	3.29	3.42	292
770	Business Park	1,000 Sq. Ft	12.44	4.04	3.08	325
820	Shopping Center (avg size)	1,000 Sq. Ft	37.75	16.11	2.34	427
857	Discount Club	1,000 Sq. Ft	41.80	32.21	1.30	771

* Trip Generation, Institute of Transportation Engineers, 10th Edition (2017).

Appendix B: Storm Drainage Plant Investment Fee Tables

City of Greeley
Storm Drainage Utility
Development Impact Fee and Plant Investment Fee Study
Calculation of Stormwater PIF
Equity Buy-In Approach

Description	Calculation
Total System Replacement Cost (1)	$61,384,185
Less: Developer Contributed Assets	(3,652,063)
Plus: NPV of Borrowing Cost	1,583,732
Less: Current Outstanding Debt Principal	(6,295,000)
Total Cost for PIF Calculation	$53,020,853
Impervious Area (sq. ft.) (2)	217,339,868
$ per sq. ft.	$0.25
Total Residential Sq. Ft.	187,630,385
Residential Accounts (3)	21,992
Average Residential Lot Size (sq.ft.)	8,532
Average Residential Impverious Area (sq. ft.) (4)	3,800
Calculated PIF per SFE:	$950
Current PIF per SFE	$402
Difference - $	$548
Difference - %	136%

(1) Replacement cost new less depreciation asset valuation using ENR-CCI as of December 2019. Excludes pre-1970 assets.
(2) Total impervious area in the City estimated based on lot size and C-factor used for monthly bills.
(3) Residential accounts as of 1/1/20.
(4) Residential c-factor is 0.45 or 45% impervious.

City of Greeley
Storm Drainage Utility
Development Impact Fee and Plant Investment Fee Study
Stormwater Assets as of December 31, 2019
Asset Summary by Function

Line No	Description	Asset Count	Original Cost	Total RCLND (1)	RCNLD - Contributed (1)	RCNLD - Net (1)
1	Land	19	$2,596,850	$2,536,233	$1,150,797	$1,385,436
2	Post 1970 Physical Infrastructure	198	51,116,167	53,772,853	1,914,053	51,858,800
3	Miscellaneous / Admin	16	739,085	780,304	0	780,304
4	Vehicles & Equipment	22	2,892,234	1,504,632	0	1,504,632
5	Lines	32	2,458,414	2,790,164	587,214	2,202,950
6	1970 Stormwater Assets	22	106,885,343	22,762,955	0	22,762,955
7	Total	309	$166,688,094	$84,147,140	$3,652,063	$80,495,076
(1) Indexed t	(1) Indexed to ENR-CCI for Denver using December 2019 compared to ratio in year of acquisition.					

City of Greeley
Storm Drainage Utility
Development Impact Fee and Plant Investment Fee Study
Bond Amortization Schedule
2015 Stormwater Revenue Bonds

Principal Amount	$7,680,000
Year of Issue	2015

NPV of Interest Payments
$1,827,382

Fiscal Year	EOY Principal Balance	Principal	Interest	Total Payment	Interest rate	NPV of Interest
2019	$6,600,000					
2020	6,295,000	$305,000	$243,650	$548,650	3.69%	$243,650
2021	5,985,000	310,000	237,550	547,550	3.77%	228,912
2022	5,660,000	325,000	222,050	547,050	3.71%	206,447
2023	5,320,000	340,000	205,800	545,800	3.64%	184,890
2024	4,960,000	360,000	188,800	548,800	3.55%	164,218
2025	4,585,000	375,000	170,800	545,800	3.44%	144,202
2026	4,190,000	395,000	152,050	547,050	3.32%	125,019
2027	3,780,000	410,000	136,250	546,250	3.25%	108,906
2028	3,355,000	425,000	123,950	548,950	3.28%	95,752
2029	2,920,000	435,000	111,200	546,200	3.31%	82,919
2030	2,470,000	450,000	98,150	548,150	3.36%	70,520
2031	2,010,000	460,000	84,088	544,088	3.40%	58,184
2032	1,535,000	475,000	69,138	544,138	3.44%	46,075
2033	1,040,000	495,000	53,106	548,106	3.46%	34,129
2034	530,000	510,000	36,400	546,400	3.50%	22,487
2035	-	530,000	18,550	548,550	3.50%	11,072
Total		$6,600,000	$2,151,531	$8,751,531		$1,827,382

City of Greeley
Storm Drainage Utility
Development Impact Fee and Plant Investment Fee Study
NPV of Borrowing Costs

Stormwater Bond Issues	Original Principal	Remaining Principal (1/1/21)	NPV of Interest (1/1/21)	% Included	Included NPV of Interest
2015 Stormwater Revenue Bonds	$7,680,000	6,295,000	$1,583,732	100%	1,583,732
Total	$7,680,000	$6,295,000	$1,583,732		$1,583,732

City of Greeley
Storm Drainage Utility
Development Impact Fee and Plant Investment Fee Study
Stormwater Assets as of December 31, 2019

FUNCTION	FUNCTION DESCRIPTION	ASSET	Year Acquired	Total Cost / Total Adjusted Cost	Depreciation	ENR 20-Cities Index CCI (1)	ENR-CCI Ratio	Replacment Cost New Less Depreciation (RCNLD)	Acquisition Method	Contributed (1=N, 0=Y)	Raw Date
2	Post 1970 Physical Infrastructure	CONCRETE SLAB	2002	$2,055	$1,164	6,538	1.73	$1,537		1	12/20/2002
3	Miscellaneous / Admin	TOTAL STATION SURVEY INSTRUMEN	2007	5,654	5,654	7,966	1.42	0	PURCHASE	1	12/31/2007
3	Miscellaneous / Admin	DIGITAL VANDALISM DETERRANT SY	2008	2,413	2,413	8,310	1.36	0	PURCHASE	1	12/31/2008
3	Miscellaneous / Admin	CITYWORKS SOFTWARE	2011	7,000	7,000	9,070	1.24	0	PURCHASE	1	11/30/2011
2	Post 1970 Physical Infrastructure	35TH AVE DETENTION POND	2013	1,271,532	152,584	9,547	1.18	1,322,181	PURCHASED	1	12/31/2013
2	Post 1970 Physical Infrastructure	CLARKSON SPILLWAY	2005	18,277	5,118	7,446	1.52	19,937	PURCHASED	1	12/31/2005
2	Post 1970 Physical Infrastructure	CLARKSON SPILLWAY	2005	147,301	41,244	7,446	1.52	160,680	PURCHASE	1	12/31/2005
2	Post 1970 Physical Infrastructure	CLARKSON SPILLWAY	2005	11,329	3,172	7,446	1.52	12,358	PURCHASED	1	12/31/2005
2	Post 1970 Physical Infrastructure	CLARKSON SPILLWAY	2005	15,294	4,282	7,446	1.52	16,683	PURCHASE	1	12/31/2005
2	Post 1970 Physical Infrastructure	JACKSON SPILLWAY	2005	29,895	8,371	7,446	1.52	32,611	PURCHASED	1	12/31/2005
2	Post 1970 Physical Infrastructure	JACKSON SPILLWAY	2005	94,738	26,527	7,446	1.52	103,343	PURCHASE	1	12/31/2005
2	Post 1970 Physical Infrastructure	JACKSON SPILLWAY	2005	15,606	4,370	7,446	1.52	17,023	PURCHASED	1	12/31/2005
1	Land	35 AV DETENTION - LAND	2004	341,226	0	7,115	1.00	341,226	PURCHASE	1	12/31/2004
1	Land	3018 W 5 ST-LAND (FRANKLIN PRK	2004	149,803	0	7,115	1.00	149,803	PURCHASE	1	12/31/2004
2	Post 1970 Physical Infrastructure	EAGLEVIEW DET POND/F ST EASEME	2004	94,279	0	7,115	1.59	149,482	PURCHASE	1	12/31/2004
1	Land	N EAGLEVIEW DET - LAND	2004	64,148	0	7,115	1.00	64,148	PURCHASE	1	12/31/2004
1	Land	35 AV DETENTION - LAND	2004	354,765	0	7,115	1.00	354,765	PURCHASE	1	12/31/2004
2	Post 1970 Physical Infrastructure	EAGLEVIEW DET POND/F ST-EASEME	2004	20,721	0	7,115	1.59	32,854	PURCHASE	1	12/31/2004
2	Post 1970 Physical Infrastructure	8 ST / 14-16 AV IMPROVEMENTS	2006	516,785	134,364	7,751	1.46	556,585	PURCHASE	1	12/31/2006
2	Post 1970 Physical Infrastructure	FRANKLIN DETENTION POND	2006	802,238	208,582	7,751	1.46	864,022	PURCHASE	1	12/31/2006
2	Post 1970 Physical Infrastructure	59 AV / 10-4 ST DETENTION POND	2007	136,034	32,648	7,966	1.42	146,410	PURCHASE	1	12/31/2007
1	Land	OUTLOT A - SOMMERSETT WEST	2007	6,593	0	7,966	1.00	6,593	PURCHASE	1	12/31/2007
1	Land	OUTLOT E - MOUNTAIN SHADOWS 1S	2007	3,159	0	7,966	1.00	3,159	PURCHASE	1	12/31/2007
2	Post 1970 Physical Infrastructure	DETENTION POND/OUTLOT B-GATEWA	2008	250,000	55,000	8,310	1.36	264,717	PURCHASE	1	12/31/2008
2	Post 1970 Physical Infrastructure	DETENTION POND/OUTLOT 1-PINNAC	2008	50,000	11,000	8,310	1.36	52,943	PURCHASE	1	12/31/2008
2	Post 1970 Physical Infrastructure	MCCLOSKY COMM SUB- 1 10' INLET	2010	4,200	1,260	8,802	1.28	3,768	CONTRIBUTED	0	12/31/2010
2	Post 1970 Physical Infrastructure	MCCLOSKY COMM SUB- 1 5' INLET	2010	2,100	630	8,802	1.28	1,884	CONTRIBUTED	0	12/31/2010
2	Post 1970 Physical Infrastructure	MCCLOSKY COMM - 1 15 MANHOLE"	2010	340	102	8,802	1.28	305	CONTRIBUTED	0	12/31/2010
5	Lines	MCCLOSKY- 310' OF 36 STM PIPE"	2010	34,720	10,416	8,802	1.28	31,149	CONTRIBUTED	0	12/31/2010
5	Lines	MCCLOSKY- 30' OF 30 STM PIPE "	2010	2,685	805	8,802	1.28	2,409	CONTRIBUTED	0	12/31/2010
5	Lines	MCCLOSKY- 420' OF 24 STM PIPE"	2010	24,780	7,434	8,802	1.28	22,231	CONTRIBUTED	0	12/31/2010
2	Post 1970 Physical Infrastructure	35TH AVE CROSSING	2012	913,458	213,140	9,308	1.21	848,763	PURCHASED	1	12/31/2012
2	Post 1970 Physical Infrastructure	GATEWAY ESTATES #3 DRAINAGE	2010	7,035	0	8,802	1.28	9,016	PURCHASE	1	12/31/2010
2	Post 1970 Physical Infrastructure	GATEWAY ESTATES #3 DRAINAGE	2011	13,230	0	9,070	1.24	16,455	PURCHASE	1	12/31/2011
2	Post 1970 Physical Infrastructure	GATEWAY ESTATES #3 DRAINAGE	2012	31,614	0	9,308	1.21	38,315	PURCHASED	1	12/31/2012
2	Post 1970 Physical Infrastructure	GATEWAY ESTATES #3 DRAINAGE	2013	1,013,807	0	9,547	1.18	1,197,942	PURCHASED	1	12/31/2013
2	Post 1970 Physical Infrastructure	GATEWAY ESTATES #3 DRAINAGE	2014	1,361,168	136,117	9,806	1.15	1,409,322	PURCHASE	1	12/31/2014
2	Post 1970 Physical Infrastructure	35TH AVE DET POND PHASE II	2012	639,552	0	9,308	1.21	775,116	PURCHASED	1	12/31/2012
2	Post 1970 Physical Infrastructure	35TH AVE DET POND PHASE II	2013	879,388	0	9,547	1.18	1,039,109	PURCHASED	1	12/31/2013
2	Post 1970 Physical Infrastructure	35TH AVE DET POND PHASE II	2014	1,539,758	153,976	9,806	1.15	1,594,228	PURCHASE	1	12/31/2014
6	1970 Stormwater Assets	INLETS & STRUCTURES	1970	5,658,487	5,658,487	1,381	8.17	0	PURCHASED	1	1/1/1970
6	1970 Stormwater Assets	INLETS & STRUCTURES	1970	6,413,145	5,900,093	1,381	8.17	4,190,974	PURCHASE	1	1/1/1970
6	1970 Stormwater Assets	INLETS & STRUCTURES	1970	6,408,645	6,024,126	1,381	8.17	3,141,025	PURCHASE	1	1/1/1970
6	1970 Stormwater Assets	INLETS & STRUCTURES	1970	6,202,493	6,202,493	1,381	8.17	0	PURCHASE	1	1/1/1970
6	1970 Stormwater Assets	INLETS & STRUCTURES	1970	6,406,420	6,150,164	1,381	8.17	2,093,290	PURCHASE	1	1/1/1970
6	1970 Stormwater Assets	INLETS & STRUCTURES	1970	6,341,070	6,214,248	1,381	8.17	1,035,968	PURCHASE	1	1/1/1970
6	1970 Stormwater Assets	INLETS & STRUCTURES	1970	6,238,256	6,238,256	1,381	8.17	0	PURCHASE	1	1/1/1970
6	1970 Stormwater Assets	COLLECTION SYSTEMS	1970	13,714,601	13,714,601	1,381	8.17	0	PURCHASED	1	1/1/1970
6	1970 Stormwater Assets	COLLECTION SYSTEMS	1970	15,213,242	14,300,448	1,381	8.17	7,456,362	PURCHASE	1	1/1/1970
6	1970 Stormwater Assets	COLLECTION SYSTEMS	1970	14,828,935	14,235,778	1,381	8.17	4,845,336	PURCHASE	1	1/1/1970
6	1970 Stormwater Assets	COLLECTION SYSTEMS	1970	14,705,795	14,705,795	1,381	8.17	0	PURCHASE	1	1/1/1970
6	1970 Stormwater Assets	NORTH GRLY DRAINAGE BASIN	1970	25,992	25,992	1,381	8.17	0	PURCHASED	1	1/1/1970
6	1970 Stormwater Assets	EAST GRLY DRAINAGE BASIN	1970	347,628	347,628	1,381	8.17	0	PURCHASED	1	1/1/1970
6	1970 Stormwater Assets	CENTRAL GRLY DRAINAGE BASIN	1970	63,585	63,585	1,381	8.17	0	PURCHASED	1	1/1/1970
6	1970 Stormwater Assets	CENTRAL GRLY DRAINAGE BASIN	1970	44,883	44,883	1,381	8.17	0	PURCHASED	1	1/1/1970
6	1970 Stormwater Assets	DOWNTOWN DRAINAGE BASIN	1970	227,316	227,316	1,381	8.17	0	PURCHASED	1	1/1/1970
6	1970 Stormwater Assets	SOUTH GRLY DRAINAGE BASIN	1970	40,249	40,249	1,381	8.17	0	PURCHASED	1	1/1/1970
6	1970 Stormwater Assets	28TH AVENUE DRAINAGE BASIN	1970	577,828	577,828	1,381	8.17	0	PURCHASED	1	1/1/1970
6	1970 Stormwater Assets	GRAPEVINE DRAINAGE BASIN	1970	736,294	736,294	1,381	8.17	0	PURCHASED	1	1/1/1970
6	1970 Stormwater Assets	COUNTRY CLUB DRAINAGE BASIN	1970	515,139	515,139	1,381	8.17	0	PURCHASED	1	1/1/1970
6	1970 Stormwater Assets	SHEEPDRAW DRAINAGE BASIN	1970	1,806,628	1,806,628	1,381	8.17	0	PURCHASED	1	1/1/1970
6	1970 Stormwater Assets	ASHCROFT DRAINAGE BASIN	1970	368,710	368,710	1,381	8.17	0	PURCHASED	1	1/1/1970
4	Vehicles & Equipment	9TH AVE PUMP STATION-PUMP ONLY	2006	17,917	15,528	7,751	1.46	3,477	PURCHASE	1	12/31/2006
2	Post 1970 Physical Infrastructure	IG POLE BARN/ANIMAL WASH ROOF	2008	2,557	2,557	8,310	1.36	0	PURCHASE	1	12/31/2008
2	Post 1970 Physical Infrastructure	IG POLE BARN/ANIMAL WASH ROOF	2008	17,725	17,725	8,310	1.36	0	PURCHASE	1	12/31/2008
2	Post 1970 Physical Infrastructure	GRAPEVINE DETENTION POND	1978	40,798	33,454	2,776	4.06	29,842	PURCHASED	1	1/1/1978
5	Lines	WESTMOOR 1ST FILING STORM SEWE	1973	6,360	5,851	1,895	5.95	3,028	PURCHASED	1	1/1/1973
2	Post 1970 Physical Infrastructure	WEST HIGH DETENTION POND	1978	92,707	74,165	2,776	4.06	75,348	PURCHASED	1	1/1/1978
5	Lines	E MEMORIAL STORM SEWER	1980	19,630	15,311	3,237	3.49	15,050	PURCHASED	1	1/1/1980
5	Lines	23RD AVE STORM SEWER	1979	99,866	75,898	3,003	3.76	90,038	PURCHASED	1	1/1/1979
5	Lines	23RD AVE STORM WATER	1979	66,465	54,501	3,003	3.76	44,942	PURCHASED	1	1/1/1979
2	Post 1970 Physical Infrastructure	28TH AVE DRAINAGE BASIN	1974	374,190	336,771	2,020	5.58	208,971	PURCHASED	1	1/1/1974
2	Post 1970 Physical Infrastructure	DETENTION POND - PHEASANT RUN	1992	22,460	12,128	4,985	2.26	23,380	PURCHASED	1	6/10/1992
1	Land	LAND - GALLERY GREEN	1994	135,602	0	5,408	1.00	135,602	PURCHASED	1	1/31/1994
3	Miscellaneous / Admin	EARNEST MONEY - GALLERY GREEN	1993	1,000	0	5,210	2.17	2,165	PURCHASED	1	10/14/1993
1	Land	LAND - SCHNEIDER INDUSTRIAL	1994	40,000	0	5,408	1.00	40,000	PURCHASED	1	7/21/1994
2	Post 1970 Physical Infrastructure	1812 1ST AV - STORM WATER DET	1995	22,577	0	5,471	2.06	46,553	10TRANSFER	0	3/17/1995
2	Post 1970 Physical Infrastructure	29TH ST DETENTION POND-GALLERY	1995	62,922	26,427	5,471	2.06	75,252	PURCHASED	1	9/30/1995
2	Post 1970 Physical Infrastructure	EAGLEVIEW DETENTION POND	1997	483,042	212,538	5,826	1.94	523,781	PURCHASED	1	12/31/1997
2	Post 1970 Physical Infrastructure	LOTS 7&19 BLK2 GATEWAY EST #1	1996	50,051	0	5,620	2.01	100,467	PURCHASED	1	10/3/1996
1	Land	DRAINAGE EASEMENT-1ST AVE PROJ	1999	1,013	0	6,059	1.00	1,013	10TRANSFER	0	2/25/1999
1	Land	LOT 1,2,3 BLK 1 BURGER & FRY	2000	4,068	0	6,221	1.00	4,068	10TRANSFER	0	9/29/2000
1	Land	OUTLOT A,CCW,4TH,REPLAT L1 BK6	2005	98	0	7,446	1.00	98	10TRANSFER	0	4/4/2000

City of Greeley
Storm Drainage Utility
Development Impact Fee and Plant Investment Fee Study
Stormwater Assets as of December 31, 2019

FUNCTION	FUNCTION DESCRIPTION	ASSET	Year Acquired	Total Cost / Total Adjusted Cost	Depreciation	ENR 20-Cities Index CCI (1)	ENR-CCI Ratio	Replacment Cost New Less Depreciation (RCNLD)	Acquisition Method	Contributed (1=N, 0=Y)	Raw Date
1	Land	OUTLOT A & 7,CCW,4TH FILING	2005	98	0	7,446	1.00	98	10TRANSFER	0	4/4/2000
2	Post 1970 Physical Infrastructure	MONFORT PARK DETENTION-2000	2005	393,693	141,730	7,446	1.52	381,735	10TRANSFER	0	12/31/2000
1	Land	LAND DONATED-NORTHRIDGE ESTATE	2005	990,000	0	7,446	1.00	990,000	CONTRIBUTED	0	12/20/2002
2	Post 1970 Physical Infrastructure	56TH AVE DETENTION POND	1987	51,399	17,476	4,406	2.56	86,857	10TRANSFER	0	12/31/2002
2	Post 1970 Physical Infrastructure	56TH AVE DETENTION POND (1350)	1988	49,637	16,876	4,519	2.50	81,781	10TRANSFER	0	12/31/2002
1	Land	TWIN RIVERS DETENTION - LAND	2002	51,080	0	6,538	1.00	51,080	PURCHASED	1	12/31/2002
2	Post 1970 Physical Infrastructure	DETENTION POND C ST-NORTHVIEW	2002	313,764	106,680	6,538	1.73	357,315	PURCHASED	1	12/31/2002
2	Post 1970 Physical Infrastructure	EPPLE PARK - STORM SEWER CROSS	2002	292,022	99,288	6,538	1.73	332,555	PURCHASED	1	12/31/2002
2	Post 1970 Physical Infrastructure	POUDRE RIVER RETURN IMPROVMENT	2002	6,830	6,830	6,538	1.73	0	10TRANSFER	0	12/31/2002
2	Post 1970 Physical Infrastructure	POUDRE RIVER RETURN IMPROVMENT	2003	45,187	45,187	6,694	1.69	0	10TRANSFER	0	12/31/2003
2	Post 1970 Physical Infrastructure	NORTH EAGLEVIEW DETENTION POND	2005	36,160	10,125	7,446	1.52	39,444	PURCHASED	1	12/31/2005
2	Post 1970 Physical Infrastructure	NORTH EAGLEVIEW DETENTION	2005	97,950	27,426	7,446	1.52	106,847	PURCHASED	1	12/31/2005
2	Post 1970 Physical Infrastructure	NORTH EAGLEVIEW DETENTION POND	2005	17,729	4,964	7,446	1.52	19,339	PURCHASE	1	12/31/2005
2	Post 1970 Physical Infrastructure	NORTH EAGLEVIEW DETENTION POND	2005	718,594	201,206	7,446	1.52	783,865	PURCHASED	1	12/31/2005
2	Post 1970 Physical Infrastructure	NORTH EAGLEVIEW DETENTION POND	2005	71,099	19,908	7,446	1.52	77,557	PURCHASED	1	12/31/2005
3	Miscellaneous / Admin	CLOSING COSTS-NORTHRIDGE ESTAT	2002	1,622	0	6,538	1.73	2,799	PURCHASED	1	12/31/2002
2	Post 1970 Physical Infrastructure	47 AV DRAINAGE	2003	51,216	16,389	6,694	1.69	58,691	PURCHASED	1	12/31/2003
2	Post 1970 Physical Infrastructure	8 AV DRAINAGE	2004	80,000	24,000	7,115	1.59	88,789	PURCHASED	1	12/31/2004
2	Post 1970 Physical Infrastructure	8 AV DRAINAGE	2004	136,473	40,942	7,115	1.59	151,467	PURCHASE	1	12/31/2004
2	Post 1970 Physical Infrastructure	COUNTRY CLUB BASIN	2003	23,192	12,369	6,694	1.69	18,240	10TRANSFER	0	12/31/2003
2	Post 1970 Physical Infrastructure	WESTLAKE DETENTION POND	2005	23,652	6,623	7,446	1.52	25,800	PURCHASED	1	12/31/2005
2	Post 1970 Physical Infrastructure	WESTLAKE DETENTION POND	2005	3,193	894	7,446	1.52	3,483	07TRANSFER	0	12/31/2005
2	Post 1970 Physical Infrastructure	WESTLAKE DETENTION POND	2005	80,808	22,626	7,446	1.52	88,147	PURCHASE	1	12/31/2005
2	Post 1970 Physical Infrastructure	WESTLAKE DETENTION POND	2005	96,173	26,928	7,446	1.52	104,908	07TRANSFER	0	12/31/2005
2	Post 1970 Physical Infrastructure	WESTLAKE DETENTION POND	2005	10,370	2,904	7,446	1.52	11,312	PURCHASED	1	12/31/2005
2	Post 1970 Physical Infrastructure	WESTLAKE DETENTION POND	2005	438,515	122,784	7,446	1.52	478,346	PURCHASED	1	12/31/2005
2	Post 1970 Physical Infrastructure	GRLY WST PRK - STORMWTR DRAINA	2004	36,423	10,927	7,115	1.59	40,424	PURCHASE	1	12/31/2004
2	Post 1970 Physical Infrastructure	NORTH EAGLEVIEW CHANNEL	2005	18,048	5,053	7,446	1.52	19,687	10TRANSFER	0	12/31/2005
1	Land	DWNTN STORMWATER DRAINAGE	2004	202,057	60,617	7,115	1.00	141,440	08TRANSFER	0	12/31/2004
2	Post 1970 Physical Infrastructure	14 AVE/A ST - STORM DRAIN IMPR	2008	8,444	1,858	8,310	1.36	8,940	PURCHASE	1	12/31/2008
2	Post 1970 Physical Infrastructure	14TH AVE/A ST STORM DRAIN IMPR	2008	109,107	24,004	8,310	1.36	115,530	PURCHASE	1	12/31/2008
2	Post 1970 Physical Infrastructure	GLEN MEADOWS FILTERING PROJECT	2007	107,788	25,869	7,966	1.42	116,009	PURCHASE	1	12/31/2007
2	Post 1970 Physical Infrastructure	9TH AVE PUMP STATION / WQV	2009	17,456	5,819	8,570	1.32	15,318	PURCHASE	1	12/31/2009
2	Post 1970 Physical Infrastructure	9TH AVE PUMP STATION / WQV	2009	48,605	16,202	8,570	1.32	42,653	PURCHASE	1	12/31/2009
2	Post 1970 Physical Infrastructure	9TH AVE PUMP STATION / WQV	2009	384,016	128,005	8,570	1.32	336,996	PURCHASE	1	12/31/2009
2	Post 1970 Physical Infrastructure	JACKSON SPILLWAY DESIGN COSTS	2008	25,421	5,592	8,310	1.36	26,918	PURCHASE	1	12/31/2008
2	Post 1970 Physical Infrastructure	FRANKLIN STORM 10 ST / 32 AVE	2010	96,542	28,962	8,802	1.28	86,612	PURCHASE	1	12/31/2010
2	Post 1970 Physical Infrastructure	FRANKLIN STORM 10TH ST/32ND AV	2010	179,474	53,842	8,802	1.28	161,015	PURCHASE	1	12/31/2010
2	Post 1970 Physical Infrastructure	FRANKLIN STORM 10 ST / 32 AV	2010	524,124	157,237	8,802	1.28	470,217	PURCHASE	1	12/31/2010
2	Post 1970 Physical Infrastructure	FRANKLIN STORM 10 ST/ 32 AVE	2010	312,103	93,631	8,802	1.28	280,003	PURCHASE	1	12/31/2010
2	Post 1970 Physical Infrastructure	SUNRISE NEIGHBORHOOD IMPRV	2011	16,638	4,437	9,070	1.24	15,175	PURCHASE	1	12/31/2011
2	Post 1970 Physical Infrastructure	9TH ST @ POUDRE RIVER WQV	2010	17,456	5,237	8,802	1.28	15,660	PURCHASE	1	12/31/2010
2	Post 1970 Physical Infrastructure	9TH ST @ POUDRE RIVER / WQV	2010	11,973	3,592	8,802	1.28	10,741	PURCHASE	1	12/31/2010
2	Post 1970 Physical Infrastructure	9TH ST @ POUDRE RIVER WQV	2010	112,254	33,676	8,802	1.28	100,709	PURCHASE	1	12/31/2010
2	Post 1970 Physical Infrastructure	9TH ST @ POUDRE RIVER WQV	2010	6,308	1,892	8,802	1.28	5,659	PURCHASE	1	12/31/2010
2	Post 1970 Physical Infrastructure	18TH ST DRAINAGE PROJECT	2009	17,456	5,819	8,570	1.32	15,318	PURCHASE	1	12/31/2009
2	Post 1970 Physical Infrastructure	18TH ST DRAINAGE PROJECT	2009	24,627	8,209	8,570	1.32	21,612	PURCHASE	1	12/31/2009
2	Post 1970 Physical Infrastructure	18TH ST DRAINAGE PROJECT	2009	119,130	39,710	8,570	1.32	104,544	PURCHASE	1	12/31/2009
2	Post 1970 Physical Infrastructure	4 ST BETWEEN 8/9 AV STORMDRAIN	2008	26,683	5,870	8,310	1.36	28,254	PURCHASE	1	12/31/2008
5	Lines	290 LF STORM MAINLINE-TERRACE	2008	22,040	4,849	8,310	1.36	23,337	DONATED	0	12/31/2008
2	Post 1970 Physical Infrastructure	TERRACE GREEN INLETS (2)	2008	6,000	1,320	8,310	1.36	6,353	DONATED	0	12/31/2008
2	Post 1970 Physical Infrastructure	TERRACE GREEN MANHOLES (2)	2008	5,308	1,168	8,310	1.36	5,620	DONATED	0	12/31/2008
5	Lines	40 LF STORM MAINLINE-CLOVER ME	2008	3,040	669	8,310	1.36	3,219	DONATED	0	12/31/2008
2	Post 1970 Physical Infrastructure	CLOVER MEADOWS INLETS (2)	2008	6,000	1,320	8,310	1.36	6,353	DONATED	0	12/31/2008
5	Lines	70 LF STORM MAINLINE-ACCUTEL	2008	5,320	1,170	8,310	1.36	5,633	DONATED	0	12/31/2008
5	Lines	3820 LF STORM MAINLINE-FOX RUN	2008	290,320	63,870	8,310	1.36	307,410	DONATED	0	12/31/2008
2	Post 1970 Physical Infrastructure	FOX RUN 3RD FILING INLETS (20)	2008	60,000	13,200	8,310	1.36	63,532	DONATED	0	12/31/2008
2	Post 1970 Physical Infrastructure	FOX RUN 3RD FILING MANHOLES 11	2008	29,194	6,423	8,310	1.36	30,913	DONATED	0	12/31/2008
2	Post 1970 Physical Infrastructure	PLAZA COMMERCIAL PK - 4 INLETS	2009	5,700	1,900	8,570	1.32	5,002	CONTRIBUTED	0	12/31/2009
2	Post 1970 Physical Infrastructure	PLAZA COMM PK - 3 MANHOLES	2009	4,275	1,425	8,570	1.32	3,752	CONTRIBUTED	0	12/31/2009
5	Lines	PLAZA COMM PK-1895' OF 18 PIP"	2009	86,412	28,804	8,570	1.32	75,831	CONTRIBUTED	0	12/31/2009
3	Miscellaneous / Admin	VALLEY PAN - 30 AVENUE COURT	2010	49,246	14,774	8,802	1.28	44,181	PURCHASE	1	12/31/2010
3	Miscellaneous / Admin	VALLEY PAN - 31ST AVENUE	2010	49,246	14,774	8,802	1.28	44,181	PURCHASE	1	12/31/2010
3	Miscellaneous / Admin	VALLEY PAN - 30TH AVE PLACE	2010	49,246	14,774	8,802	1.28	44,181	PURCHASE	1	12/31/2010
2	Post 1970 Physical Infrastructure	1ST AVE/16-18 STREET LINING	2010	35,713	10,714	8,802	1.28	32,040	PURCHASE	1	12/31/2010
3	Miscellaneous / Admin	STORMWATER LINE INSP SOFTWARE	2010	12,000	12,000	8,802	1.28	0	PURCHASE	1	12/31/2010
5	Lines	1 ST/6-9TH AVE LINING-PHASE I	2011	115,107	30,695	9,070	1.24	104,989	PURCHASE	1	12/31/2011
2	Post 1970 Physical Infrastructure	1ST ST/6TH AVE-POUDRE PHASE II	2013	203,006	24,361	9,547	1.18	211,092	PURCHASED	1	12/31/2013
2	Post 1970 Physical Infrastructure	PINNACLE OFC PRK-1-5' 13 INLET	2011	5,000	1,333	9,070	1.24	4,560	CONTRIBUTED	0	12/31/2011
2	Post 1970 Physical Infrastructure	PINNACLE OFC PRK-1-10' R INLET	2011	2,500	667	9,070	1.24	2,280	CONTRIBUTED	0	12/31/2011
2	Post 1970 Physical Infrastructure	PINNACLE OFC PRK- MANHOLES	2011	5,000	1,333	9,070	1.24	4,560	CONTRIBUTED	0	12/31/2011
5	Lines	PINNACLE OFC PRK-180'STORMPIPE	2011	12,240	3,264	9,070	1.24	11,164	CONTRIBUTED	0	12/31/2011
5	Lines	PINNACLE-547' OF 18 STRM PIPE"	2011	22,974	6,126	9,070	1.24	20,955	CONTRIBUTED	0	12/31/2011
2	Post 1970 Physical Infrastructure	PINNACLE-6.1 AC-FT DET POND	2011	177,586	47,356	9,070	1.24	161,976	CONTRIBUTED	0	12/31/2011
2	Post 1970 Physical Infrastructure	WELD CTY N. JAIL TYPE D INLET	2011	5,000	1,333	9,070	1.24	4,560	CONTRIBUTED	0	12/31/2011
2	Post 1970 Physical Infrastructure	WELD CTY N JAIL-6-6' MANHOLES	2011	24,000	6,400	9,070	1.24	21,890	CONTRIBUTED	0	12/31/2011
5	Lines	WC N JAIL-310' OF 42 STM PIPE"	2011	49,910	13,309	9,070	1.24	45,523	CONTRIBUTED	0	12/31/2011
5	Lines	WC N JAIL-146' OF 34X53" SP "	2011	42,048	11,213	9,070	1.24	38,352	CONTRIBUTED	0	12/31/2011
1	Land	LOT 15, BLK 2 WESTLAKE PARK	2011	14,081	0	9,070	1.00	14,081	CONTRIBUTED	0	12/31/2011
1	Land	LOT 15, BLK 2 WESTLAKE PARK 2	2011	1,923	0	9,070	1.00	1,923	PURCHASE	1	12/31/2011
1	Land	24' PERM EASEMENT FOC PRESBY	2011	5,314	0	9,070	1.00	5,314	PURCHASE	1	12/31/2011
2	Post 1970 Physical Infrastructure	BELAIR STORM DRAIN 35TH AVE/24	2012	327,403	76,394	9,308	1.21	304,215	PURCHASED	1	12/31/2012
2	Post 1970 Physical Infrastructure	6' RADIAL GATE FOR #3 DITCH	2012	36,500	8,922	9,308	1.21	33,423	PURCHASED	1	8/31/2012

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3	Miscellaneous / Admin	USA COE STUDY	2013	327,204	0	9,547	1.18	386,633	PURCHASED	1	12/31/2013
3	Miscellaneous / Admin	USA COE STUDY	2014	193,619	0	9,806	1.15	222,743		1	12/31/2014
2	Post 1970 Physical Infrastructure	11 AVE RPRS 7,8,9,10 & 13 STRS	2014	169,532	16,953	9,806	1.15	175,530	PURCHASE	1	12/31/2014
2	Post 1970 Physical Infrastructure	NPDES 21 AVE @ #3 DTCH W Q VLT	2014	245,417	24,542	9,806	1.15	254,099	PURCHASE	1	12/31/2014
2	Post 1970 Physical Infrastructure	E 20TH ST DRAINAGE IMPROVEMENT	2014	251,153	0	9,806	1.15	288,931	PURCHASE	1	12/31/2014
2	Post 1970 Physical Infrastructure	E 20TH ST DRAINAGE IMPROVMENTS	2015	252,033	20,163	10,035	1.12	260,660	PURCHASE	1	12/31/2015
2	Post 1970 Physical Infrastructure	27 AVE STRMWTR 17 ST - POUDRE	2014	94,756	0	9,806	1.15	109,009	PURCHASE	1	12/31/2014
2	Post 1970 Physical Infrastructure	27 AVE STRMWTR 17 ST - POUDRE	2015	2,003,332	0	10,035	1.12	2,252,076	PURCHASE	1	12/31/2015
2	Post 1970 Physical Infrastructure	27TH AVE/16TH ST OUTFALL PROJ	2016	3,843,070	288,230	10,338	1.09	3,879,101	PURCHASE	1	12/31/2016
2	Post 1970 Physical Infrastructure	IRRIGATION @ 8TH AVE/22ND ST	2016	190,900	22,908	10,338	1.09	183,315	PURCHASE	1	12/31/2016
2	Post 1970 Physical Infrastructure	OWL RIDGE 1ST FILING -INLETS	2014	40,600	4,060	9,806	1.15	42,036	PURCHASE	1	12/31/2014
2	Post 1970 Physical Infrastructure	OWL RIDGE 1ST FILING DRAINS	2014	259,336	25,934	9,806	1.15	268,510	PURCHASE	1	12/31/2014
2	Post 1970 Physical Infrastructure	OWL RIDGE 1ST FILING - DRAIN	2014	14,634	1,463	9,806	1.15	15,151	PURCHASE	1	12/31/2014
2	Post 1970 Physical Infrastructure	OWL RIDGE 1ST FILING - 6 48 "	2014	21,168	2,117	9,806	1.15	21,917	PURCHASE	1	12/31/2014
2	Post 1970 Physical Infrastructure	SUNRISE DRAINAGE IMPROVEMENTS	2015	20,780	0	10,035	1.12	23,360	PURCHASE	1	12/31/2015
2	Post 1970 Physical Infrastructure	SUNRISE DRAINAGE IMPROVEMENTS	2016	1,587,813	0	10,338	1.09	1,732,649	PURCHASE	1	12/31/2016
2	Post 1970 Physical Infrastructure	SUNRISE DRAINAGE IMPROVEMENTS	2017	1,608,593	64,344	10,736	1.05	1,622,641	PURCHASE	1	12/31/2017
2	Post 1970 Physical Infrastructure	59TH AVE FLOW & RAIN GAUGE	2015	594	0	10,035	1.12	668	PURCHASE	1	12/31/2015
2	Post 1970 Physical Infrastructure	59TH AVE FLOW & RAIN GAUGE	2016	24,045	0	10,338	1.09	26,238	PURCHASE	1	12/31/2016
2	Post 1970 Physical Infrastructure	59TH AVE FLOW & RAIN GAUGE	2017	24,639	7,392	10,736	1.05	18,123	PURCHASE	1	1/1/2017
2	Post 1970 Physical Infrastructure	SHEEP DRAW DRAIN BASIN	2015	3,000	240	10,035	1.12	3,103	PURCHASE	1	12/31/2015
2	Post 1970 Physical Infrastructure	SHEEP DRAW DRAIN BASIN	2015	2,934	235	10,035	1.12	3,034	PURCHASE	1	12/31/2015
2	Post 1970 Physical Infrastructure	SHEEP DRAW DRAIN BASIN	2015	94,019	7,521	10,035	1.12	97,237	PURCHASE	1	12/31/2015
2	Post 1970 Physical Infrastructure	SHEEP DRAW DRAIN BASIN	2015	32,500	2,600	10,035	1.12	33,613	PURCHASE	1	12/31/2015
2	Post 1970 Physical Infrastructure	SHEEP DRAW DRAIN BASIN	2015	27,920	2,234	10,035	1.12	28,876	PURCHASE	1	12/31/2015
2	Post 1970 Physical Infrastructure	SHEEP DRAW DRAIN BASIN	2015	100,794	8,064	10,035	1.12	104,244	PURCHASE	1	12/31/2015
2	Post 1970 Physical Infrastructure	SHEEP DRAW DRAIN BASIN	2015	135,665	10,853	10,035	1.12	140,309	PURCHASE	1	12/31/2015
2	Post 1970 Physical Infrastructure	SHEEP DRAW DRAIN BASIN	2015	165,835	13,267	10,035	1.12	171,512	PURCHASE	1	12/31/2015
2	Post 1970 Physical Infrastructure	2015 OVERLAY 22ND STREET	2015	138,146	27,629	10,035	1.12	124,239	PURCHASE	1	12/31/2015
2	Post 1970 Physical Infrastructure	UPGRADES WOODBRIAR PARK DETENT	2017	443,519	0	10,736	1.05	466,034	PURCHASE	1	12/31/2017
2	Post 1970 Physical Infrastructure	UPGRADES WOODBRIAR PARK DETENT	2018	2,423,202	48,464	11,062	1.02	2,421,752	PURCHASE	1	12/31/2018
2	Post 1970 Physical Infrastructure	CLARKSON OUTFALL CHANNEL C ST	2017	157,269	0	10,736	1.05	165,253	PURCHASE	1	12/31/2017
2	Post 1970 Physical Infrastructure	CLARKSON OUTFALL CHANNEL C ST	2018	1,627,666	0	11,062	1.02	1,659,890	PURCHASE	1	12/31/2018
2	Post 1970 Physical Infrastructure	CLARKSON OUTFALL CHANNEL C ST	2019	6,252,324	0	11,281	1.00	6,252,324	PURCHASE	1	12/31/2019
3	Miscellaneous / Admin	ARROW GOLD RTK GPS	2019	10,467	1,570	11,281	1.00	8,897	PURCHASE	1	3/31/2019
4	Vehicles & Equipment	2019 MIRAGE TRAILER	2019	5,195	371	11,281	1.00	4,824	PURCHASE	1	6/30/2019
2	Post 1970 Physical Infrastructure	8TH AVE IMP 13TH-14TH STREETS	2015	45,000	3,600	10,035	1.12	46,540	PURCHASE	1	12/31/2015
2	Post 1970 Physical Infrastructure	27TH AVE PROJ IRRIG SYSTEM	2015	5,964	0	10,035	1.12	6,704	PURCHASE	1	12/31/2015
2	Post 1970 Physical Infrastructure	4TH AVE 31ST ST CULVERT	2006	18,568	0	7,751	1.46	27,025	PURCHASE	1	12/31/2016
2	Post 1970 Physical Infrastructure	4TH AVE 31ST ST CULVERT	2006	655,171	0	7,751	1.46	953,552	PURCHASE	1	12/31/2017
2	Post 1970 Physical Infrastructure	4TH AVE 31ST ST CULVERT	2006	841,007	16,820	7,751	1.46	1,199,543	PURCHASE	1	12/31/2018
2	Post 1970 Physical Infrastructure	800 BLOCK 2ND ST	2006	22,246	1,335	7,751	1.46	30,435	PURCHASE	1	12/31/2016
2	Post 1970 Physical Infrastructure	COLLEGE GREEN SINKHOLE	2006	34,580	2,075	7,751	1.46	47,309	PURCHASE	1	12/31/2016
5	Lines	23RD AVE PIPE REPLACEMENT	2006	65,522	0	7,751	1.46	95,362	PURCHASE	1	12/31/2016
5	Lines	23RD AVE PIPE REPLACEMENT	2006	334,018	13,361	7,751	1.46	466,693	PURCHASE	1	12/31/2017
2	Post 1970 Physical Infrastructure	13TH ST IMPROV CCW DET POND	2006	10,142	0	7,751	1.46	14,760	PURCHASE	1	12/31/2016
2	Post 1970 Physical Infrastructure	13TH ST IMPROV CCW DET POND	2006	13,089	0	7,751	1.46	19,051	PURCHASE	1	12/31/2017
2	Post 1970 Physical Infrastructure	13TH ST IMPROV CCW DET POND	2006	43,424	0	7,751	1.46	63,200	PURCHASE	1	12/31/2018
2	Post 1970 Physical Infrastructure	WESTMOOR WEST IMPR PROJECT	2016	58,168	0	10,338	1.09	63,474	PURCHASE	1	12/31/2016
2	Post 1970 Physical Infrastructure	WESTMOOR WEST IMPR PROJECT	2017	423,879	16,955	10,736	1.05	427,581	PURCHASE	1	12/31/2017
2	Post 1970 Physical Infrastructure	CLARKSON DRAINAGE WAY	2016	160,872	0	10,338	1.09	175,546	PURCHASE	1	12/31/2016
2	Post 1970 Physical Infrastructure	CLARKSON DRAINAGE WAY	2017	213,943	0	10,736	1.05	224,804	PURCHASE	1	12/31/2017
2	Post 1970 Physical Infrastructure	CLARKSON DRAINAGE WAY	2018	67,287	0	11,062	1.02	68,619	PURCHASE	1	12/31/2018
2	Post 1970 Physical Infrastructure	CLARKSON DRAINAGE WAY	2007	442,102	0	7,966	1.42	626,080	PURCHASE	1	12/31/2019
2	Post 1970 Physical Infrastructure	BOOMERANG RANCH	2007	92,654	5,559	7,966	1.42	123,339	CONTRIBUTED	0	12/31/2016
2	Post 1970 Physical Infrastructure	BOOMERANG RANCH	2007	107,204	6,432	7,966	1.42	142,707	CONTRIBUTED	0	12/31/2016
2	Post 1970 Physical Infrastructure	BOOMERANG RANCH	2007	90,159	5,410	7,966	1.42	120,018	CONTRIBUTED	0	12/31/2016
2	Post 1970 Physical Infrastructure	BOOMERANG RANCH	2007	12,118	727	7,966	1.42	16,131	CONTRIBUTED	0	12/31/2016
2	Post 1970 Physical Infrastructure	CENTERPLACE	2007	61,099	3,666	7,966	1.42	81,333	CONTRIBUTED	0	12/31/2016
2	Post 1970 Physical Infrastructure	GREELEY SUBARU	2007	55,398	3,324	7,966	1.42	73,745	CONTRIBUTED	0	12/31/2016
2	Post 1970 Physical Infrastructure	GREELEY SUBARU	2007	82,226	4,934	7,966	1.42	109,457	CONTRIBUTED	0	12/31/2016
2	Post 1970 Physical Infrastructure	GREELEY SUBARU	2007	32,251	1,935	7,966	1.42	42,932	CONTRIBUTED	0	12/31/2016
2	Post 1970 Physical Infrastructure	BOOMERANG RANCH	2007	44,641	2,678	7,966	1.42	59,424	CONTRIBUTED	0	12/31/2016
2	Post 1970 Physical Infrastructure	CENTERPLACE	2008	11,160	670	8,310	1.36	14,241	CONTRIBUTED	0	12/31/2016
2	Post 1970 Physical Infrastructure	CENTERPLACE	2008	4,216	253	8,310	1.36	5,380	CONTRIBUTED	0	12/31/2016
2	Post 1970 Physical Infrastructure	BOOMERANG RANCH	2008	12,125	1,212	8,310	1.36	14,814	CONTRIBUTED	0	12/31/2016
2	Post 1970 Physical Infrastructure	CENTERPLACE	2008	12,125	1,212	8,310	1.36	14,814	CONTRIBUTED	0	12/31/2016
2	Post 1970 Physical Infrastructure	GREELEY SUBARU	2016	6,063	606	10,338	1.09	5,954	CONTRIBUTED	0	12/31/2016
2	Post 1970 Physical Infrastructure	BOOMERANG RANCH	2016	3,460	208	10,338	1.09	3,549	CONTRIBUTED	0	12/31/2016
2	Post 1970 Physical Infrastructure	BOOMERANG RANCH	2016	4,637	278	10,338	1.09	4,756	CONTRIBUTED	0	12/31/2016
2	Post 1970 Physical Infrastructure	BOOMERANG RANCH	2016	2,617	157	10,338	1.09	2,685	CONTRIBUTED	0	12/31/2016
2	Post 1970 Physical Infrastructure	CENTERPLACE	2016	3,983	239	10,338	1.09	4,085	CONTRIBUTED	0	12/31/2016
2	Post 1970 Physical Infrastructure	CENTERPLACE	2016	1,730	104	10,338	1.09	1,774	CONTRIBUTED	0	12/31/2016
2	Post 1970 Physical Infrastructure	GREELEY SUBARU	2016	2,300	138	10,338	1.09	2,359	CONTRIBUTED	0	12/31/2016
5	Lines	REPAIR STORM MAIN SANBORN PARK	2017	46,937	1,878	10,736	1.05	47,347	PURCHASE	1	12/31/2017
2	Post 1970 Physical Infrastructure	CASCADE PARK REPAIRS	2017	57,947	2,318	10,736	1.05	58,453	PURCHASE	1	12/31/2017
5	Lines	16TH ST/46TH AV CT PIPE REPAIR	2007	48,914	1,957	7,966	1.42	66,499	PURCHASE	1	12/31/2017
5	Lines	REPLCE CLLEGE GRN STRMWTR PIPE	2007	499,709	19,988	7,966	1.42	679,353	PURCHASE	1	12/31/2017
2	Post 1970 Physical Infrastructure	SUNRISE DRAINAGE-9TH ST OUTFAL	2007	626,429	25,057	7,966	1.42	851,629	PURCHASE	1	12/31/2017
2	Post 1970 Physical Infrastructure	DOWNTOWN STORMWATER DRAINAGE	2007	181,098	7,244	7,966	1.42	246,203	PURCHASE	1	12/31/2017
5	Lines	CENTERPLACE NORTH STRM PIPE	2007	14,614	974	7,966	1.42	19,316	PURCHASE	1	12/31/2017
5	Lines	FRONTIER ACADEMY STRM PIPE	2007	7,543	503	7,966	1.42	9,970	PURCHASE	1	12/31/2017
5	Lines	OWL RDG 5 FILING PHS I/II PIPE	2007	41,728	2,782	7,966	1.42	55,153	PURCHASE	1	12/31/2017

City of Greeley
Storm Drainage Utility
Development Impact Fee and Plant Investment Fee Study
Stormwater Assets as of December 31, 2019

FUNCTION	FUNCTION DESCRIPTION	ASSET	Year Acquired	Total Cost / Total Adjusted Cost	Depreciation	ENR 20-Cities Index CCI (1)	ENR-CCI Ratio	Replacment Cost New Less Depreciation (RCNLD)	Acquisition Method	Contributed (1=N, 0=Y)	Raw Date
5	Lines	PDC ENRGY SANITRY SWR STM PIPE	2008	4,784	319	8,310	1.36	6,061	PURCHASE	1	12/31/2017
2	Post 1970 Physical Infrastructure	RVR RUN @ POUDR RVR RNCH F2 PI	2008	154,409	10,294	8,310	1.36	195,639	PURCHASE	1	12/31/2017
2	Post 1970 Physical Infrastructure	CENTERPLACE NORTH INLET	2008	15,243	1,016	8,310	1.36	19,313	PURCHASE	1	12/31/2017
2	Post 1970 Physical Infrastructure	FRONTIER ACADEMY INLET	2008	31,268	2,085	8,310	1.36	39,617	PURCHASE	1	12/31/2017
2	Post 1970 Physical Infrastructure	OWL RDG 5F DEV PH I & II INLET	2008	53,773	3,585	8,310	1.36	68,131	PURCHASE	1	12/31/2017
2	Post 1970 Physical Infrastructure	PDC ENRGY SANITRY SWR MANHOLE	2009	17,000	1,133	8,570	1.32	20,886	PURCHASE	1	12/31/2017
2	Post 1970 Physical Infrastructure	RVR RUN @ POUDR RVR RNCH INLET	2009	39,724	2,648	8,570	1.32	48,804	PURCHASE	1	12/31/2017
2	Post 1970 Physical Infrastructure	29TH STREET STORM DRAIN	2018	187,127	3,743	11,062	1.02	187,015	PURCHASE	1	12/31/2018
2	Post 1970 Physical Infrastructure	71ST AVE (12TH ST TO 22ND)	2018	64,111	0	11,062	1.02	65,380	PURCHASE	1	12/31/2018
5	Lines	2018 STORM DRAIN LINING	2018	133,353	0	11,062	1.02	135,993	PURCHASE	1	12/31/2018
5	Lines	2018 STORM DRAIN LINING	2019	133,907	0	11,281	1.00	133,907	PURCHASE	1	12/31/2019
2	Post 1970 Physical Infrastructure	MOON POND	2018	231,932	0	11,062	1.02	236,524	PURCHASE	1	12/31/2018
1	Land	MOON POND PROPERTY	2019	231,824	0	11,281	1.00	231,824	PURCHASE	1	1/31/2019
2	Post 1970 Physical Infrastructure	MOON POND	2019	200,002	0	11,281	1.00	200,002	PURCHASE	1	12/31/2019
2	Post 1970 Physical Infrastructure	7TH AVE STORMDRAIN	2018	248,183	0	11,062	1.02	253,097	PURCHASE	1	12/31/2018
2	Post 1970 Physical Infrastructure	7TH AVE STORMDRAIN	2019	2,189,210	0	11,281	1.00	2,189,210	PURCHASE	1	12/31/2019
2	Post 1970 Physical Infrastructure	SHEEP DRAW PH2	2018	359,156	7,183	11,062	1.02	358,941	PURCHASE	1	12/31/2018
2	Post 1970 Physical Infrastructure	POUDRE RIVER STORM WATER SYSTM	2018	324,897	6,498	11,062	1.02	324,703	PURCHASE	1	12/31/2018
2	Post 1970 Physical Infrastructure	STW PIPE 806 9TH ST	2018	15,662	313	11,062	1.02	15,653	PURCHASE	1	12/31/2018
2	Post 1970 Physical Infrastructure	UC HEALTH HOSPITAL SW SYSTEM	2018	38,028	761	11,062	1.02	38,005	PURCHASE	1	12/31/2018
2	Post 1970 Physical Infrastructure	60TH AVE STORM WATER SYSTEM	2018	15,591	312	11,062	1.02	15,581	PURCHASE	1	12/31/2018
2	Post 1970 Physical Infrastructure	16TH ST 17TH ST 3RD AV	2018	54,105	1,082	11,062	1.02	54,072	PURCHASE	1	12/31/2018
2	Post 1970 Physical Infrastructure	GROWLING BEAR SW SYSTM	2018	19,300	386	11,062	1.02	19,288	PURCHASE	1	12/31/2018
2	Post 1970 Physical Infrastructure	PROMONTORY PH2 SW SYSTM	2018	202,424	4,048	11,062	1.02	202,303	PURCHASE	1	12/31/2018
2	Post 1970 Physical Infrastructure	TRAILS SHEEP DRAW PH1 SW SYSTM	2018	1,565,876	31,318	11,062	1.02	1,564,939	PURCHASE	1	12/31/2018
2	Post 1970 Physical Infrastructure	25TH AV16TH ST DRAINAGE REPAIR	2018	35,203	704	11,062	1.02	35,182	PURCHASE	1	12/31/2018
3	Miscellaneous / Admin	RAIN GAUAGE STATION	2019	9,037	0	11,281	1.00	9,037	PURCHASE	1	12/31/2019
3	Miscellaneous / Admin	RAIN GAUAGE STATION	2019	7,744	0	11,281	1.00	7,744	PURCHASE	1	12/31/2019
3	Miscellaneous / Admin	RAIN GAUAGE STATION	2019	7,744	0	11,281	1.00	7,744	PURCHASE	1	12/31/2019
5	Lines	2ND AVE & 15TH ST LATERAL	2019	58,077	0	11,281	1.00	58,077	PURCHASE	1	12/31/2019
2	Post 1970 Physical Infrastructure	SUNRISE STORM DRAINAGE REPAIR	2019	49,770	0	11,281	1.00	49,770	PURCHASE	1	12/31/2019
2	Post 1970 Physical Infrastructure	47TH AVE STORM DRAINAGE REPAIR	2019	33,806	0	11,281	1.00	33,806	PURCHASE	1	12/31/2019
2	Post 1970 Physical Infrastructure	SUNRISE STORM DRAINAGE REPAIR	2019	57,495	0	11,281	1.00	57,495	PURCHASE	1	12/31/2019
2	Post 1970 Physical Infrastructure	30TH ST STORM DRAINAGE REPAIR	2019	24,573	0	11,281	1.00	24,573	PURCHASE	1	12/31/2019
2	Post 1970 Physical Infrastructure	GALLERY GR DET POND EXPANSION	1994	91,094	45,547	5,408	2.09	95,011	PURCHASED	1	11/2/1994
5	Lines	1 AV/EAST MEM PARK STORM SEWER	1996	83,215	38,279	5,620	2.01	90,200	PURCHASED	1	12/31/1996
5	Lines	1 AV/EAST MEM PARK STORM SEWER	1997	16,607	7,307	5,826	1.94	18,008	PURCHASED	1	12/31/1997
5	Lines	27TH AVE IRRIGATION SYSTEM	2016	65,568	7,868	10,338	1.09	62,963	PURCHASE	1	12/31/2016
4	Vehicles & Equipment	2002 FORD F150	2002	21,118	21,118	6,538	1.73	0	PURCHASED	1	5/24/2002
4	Vehicles & Equipment	02 FORD F150	2002	18,394	18,394	6,538	1.73	0	PURCHASED	1	10/23/2002
4	Vehicles & Equipment	2005 INTERNATIONAL 7600 SBA 6X	2004	136,467	136,467	7,115	1.59	0	PURCHASE	1	12/31/2004
4	Vehicles & Equipment	2005 INTERNATIONAL 7600 SBA 6X	2004	186,109	186,109	7,115	1.59	0	PURCHASE	1	12/31/2004
4	Vehicles & Equipment	2019 FORD TRANSIT VAN 350	2019	41,060	0	11,281	1.00	41,060	PURCHASE	1	12/31/2019
4	Vehicles & Equipment	2018 CHEVY SILVERADO 1GCVKNEH3	2017	32,196	13,952	10,736	1.05	19,171	PURCHASE	1	10/31/2017
4	Vehicles & Equipment	2018 CHEVY SILVERADO 1GCVKNEH4	2017	32,196	13,952	10,736	1.05	19,171	PURCHASE	1	10/31/2017
4	Vehicles & Equipment	2015 CHEVY 3500 1 TON	2014	56,548	56,548	9,806	1.15	0	PURCHASE	1	12/31/2014
4	Vehicles & Equipment	2017 INTERNATIONAL TRUCK	2017	304,366	167,401	10,736	1.05	143,918	PURCHASE	1	3/31/2017
4	Vehicles & Equipment	2013 JOHN DEERE 410K BACKHOE	2013	88,676	48,649	9,547	1.18	47,297	PURCHASED	1	5/31/2013
4	Vehicles & Equipment	2014 JOHN DEERE BACKHOE/LOADER	2014	90,000	41,875	9,806	1.15	55,364	PURCHASE	1	5/21/2014
4	Vehicles & Equipment	TIGER MID-MOUNT SIDE MOWER	2015	37,472	14,052	10,035	1.12	26,328	PURCHASE	1	6/30/2015
4	Vehicles & Equipment	2016 INTERNATIONAL TRUCK	2016	362,001	98,044	10,338	1.09	288,034	PURCHASE	1	9/30/2016
4	Vehicles & Equipment	2007 ALLIANZ STREET SWEEPER	2007	156,074	111,853	7,966	1.42	62,623	PURCHASE	1	7/31/2007
4	Vehicles & Equipment	2008 ALLIANZ STREET SWEEPER	2008	156,074	114,454	8,310	1.36	56,500	PURCHASE	1	6/30/2008
4	Vehicles & Equipment	2013 FREIGHTLINER SWEEPER	2013	224,218	162,825	9,547	1.18	72,544	PURCHASED	1	8/31/2013
4	Vehicles & Equipment	2015 FRTLNR- ELGIN BEAR SWEEPR	2014	226,675	167,307	9,806	1.15	68,297	PURCHASE	1	10/30/2014
4	Vehicles & Equipment	2015 SCHWARZE SWEEPER	2015	253,052	94,895	10,035	1.12	177,795	PURCHASE	1	6/30/2015
4	Vehicles & Equipment	2018 ELGN BRM BR STRT SWEEPER	2018	187,766	31,294	11,062	1.02	159,569	PURCHASE	1	10/31/2018
4	Vehicles & Equipment	2019 ELGIN STREET SWEEPER	2019	258,661	0	11,281	1.00	258,661	PURCHASE	1	12/31/2019
3	Miscellaneous / Admin	AUTODESK INFRASTRUCTURE DESIGN	2013	5,845	5,845	9,547	1.18	0	PURCHASED	1	12/31/2013
2	Post 1970 Physical Infrastructure	14TH AVE STORM SEWER	1981	730,257	569,601	3,535	3.19	512,692	PURCHASE	1	1/1/1981
		Total		$166,688,094	$111,343,851			$84,147,140			

(1) ENR-CCI reflects the 20-City average for 2019 divided by the ENR-CCI in year aquired.

City of Greeley
Storm Drainage Utility
Development Impact Fee and Plant Investment Fee Study
Customer Gross Lot Size and Estimated Impervious Area
Summary by Service Code and C-Factor

Service	Decription	Land Use	Growth Group	Total Lot Area - Sq Ft per Service Group	C-Factor	Estimated Impervious Area
303	SPECIAL	Special	Grow_02	1,288,069	0.03	38,642
305	SPECIAL	Special	Grow_02	87,120	0.05	4,356
306	SPECIAL	Special	Grow_02	1,497,469	0.06	89,848
307	SPECIAL	Special	Grow_02	4,538,063	0.07	317,664
308	SPECIAL	Special	Grow_02	599,386	0.08	47,951
309	SPECIAL	Special	Grow_02	214,815	0.09	19,333
310	SPECIAL	Special	Grow_02	847,045	0.10	84,705
311	SPECIAL	Special	Grow_02	6,288,235	0.11	691,706
312	SPECIAL	Special	Grow_02	1,393,691	0.12	167,243
313	SPECIAL	Special	Grow_02	6,435,244	0.13	836,582
314	SPECIAL	Special	Grow_02	922,457	0.14	129,144
315	SPECIAL	Special	Grow_02	854,807	0.15	128,221
316	SPECIAL	Special	Grow_02	1,473,151	0.16	235,704
317	SPECIAL	Special	Grow_02	2,665,769	0.17	453,181
318	SPECIAL	Special	Grow_02	836,642	0.18	150,596
319	SPECIAL	Special	Grow_02	339,966	0.19	64,594
320	SPECIAL	Special	Grow_02	746,775	0.20	149,355
322	SPECIAL	Special	Grow_02	599,592	0.22	131,910
323	SPECIAL	Special	Grow_02	1,008,629	0.23	231,985
324	SPECIAL	Special	Grow_02	4,700,662	0.24	1,128,159
325	SPECIAL	Special	Grow_02	8,059,312	0.25	2,014,828
326	SPECIAL	Special	Grow_02	721,787	0.26	187,665
327	SPECIAL	Special	Grow_02	100,639	0.27	27,173
328	SPECIAL	Special	Grow_02	1,280,674	0.28	358,589
329	SPECIAL	Special	Grow_02	190,664	0.29	55,293
330	SPECIAL	Special	Grow_02	15,248,127	0.30	4,574,438
331	SPECIAL	Special	Grow_02	76,480	0.31	23,709
332	SPECIAL	Special	Grow_02	70,299	0.32	22,496
333	SPECIAL	Special	Grow_02	249,225	0.33	82,244
334	SPECIAL	Special	Grow_02	695,782	0.34	236,566
335	RES EST	Residential	Residential	25,944,467	0.35	9,080,563
336	SPECIAL	Special	Grow_02	2,730,313	0.36	982,913
337	SPECIAL	Special	Grow_02	372,479	0.37	137,817
338	SPECIAL	Special	Grow_02	79,268	0.38	30,122
340	SPECIAL	Special	Grow_02	158,800	0.40	63,520
342	SPECIAL	Special	Grow_02	227,774	0.42	95,665
343	SPECIAL	Special	Grow_02	446,206	0.43	191,869
344	SPECIAL	Special	Grow_02	162,352	0.44	71,435
345	RES LO	Residential	Residential	187,630,385	0.45	84,433,673
346	RES MED	Residential	Residential	7,446,464	0.45	3,350,909
347	CHURCH	Institutional	Indust/Inst	8,287,068	0.47	3,894,922
348	SPECIAL	Special	Grow_02	1,651,230	0.48	792,590
350	SCHOOL	Institutional	Indust/Inst	28,503,214	0.50	14,251,607
352	OTHER	Institutional	Indust/Inst	19,019,321	0.52	9,890,047
354	SPECIAL	Special	Grow_02	1,400,096	0.54	756,052

City of Greeley
Storm Drainage Utility
Development Impact Fee and Plant Investment Fee Study
Customer Gross Lot Size and Estimated Impervious Area
Summary by Service Code and C-Factor

Service	Decription	Land Use	Growth Group	Total Lot Area - Sq Ft per Service Group	C-Factor	Estimated Impervious Area
359	SPECIAL	Special	Grow_02	503,345	0.59	296,974
361	SPECIAL	Special	Grow_02	370,277	0.61	225,869
362	SPECIAL	Special	Grow_02	285,401	0.62	176,949
364	RES MH	Residential	Residential	501,615	0.65	326,050
365	COM LO	Commercial	Commercial	35,843,437	0.65	23,298,234
366	RES HI	Residential	Residential	21,605,752	0.65	14,043,739
367	SPECIAL	Special	Grow_02	229,810	0.67	153,973
368	SPECIAL	Special	Grow_02	765,676	0.68	520,660
376	IND	Industrial	Indust/Inst	17,522,511	0.76	13,317,108
386	SPECIAL	Special	Grow_02	159,592	0.86	137,249
387	COM HI	Commercial	Commercial	21,007,961	0.87	18,276,926
399	RES EST	Special	Grow_02	4,258,955	Flat Fee	0
809	FLAT RATE	Special	Grow_02	235,118	0.09	21,161
810	FLAT RATE	Special	Grow_02	87,120	0.10	8,712
811	FLAT RATE	Special	Grow_02	348,480	0.11	38,333
812	FLAT RATE	Special	Grow_02	221,285	0.12	26,554
813	FLAT RATE	Special	Grow_02	800,358	0.13	104,047
814	FLAT RATE	Special	Grow_02	557,568	0.14	78,060
815	FLAT RATE	Special	Grow_02	127,980	0.15	19,197
816	FLAT RATE	Special	Grow_02	232,960	0.16	37,274
817	FLAT RATE	Special	Grow_02	217,800	0.17	37,026
818	FLAT RATE	Special	Grow_02	119,790	0.18	21,562
819	FLAT RATE	Special	Grow_02	87,120	0.19	16,553
820	FLAT RATE	Special	Grow_02	258,746	0.20	51,749
822	FLAT RATE	Special	Grow_02	110,120	0.22	24,226
827	FLAT RATE	Special	Grow_02	29,098	0.27	7,856
829	FLAT RATE	Special	Grow_02	198,164	0.29	57,468
830	FLAT RATE	Special	Grow_02	400,752	0.30	120,226
831	FLAT RATE	Special	Grow_02	127,614	0.31	39,560
835	FLAT RATE	Special	Grow_02	3,105,360	0.35	1,086,876
836	FLAT RATE	Special	Grow_02	44,750	0.36	16,110
845	FLAT RATE	Special	Grow_02	1,757,712	0.45	790,970
846	FLAT RATE	Special	Grow_02	119,440	0.46	54,942
847	FLAT RATE	Special	Grow_02	196,942	0.47	92,563
850	FLAT RATE	Special	Grow_02	364,684	0.50	182,342
852	FLAT RATE	Special	Grow_02	1,910,683	0.52	993,555
865	FLAT RATE	Special	Grow_02	1,860,131	0.65	1,209,085
866	FLAT RATE	Special	Grow_02	169,332	0.66	111,759
876	FLAT RATE	Special	Grow_02	803,674	0.76	610,792
899	FLAT RATE	Special	Grow_02	3,977,467	Flat Fee	0
	Total			469,614,591.83		217,339,867.95

City of Greeley
Storm Drainage Utility
Development Impact Fee and Plant Investment FeeStudy
Engineering New Record Cost Index

Line No	Year	ENR-CCI 20-City	ENR-CCI Ratio
1	1969	1,269	8.89
2	1970	1,381	8.17
3	1971	1,581	7.14
4	1972	1,753	6.44
5	1973	1,895	5.95
6	1974	2,020	5.58
7	1975	2,212	5.10
8	1976	2,401	4.70
9	1977	2,576	4.38
10	1978	2,776	4.06
11	1979	3,003	3.76
12	1980	3,237	3.49
13	1981	3,535	3.19
14	1982	3,825	2.95
15	1983	4,066	2.77
16	1984	4,146	2.72
17	1985	4,195	2.69
18	1986	4,295	2.63
19	1987	4,406	2.56
20	1988	4,519	2.50
21	1989	4,615	2.44
22	1990	4,732	2.38
23	1991	4,835	2.33
24	1992	4,985	2.26
25	1993	5,210	2.17
26	1994	5,408	2.09
27	1995	5,471	2.06
28	1996	5,620	2.01
29	1997	5,826	1.94
30	1998	5,920	1.91
31	1999	6,059	1.86
32	2000	6,221	1.81
33	2001	6,343	1.78
34	2002	6,538	1.73
35	2003	6,694	1.69
36	2004	7,115	1.59
37	2005	7,446	1.52
38	2006	7,751	1.46
39	2007	7,966	1.42
40	2008	8,310	1.36
41	2009	8,570	1.32
42	2010	8,802	1.28
43	2011	9,070	1.24
44	2012	9,308	1.21
45	2013	9,547	1.18
46	2014	9,806	1.15
47	2015	10,035	1.12
48	2016	10,338	1.09
49	2017	10,736	1.05
50	2018	11,062	1.02
51	2019	11,281	1.00