



RFA GOVERNANCE BOARD SPECIAL MEETING AGENDA

08:30 A.M. – Monday, August 28, 2023

Fire Station #13, 18002 108th Ave SE, Renton, WA 98055

Zoom Webinar: <https://us02web.zoom.us/j/86340359638>

Dial-in: (253) 215-8782 | Webinar ID: 863 4035 9638

View Live via Facebook: <http://www.Facebook.com/RentonRFA>

- Call Meeting to Order
- Flag Salute
- Roll Call
- New Business
 - [Resolution 2023-06 Amended Capital Facilities Plan and Rate Study](#)
 - [RRFA Capital Facilities Plan 2023 Amended](#)
 - [RRFA Rate Study 2023 Amended](#)
- Future Meetings:
 - Monday, September 11, 2023, 10:00 a.m., Governance Board Regular Meeting, Fire Station #13 (18002 108th Ave SE, Renton) / Video Conference
 - Monday, September 25, 2023, 10:00 a.m., Budget/Finance Committee Meeting, Video Conference
 - Monday, September 25, 2023, 10:30 a.m., Operations/Capital Committee Meeting, Video Conference
- Adjournment



Governing Board Agenda Item

SUBJECT/TITLE: Resolution 2023-06 Adopting the Amended 2023 Capital Facilities Plan and Rate Study

STAFF CONTACT: CAO Samantha Babich

SUMMARY STATEMENT:

Renton RFA staff have made determined that certain adjustments to the Rate Study for Fire Impact Fees and Capital Facilities Plan, approved by the Governing Board pursuant to Resolution 2023-05 on August 21, 2023, are required to more accurately capture the impacts of new development in the City of Renton and are requesting the Governing Board approve the amended Capital Facilities Plan as attached effective August 28, 2023.

FISCAL IMPACT:

Expenditure _____ Revenue _____

Currently in the Budget Yes ☒ No ☐ N/A ☐

SUMMARY OF ACTION:

The unit of measure used for medical facilities was previously reported as a dwelling unit (d.u.) and is more accurately measured with "beds". Staff have confirmed this with CoR staff and have updated the Rate Study and CFP accordingly. For most land use types, the rates have remained unchanged or have decreased from the original document adopted 08/21/2023. For medical facilities, the rate now applies to each bed rather than each dwelling unit.

Reviewed by Legal Yes ☒ No ☐ N/A ☐

EXHIBITS:

Amended Capital Facilities Plan and Rate Study
Resolution 2023-06 Adopting Amended Capital Facilities Plan and Rate Study

RFA GOVERNANCE BOARD RECOMMENDED ACTION:

I move to approve Resolution 2023-06, hereby adopting the amended 2023 Capital Facilities Plan and Rate Study for the Renton Regional Fire Authority.



RENTON REGIONAL FIRE AUTHORITY

18002 108TH AVE SE
RENTON, WA 98055
(425) 276-9500



CAPITAL FACILITIES PLAN - Amended August 2023

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1.0 Introduction

1.1 PURPOSE

The purpose of this Capital Facilities Plan (CFP) is to identify capital facility needs necessary for the Renton Regional Fire Authority (RRFA) to achieve and maintain adopted standards for levels of service concurrent with, or prior to, the impacts of expected development and population growth over the next six years (2024-2029) and is consistent with the land use and transportation elements of the City of Renton (City) and King County comprehensive plans. This CFP also identifies sound fiscal policies and funding resources for implementation.

1.2 CAPITAL PLANNING REQUIREMENTS

The Washington State Growth Management Act (GMA) requires that a county's or city's CFP should consist of: a) an inventory of existing capital facilities owned by public entities; b) a forecast of the future needs for capital facilities; c) the proposed locations and capacities of expanded or new capital facilities; d) a six-year plan to finance capital facilities within projected funding capacities and clearly identified sources of public money for such purposes; and e) a requirement to reassess the land use element if probable funding falls short of existing needs (RCW 36.70a.070(3)). The GMA requires that all capital facilities have "probable funding" to pay for capital facility needs and that jurisdictions have capital facilities in place and readily available when new development comes in or must be of sufficient capacity when the population grows. The City prepares a CFP element as part of its comprehensive plan. In accordance with the Interlocal Agreement (ILA) in place between the City and the RRFA, the City will incorporate the RRFA's six-year plan for fire and emergency services facilities into its comprehensive plan CFP. That allows the City to impose an impact fee. Impact fees may be collected and spent only for the public facilities addressed by a CFP element of a comprehensive land use plan adopted pursuant to the GMA (RCW 82.02.050 (4)).

Levels of service (LOS) are established in the CFP and represent quantifiable measures of capacity. They are minimum standards established by the RRFA to provide capital facilities and services to the RRFA service area at a certain level of quality and within the financial capacity of the RRFA. As the population grows, it is expected that demands for fire and emergency response services will also grow. Additional facilities will be necessary to meet this growing demand for service. LOS standards are influenced by local citizens, elected, and appointed officials, national and state standards, mandates, and other considerations, such as available funding.

Growth, LOS standards, and a funded capital improvement program are to be in balance. In the case where the LOS cannot be met by a service or facility, the jurisdiction could do one of the

following: 1) add proposed facilities within funding resources, 2) reduce demand through demand management strategies, 3) lower LOS standards, 4) phase growth, or 5) change the land use plan.

1.3 DEFINITION OF CAPITAL FACILITIES

The CFP addresses public facilities necessary for providing fire and emergency response services. Capital facilities generally have a long useful life and include RRFA-owned and/or -operated buildings, land, equipment, and apparatus. Capital facilities planning does not cover regular operation and maintenance, but it does include major repair, rehabilitation, or reconstruction of facilities. The RRFA considers capital assets to be assets of more than \$5,000 in value and an estimated useful life of more than one year.

1.4 PRINCIPLES GUIDING CAPITAL INVESTMENTS

There are two main guiding elements behind capital facilities planning: RRFA standard operating procedures (SOP) that define fiscal policies and the GMA. RRFA SOP 2315 “Reserve Funds” and SOP 2317 “Long-Term Planning” address the RRFA’s policies regarding capital reserves and investments. The CFP supports RRFA in making strategic capital investments that support this effort.

RRFA intends to use the CFP as:

- a tool for budgeting;
- the basis for capital spending, giving a degree of assurance about how public money will be spent; and
- a useful guidance document for leadership and staff.

Toward that end, RRFA has developed and used the following guidelines to evaluate projects before adding them to the CFP:

- Growth-related project costs should be timed to match with available remitted fire impact fee revenues.
- Project costs that are not growth-related should be timed to match with revenues available through operating transfers.
- Projects should be spaced to allow for progress on RRFA’s other financial goals, especially maintaining its capital and operating reserves.

1.5 RRFA HISTORY AND GOVERNANCE

RRFA is a special purpose district that provides fire and medical emergency response services within the City and King County Fire District 25 (KCFD25). The RRFA was established on July 1, 2016, after voters residing within KCFD25 and the City approved Proposition 1. This legislation

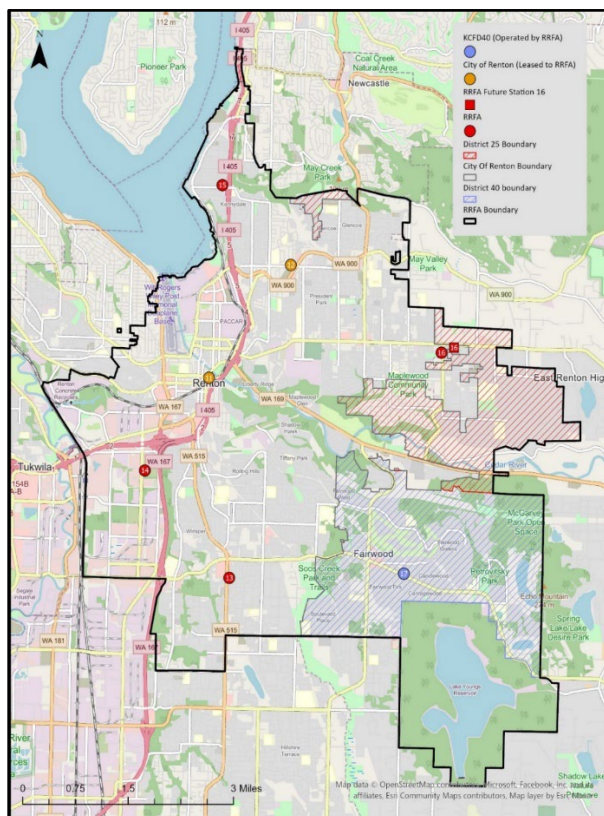
formed the regional fire authority and authorized a fire benefit charge. Prior to the creation of the RRFA, service in the City was provided by Renton Fire & Emergency Services (RF&ES) and both KCFD25 and King County Fire District 40 (KCFD40) contracted for services with the City.

Creation of the RRFA consolidated fire protection for the City and KCFD25 under a single special local government authority. The contract for fire protection with KCFD40 remained in place and transferred to RRFA and was renewed in 2022 for an additional twenty years. Accordingly, KCFD40 is treated as part of the RRFA entity for the purposes of this CFP.

1.6 SERVICE AREA

RRFA is located at the south end of Lake Washington, between Seattle and Tacoma. According to King County GIS data, the RRFA's total response area is 37 square miles, including the City of Renton and KCFD25 (27 square miles) and the KCFD40 and Lake Youngs area (10 square miles). KCFD25 is located in the area east of the City and north of State Route 169 known as the East Renton Highlands. KCFD40 and Lake Youngs are located in the area east of the City and south of State Route 169 known as Fairwood. The RRFA service area is bordered by unincorporated areas of King County, as well as the cities of Kent, Tukwila, and Newcastle, with the City of Seattle just a few miles northwest. Exhibit 1-1 presents a map of the RRFA service area and station locations.

Exhibit 1-1. Service Area and Station Locations



1.7 CURRENT CONDITIONS AND PROJECTED GROWTH

Renton is the fourth largest city in King County, covering 23.54 square miles and having an estimated 2022 population of 107,900. The City includes residential neighborhoods, a strong industrial base, and a growing commercial/office sector. The City's downtown and northern manufacturing area were designated as a regional growth center by the Puget Sound Regional Council (PSRC) in 1995. The northern part of the regional growth center borders Lake Washington and emphasizes mixed use and regional employment, including the Boeing Company's Renton Plant and The Landing, a significant recent retail and residential development. The southern part of the regional growth center includes the downtown core and adjacent residential area. Downtown Renton has seen investment in recent years, including the Renton Pavilion Event Center and Piazza Park, the Renton Transit Center, the IKEA Performing Arts Center, Top Golf, the Hyatt, and Southport. The City also contains commercial corridors, multi-family nodes, and extensive single-family neighborhoods. KCFD25 and KCFD40 mostly contain residential areas located in King County outside of Renton city limits.

Population projections for Renton, KCFD25, and KCFD40 for the years 2023-2029 are presented in Exhibit 1-2.¹ The City is expected to grow by 6,053 residents, 86% of the total population growth forecasted for the RRFA service area.

Exhibit 1-2. Service Area Population and Projected Growth

Description	2022	Projected Growth 2023-2029
City of Renton	107,900	6,053
KCFD25	7,947	87
KCFD40	22,148	917
Total Service Area	137,995	7,057
City of Renton Share of Population Growth		86%

¹ Source: Projections provided by the City of Renton.

2.0 Inventory of Existing RRFA Capital Facilities

This section provides a current inventory of capital facilities that are either owned or operated by RRFA, including both stations and apparatus.

2.1 BUILDING INVENTORY

Exhibit 1-1 in Section 1 maps the locations and ownership of the seven fire stations operated by RRFA. Exhibit 2-1 provides station locations and square footage operated by RRFA.

Exhibit 2-1. Fire Station Inventory

Station	Address	Building Square Footage Operated by RRFA
Fire Station 11 ²	211 Mill Ave S, Renton, WA 98057	20,550
Fire Station 12 (Ex EOC) ³	1209 Kirkland Ave NE, Renton, WA 98056	14,800
Fire Station 13	18002 108th Ave SE, Renton, WA 98055	20,521
Fire Station 13 Shop	18002 108th Ave SE, Renton, WA 98055	6,000
Fire Station 14	1900 Lind Ave SW, Renton, WA 98057	13,659
Fire Station 14 Tower	1900 Lind Ave SW, Renton, WA 98057	3,658
Fire Station 15	1404 N 30th St., Renton, WA 98056	7,497
Fire Station 16	12923 156th Ave SE, Renton, WA 98059	7,732
Fire Station 17 ⁴	14810 Petrovitsky Rd SE, Renton, WA 98058	6,836

² Fire Station 11 is owned by the City of Renton and leased to RRFA. The building square footage excludes the area leased by KC Medics.

³ Fire Station 12 is owned by the City of Renton and leased to the RRFA. The building square footage excludes the portion of the building that is utilized by City of Renton Emergency Management.

⁴ Fire Station 17 is owned by Fire District 40 and used by RRFA through service contract.

2.2 APPARATUS INVENTORY

The RRFA maintains a wide variety of highly specialized apparatus in order to fulfill its mission to protect the community it serves. Inventories of RRFA engines, ladders, aid units, hazardous materials vehicles, brush trucks, command vehicles, dive apparatus, service vehicles, staff vehicles, utility vehicles, small utility vehicles, and other apparatus/equipment are shown in Exhibits 2-2 through 2-13.

Exhibit 2-2. Engines in RRFA Fleet

Vehicle Number	Call Sign	Station/ Division Assignment	Year	Make	Model	Replacement Year	Est. Cost in Year of Replacement
F074	E413	Station 13	1999	E-One	Cyclone II	not scheduled	\$0
F085	E414	Station 14	2005	E-One	Cyclone II	2025	\$1,103,258
F093	E412	Station 12	2008	E-One	Cyclone II	2025	\$1,103,258
F114	E313	Station 13	2015	E-One	Cyclone II	2031	\$1,317,348
F115	E314	Station 14	2015	E-One	Cyclone II	2031	\$1,317,348
F123	E311	Station 11	2017	E-One	Cyclone II	2033	\$1,397,574
F124	E312	Station 12	2017	E-One	Cyclone II	2033	\$1,397,574
F137	E316	Station 16	2019	E-One	Cyclone II	2035	\$1,482,687
F148	E313	Station 13	2022	Pierce	Enforcer	2038	\$1,620,172
F149	E314	Station 14	2022	Pierce	Enforcer	2038	\$1,620,172
F2515	E316	Station 16	2003	E-One	Cyclone II	2025	\$1,103,258
F441	E417	Station 17	2022	Pierce	Enforcer	2038	\$1,620,172

Exhibit 2-3. Ariel Ladder Inventory

Vehicle Number	Call Sign	Station/Division Assignment	Year	Make	Model	Replacement Year	Est. Cost in Year of Replacement
F105	L311	Station 11	2011	E-One	Aerial	2029	\$2,591,449
F135	L311	Station 11	2019	E-One	Cyclone	2037	\$3,282,770

Exhibit 2-4. Aid Units in RRFA Fleet

Vehicle Number	Call Sign	Station/Division Assignment	Year	Make	Model	Replacement Year	Est. Cost in Year of Replacement
F110	A313	Station 13	2014	INTE	Northstar	2025	\$421,371
F111	A312	Station 12	2014	INTE	Northstar	2025	\$421,371
F138	A311	Station 11	2020	Ford	F-450	2032	\$518,233
F153	A313	Station 13	2022	Ford	F-450	2034	\$549,793
F154	A312	Station 12	2022	Ford	F-450	2034	\$549,793
F440	A317	Station 17	2022	Ford	F-450	2034	\$549,793

Exhibit 2-5. Hazardous Materials Vehicle in RRFA Fleet

Vehicle Number	Call Sign	Station/Division Assignment	Year	Make	Model	Replacement Year	Est. Cost in Year of Replacement
F120	HM314	Station 14	2017	E-One	Freightliner	2037	\$826,618

Exhibit 2-6. Brush Trucks in RRFA Fleet

Vehicle Number	Call Sign	Station/ Division Assignment	Year	Make	Model	Replacement Year	Est. Cost in Year of Replacement
F091	BR317	Station 17	2008	Ford	F-550	2024	\$354,413
F155	BR316	Station 16	2022	Ford	F-550	2037	\$520,467

Exhibit 2-7. Command Vehicles in RRFA Fleet

Vehicle Number	Call Sign	Station/Division Assignment	Year	Make	Model	Replacement Year	Est. Cost in Year of Replacement
F109	B413	Station 13	2013	Chevrolet	Tahoe	2023	\$111,202
F119	B312	Station 12	2016	Chevrolet	Silverado	2024	\$114,538
F121	C312	Station 13	2017	Chevrolet	Tahoe	2027	\$125,159
F122	C314	Station 13	2017	Ford	Explorer	2027	\$125,159
F125	B313	Station 13	2018	Chevrolet	Silverado	2028	\$128,914
F134	C313	Station 13	2020	Ford	Explorer	2030	\$136,764
F139	C311	Station 13	2020	Ford	Explorer	2030	\$136,764
F156	TBD	Station 11	2023	Chevrolet	Silverado	2033	\$149,446
F158	TBD	Station 12	2024	Chevrolet	Silverado 2500	2034	\$153,930

Exhibit 2-8. Dive Apparatus in RRFA Fleet

Vehicle Number	Call Sign	Station/Division Assignment	Year	Make	Model	Replacement Year	Est. Cost in Year of Replacement
F129	DIV312	Station 12	2018	Ram	5500	2039	\$443,087

Exhibit 2-9. Service Vehicles in RRFA Fleet

Vehicle Number	Call Sign	Station/Division Assignment	Year	Make	Model	Replacement Year	Est. Cost in Year of Replacement
F136	CAR312	EMS	2019	Ford	F-150 Pursuit	2029	\$110,086
F434	CAR52	EMS	2004	Chevrolet	Tahoe	2023	\$92,195

Exhibit 2-10. Staff Vehicles in RRFA Fleet

Vehicle Number	Call Sign	Station/Division Assignment	Year	Make	Model	Replacement Year	Est. Cost in Year of Replacement
F096A	N/A	OFM	2009	Ford	Escape	2024	\$39,035
F104	N/A	EMS	2012	Ford	Escape	2027	\$42,655
F116	N/A	Administration	2016	Ford	Police Utility	2030	\$46,610
F117	N/A	OFM	2015	Ford	C-Max	2030	\$46,610
F126	N/A	OFM	2018	Ford	Escape	2033	\$50,932
F127	N/A	OFM	2018	Ford	Escape	2033	\$50,932
F128	N/A	OFM	2018	Ford	Escape	2033	\$50,932
F130	N/A	OFM	2020	Ford	Escape	2035	\$54,033
F143	N/A	OFM	2020	Ford	Escape	2035	\$54,033
F144	N/A	OFM	2020	Ford	Escape	2035	\$54,033
F145	N/A	Support Services	2020	Ford	Escape	2035	\$54,033
F146	N/A	Support Services	2020	Ford	Escape	2035	\$54,033
F147	N/A	Support Services	2020	Ford	Escape	2035	\$54,033

Exhibit 2-11. Utility Vehicles in RRFA Fleet

Vehicle Number	Call Sign	Station/Division Assignment	Year	Make	Model	Replacement Year	Est. Cost in Year of Replacement
F112	N/A	SKCFTC	2015	Ford	F-250	2030	\$85,978
F113	N/A	OFM	2015	Dodge	Promaster	2030	\$85,978
F132	N/A	Support Services	2019	Ford	F-250	2034	\$96,769
F133	N/A	Support Services	2019	Ford	F-250	2034	\$96,769
F140	N/A	Administration	2020	Chevrolet	Express 2500	2035	\$99,672
F151	N/A	SKCFTC	2021	Ford	F-150	2036	\$102,662
F152	N/A	SKCFTC	2021	Ford	F-150	2036	\$102,662
F159	N/A	Support Services	2024	Chevrolet	Silverado	2039	\$112,182
F436	N/A	Support Services	2005	Chevrolet	Silverado	2023	\$69,908

Exhibit 2-12. Small Utility Vehicles in RRFA Fleet

Vehicle Number	Call Sign	Station/Division Assignment	Year	Make	Model	Replacement Year	Est. Cost in Year of Replacement
F131	N/A	Station 14	2020	Ford	Transit Connect	2035	\$60,022
F141	N/A	Station 13	2020	Nissan	NV200 S	2035	\$60,022
F142	N/A	Station 13	2020	Nissan	NV200 S	2035	\$60,022

Exhibit 2-13. Other Apparatus/Equipment in RRFA Fleet

Vehicle Number	Call Sign	Station/Division Assignment	Year	Make	Model	Replacement Year	Est. Cost in Year of Replacement
F092	N/A	N/A	2007	Cargo	Trailer 22Ft	not scheduled	\$0
F094	N/A	N/A	2008	Eagle	Utility	not scheduled	\$0
F101	N/A	N/A	2008	Club	Inteltrak	not scheduled	\$0
F103	N/A	N/A	2008	PLRS	Spirit	2025	\$100,394
F118	N/A	N/A	2016	EZLD	Trailer	2026	\$17,727
F150	N/A	N/A	2005	CGMT	Trailblazer	2025	\$17,210

3.0 Measuring Future Capital Facility Needs

The GMA was enacted to provide local oversight of community growth with the intent for local governments such as counties, cities, and towns to monitor and mitigate the impacts of growth. GMA Goal 1 promotes placing growth in urban areas where there are public facilities and services, while GMA Goal 12 promotes adequate facilities and services to support development:

(1) Urban growth. Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner.

(12) Public facilities and services. Ensure that those public facilities and services necessary to support development shall be adequate to serve the development at the time the development is available for occupancy and use without decreasing current service levels below locally established minimum standards (RCW 36.70A.020(12)).

Concurrency for transportation infrastructure is mandated by the GMA, and local agencies were given the authority to establish concurrency guidelines for other public needs such as water, sewer, and fire services:

Purpose.

- The purpose of concurrency is to assure that those public facilities and services necessary to support development are adequate to serve that development at the time it is available for occupancy and use, without decreasing service levels below locally established minimum standards.
- Concurrency describes the situation in which adequate facilities are available when the impacts of development occur, or within a specified time thereafter. Concurrency ensures consistency in land use approval and the development of adequate public facilities as plans are implemented, and it prevents development that is inconsistent with the public facilities necessary to support the development.
- With respect to facilities other than transportation facilities, counties and cities may fashion their own regulatory responses and are not limited to imposing moratoria on development during periods when concurrency is not maintained (WAC 365-196-840).

The RRFA CFP identifies the need for \$25.5M in capital investments as shown in Exhibits 4-1 and 4-2, to maintain fire service concurrency through the year 2029.

3.1 LEVEL OF SERVICE MEASURES

RRFA measures LOS from three different perspectives. The first concerns the cost of facilities for

incident response per unit of development. The second perspective concerns turnout and response times in accordance with established policy. The third perspective concerns the Protection Class (PC) rating for each of the areas served (the City of Renton, KCFD25, and KDFD40). Each of these LOS measures are described below.

3.1.1 Cost of Facilities for Incident Response per Unit of Development

In 2023, RRFA conducted a rate study for fire impact fees. That study presents a methodology for quantifying the need for fire and EMS stations and apparatus to serve new growth, for the purpose of collecting fire impact fees. The level of service standard is the 2022 ratio of apparatus and stations to EMS and fire/other incidents. More specifically, the rate study calculates the annualized facility value per incident as well as the number of incidents produced by different kinds of development. This determines the total cost of facilities for incident response needed per unit of development. This standard is used to measure the systemwide capacity of facilities to support incident response throughout the RRFA service area.

Full documentation of the methodology is available in the rate study. A brief summary follows.

For apparatus, including engines and other response vehicles, the ratio of apparatus to incidents as of 2022 was selected as an acceptable LOS standard. As growth occurs, more incidents will occur, and therefore more apparatus will be needed to maintain this standard. It is anticipated that much of the growth in the RRFA service area will come in the form of infill development and increased density within the City. As the growth occurs, the RRFA intends to add additional apparatus units to address the anticipated increase in multi-story housing (ladder) and emergency medical calls for service (aid unit).

For fire stations, the rate study measures LOS using the ratio of station square footage to incidents. However, a deduction to the station square footage is made to account for unused beds that could accommodate additional fire and emergency response staff. As stated above, it is anticipated that much of the growth in the RRFA service area will come in the form of infill development and increased density within the City. As this growth occurs, the RRFA intends to utilize excess bed capacity in current stations to increase its capacity for emergency response at existing stations.

On the next page, Exhibit 3-1 shows the cost of response per unit of development (dwelling unit, square foot, room, or student), by land use category, as calculated in the 2023 RRFA Rate Study for Fire Impact Fees. These represent the total amount of facility investment the RRFA would need to make to maintain the current level of service as growth occurs within the service area, but not the actual fire impact fee to be charged.

Exhibit 3-1. Total Cost of Response by Land Use Category

Land Use Type	Unit of Development	Total Cost of Response to EMS, Fire, & Other Incidents, Per Unit of Development
Single-Family Residential	d.u.	\$880.99
Multi-Family Residential	d.u.	\$1,209.66
Hotel/Motel/Resort	room	\$722.82
Medical Care Facility	bed	\$2,196.29
Office	sq. ft.	\$0.29
Medical/Dental Office	sq. ft.	\$1.28
Retail	sq. ft.	\$1.38
Leisure Facilities	sq. ft.	\$0.89
Restaurant/Lounge	sq. ft.	\$3.00
Industrial/Manufacturing	sq. ft.	\$0.10
Church/Non-Profit	sq. ft.	\$0.50
Education	student	\$58.50
Special Public Facilities	sq. ft.	\$0.27

3.1.2 Turnout and Response Time Standards

Traffic and geographic barriers currently present challenges to providing adequate response time in some areas. For this reason, RRFA also has turnout and response time standards for measuring performance across the entire service area and by individual station.

Turnout and response time standards are documented in SOP 4101 “Response Guidelines”. First, this policy addresses turnout times, or the interval that begins when audible or visual notification is received by firefighters from the 911 center and ends at the beginning point of travel time. SOP 4101 states: “Turnout time for emergent responses shall be expedient and no longer than one hundred twenty seconds.” Second, this policy addresses response times, or the interval that begins with notification and ends with the time the unit arrives on scene. SOP 4101 states: “The organization aspires in a non-disaster situation, under current conditions of funding, staffing, and equipment, to respond to 90% of the emergency service calls within 7 minutes and 30 seconds from the time of dispatch.”

These standards are summarized in Exhibit 3-2.

⁵ Source: RRFA Rate Study for Fire Impact Fees, 2023

Exhibit 3-2. Response Time Level of Service Standards

Service Standard	Response Time	Meet Response Time Goal
Turnout time for emergency response	120 seconds	100%
First unit arrival	7 minutes and 30 seconds from the time of dispatch	90%

Measuring response time helps RRFA to identify where additional capacity may be necessary. It also helps to identify where current conditions such as station design, local traffic, land use, or geographic barriers are presenting challenges to responding to incidents in a timely manner. For example, Fire Stations 13 and 16 are multi-story buildings that require response crews to travel from a second story to the main story in order to respond, thus increasing their turnout time compared to a single-story station. Similarly, the increased density of multi-family housing and commercial development outside of the Fire Station 11 response area reduces the probability of meeting the response standard and impacts response time level of service for that property type.

The response time level of service standards for 2022 are displayed in Exhibit 3-3 and 3-4.

Exhibit 3-3. 2022 Response Time Level of Service Standards for Fire/Other

In/Out of Jurisdiction	Turnout time under 120 seconds	Response time under 7.5m
In Jurisdiction	50.66%	81.87%
Out of Jurisdiction	56.22%	32.33%

Exhibit 3-4. 2022 Response Time Level of Service Standards for EMS

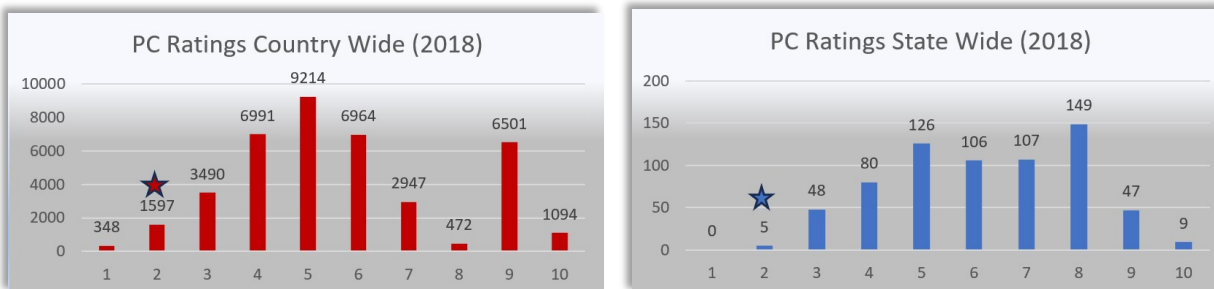
In/Out of Jurisdiction	Turnout time under 120 seconds	Response time under 7.5m
In Jurisdiction	74.26%	94.06%
Out of Jurisdiction	72.02%	72.13%

3.1.3 Washington Surveying Rating Bureau Protection Class

A Washington Surveying Rating Bureau (WSRB) protection class (PC) is a score from 1 to 10 that represents the community-provided fire protection capabilities available at a specific property. A PC of 1 indicates exemplary fire protection capabilities are available; a PC of 10 indicates the fire protection capabilities, if any, are not sufficient to receive credit for insurance. Each community in Washington state has a PC, which is used as a starting point to determine the PC of individual properties.

In 2018, the City's PC was upgraded from a Class 3 to a Class 2.⁶ This put the RRFA's fire protection of the City in the top 5% in the country and top 1% in the state. In July of 2022, the City of Seattle became the first and only fire department in the state to achieve a Class 1 PC.

Exhibit 3-5. City of Renton 2018 PC Rating



The improvements made to fire and life safety throughout Renton over the past several years have led to this outstanding upgrade in PC for the Renton community. Because a community's PC is one of the key factors in insurance premium determination, not only does this upgrade represent exceptional fire and life safety protection, but Renton property owners also have an even greater opportunity to realize insurance premium savings. KCFD25 and KCFD40 both maintain a PC of Class 3.

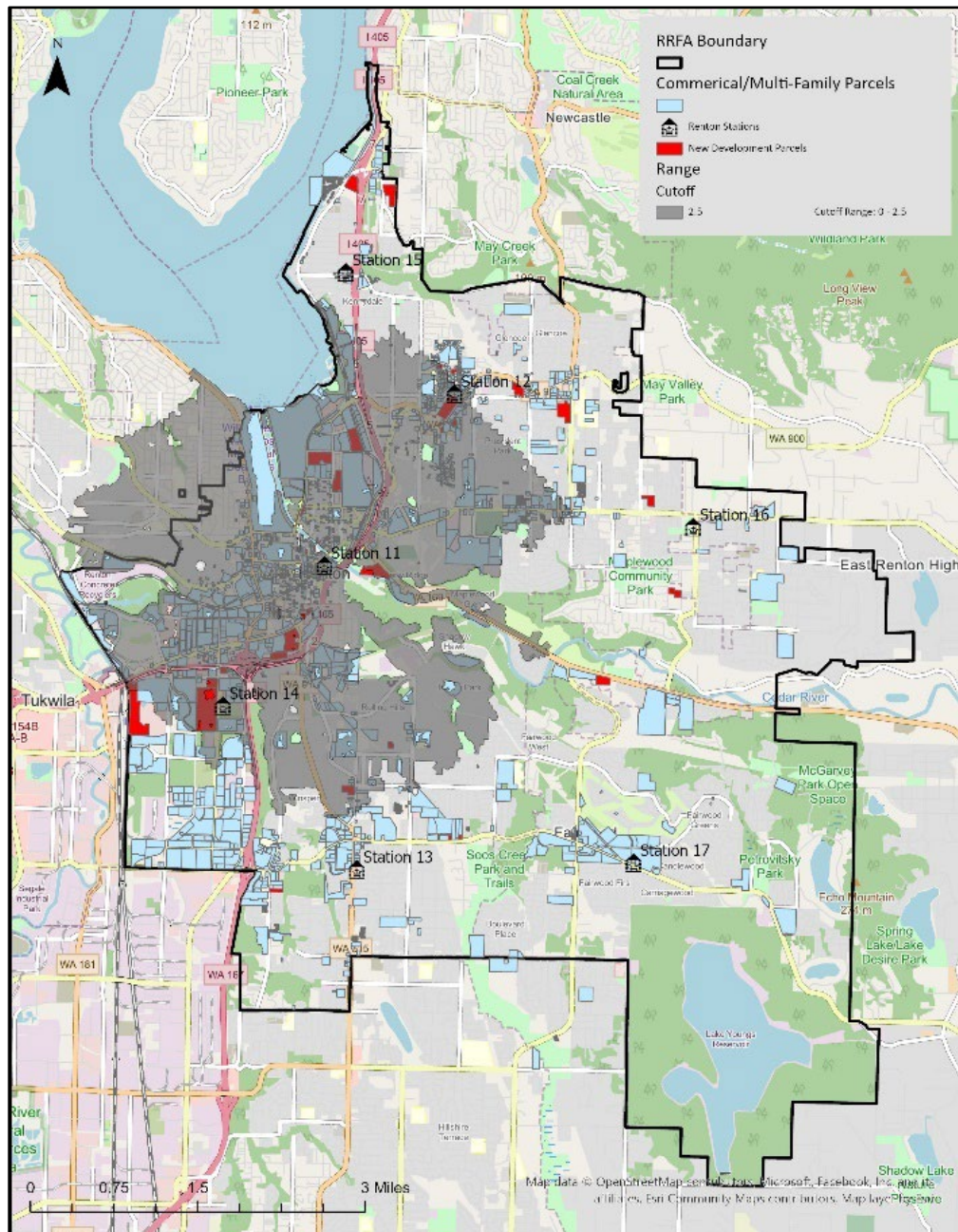
A community's PC rating is evaluated using the following criteria:

- **Fire department (40%),** including distribution of stations, staffing levels, equipment, and personnel training.
- **Water supply (35%),** including water flow capacity, fire hydrant location, and maintenance.
- **Emergency communications system (9%),** including dispatching system, staffing, and training.
- **Fire safety control (16%),** including fire code and building code enforcement, fire investigations, and public fire education programs.

⁶ Source: Country Wide PC Ratings were obtained in 2019 from www.isomitigation.com/ppc/program-works/facts-and-figures-about-ppc-codes-around-the-country/. State Wide PC Ratings were published in the WSRB Protection Class Report for Renton, dated October 5, 2018.

Because the PC criteria that most affect the overall rating are the fire operations and deployment of resources for fire protection, the RRFA must maintain the fire protection apparatus, staffing, and deployment that supports its current PC rating as growth occurs. For example, WSRB requires a ladder to be positioned within 2.5 road miles of a given structure. The RRFA maintains a single ladder located at Fire Station 11 in downtown Renton. Exhibit 3-6 shows the 2.5 road mile radius of Fire Station 11 in comparison to the projected new development within the City. A second ladder is required to address the growth in these areas.

Exhibit 3-6. Fire Station 11 Ladder with 2.5 Road Mile Radius



Some of the City-projected developments that will require a ladder response are shown in Exhibit 3-7 below.⁷

Exhibit 3-7. Highlighted City of Renton Planned Development



⁷ Source: City of Renton: [Renton Highlighted Development \(arcgis.com\)](https://arcgis.com) accessed 08/04/2023.



Cedar River Apartments



Watershed Apartments



Kennydale Gateway



4.0 Forecast of Future Facility Needs, 2024-2029

The following is a summary of capital facility needs for the period of 2024-2029.

4.1 APPARATUS FACILITY NEEDS

Over the next six years, RRFA will need to replace 17 apparatus and add 2 additional apparatus to its fleet. The inventory of apparatus in Section 2.2 provides the year of replacement for all apparatus in the current fleet. Exhibit 4-1 summarizes scheduled apparatus replacements and total costs through the year 2029. It also includes the cost of expansions to the RRFA vehicle fleet needed to serve new growth.⁸

Exhibit 4-1. Capital Costs for Apparatus, 2024-2029

Project Description	Quantity	Average Unit Cost	Total Cost in Year of Replacement	Percentage Related to City of Renton Growth	Impact Fee Eligible Costs
Apparatus Replacements					
Engine	3	\$1,103,258	\$3,826,688	0%	\$0
Ladder	1	\$2,591,449	\$2,591,449	0%	\$0
Aid Unit	2	\$421,371	\$842,741	0%	\$0
HazMat Vehicle	0	N/A	\$0	0%	\$0
Brush Truck	1	\$354,413	\$354,413	0%	\$0
Command Vehicle	4	\$123,442	\$493,769	0%	\$0
Dive Apparatus	0	N/A	\$0	0%	\$0
Service Vehicle	1	\$110,086	\$110,086	0%	\$0
Staff Vehicle	2	\$40,845	\$81,689	0%	\$0
Utility Vehicle	0	N/A	\$0	0%	\$0
Sm. Utility Vehicle	0	N/A	\$0	0%	\$0
Other Apparatus/Equipment	3	N/A	\$135,332	0%	\$0
Apparatus Fleet Expansions					
Ladder	1	\$2,591,449	\$2,591,449	86%	\$2,222,764
Aid Unit	1	\$421,371	\$421,371	86%	\$361,422
Apparatus Total			\$7,622,299		\$2,584,186

⁸ See the RRFA Rate Study for Fire Impact Fees (2023) for the methodology used to determine the proportion of growth-related apparatus needs based on population.

4.2 STATION FACILITY NEEDS

RRFA has three categories of station facility costs: debt servicing for existing stations, new station construction, and renovations to address operational needs. The costs related to these needs are summarized in Exhibit 4-2 and described in more detail below.

Exhibit 4-2. Capital Facility Costs for Stations, 2024-2029

Project Description	Total Cost	Percentage Related to City of Renton Growth	Impact Fee Eligible Costs
Fire Station Debt Servicing			
Fire Station 16/Maintenance	\$15,064,544	18%	\$2,711,618
Fire Station Improvements for Operational Needs			
Fire Station 11 Facility Improvements	\$571,225	0%	\$0
Fire Station 12 Facility Improvements	\$883,022	0%	\$0
Fire Station 13 Facility Improvements	\$852,489	0%	\$0
Fire Station 13 Shop Facility Improvements	\$0	0%	\$0
Fire Station 14 Facility Improvements	\$320,319	0%	\$0
Fire Station 14 Tower Facility Improvements	\$0	0%	\$0
Fire Station 15 Facility Improvements	\$0	0%	\$0
Fire Station 16 Facility Improvements	\$190,542	0%	\$0
Fire Station 17 Facility Improvements	\$1,069	0%	\$0
Total Fire Station Costs	\$17,883,211		\$2,711,618

4.2.1 Debt Servicing

RRFA intends to relocate Fire Station 16 and build a new maintenance repair facility within the City borders to address the anticipated growth in the area. The percent attributed to City growth is 18%. Construction costs have not yet been developed; however, TCA has provided an estimate of \$20M for the project. The RRFA currently has no debt but does intend to issue Limited Tax General Obligation (LTGO) bonds in late 2023 and early 2024 for the financing of the new Fire Station 16 and maintenance facility in the amount of approximately \$20M. The debt service in Exhibit 4-2 represents anticipated bond payments for the years 2024-2029. See Appendix A for an estimated amortization table.

4.2.2 New Facility Needs

RRFA has identified the need to replace Fire Station 16 in the East Plateau neighborhood on the northeast side of Renton. The existing facility was built in 1974 and is approaching 50 years old and does not accommodate the modern needs of the fire service. Building a new station will increase capacity to serve expected growth in this area of Renton for the next 50 years. In addition, the RRFA intends to build a new maintenance facility to provide the space necessary to conduct apparatus service and repair as we continue to expand our fleet. RRFA's assessment of facility needs to meet our current level of service standards has determined that 82% of this new station and maintenance facility will address existing deficiencies while 18% will expand capacity to serve future growth. Construction of the new Fire Station 16 is anticipated to begin in 2024. The total estimated cost of this station and additional apparatus repair facility, including land acquisition, is \$20,000,000.

Exhibit 4-3. Fire Station 16



4.2.3 Capital Projects Associated with Station Operational Needs

The RRFA anticipates several improvement projects at existing fire stations necessary to address operational needs and maintain concurrency of fire services through 2029. These improvements include major repair and rehabilitation and do not including regular operations and maintenance. They are summarized in Exhibit 4-2 above and detailed in Appendix B.

4.3 PROPOSED LOCATIONS AND CAPACITIES OF EXPANDED OR NEW CAPITAL FACILITIES

4.3.1 Apparatus

The RRFA has identified the need to add one aid unit and one ladder to serve the new growth within the City. Appendix C highlights the areas covered by the addition of an aid unit at Fire Station 11, much of which includes new development parcels. Appendix D highlights the areas

covered by adding an additional ladder and locating one ladder at Fire Station 12 and one at Fire Station 13.

4.3.2 Station

The new Fire Station 16 and maintenance facility will be located at 15815 SE 128th St in Renton. The existing Fire Station 16 is 7,732 square feet (SF) and is situated on a 58,806 SF parcel of land. Due to the limited size of the current lot, the maximum building area allowed is 12,800 SF which will not accommodate a station intended to serve growth over the next 50 years, the average longevity of a fire station. In addition, the current maintenance facility located at Fire Station 13 is at maximum capacity and cannot accommodate servicing any additions to the RRFA fleet. An additional maintenance facility is needed. The new Fire Station 16 will be located on a 150,200 SF parcel of land and that will allow up to 25,100 SF of building space. A single-story station of approximately 15,150 will accommodate eight beds and three bays and a five-bay maintenance facility are planned for the new parcel. See Appendix E for a preliminary layout of the parcel.

5.0 Capital Facilities Revenue Analysis

5.1 OVERVIEW

This CFP revenue analysis supports the financing for providing facilities and services, as required by RCW 36.70A.070(3)(d). Revenue estimates, using assumptions based on historical trends, are used to represent realistic expectations for revenue that may be available for capital funding.

This revenue analysis provides an **approximate, and not exact, projection of future revenue sources**. The numbers projected in this analysis are for planning purposes and cannot account for sensitivities such as local, state, and federal policy, economic trends, and other factors. This analysis may not align with RRFA's annual budget because it is based on multi-year projections of revenue, while the annual budget presents precise estimates of available revenue for spending in a specific fiscal year.

5.2 FUNDING THE CAPITAL FACILITIES PLAN

Estimated future revenues are projected for the years 2024-2029. The revenue analysis is categorized according to:

- **Dedicated Capital Revenues.** Dedicated revenues are required to be used for certain types of capital spending, outlined by the law. The dedicated capital revenues for RRFA include fire impact fees remitted to RRFA by the City.
- **Operating Transfers.** Operating transfers-in are those revenue sources that are transferred in from the operating fund. Although these are not dedicated sources to be relied on for capital funding, the RRFA endeavors to make regular operating transfers-in to its reserves on a level basis each year. These transfers are not specifically dedicated to capital spending and could be used elsewhere.
- **LTGO Bonds.** Financing bonds that do not require voter approval or include the levying of an additional tax to repay them.
- **Other Funding Sources.** The RRFA continuously explores external sources available to fund capital projects such as grant opportunities.

5.3 ASSUMPTIONS

The RRFA revenue analysis is based on the following assumptions:

- **Analysis Boundary.** The analysis includes the current RRFA boundary as shown in Exhibit 1-1.
- **Growth.** Growth targets were provided by the City staff and reflect projections as of August 2023.
- **Property Tax.** This analysis assumes that the property tax levy rate will reset to

\$1 per thousand in 2024 with the successful passing of Proposition 1 in August of 2023. Property tax revenues will increase at an annual rate of 1% going forward, with the assessed value and new construction growing according to the July 2023 King County Economic and Revenue Forecast – Office of Economic and Financial Analysis.

- **Fire Benefit Charge.** In 2021, the voters approved a ten-year renewal of the fire benefit charge with a vote of nearly 82% in favor of the proposition. By law, the fire benefit charge may be used for up to 60% of the RRFA operating budget. In 2023, the fire benefit makes up approximately 35% of the RRFA's total budget. With the passing of Proposition 1 (see above), the RRFA intends to lower the fire benefit charge by as much as 50% and is estimating that the benefit charge will account for approximately 17% of the 2024 operating budget.
- **Fire Impact Fees.** This analysis assumes the City will adopt the 2024 fire impact fees proposed by the RRFA and will remit fees collected to the RRFA as outlined in the interlocal agreement between the City and the RRFA. Projected residential and commercial impact fee revenues are based on residential and nonresidential growth projections provided by City staff.
- **Fire District 40 Service Contract.** RRFA and KCFD40 entered into a twenty-year agreement in 2022 and maintains a collaborative relationship with the governance board for the district. This analysis assumes that from 2024 forward, the service contract grows annually at a rate relative to the costs of operating the RRFA.
- **EMS Levy.** This analysis assumes revenues from the EMS levy continue to increase at an annual growth rate of 3%.
- **Permits and Fees.** This analysis assumes revenues from miscellaneous permits and fees will remain at now current rates.
- **EMS Services.** This analysis assumes revenues from EMS services will increase at a rate of 5% per year and Ground Emergency Medical Transport (GEMT) revenues will remain level. GEMT funding is at the discretion of the federal government and the program could be modified or cancelled at any time.

5.4 FIRE IMPACT FEES

The City has collected fire impact fees since 2011. In 2023, the debt service on Fire Station 13 was paid in full and the City now remits fire impact fees to the RRFA on a monthly basis. Impact fees collected through 2023 will be used for capital facility needs identified in the 2017 RRFA CFP. Fees collected beginning in 2024 will be used for capital facility needs identified in this CFP. The RRFA projects fire impact fees of \$5,074,209 for the years 2024 through 2029. Exhibit 5-1 compares the projected fire impact fee revenue to the projected growth-related project costs, as presented in Exhibit 4-1 and Exhibit 4-2.

Exhibit 5-1. Projected Dedicated Capital Revenues and Costs

Dedicated Revenues and Project Costs	2024-2029 Total Revenues and Costs
Fire Impact Fee Revenues (remitted)	\$5,074,209
Planned Growth-Related Project Costs	\$5,295,804
Estimated Dedicated Funding Surplus/(Deficit)	(\$221,594)

5.5 OPERATING TRANSFERS

The projected revenues available for operating transfers-in over the planning period of 2024-2029 is \$33,200,000. RRFA's funding streams for these transfers-in and for capital facilities costs include revenues from its property tax, fire benefit charge, KCFD40 service contract, EMS levy, LTGO bonds, and miscellaneous permits and fees.

5.6 SIX-YEAR COST AND REVENUE COMPARISON

This six-year comparison looks at RRFA's total revenues and planned project costs for the six-year planning horizon of 2024-2029 in order to understand the difference between future dedicated capital costs and potential future revenues. Capital costs are presented as year of expenditure (YOE) and include growth-related capital facility and apparatus replacement costs. Exhibit 5-2 summarizes projected capital facilities revenues and costs.⁹

Exhibit 5-2. Estimated Capital Facilities Revenues and Costs, YOE

Capital Facilities	Revenues and Costs 2024-2029
Growth-Related Capital Costs	\$5,295,804
Capital Replacement and Project Costs, not Growth-Related	\$22,492,690
Total Costs	\$27,788,494
Impact Fee Revenue	\$5,074,209
Operating Transfer Potential Revenue	\$33,200,000
Estimated Funding Surplus/(Deficit)	\$10,485,716

5.7 POLICY OPTIONS AND OTHER FUNDING SOURCES

One additional funding source option is:

- **Unlimited Tax General Obligation (UTGO) Bonds:** Financing bonds that require voter approval and include the levying of an additional tax to repay them.

⁹ Source: Renton RFA, 2023.

Appendix A: Amortization Schedule

Debt Servicing Amortization Schedule

Payment: Every 6 Months Term: 10 Years
 Amount: \$20,000,000 Interest Rate: 4.50%

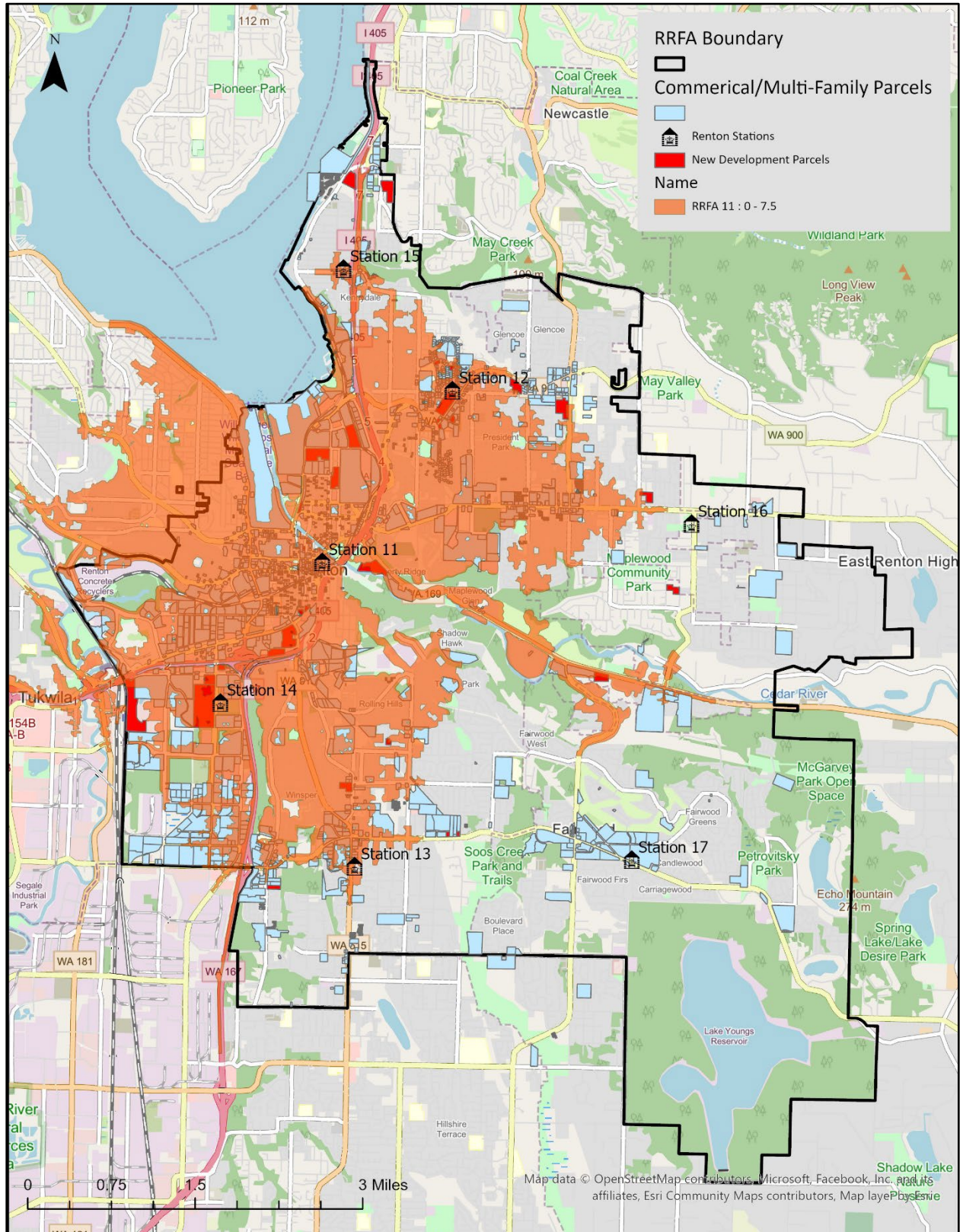
Year	Beginning Balance	Interest	Principal	Ending Balance	Payment	Year
1. Year #1	\$20,000,000.00	\$454,239.90	\$801,138.78	\$19,198,861.22	\$1,255,378.68	2024
2. Year #1	\$19,198,861.22	\$436,044.44	\$819,334.24	\$18,379,526.97	\$1,255,378.68	2024
3. Year #2	\$18,379,526.97	\$417,435.73	\$837,942.96	\$17,541,584.01	\$1,255,378.69	2025
4. Year #2	\$17,541,584.01	\$398,404.37	\$856,974.32	\$16,684,609.70	\$1,255,378.69	2025
5. Year #3	\$16,684,609.70	\$378,940.77	\$876,437.91	\$15,808,171.79	\$1,255,378.68	2026
6. Year #3	\$15,808,171.79	\$359,035.12	\$896,343.57	\$14,911,828.22	\$1,255,378.69	2026
7. Year #4	\$14,911,828.22	\$338,677.37	\$916,701.32	\$13,995,126.90	\$1,255,378.69	2027
8. Year #4	\$13,995,126.90	\$317,857.25	\$937,521.43	\$13,057,605.47	\$1,255,378.68	2027
9. Year #5	\$13,057,605.47	\$296,564.27	\$958,814.41	\$12,098,791.06	\$1,255,378.68	2028
10. Year #5	\$12,098,791.06	\$274,787.68	\$980,591.00	\$11,118,200.05	\$1,255,378.68	2028
11. Year #6	\$11,118,200.05	\$252,516.51	\$1,002,862.18	\$10,115,337.87	\$1,255,378.69	2029
12. Year #6	\$10,115,337.87	\$229,739.50	\$1,025,639.18	\$9,089,698.69	\$1,255,378.68	2029
13. Year #7	\$9,089,698.69	\$206,445.19	\$1,048,933.49	\$8,040,765.20	\$1,255,378.68	2030
14. Year #7	\$8,040,765.20	\$182,621.82	\$1,072,756.87	\$6,968,008.33	\$1,255,378.69	2030
15. Year #8	\$6,968,008.33	\$158,257.37	\$1,097,121.32	\$5,870,887.01	\$1,255,378.69	2031
16. Year #8	\$5,870,887.01	\$133,339.56	\$1,122,039.13	\$4,748,847.88	\$1,255,378.69	2031
17. Year #9	\$4,748,847.88	\$107,855.81	\$1,147,522.88	\$3,601,325.01	\$1,255,378.69	2032
18. Year #9	\$3,601,325.01	\$81,793.28	\$1,173,585.41	\$2,427,739.60	\$1,255,378.69	2032
19. Year #10	\$2,427,739.60	\$55,138.81	\$1,200,239.88	\$1,227,499.72	\$1,255,378.69	2033
20. Year #10	\$1,227,499.72	\$27,878.97	\$1,227,499.72	\$0.00	\$1,255,378.69	2033

Appendix B: Major Repair and Rehabilitation for Stations

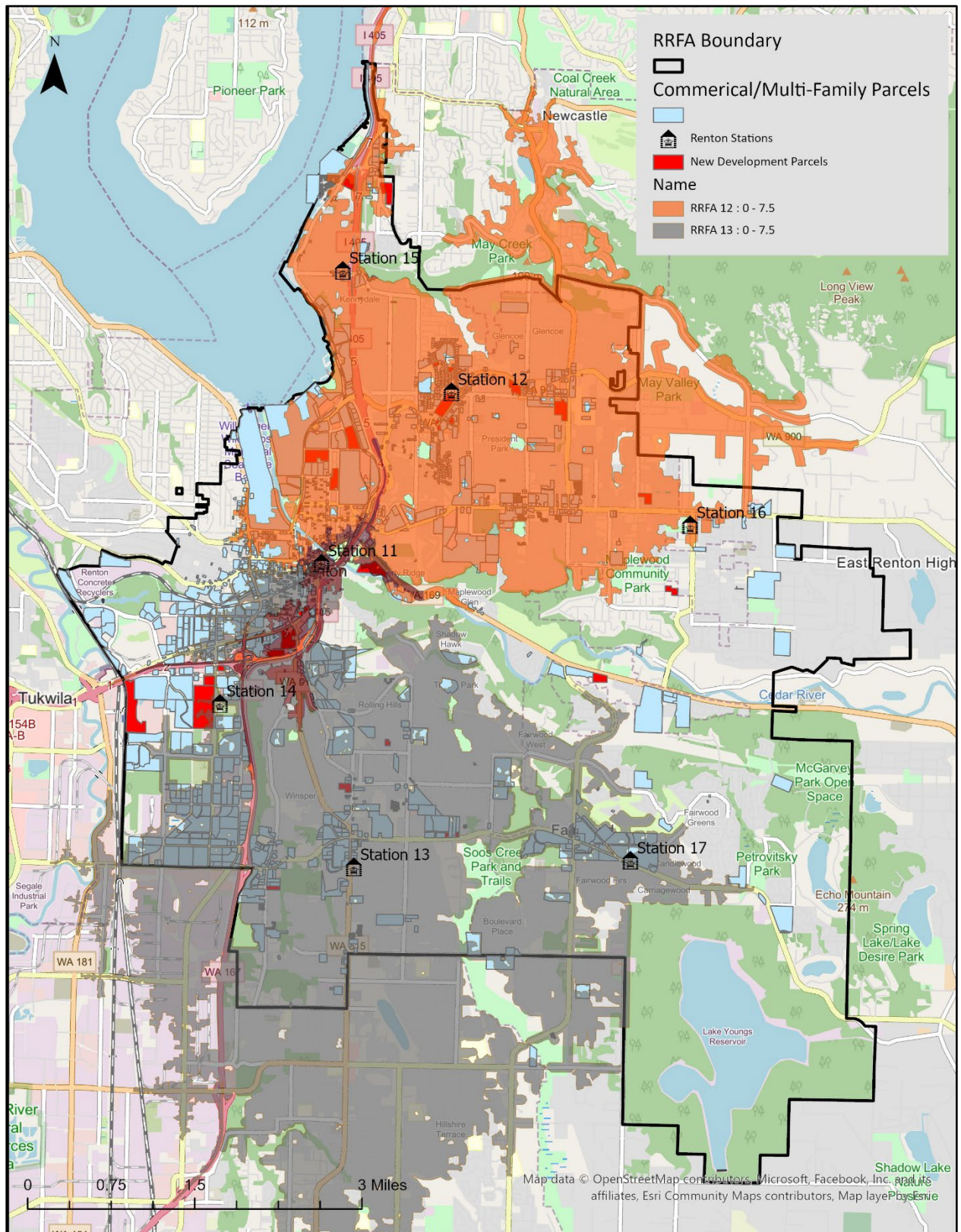
Station/Description	2024	2025	2026	2027	2028	2029
Fire Station #11		\$ 255,571	\$ 26,095	\$ 186,491		\$ 103,068
AC Unit		\$ 155,179				
Carpet/Tile/Hardwood/ Concrete Finishes						\$ 67,652
Ceiling Finishes/Drop Ceilings/Acoustic Tile						\$ 12,490
Exhaust Fan				\$ 47,306		
Expansion Tank						\$ 1,069
Furnace				\$ 139,185		
Heat Pump		\$ 95,008				
Interior Walls						\$ 21,857
Water Heater		\$ 5,384	\$ 26,095			
Fire Station #12	\$ 315,770	\$ 111,539	\$ 304,134	\$ 117,146	\$ 26,577	\$ 7,856
Air Compressor		\$ 16,468				
Air Handler Unit			\$ 297,923			
Automatic Transfer Switch				\$ 10,079		
Boiler				\$ 59,290		
Carpet/Tile/Hardwood/ Concrete Finishes		\$ 65,049				
Fire Alarm Systems		\$ 30,022				
Furniture/Millwork				\$ 47,776		
Lighting	\$ 24,290					
Pump			\$ 6,211			\$ 6,787
Radiant Heater					\$ 6,644	
Roofing	\$ 291,480					
Unit Heater					\$ 19,933	
Water Heater						\$ 1,069
Fire Station #13		\$ 407,561		\$ 423,400		\$ 21,529
AC Unit				\$ 13,439		
Air Compressor						\$ 21,529
Ceiling Finishes/Drop Ceilings/Acoustic Tile		\$ 17,507				
Condensing Unit		\$ 4,750		\$ 5,040		
Duct Heater		\$ 17,497				

Station/Description	2024	2025	2026	2027	2028	2029
Evaporative Unit				\$ 5,320		
Exhaust Fan		\$ 87,660				
Expansion Tank		\$ 950				
Expansion Tank		\$ 1,077				
Exterior Finishes		\$ 61,273				
Fan Terminal Unit		\$ 143,596				
Fire Alarm Systems				\$ 46,432		
Furniture/Millwork		\$ 65,649				
Heat Exchanger		\$ 7,601				
Lighting				\$ 38,693		
Roofing				\$ 314,476		
Fire Station #14				\$ 129,419	\$ 123,889	\$ 67,011
Carpet/Tile/Hardwood/ Concrete Finishes						\$ 64,872
Doors/Hardware					\$ 38,759	
Electrical Panel				\$ 109,664		
Interior Walls				\$ 19,756		
Pump						\$ 2,139
Water Heater					\$ 85,130	
Fire Station #16	\$ 3,075	\$ 117,176	\$ 49,712		\$ 6,921	\$ 13,658
Automatic Transfer Switch	\$ 3,075					
Exhaust Fan			\$ 42,536			
Generator					\$ 6,921	
Interior Walls						\$ 13,658
Package Unit		\$ 117,176				
Unit Heater			\$ 7,176			
Fire Station #17						\$ 1,069
Water Heater						\$ 1,069
Grand Total	\$ 318,845	\$ 891,847	\$ 379,941	\$ 856,456	\$ 157,387	\$ 214,191

Appendix C: Fire Station 11 Drive Time (Aid Unit)



Appendix D: Fire Station 12-13 Drive Time (Ladders)





RENTON REGIONAL FIRE AUTHORITY

18002 108TH AVE SE
RENTON, WA 98055
(425) 276-9500



RATE STUDY FOR IMPACT FEES

August 2023

- Amended

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1.0 Introduction

The purpose of this study is to establish the rates for impact fees in the Renton Regional Fire Authority (RRFA) for fire protection facilities authorized by RCW 82.02.090(7).¹ The RRFA serves the City of Renton (City) and King County Fire Protection District 25 (KCFD25), and contracts for services with King County Fire Protection District 40 (KCFD40). However, only the City will be implementing impact fees based on this rate study.

Impact fees are charges paid by new development to reimburse local governments for the capital cost of public facilities that are needed to serve new development and the people who occupy or use the new development. Throughout this study, the term “developer” is used as a shorthand expression to describe anyone who is obligated to pay impact fees, including builders, owners, or developers.

Local governments charge impact fees for several reasons:

- to obtain revenue to pay for some of the cost of new public facilities;
- to implement a public policy that new development should pay a portion of the cost of facilities that it requires, and that existing development should not pay all of the cost of such facilities; and
- to assure that adequate public facilities will be constructed to serve new development.

In 2011, the City completed an impact fee rate study that included fee calculations for transportation, parks, and fire protection.² In 2017, the RRFA and the City adopted an updated impact fee rate study³ which utilized methodology generally consistent with the methodology used in the 2011 study, but did include some refinements to reflect the RRFA’s then current approach to measuring level of service and its ability to serve growth-related service demands in the future, as described in Chapter 3. This rate study follows the same format, assumptions, and calculations of the 2011 and 2017 rate studies with some modifications to reflect the current operations and level of service for the RRFA.

1.1 FIRE IMPACT FEE RATE SCHEDULE

Impact fees are paid by all types of new development within the City.⁴ Impact fee rates for new development are based on, and vary according to, the type of land use. Additionally, impact fee rates reflect discounts based on available funds to pay for eligible capital projects. Exhibit 1-1 shows the fire impact fee rates adopted within the City.

¹ Revised Code of Washington (RCW) is the state law of Washington State.

² Henderson, Young & Company. (August 26, 2011). *Rate Study for Impact Fees, City of Renton*.

³ BERK. (August 28, 2017). *Rate Study for Impact Fees, Renton Regional Fire Authority*.

⁴ The impact fee ordinance may specify exemptions for low-income housing and/or “broad public purposes”, but such exemptions must be paid for by public money, not other impact fees. The ordinance may specify if impact fees apply to changes in use, remodeling, etc.

Exhibit 1-1. 2024 Fire Impact Fee Rate Schedule

Land Use	Unit	Fire Impact Fee
Single-Family Residential	Dwelling Unit (d.u.)	\$421.98
Multi-Family Residential	Dwelling Unit (d.u.)	\$579.41
Hotel/Motel/Resort	Room	\$346.22
Medical Care Facility	Bed	\$1,052.00
Office	Square Foot	\$0.14
Medical/Dental Office	Square Foot	\$0.61
Retail	Square Foot	\$0.66
Leisure Facilities	Square Foot	\$0.42
Restaurant/Lounge	Square Foot	\$1.44
Industrial/Manufacturing	Square Foot	\$0.05
Church/Non-Profit	Square Foot	\$0.24
Education	Student	\$28.02
Special Public Facilities	Square Foot	\$0.13

1.2 STUDY ORGANIZATION

This rate study includes three chapters.

- Chapter 1 provides an introduction and defines the 2024 fire impact fee rate schedule.
- Chapter 2 summarizes the statutory requirements for impact fees in Washington State and describes how the RRFA's impact fees comply with the statutory requirements.
- Chapter 3 includes the RRFA service area, level of service used for the purpose of calculating impact fee rates, and the methodology for calculating the capital costs of response by unit of development. It also provides a list of growth-related capital projects that are eligible for impact fees and final adjustments to the impact fee rates to account for eligible costs and future payments of other revenues.

2.0 Statutory Basis

This chapter summarizes the statutory requirements for impact fees in Washington State and describes how the RRFA's impact fees comply with the statutory requirements.

2.1 STATUTORY REQUIREMENTS FOR IMPACT FEES

The Growth Management Act of 1990 (Chapter 17, Washington Laws, 1990, 1st Ex. Sess.) authorizes local governments in Washington State to charge impact fees. RCW 82.02.050 - 82.02.110 contain the provisions of the Growth Management Act that authorize and describe the requirements for impact fees.

The following synopsis of the most significant requirements of the law includes citations to the Revised Code of Washington as an aid to readers who wish to review the exact language of the statutes.

2.1.1 Types of Public Facilities

Four types of public facilities can be the subject of impact fees: 1) public transportation and roads; 2) publicly owned parks, open space and recreation facilities; 3) school facilities; and 4) fire protection facilities (RCW 82.02.090(7)).

2.1.2 Types of Improvements

Impact fees can be spent on "system improvements" (which are typically outside the development), as opposed to "project improvements" (which are typically provided by the developer on-site within the development). Impact fees can never be used to fund maintenance or operational needs (RCW 82.02.050(5) and RCW 82.02.090(5) and (9)).

2.1.3 Benefit to Development

Impact fees must be limited to system improvements that are reasonably related to, and which will benefit new development (RCW 82.02.050(4)(a) and (c)). Local governments must establish reasonable service areas (one area, or more than one, as determined to be reasonable by the local government), and local governments must develop impact fee rate categories for various land uses (RCW 82.02.060).

2.1.4 Proportionate Share

Capital improvement costs can be funded using impact fees to the extent that the improvements are reasonably related to the new development and reasonably benefit the new development. Costs assessed on a development cannot exceed its proportionate share of the costs of system improvements. The impact fee amount shall be based on a formula (or other method of

calculating the fee) that determines the proportionate share (RCW 82.02.050(4)(b) and RCW 82.02.060(1)).

2.1.5 Reductions of Impact Fee Amounts

Impact fees rates must be adjusted to account for other revenues that the development pays (if such payments are earmarked for or pro-ratable to particular system improvements) RCW 82.02.060(1)(b)). Impact fees may be credited for the value of dedicated land, improvements or construction provided by the developer (if such facilities are in the adopted CFP as system improvements eligible for impact fees and are required as a condition of development approval) (RCW 82.02.060(5)).

2.1.6 Exemptions from Impact Fees

Local governments have the discretion to provide exemptions from impact fees for low-income housing (RCW 82.02.060(2)) and other broad public purposes including the development of an early learning center, but all such exempt fees must be paid from public funds (other than impact fee accounts) (RCW 82.02.060(3)).

2.1.7 Developer Options

Developers who are liable for impact fees can submit data and/or an analysis to demonstrate that the impacts of the proposed development are less than the impacts calculated in this rate study (RCW 82.02.060(7)). Developers can pay impact fees under protest and appeal impact fee calculations (RCW 82.02.070(4) and (5)). The developer can obtain a refund of the impact fees if the local government fails to expend or obligate the impact fee payments within ten years, or terminates the impact fee requirement, or the developer does not proceed with the development (and creates no impacts) (RCW 82.02.080).

2.1.8 Capital Facilities Plans

Impact fees must be expended on public facilities in a capital facilities plan (CFP) element or used to reimburse the government for the unused capacity of existing facilities. The CFP must conform to the Growth Management Act of 1990 and must identify existing deficiencies in facility capacity for current development, capacity of existing facilities available for new development, and additional facility capacity needed for new development (RCW 82.02.050(4), RCW 82.02.060(9), and RCW 82.02.070(2)).

2.1.9 New Versus Existing Facilities

Impact fees can be charged for new public facilities (RCW 82.02.060(1)(a)) and for the unused capacity of existing public facilities (RCW 82.02.060(9)) subject to the proportionate share limitation described above.

2.1.10 Accounting Requirements

The local government must separate the impact fees from other monies, expend or obligate the money on CFP projects within ten years, and prepare annual reports of collections and expenditures (RCW 82.02.070(1)-(3)).

2.1.11 Compliance with Statutory Requirements for Impact Fees

Many of the statutory requirements listed above are fulfilled in Chapter 3 of this study, which presents the calculation of the fire impact fees. Some of the statutory requirements are fulfilled in other ways, as described below.

2.1.12 Types of Public Facilities

This study contains impact fees for fire protection facilities as authorized by statute. The RRFA defines “fire protection” as fire protection facilities, including but not limited to fire stations, fire apparatus, and any furnishings and equipment that may be capitalized. The City uses this same definition in the Renton Municipal Code (RMC 4-1-190).

In general, local governments that are authorized to charge impact fees are responsible for specific public facilities for which they may charge such fees. In no instance may a local government charge impact fees for private facilities, but it may charge impact fees for some public facilities that it does not administer if such facilities are “owned or operated by government entities” (RCW 82.02.090 (7)). A city may charge impact fees for fire and enter into an agreement with a regional fire authority (RFA) for the transfer, expenditure, and reporting of fire impact fees for the RFA. A city may only charge and use impact fees on RFA projects if it has an agreement with the RFA, and the city’s CFP references the RFA CFP.

As part of the RRFA plan, the City and the RRFA entered into an interlocal agreement (ILA) (CAG-16-116) in which the City agreed to collect the fire impact fees. Subsequent agreements between the City and the RRFA in 2017 (CAG-19-022) and in 2019 (CAG-19-022, Adden #1-19) affirmed the City will collect fire impact fees on behalf of the RRFA, subject to specific requirements.

2.1.13 Types of Improvements

The impact fees in this study are based on system improvements that are described in Chapter 3. No project improvements are included in this study.

The public facilities that can be paid for by impact fees are “system improvements” (which are typically outside the development), and “designed to provide service to areas within the community at large” as provided in RCW 82.02.090(9)), as opposed to “project improvements” (which are typically provided by the developer on-site within the development or adjacent to the development), and “designed to provide service for a particular development project and that are necessary for the use and convenience of the occupants or users of the project” as provided

in RCW 82.02.090(5). The capital improvements costs contained in Chapter 3 comply with these requirements.

Impact fee revenue can be used for the capital cost of public facilities. Impact fees cannot be used for operating or maintenance expenses. The cost of public facilities that can be paid for by impact fees include design studies, engineering, land surveys, land and right of way acquisition, engineering, permitting, financing, administrative expenses, construction, applicable mitigation costs, and capital equipment pertaining to capital improvements.

2.1.14 Benefit to Development, Proportionate Share and Reductions of Fee Amounts

The law imposes three tests of the benefit provided to development by impact fees: 1) proportionate share, 2) reasonably related to need, and 3) reasonably related to expenditure (RCW 80.20.050(4)). In addition, the law requires the designation of one or more service areas (RCW 82.02.060(8)).

Proportionate Share

First, the “proportionate share” requirement means that impact fees can be charged only for the portion of the cost of public facilities that is “reasonably related” to new development. In other words, impact fees cannot be charged to pay for the cost of reducing or eliminating deficiencies in existing facilities.

Second, there are several important implications of the proportionate share requirement that are not specifically addressed in the law, but which follow directly from the law:

- Costs of facilities that will benefit new development and existing users must be apportioned between the two groups in determining the amount of the fee. This can be accomplished in either of two ways: (1) by allocating the total cost between new and existing users, or (2) calculating the cost per unit and applying the cost only to new development when calculating impact fees.
- Impact fees that recover the costs of existing unused capacity should be based on the government's actual cost. Carrying costs may be added to reflect the government's actual or imputed interest expense.

The third aspect of the proportionate share requirement is its relationship to the requirement to provide adjustments and credits to impact fees, where appropriate. These requirements ensure that the amount of the impact fee does not exceed the proportionate share.

- The “adjustments” requirement reduces the impact fee to account for past and future payments of other revenues (if such payments are earmarked for, or pro-ratable to, the system improvements that are needed to serve new growth). The impact fees calculated in this study include an adjustment that accounts for any other revenue that is used by the RFA to pay for a portion of growth’s proportionate share of costs.

This adjustment is in response to the limitations in RCW 82.02.060 (1)(b) and RCW 82.02.050(2).

- The “credit” requirement reduces impact fees by the value of dedicated land, improvements or construction provided by the developer (if such facilities are in the adopted CFP, identified as the projects for which impact fees are collected, and are required as a condition of development approval). The law does not prohibit a local government from establishing reasonable constraints on determining credits. For example, the location of dedicated land can be required to be acceptable to the local government.

Reasonably Related to Need

There are many ways to fulfill the requirement that impact fees be “reasonably related” to the development's need for public facilities, including personal use and use by others in the family or business enterprise (direct benefit), use by persons or organizations who provide goods or services to the fee-paying property or are customers or visitors at the fee-paying property (indirect benefit), and geographical proximity (presumed benefit). These measures of relatedness are implemented by the following techniques:

- Impact fees are charged to properties which need (i.e., benefit from) new public facilities. The RRFA provides fire protection facilities to serve all kinds of property throughout its service area, therefore impact fees have been calculated for all types of property.
- The relative needs of different types of growth are considered in establishing fee amounts (i.e., different impact values for different types of land use). For instance, this study analyzed fire/other and EMS incident and response data to determine rates for each type of land use.
- Feepayers can pay a smaller fee if they demonstrate that their development will have less impact than is presumed in the impact fee schedule calculation for their property classification. Such reduced needs must be permanent and enforceable (i.e., via land use restrictions).

Reasonably Related to Expenditures

Two provisions of the City’s impact fee ordinance comply with the requirement that expenditures be “reasonably related” to the development that paid the impact fee. First, the requirement that fee revenue must be earmarked for specific uses related to public facilities ensures that expenditures are on specific projects, the benefit of which has been demonstrated in determining the need for the projects and the portion of the cost of needed projects that are eligible for impact fees as described in this study. Second, impact fee revenue must be expended or obligated within ten years, thus requiring the impact fees to be used to benefit to the feepayer and not held by the RRFA.

Service Areas for Impact Fees

Impact fees in some jurisdictions are collected and expended within service areas that are smaller than the jurisdiction that is collecting the fees. Impact fees are not required to use multiple service areas unless such “zones” are necessary to establish the relationship between the fee and the development. Because of the compact size of the RRFA and the accessibility of its fire facilities to all properties within the service area, the RRFA’s fire facilities serve the entire RRFA service area, therefore the impact fees are based on a single service area corresponding to the boundaries of the RRFA.

2.1.15 Exemptions

The City’s impact fee ordinance addresses the subject of exemptions. Exemptions do not affect the impact fee rates calculated in this study because of the statutory requirement that any exempted impact fee must be paid from other public funds. As a result, there is no increase in impact fee rates to make up for the exemption because there is no net loss to the impact fee account as a result of the exemption.

2.1.16 Developer Options

A developer who is liable for impact fees has several options regarding impact fees. The developer can submit data and or/analysis to demonstrate that the impacts of the proposed development are less than the impacts calculated in this rate study. The developer can appeal the impact fee calculation by the RRFA. If the local government fails to expend the impact fee payments within ten years of receipt of such payments, the developer can obtain a refund of the impact fees. The developer can also obtain a refund if the development does not proceed, and no impacts are created. These provisions are addressed in the City’s impact fee ordinance, and none of them affect the calculation of impact fee rates in this study.

2.1.17 Capital Facilities Plan

There are references in RCW to the CFP as the basis for projects that are eligible for funding by impact fees. The RRFA published a CFP in August 2023 which fulfills the requirements of RCW 82.02.050 et. seq. pertaining to a “capital facilities plan”. This CFP is referenced in the Capital Facilities Plan Element of the City’s Comprehensive Plan.

The requirement to identify existing deficiencies, capacity available for new development, and additional public facility capacity needed for new development is determined by analyzing levels of service for fire/other and emergency response. Chapters 3 provides this analysis.

2.1.18 New Versus Existing Facilities, Accounting Requirements

Impact fees must be spent on capital projects contained in an adopted CFP, or they can be used to reimburse the government for the unused capacity of existing facilities. Washington State

GMA states that an impact fee ordinance “[m]ay provide for the imposition of an impact fee for system improvement costs previously incurred by a county, city, or town to the extent that new growth and development will be served by the previously constructed improvements provided such fee shall not be imposed to make up for any system improvement deficiencies” (RCW 82.02.060(9)). The rate calculations in Chapter 3 affirm there are no existing deficiencies and accounts for excess station capacity systemwide for serving new growth. Because of this excess systemwide capacity, impact fees collected can be used to pay for the debt servicing of stations not to exceed the proportional share of existing station value that is available for serving additional growth.

Impact fee payments that are not expended or obligated within ten years must be refunded unless the City Council makes a written finding that an extraordinary and compelling reason exists to hold the fees for longer than ten years. To verify these two requirements, impact fee revenues must be deposited into separate accounts of the government, and annual reports must describe impact fee revenue and expenditures. These requirements are addressed by the City’s impact fee ordinance and are not factors in the impact fee calculations in this study.

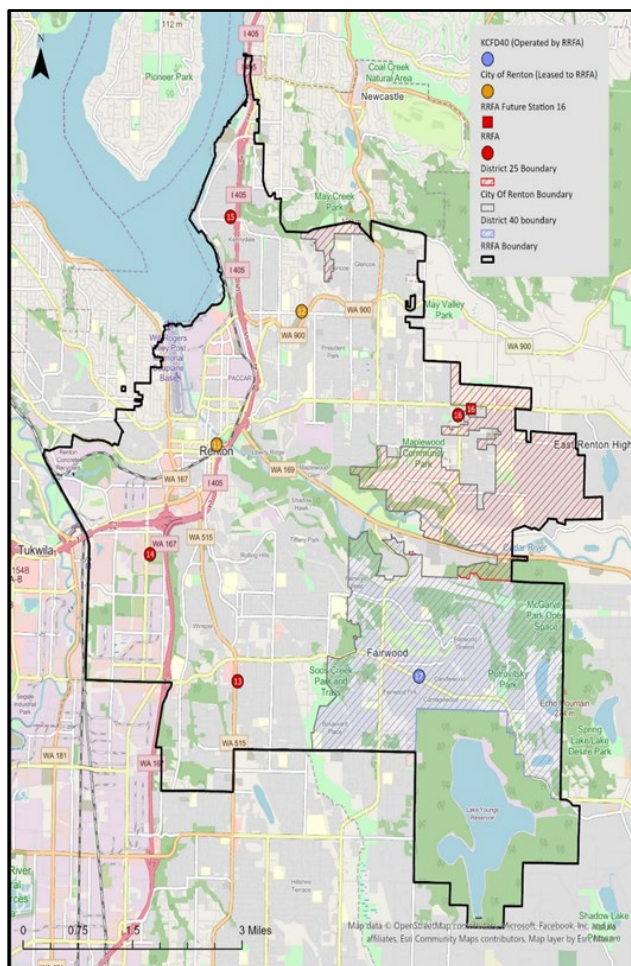
3.0 Fire Impact Fee Methodology

This chapter describes the methodology used to calculate impact fee rates for fire protection facilities. It begins with a discussion of the service area considered for the rate study analysis. This is followed by a discussion of the level of service. Next is an inventory of fire protection facilities, which are defined to include stations, equipment, and apparatus (such as engines and other vehicles). Then a series of calculations are presented to document the methodology for determining the total facility costs per unit of development by land use type.

3.1 SERVICE AREA

As noted above, the RRFA includes both the City and KCFD25. It also provides service to KCFD40 under contract, as shown in Exhibit 3-1. RRFA provides services to these areas as one integrated system. All facilities needed to serve these areas are owned and/or operated by the RRFA. Therefore, the analysis in this rate study considers facility costs per unit of development throughout the entire service area, inclusive of KCFD40.

Exhibit 3-1. Renton Regional Fire Authority Service Area and Stations



While this rate study considers incidents and facilities throughout the RRFA service area when calculating impact fee rates, the RRFA CFP identifies the percentage of capital facilities needs that are directly related to anticipated growth within the City only. This ensures that impact fees collected in the City are not used to pay for capital facility costs associated with growth expected in KCFD25 or KCFD40.

3.2 DATA SOURCES AND ROUNDING

The data in this study of impact was provided by staff from the City and the RRFA, unless a different source is specifically cited. Inventory, incident, and response data were provided by the RRFA's planning section and reflect conditions in the year 2022 for incidents and 2023 for inventory. Development, population, and trip generation data were provided by the staff from the City's Community and Economic Development and Transportation departments.

The data in this study was prepared using computer spreadsheet software. In some tables in this study, there may be very small variations from the results that would be obtained using a calculator based on the same values presented. The reason for these insignificant differences is that the spreadsheet software calculates results to more places after the decimal than is reported in the tables of these reports. The calculation to extra places after the decimal increases the accuracy of the end results but causes occasional minor differences due to rounding of data that appears in this study.

3.3 LEVEL OF SERVICE

The need for fire protection facilities is influenced by a variety of factors, such as response time, call loads, geographical area, land use development, topographic and manmade barriers, and standards of the National Fire Protection Association and the Washington Surveying and Rating Bureau.

RRFA measures level of service (LOS) from three different perspectives. The first concerns the cost of facilities for incident response per unit of development. The second perspective concerns turnout and response times in accordance with established policy. The third perspective concerns the Protection Class rating for each of the areas served (the City, KCFD25, and KDFD 40). This study focuses on the first perspective, the latter two are addressed in the RRFA CFP.

For the purpose of quantifying the need for fire facilities to serve growth, this study uses the ratio of apparatus and stations to incidents. To measure this ratio, this study analyzes both facility inventory and incident data. For apparatus, the current ratio of apparatus to incidents provides an acceptable LOS, and there are no deficiencies. As growth occurs, more incidents will occur, and therefore more apparatus will be needed to maintain this standard.

For stations, LOS is measured in two different ways. The first approach mirrors the LOS standard used for apparatus by measuring using the ratio of station square footage to incidents. This

approach accounts for the systemwide demands for response created by new growth. From this perspective, the current inventory of stations includes excess capacity to serve growth, as shown in Exhibit 3-2. This capacity comes in the form of beds necessary for staffing fire and emergency response facilities and apparatus. It is anticipated that much of the growth in the RRFA service area will come in the form of infill and high-rise development and increased density within the City. As this growth occurs, the RRFA intends to utilize excess bed capacity in current stations to increase its capacity for emergency response at existing stations. Systemwide, this analysis finds that 63% of station capacity is in use. The remaining 37% of station capacity is available to serve new growth.

Exhibit 3-2. Emergency Response Bed Capacity by Station

Station Name	Total Beds	Currently in Use	Percentage of Capacity in Use
Fire Station 11	9	6	67%
Fire Station 12	10	6	60%
Fire Station 13	8	6	75%
Fire Station 14	7	3	43%
Fire Station 15	5	3	60%
Fire Station 16	6	3	50%
Fire Station 17 ⁵	6	5	83%
Total	51	32	63%

⁵ Station 17 is owned by Fire District 40 but considered in this rate study when valuing facility costs per incident, given that the RRFA provides service to Fire District 40 as a single integrated system. This is consistent with the 2011 and 2017 Rate Studies.

3.4 CAPITAL COST OF RESPONSE CALCULATIONS

This section guides the reader through a series of formulas and calculations with the goal of determining the total capital costs of response by unit of development. It begins with an inventory of fire apparatus and stations and the number of emergencies to which the RRFA responded. Next is an analysis of the capital cost of fire protection apparatus and stations including calculation of the capital cost per response.

The emergency responses are summarized according to the types of land uses that received responses, and incident rates are calculated to quantify the average number of emergency responses per unit of development for each type of land use. The costs per response and the response incident rates are used to calculate the number and cost of responses to emergency medical service (EMS) and to fire/other⁶ incidents at each type of land use. The EMS and fire/other cost per unit of development are combined to calculate the total cost per unit of development. The total cost is adjusted for payments of other and the result is the fire impact fee rates for the RRFA for development within the City.

These steps are described below in the formulas, descriptions of variables, tables of data, and explanation of calculations of fire impact fees.

3.4.1 Formula F-1: Inventory and Fire/Other and EMS Responses

The RRFA owns and/or operates a variety of fire apparatus (i.e., fire engines, ladder trucks, Aid Units, etc.). Each vehicle responds to many emergencies. The average number of EMS responses per apparatus is used as one element in calculating the cost per EMS response.

$$\text{Formula F-1:} \quad \text{Responses} \div \text{Apparatus} = \text{Responses per Apparatus}$$

There are two variables that require explanation: (A) fire apparatus and (B) fire stations.

Variable (A): Fire Apparatus

The term “fire apparatus” applies to vehicles that the RRFA uses for operations. Exhibit 3-3 contains a list of each type of primary fire apparatus and the number of each type.

⁶ In this study, “fire/other” refers to all emergency incidents to which RRFA responds except for medical emergencies/EMS. These would include fires, hazardous materials, gas leaks, and other non-medical related emergencies.

Exhibit 3-3. Apparatus Inventory and Emergency Responses 2022

Type of Apparatus	Count of Apparatus in Inventory	Total Annual EMS Responses	EMS Responses per Individual Apparatus
Engine	12	12,980	1,082
Ladder	2	1,741	871
Aid Unit	6	6,841	1,141
Hazardous Materials Vehicle	1	155	155
Brush Truck	2	18	9
Command Vehicle	9	950	106
Dive Apparatus	1	41	41
Service Vehicle	2	960	480
Staff Vehicle	13	-	-
Utility Vehicle	9	-	-
Small Utility Vehicle	3	-	-
Other Apparatus/Equipment ⁷	6	-	-
Total	66	23,686	

⁷ Includes trailers, carts, boat, etc.

Variable (B): Fire Stations

RRFA provides fire/other and EMS services out of seven stations. Exhibit 3-4 lists the seven stations and the total square footage of RRFA fire stations and associated support facilities (i.e., shop and tower). Exhibit 3-4 also shows the total fire/other and EMS incidents, and the average square footage of fire station per incident (calculated by dividing the total square footage of all fire stations by the number of annual fire/other and EMS incidents). The total number of incidents from stations is less than the total incidents from apparatus (Exhibit 3-3) because more than one apparatus responds to many calls, but often one station is the source of all the apparatus responding to a call.

As noted earlier in Exhibit 3-2, there is excess station capacity systemwide due to the available beds for emergency responders. The percentage of capacity in use is used to calculate station square feet in use per incident.

Exhibit 3-4. Building Inventory and Building Square Feet per Incident 2022

Station Name	Building Square Feet	Annual Incidents	Total Building Square Feet per Incident	Percentage of Station Capacity in Use ⁸	Station Square Feet in Use Per Incident
Fire Station 11 ⁹	20,550				
Fire Station 12 (Ex EOC) ¹⁰	14,800				
Fire Station 13	20,521				
Fire Station 13 Shop	6,000				
Fire Station 14	13,659				
Fire Station 14 Tower	3,658				
Fire Station 15	7,497				
Fire Station 16	7,732				
Fire Station 17 ¹¹	6,836				
Total	101,253	20,720	4.89	63%	3.07

⁸ See Exhibit 3-2 for calculation of systemwide station capacity in use.

⁹ Station 11 is owned by the City of Renton and leased to RRFA.

¹⁰ Station 12 is owned by the City of Renton and leased to the RRFA. The building square footage excludes the portion of the Station that is utilized exclusively by the City of Renton Emergency Management Division.

¹¹ Station 17 is owned by Fire District 40 and operated by RRFA.

3.4.2 Formula F-2: Annual Cost per Apparatus

Formulas F-2 through F-4 are needed to calculate the apparatus cost per fire/other incident. The first step in this calculation is to identify and annualize the cost of each type of apparatus using formula F-2. The capital cost per apparatus is based on the cost of primary response apparatus and major support equipment. The annualized capital cost per apparatus is determined by dividing the capital cost of each type of apparatus by its useful life:

$$\text{Formula F-2:} \quad \text{Fire Apparatus Cost} \div \text{Useful Life} = \text{Annual Cost Per Apparatus}$$

There are two variables that require explanation: (C) fire apparatus cost and (D) useful life.

Variable (C): Fire Apparatus Cost

Exhibit 3-5 shows the annualized cost for each type of primary apparatus listed in Exhibit 3-3. The cost per apparatus includes the vehicle, fire and EMS equipment, and communication equipment. The apparatus and equipment costs in Exhibit 3-5 represent current costs to purchase a new fully equipped apparatus.

Variable (D): Useful Life

Exhibit 3-5 also shows the number of years of useful life of each type of apparatus. The annualized cost is calculated by dividing each apparatus cost by the useful life of that apparatus. Note that the inventory of apparatus includes a mix of front-line and reserve/callback apparatus. RRFA expects apparatus to serve one half of its useful life in a front-line status and one half as a reserve or call-back vehicle.

Exhibit 3-5. Annualized Apparatus Cost in 2023

Apparatus Type	Cost per Apparatus	Average Useful Lifespan ¹³	Annualized Cost of Apparatus
Engine	\$1,039,927	14.67	\$70,887.97
Ladder	\$2,170,298	18	\$120,572.11
Aid Unit	\$397,182	10	\$39,718.22
Hazardous Materials Vehicle	\$546,492	21	\$26,023.43
Brush Truck	\$344,090	15	\$22,939.33
Command Vehicle	\$111,202	10	\$11,120.20
Dive Apparatus	\$276,117	21	\$13,148.43
Service Vehicle	\$92,195	15	\$6,146.33
Staff Vehicle	\$37,898	15	\$2,526.53
Utility Vehicle	\$69,908	15	\$4,660.53
Small Utility Vehicle	\$42,098	15	\$2,806.53
Other Apparatus/Equipment ¹²	\$148,706	15	\$9,913.75

3.4.3 Formula F-3: Cost per Apparatus per Fire/Other or EMS Response

The second step in calculating the apparatus cost per fire/other or EMS response is formula F-3. The capital cost per fire/other or EMS incident is calculated for each apparatus by dividing the annualized cost per apparatus by the total annual response (both fire/other and EMS) each type of apparatus responds to. Each type of apparatus is analyzed separately because the number and type of apparatus responding to an incident varies depending on the type and severity of the incident.

$$\text{Formula F-3: } \frac{\text{Annual Cost Per Apparatus}}{\text{Annual Responses Per Apparatus}} = \text{Annual Apparatus Cost Per Response}$$

There are no new variables used in formula F-3. Both variables were developed in previous formulas.

In Exhibit 3-6 the cost per fire/other or EMS response is calculated for each type of apparatus. Exhibit 3-6 shows the annualized cost of one of each type of apparatus (from Exhibit 3-5) and the average annual EMS responses for each type of apparatus (from Exhibit 3-3). Each apparatus cost per response is calculated by dividing the annualized cost of that type of apparatus by the total number of annual responses for the same type of apparatus.

¹² Includes carts, trailers, boat, and lift. Cost is cumulative.

¹³ For Engines, Ladders, and Aid Units, the average useful lifespans have been weighted to reflect the proportion of vehicles in the fleet that are front-line vs reserve or call back.

Exhibit 3-6. Apparatus Costs per Response

Apparatus Type	Annualized Cost of Apparatus	Average Annual Responses Per Apparatus	Apparatus Cost Per Response
Engine	\$70,887.97	1,082	\$65.52
Ladder	\$120,572.11	871	\$138.43
Aid Unit	\$39,718.22	1,141	\$34.81
Hazardous Materials Vehicle	\$26,023.43	155	\$167.89
Brush Truck	\$22,939.33	9	\$2,548.81
Command Vehicle	\$11,120.20	106	\$104.91
Dive Apparatus	\$13,148.43	41	\$320.69
Service Vehicle	\$6,146.33	480	\$12.80
Staff Vehicle	\$2,526.53	-	-
Utility Vehicle	\$4,660.53	-	-
Small Utility Vehicle	\$2,806.53	-	-
Other Apparatus/Equipment ¹⁴	\$9,913.75	-	-

¹⁴ Includes carts, trailers, boat, and lift.

3.4.4 Formula F-4: Total Apparatus Cost per Fire/Other Incidents

The third step in calculating the apparatus cost per fire/other incident is Formula F-4. The total apparatus cost per fire/other incident is calculated by multiplying the apparatus cost per response by the percent of fire/other incidents each type of apparatus responds to. This calculation accounts for the fact that multiple apparatuses are dispatched to many incidents, and that some apparatus are only dispatched to specific types of incidents. The result of this calculation is a weighted average total cost of apparatus per fire/other incident.

$$\text{Formula F-4: } \begin{array}{c} \text{Annual Cost Per} \\ \text{Response} \end{array} \times \begin{array}{c} \text{Apparatus Percent of all} \\ \text{Fire/Other Responses} \end{array} = \begin{array}{c} \text{Apparatus Cost Per} \\ \text{Fire/Other Incident} \end{array}$$

There is one new variable that requires explanation: (F) apparatus percent of fire/other responses.

Variable (E): Apparatus Percent of Fire Responses

The next step in calculating the apparatus cost per fire/other incident is to identify the annual number of incidents that RRFA responds to. Emergency incidents are separated into two categories: Fire/Other and EMS. Exhibit 3-7 lists the annual number of fire/other and EMS incidents responded to during 2022.

Exhibit 3-7. Annual Fire/Other and EMS Incidents

Incident Type	Annual Incidents in 2022
Fire/Other	4,674
EMS	16,046
Total	20,720

Different types of fire/other emergencies need different types or combinations of apparatus. As a result, the usage of apparatus varies among the types of apparatus. This variance is an important factor in determining the cost per incident. The percent of fire/other responses by each type of apparatus is calculated in Exhibit 3-8 by dividing the annual fire/other responses for each type of apparatus by the total annual fire/other incidents from Exhibit 3-7. The result of the calculation in Exhibit 3-8 is the percent of fire/other incidents responded to by each type of apparatus.

Exhibit 3-8. Fire/Other Responses per Incident by Apparatus Type

Apparatus Type	Annual Fire/Other-Related Responses for Apparatus	Annual Fire/Other-Related Incidents	Apparatus Response per Fire/Other Incident
Engine	3,940		0.843
Ladder	550		0.118
Aid Unit	354		0.076
Hazardous Materials Vehicle	152		0.033
Brush Truck	18		0.004
Command Vehicle	590		0.126
Dive Apparatus	15		0.003
Service Vehicle	144		0.031
Total	5,763	4,674	

The final step in calculating the apparatus cost per fire/other incident is shown in Exhibit 3-9.

Exhibit 3-9. The cost per response for each type of apparatus (from Exhibit 3-6) is multiplied by the percent of fire/other incidents dispatched to (from Exhibit 3-8) resulting in the total apparatus cost per fire/other incident. The “bottom line” in Exhibit 3-9 is the apparatus cost per fire/other incident of \$104.09. In other words, every fire/other incident “uses up” \$104.09 worth of apparatus.

Exhibit 3-9. Apparatus Cost per Fire/Other Incident

Apparatus Type	Apparatus Cost Per Response	Apparatus Response per Fire/Other Incident	Apparatus Cost per Fire/Other Incident
Engine	\$65.52	0.843	\$55.23
Ladder	\$138.43	0.118	\$16.29
Aid Unit	\$34.81	0.076	\$2.64
Hazardous Materials Vehicle	\$167.89	0.033	\$5.46
Brush Truck	\$2,548.81	0.004	\$9.82
Command Vehicle	\$104.91	0.126	\$13.24
Dive Apparatus	\$320.69	0.003	\$1.03
Service Vehicle	\$12.80	0.031	\$0.39
Total			\$104.09

The RRFA dispatch system does not track usage of staff vehicles and other equipment/apparatus. However, these apparatuses are also essential RRFA emergency response operations. To account for the cost of these apparatus in this rate study, Exhibit 3-10 divides the total apparatus cost by the useful lifespan and divides these annualized costs by the total annual incidents to calculate the total cost per incident.

Exhibit 3-10. Staff Vehicle and Other Equipment/Apparatus Cost per Incident

Apparatus Type	Total Cost of All Apparatus	Useful Lifespan (years)	Annualized Cost of Apparatus	Annual Incidents	Cost per Incident
Staff Vehicle	\$492,674.00	15	\$32,844.93		\$1.59
Utility Vehicle	\$629,172	15	\$41,944.80		\$2.02
Small Utility Vehicle	\$126,294	15	\$8,419.60		\$0.41
Other Equipment/Apparatus	\$148,706	15	\$9,913.75		\$0.48
Total				20,720	

3.4.5 Formula F-5: Annual Station Cost

The annual station cost is determined by dividing the station capital cost by its useful life.

$$\text{Formula F-5:} \quad \frac{\text{Station Cost Per Square Foot}}{\text{Useful Life}} = \text{Annual Station Cost Per Square Foot}$$

There is one new variable that requires explanation: (G) station cost per square foot.

Variable (G): Station Cost per Square Foot

Exhibit 3-11 calculates the average annualized fire station cost per building square foot. The cost per square foot is divided into two parts. Land cost per building square foot is based on the average land cost per building square foot of all stations in the current RRFA inventory. Building, furnishings, and equipment are based on the 2017 Rate Study.¹⁵

The useful life represents the length of time the station is expected to last before it needs to be replaced. The annualized cost is calculated by dividing the estimated cost per square foot by the average useful life. The “bottom line” of Exhibit 3-11¹⁶ is an annualized station cost of \$16.00 per square foot.

Exhibit 3-11. Annualized Station Cost per Square Foot

Type of Cost	Cost per Building Square Foot	Building Useful Life (years)	Annual Station Cost per Square Foot
Land	\$90.00		
Building, Furnishings, & Equipment	\$710.00		
Cost of Borrowing	\$0.00		
Total	\$800.00	50	\$16.00

¹⁵These stations are Central Pierce Station #63 in Midland, Central Pierce Station #72 in Puyallup, Shoreline Station #63, and Kirkland Station #25. These stations average \$480 per sq. ft. in site preparation and “hard” building costs. An additional 48% is added for soft costs such as sales tax, design, permitting, and furnishings. The total cost per building sq. ft. is \$800.

¹⁶Source: TCA, 2023

3.4.6 Formula F-6: Station Cost per Fire/Other and EMS Incident

The station cost per fire/other and EMS incident is calculated by multiplying the annual station cost per square foot by the station square feet per fire and EMS incident.

$$\text{Formula F-6: } \frac{\text{Annual Station Cost per Square Foot}}{\text{per Square Foot}} \times \frac{\text{Station Square Feet Per Fire/Other and EMS Incident}}{\text{Fire/Other and EMS Incident}} = \frac{\text{Annual Station Cost Per Fire/Other and EMS Incident}}{\text{Fire/Other and EMS Incident}}$$

There are no new variables used in formula F-6. Both variables were developed in previous formulas.

This calculation is shown in Exhibit 3-12. The station cost per square foot (from Exhibit 3-11) is multiplied by the station square feet per incident (from Exhibit 3-6). The result is the station cost of \$49.06 per fire/other and EMS incident. In other words, each fire/other and EMS incident “uses up” \$49.06 worth of fire station.

Exhibit 3-12. Station Cost per Incident

Annual Station Cost per Square Foot	Square Feet per Incident	Annualized Station Cost per Incident
\$16.00	3.07	\$49.06

3.4.7 Formula F-7: Annual Fire Incident Rate per Unit of Development

The annual fire/other incident rate per unit of development (i.e., dwelling unit or square foot of non- residential development) is calculated by dividing the total annual fire/other incidents to each type of land use by the number of dwelling units or square feet of non-residential development for that type of land use.

$$\text{Formula F-7: } \frac{\text{Annual Fire/Other Incidents at Each Type of Land Use}}{\text{Land Use}} \div \frac{\text{Number of Dwelling Units or Square Feet of Each Type of Land Use}}{\text{Type of Land Use}} = \frac{\text{Annual Fire/Other Incidents Per Unit of Development}}{\text{Development}}$$

There are two variables that require explanation: (H) annual emergency fire/other incidents at land use types, and (I) number of dwelling units or square feet.

Variable (H): Annual Emergency Fire Incidents at Land Use Types

The emergency incident data comes from the RRFA's dispatch records. RRFA codes each individual incident by property type. For the purpose of developing impact fees, this study combines property types into 13 broad land use categories.¹⁷

As shown in Exhibit 3-13, RRFA responded to 4,674 fire/other incidents during 2022. Of these incidents, 3,340 were coded to a specific property type related to one of the 13 land use categories (i.e., the incident occurred at a specific property address, such as a residence or business). 717 incidents occurred in roads and streets (in most cases these are traffic-related). The records for the remaining 617 were not coded to one of the 13 land use categories or roadways. These include incidents with no code at all or those at other kinds of properties such as vacant land or construction sites. To account for all incidents, these 617 incidents were allocated proportionally to properties or roads and streets.

Exhibit 3-13. Fire/Other Incidents by Location

Incident Location	Fire/Other Incidents Identifiable by Location	Percent of Identifiable Fire/Other Incidents	Fire/Other Incidents Not Identifiable by Property Type	Unidentifiable Fire/Other Incidents Allocated to Location	Total Fire/Other Incidents
At Properties	3340	82.33%		508	3,848
In Roads and Streets	717	17.67%		109	826
Total	4,057		617		4,674

The next four exhibits present the allocation of fire/other incidents among the 13 land use categories.

¹⁷ RRFA dispatch data includes property codes for 1-2 unit residences and multi-family residences. For simplicity, this rate study labels each category "single-family" and "multi-family". However, development data for each of these categories starting in Exhibit 3-14 reflects the RRFA property codes. In other words, unit counts for the "single-family" land use type is inclusive of both single-family homes and duplexes. "Multi-family" is inclusive of all structures with more than 2 units. Additionally, mobile homes are included in the "multi-family" land use type consistently.

Exhibit 3-14 shows the fire/other incidents that were identifiable by land use type, Exhibit 3-15 shows the fire/other incidents that were in roads and streets. Exhibit 3-16 summarizes the results of the analysis of fire/other incidents. The total annual fire/other incidents are a combination of the fire/other incidents allocated among direct responses to land use types (from Exhibit 3-14) and the allocation of incidents at roads and streets based on trip generation rates (from Exhibit 3-15). Exhibit 3-16 combines the fire/other incident data (those land use and traffic), and Exhibit 3-17 shows the fire/other incident rate per unit of development.

Exhibit 3-14 shows the distribution of the 3,340 fire/other incidents that are traceable to a land use along with the percent distribution of these 3,340 incidents. In the final column, the total 3,848 fire/other incidents (3,340 traceable + 508 allocated) are allocated among the land use types using the percent distribution column. The result is the total annual fire/other incidents at each of the land use types.

Exhibit 3-14. Fire/Other Incidents at Specific Land Uses

Land Use Type	Annual Fire/Other Incidents Identifiable to Land Use	Percent of All Property Fire/Other Incidents Identifiable to Land Use	Allocate Total Property Related Fire/Other Incidents (3,848) to Land Uses
Single-Family Residential	1,028	30.78%	1,184
Multi-Family Residential	1,200	35.93%	1,382
Hotel/Motel/Resort	105	3.14%	121
Medical Care Facility	72	2.16%	83
Office	107	3.20%	123
Medical/Dental Office	43	1.29%	50
Retail	403	12.07%	464
Leisure Facilities	34	1.02%	39
Restaurant/Lounge	49	1.47%	56
Industrial/Manufacturing	139	4.16%	160
Church/Non-Profit	47	1.41%	54
Education	92	2.75%	106
Special Public Facilities	21	0.63%	24
Total	3,340		3,848

Variable (I): Number of Dwelling Units or Square Feet

Exhibit 3-15 shows total units of development by land use category for the year 2023. Data on dwelling unit counts comes from City staff. These data reflect conditions in 2023 within the entire

RRFA service area, including City, KCFD25, and KCFD40. These data on units of development were aggregated into the same 13 land use categories used to summary incidents by property type.

The fire/other incidents in roads and streets are allocated to land use types based on the amount of traffic generated by each type of land use. In Exhibit 3-15, the number of dwelling units and square feet of non-residential construction in the RRFA service area is multiplied by the number of daily trips that are generated by each land use type as reported in the 11th Edition of Trip Generation by the Institute of Transportation Engineers (ITE). The result is the total trips associated with each land use type. The percent of trips associated with each land use type is calculated from the total of all trips.

In the final calculation of Exhibit 3-15, the total 826 annual fire/other incidents in roads and streets (717 traceable + 109 allocated) are assigned to land use types using the percent of trips generated.

Exhibit 3-15. Fire/Other Incidents in Roads and Streets - Allocated to Land Uses

Land Use Type	Units of Development ¹⁸		ITE Trip Generation Rate	Total Trips	Percent of Trips Generated	Annual Fire/Other Incidents in Roads and Streets per Unit of Development
Single-Family Residential	30,564	d.u.	9.43000	288,219	28.57%	236
Multi-Family Residential	23,725	d.u.	6.74000	159,907	15.85%	131
Hotel/Motel/Resort	1,850	room	7.99000	14,782	1.47%	12
Medical Care Facility	381	bed	22.32000	8,504	0.84%	7
Office	8,726,719	sq. ft.	0.01084	94,598	9.38%	77
Medical/Dental Office	978,096	sq. ft.	0.03600	35,211	3.49%	29
Retail	5,485,938	sq. ft.	0.03701	203,035	20.13%	166
Leisure Facilities	501,843	sq. ft.	0.02882	14,463	1.43%	12
Restaurant/Lounge	302,629	sq. ft.	0.10720	32,442	3.22%	27
Industrial/Manufacturing	15,244,876	sq. ft.	0.00475	72,413	7.18%	59
Church/Non-Profit	861,468	sq. ft.	0.00760	6,547	0.65%	5
Education	20,721	student	1.94000	40,199	3.99%	33
Special Public Facilities	1,700,841	sq. ft.	0.02259	38,422	3.81%	31
Total				1,008,740		826

¹⁸ Non-residential units of development exclude structured parking. Single-family units include duplexes (see footnote 16 for explanation). Multi-family residential includes units in all structures larger with more than two units plus mobile homes.

Exhibit 3-16 summarizes the results of the analysis of fire/other incidents. The total annual fire/other incidents are a combination of the fire/other incidents allocated among direct responses to land use types (from Exhibit 3-14) and the allocation of incidents at roads and streets based on trip generation rates (from Exhibit 3-15).

Exhibit 3-16. Total Fire/Other Incidents by Land Use

Land Use Types	Annual Fire/Other Incidents Direct to Land Use	Annual Fire/Other Incidents in Roads and Streets Allocated to Land Use	Total Annual Fire/Other Incidents by Land Use
Single-Family Residential	1,184	236	1,420
Multi-Family Residential	1,382	131	1,513
Hotel/Motel/Resort	121	12	133
Medical Care Facility	83	7	90
Office	123	77	201
Medical/Dental Office	50	29	78
Retail	464	166	631
Leisure Facilities	39	12	51
Restaurant/Lounge	56	27	83
Industrial/Manufacturing	160	59	219
Church/Non-Profit	54	5	60
Education	106	33	139
Special Public Facilities	24	31	56
Total	3,848	826	4,674

The final step in determining the annual fire/other incident rate per unit of development is shown in Exhibit 3-17.¹⁹ The total annual fire/other incidents for each type of land use (from Exhibit 3-16) are divided by the number of dwelling units or square feet of structures to calculate the annual incident rate per dwelling unit or square foot. The units of development are the same as was used to determine traffic-related incidents (see Exhibit 3-15).

The results in Exhibit 3-17 show how many times an average unit of development has a fire/other incident to which the City responds. For example, a single-family residence has an average of 0.0464716 fire/other incidents per year. This is the same as saying that about 4% of single-family homes have a fire/other incident in a year. Another way of understanding this information is that an average single-family home would have a fire/other incident once every 25 years.

Exhibit 3-17. Annual Fire/Other Incident Rate by Land Use

Land Use Type	Total Annual Fire/Other Incidents Attributed to Land Use	Units of Development	Annual Fire/Other Incidents Per Unit of Development
Single-Family Residential	1,420	30,564 d.u.	0.0464716
Multi-Family Residential	1,513	23,725 d.u.	0.0637911
Hotel/Motel/Resort	133	1,850 room	0.0719314
Medical Care Facility	90	381 bed	0.2359940
Office	201	8,726,719 sq. ft.	0.0000230
Medical/Dental Office	78	978,096 sq. ft.	0.0000801
Retail	631	5,485,938 sq. ft.	0.0001149
Leisure Facilities	51	501,843 sq. ft.	0.0001017
Restaurant/Lounge	83	302,629 sq. ft.	0.0002743
Industrial/Manufacturing	219	15,244,876 sq. ft.	0.0000144
Church/Non-Profit	60	861,468 sq. ft.	0.0000691
Education	139	20,721 student	0.0067038
Special Public Facilities	56	1,700,841 sq. ft.	0.0000327
Total	4,674		

¹⁹ Source: RRFA and City of Renton.

3.4.8 Formula F-8: Fire/Other Incident Capital Cost per Unit of Development

The capital cost of fire/other incidents per unit of development is determined by multiplying the annual fire/other incidents per unit of development (from Exhibit 3-17) times the annual capital cost per fire/other incident of each type of apparatus (from Exhibit 3-9) and fire station (from Exhibit 3-12), then multiplying that result times the useful life of the apparatus or fire station.²⁰

$$\begin{array}{ccccccc} \text{Formula F-8:} & \text{Annual Fire/Other} & & \text{Annual Cost Per} & & \text{Useful Life of} & \text{Fire Incident Capital} \\ & \text{Incidents per Unit of} & \times & \text{Fire Incident} & \times & \text{Apparatus or} & \text{Cost per Unit of} \\ & \text{Development} & & & & \text{Station} & \text{Development} \\ & & & & & = & \end{array}$$

There are no new variables used in formula F-8. All three variables were developed in previous formulas. In Exhibit 3-18 through Exhibit 3-30, each fire/other incident rate (from Exhibit 3-17) is multiplied by the annual capital cost per fire/other incident. The result is then multiplied by the useful life of the apparatus or station to calculate the capital cost per unit of development for each type of apparatus and station. For example, single-family residential units average 0.0464716 fire/other incidents per year (i.e., 4% of a fire/other incident per year). In Exhibit 3-18, multiplying this incident rate times the annual capital cost of an engine (\$55.23 from Exhibit 3-9) per incident indicates a cost of about \$2.56 per single-family dwelling unit to provide it with fire engines for one year. Since the weighted useful life of an engine is 14.67 years, the residential dwelling needs to pay for 14.67 times the annual rate, for a total of about \$37.65 per year.

²⁰ Some fire impact fees are calculated for the economic life of the property paying the impact fee, rather than the useful life of the apparatus and stations that provide the fire protection. Both methods meet the legal requirements for impact fees. The method used in this rate study charges impact fees for the first of each type of apparatus and station needed for new development, but subsequent replacements of apparatus and stations are funded by other revenues available to the RRFA.

Exhibit 3-18. Engine Cost of Response to Fire/Other Incidents, per Unit of Development

Land Use Type	Unit of Development	Annual Fire/Other Incidents Per Unit of Development	Engine Cost at \$55.23 per Fire/Other Incident, per Unit of Development	Engine Life Cost per Unit of Development Based on 14.67-Year useful life
Single-Family Residential	d.u.	0.0464716	\$2.5665	\$37.6505
Multi-Family Residential	d.u.	0.0637911	\$3.5230	\$51.6825
Hotel/Motel/Resort	room	0.0719314	\$3.9726	\$58.2776
Medical Care Facility	bed	0.2359940	\$13.0333	\$191.1982
Office	sq. ft.	0.0000230	\$0.0013	\$0.0186
Medical/Dental Office	sq. ft.	0.0000801	\$0.0044	\$0.0649
Retail	sq. ft.	0.0001149	\$0.0063	\$0.0931
Leisure Facilities	sq. ft.	0.0001017	\$0.0056	\$0.0824
Restaurant/Lounge	sq. ft.	0.0002743	\$0.0152	\$0.2223
Industrial/Manufacturing	sq. ft.	0.0000144	\$0.0008	\$0.0117
Church/Non-Profit	sq. ft.	0.0000691	\$0.0038	\$0.0560
Education	student	0.0067038	\$0.3702	\$5.4313
Special Public Facilities	sq. ft.	0.0000327	\$0.0018	\$0.0265

Exhibit 3-19 calculates the capital cost per unit of development for a ladder response to fire/other incidents. The incident rate (from Exhibit 3-17) is multiplied by the ladder's capital cost per fire/other incident (\$16.29 from Exhibit 3-9). The result is then multiplied by the ladder's weighted useful life of 18 years to calculate the capital cost per unit of development for ladders.

Exhibit 3-19. Ladder Cost of Response to Fire/Other Incidents, per Unit of Development

Land Use Type	Unit of Development	Annual Fire/Other Incident Per Unit of Development	Ladder Cost at \$16.29 per Fire/Other Incident, per Unit of Development	Ladder Life Cost per Unit of Development Based on 18-Year life
Single-Family Residential	d.u.	0.0464716	\$0.76	\$11.1051
Multi-Family Residential	d.u.	0.0637911	\$1.04	\$15.2438
Hotel/Motel/Resort	room	0.0719314	\$1.17	\$17.1890
Medical Care Facility	bed	0.2359940	\$3.84	\$56.3941
Office	sq. ft.	0.0000230	\$0.00	\$0.0055
Medical/Dental Office	sq. ft.	0.0000801	\$0.00	\$0.0191
Retail	sq. ft.	0.0001149	\$0.00	\$0.0275
Leisure Facilities	sq. ft.	0.0001017	\$0.00	\$0.0243
Restaurant/Lounge	sq. ft.	0.0002743	\$0.00	\$0.0656
Industrial/Manufacturing	sq. ft.	0.0000144	\$0.00	\$0.0034
Church/Non-Profit	sq. ft.	0.0000691	\$0.00	\$0.0165
Education	student	0.0067038	\$0.11	\$1.6020
Special Public Facilities	sq. ft.	0.0000327	\$0.00	\$0.0078

Exhibit 3-20 calculates the capital cost per unit of development for aid units responses to fire/other incidents. The incident rate (from Exhibit 3-17) is multiplied by the aid unit cost per fire/other incident (\$2.64 from Exhibit 3-9). The result is then multiplied by the ten-year weighted average useful life of an aid unit to calculate the capital cost per unit of development for aid units.

Exhibit 3-20. Aid Unit Cost of Response to Fire/Other Incidents, per Unit of Development

Land Use Type	Unit of Development	Annual Fire/Other Incident Rate	Aid Unit Cost at \$2.64 per Fire/Other Incident, per Unit of Development	Aid Unit Life Cost per Unit of Development at 10-Year life
Single-Family Residential	d.u.	0.0464716	\$0.1225	\$1.2252
Multi-Family Residential	d.u.	0.0637911	\$0.1682	\$1.6818
Hotel/Motel/Resort	room	0.0719314	\$0.1896	\$1.8964
Medical Care Facility	bed	0.2359940	\$0.6222	\$6.2219
Office	sq. ft.	0.0000230	\$0.0001	\$0.0006
Medical/Dental Office	sq. ft.	0.0000801	\$0.0002	\$0.0021
Retail	sq. ft.	0.0001149	\$0.0003	\$0.0030
Leisure Facilities	sq. ft.	0.0001017	\$0.0003	\$0.0027
Restaurant/Lounge	sq. ft.	0.0002743	\$0.0007	\$0.0072
Industrial/Manufacturing	sq. ft.	0.0000144	\$0.0000	\$0.0004
Church/Non-Profit	sq. ft.	0.0000691	\$0.0002	\$0.0018
Education	student	0.0067038	\$0.0177	\$0.1767
Special Public Facilities	sq. ft.	0.0000327	\$0.0001	\$0.0009

Exhibit 3-21 calculates the capital cost per unit of development for hazardous materials vehicle responses to fire/other incidents. The incident rate (from Exhibit 3-17) is multiplied by the hazardous materials vehicle cost per fire/other incident (\$5.46 from Exhibit 3-9). The result is then multiplied by the 21-year useful life of a hazardous materials vehicle to calculate the capital cost per unit of development for hazardous materials vehicles.

Exhibit 3-21. Hazardous Materials Vehicle Cost of Response to Fire/Other Incidents, per Unit of Development

Land Use Type	Unit of Development	Annual Fire/Other Incident Rate	Hazardous Materials Vehicle Cost at \$5.46 per Fire/Other Incident, per Unit of Development	Hazardous Materials Vehicle Life Cost per Unit of Development at 21-Year life
Single-Family Residential	d.u.	0.0464716	\$0.2537	\$5.3284
Multi-Family Residential	d.u.	0.0637911	\$0.3483	\$7.3142
Hotel/Motel/Resort	room	0.0719314	\$0.3927	\$8.2476
Medical Care Facility	bed	0.2359940	\$1.2885	\$27.0588
Office	sq. ft.	0.0000230	\$0.0001	\$0.0026
Medical/Dental Office	sq. ft.	0.0000801	\$0.0004	\$0.0092
Retail	sq. ft.	0.0001149	\$0.0006	\$0.0132
Leisure Facilities	sq. ft.	0.0001017	\$0.0006	\$0.0117
Restaurant/Lounge	sq. ft.	0.0002743	\$0.0015	\$0.0315
Industrial/Manufacturing	sq. ft.	0.0000144	\$0.0001	\$0.0017
Church/Non-Profit	sq. ft.	0.0000691	\$0.0004	\$0.0079
Education	student	0.0067038	\$0.0366	\$0.7687
Special Public Facilities	sq. ft.	0.0000327	\$0.0002	\$0.0038

Exhibit 3-22 calculates the capital cost per unit of development for brush truck responses to fire/other incidents. The incident rate (from Exhibit 3-17) is multiplied by the brush truck cost per fire/other incident (\$9.82 from Exhibit 3-9). The result is then multiplied by the 15-year useful life of a brush truck to calculate the capital cost per unit of development for brush trucks.

Exhibit 3-22. Brush Truck Cost of Response to Fire/Other Incidents, per Unit of Development

Land Use Type	Unit of Development	Annual Fire/Other Incident Rate	Brush Truck Cost at \$9.82 per Fire/Other Incident, per Unit of Development	Brush Truck Life Cost per Unit of Development at 15-Year Life
Single-Family Residential	d.u.	0.0464716	\$0.4562	\$6.8423
Multi-Family Residential	d.u.	0.0637911	\$0.6262	\$9.3923
Hotel/Motel/Resort	room	0.0719314	\$0.7061	\$10.5909
Medical Care Facility	bed	0.2359940	\$2.3165	\$34.7468
Office	sq. ft.	0.0000230	\$0.0002	\$0.0034
Medical/Dental Office	sq. ft.	0.0000801	\$0.0008	\$0.0118
Retail	sq. ft.	0.0001149	\$0.0011	\$0.0169
Leisure Facilities	sq. ft.	0.0001017	\$0.0010	\$0.0150
Restaurant/Lounge	sq. ft.	0.0002743	\$0.0027	\$0.0404
Industrial/Manufacturing	sq. ft.	0.0000144	\$0.0001	\$0.0021
Church/Non-Profit	sq. ft.	0.0000691	\$0.0007	\$0.0102
Education	student	0.0067038	\$0.0658	\$0.9870
Special Public Facilities	sq. ft.	0.0000327	\$0.0003	\$0.0048

Exhibit 3-23 calculates the capital cost per unit of development for command vehicle responses to fire/other incidents. The incident rate (from Exhibit 3-17) is multiplied by the command vehicle cost per fire/other incident (\$13.24 from Exhibit 3-9). The result is then multiplied by the ten-year useful life of a command vehicle to calculate the capital cost per unit of development for command vehicles.

Exhibit 3-23. Command Vehicle Cost of Response to Fire/Other Incidents, per Unit of Development

Land Use Type	Unit of Development	Annual Fire/Other Incident Rate	Command Vehicle Cost at \$13.24 per Fire/Other Incident, per Unit of Development	Command Vehicle Life Cost per Unit of Development at 10-Year Life
Single-Family Residential	d.u.	0.0464716	\$0.6154	\$9.0279
Multi-Family Residential	d.u.	0.0637911	\$0.8448	\$12.3925
Hotel/Motel/Resort	room	0.0719314	\$0.9526	\$13.9739
Medical Care Facility	bed	0.2359940	\$3.1252	\$45.8460
Office	sq. ft.	0.0000230	\$0.0003	\$0.0045
Medical/Dental Office	sq. ft.	0.0000801	\$0.0011	\$0.0156
Retail	sq. ft.	0.0001149	\$0.0015	\$0.0223
Leisure Facilities	sq. ft.	0.0001017	\$0.0013	\$0.0197
Restaurant/Lounge	sq. ft.	0.0002743	\$0.0036	\$0.0533
Industrial/Manufacturing	sq. ft.	0.0000144	\$0.0002	\$0.0028
Church/Non-Profit	sq. ft.	0.0000691	\$0.0009	\$0.0134
Education	student	0.0067038	\$0.0888	\$1.3023
Special Public Facilities	sq. ft.	0.0000327	\$0.0004	\$0.0064

Exhibit 3-24 calculates the capital cost per unit of development for dive apparatus responses to fire/other incidents. The incident rate (from Exhibit 3-17) is multiplied by the dive apparatus cost per fire/other incident (\$1.03 from Exhibit 3-9). The result is then multiplied by the 21-year useful life of a dive apparatus to calculate the capital cost per unit of development for dive apparatus.

Exhibit 3-24. Dive Apparatus Cost of Response to Fire/Other Incidents, per Unit of Development

Land Use Type	Unit of Development	Annual Fire/Other Incident Rate	Dive Apparatus Cost at \$1.03 per Fire/Other Incident, per Unit of Development	Dive Apparatus Life Cost per Unit of Development at 21-Year Life
Single-Family Residential	d.u.	0.0464716	\$0.0478	\$0.7174
Multi-Family Residential	d.u.	0.0637911	\$0.0657	\$0.9848
Hotel/Motel/Resort	room	0.0719314	\$0.0740	\$1.1105
Medical Care Facility	bed	0.2359940	\$0.2429	\$3.6432
Office	sq. ft.	0.0000230	\$0.0000	\$0.0004
Medical/Dental Office	sq. ft.	0.0000801	\$0.0001	\$0.0012
Retail	sq. ft.	0.0001149	\$0.0001	\$0.0018
Leisure Facilities	sq. ft.	0.0001017	\$0.0001	\$0.0016
Restaurant/Lounge	sq. ft.	0.0002743	\$0.0003	\$0.0042
Industrial/Manufacturing	sq. ft.	0.0000144	\$0.0000	\$0.0002
Church/Non-Profit	sq. ft.	0.0000691	\$0.0001	\$0.0011
Education	student	0.0067038	\$0.0069	\$0.1035
Special Public Facilities	sq. ft.	0.0000327	\$0.0000	\$0.0005

Exhibit 3-25 calculates the capital cost per unit of development for service vehicle responses to fire/other incidents. The incident rate (from Exhibit 3-17) is multiplied by the service vehicle cost per fire/other incident (\$0.39 from Exhibit 3-9). The result is then multiplied by the 15-year useful life of a service vehicle to calculate the capital cost per unit of development for service vehicles.

Exhibit 3-25. Service Vehicle Cost of Response to Fire/Other Incidents, per Unit of Development

Land Use Type	Unit of Development	Annual Fire/Other Incident Rate	Service Vehicle Cost at \$0.39 per Fire/Other Incident, per Unit of Development	Service Vehicle Life Cost per Unit of Development at 15-Year Life
Single-Family Residential	d.u.	0.0464716	\$0.0183	\$0.3850
Multi-Family Residential	d.u.	0.0637911	\$0.0252	\$0.5285
Hotel/Motel/Resort	room	0.0719314	\$0.0284	\$0.5959
Medical Care Facility	bed	0.2359940	\$0.0931	\$1.9551
Office	sq. ft.	0.0000230	\$0.0000	\$0.0002
Medical/Dental Office	sq. ft.	0.0000801	\$0.0000	\$0.0007
Retail	sq. ft.	0.0001149	\$0.0000	\$0.0010
Leisure Facilities	sq. ft.	0.0001017	\$0.0000	\$0.0008
Restaurant/Lounge	sq. ft.	0.0002743	\$0.0001	\$0.0023
Industrial/Manufacturing	sq. ft.	0.0000144	\$0.0000	\$0.0001
Church/Non-Profit	sq. ft.	0.0000691	\$0.0000	\$0.0006
Education	student	0.0067038	\$0.0026	\$0.0555
Special Public Facilities	sq. ft.	0.0000327	\$0.0000	\$0.0003

Exhibit 3-26 calculates the capital cost per unit of development for staff vehicle responses to fire/other incidents. The incident rate (from Exhibit 3-17) is multiplied by the staff vehicle cost per fire/other incident (\$1.59 from Exhibit 3-10). The result is then multiplied by the 15-year useful life of a staff vehicle to calculate the capital cost per unit of development for staff vehicles.

Exhibit 3-26. Staff Vehicle Cost of Response to Fire/Other Incidents, per Unit of Development

Land Use Type	Unit of Development	Annual Fire/Other Incident Rate	Staff Vehicle Cost at \$1.59 per Fire/Other Incident, per Unit of Development	Staff Vehicle Life Cost per Unit of Development at 15-Year Life
Single-Family Residential	d.u.	0.0464716	\$0.0737	\$1.1050
Multi-Family Residential	d.u.	0.0637911	\$0.1011	\$1.5168
Hotel/Motel/Resort	room	0.0719314	\$0.1140	\$1.7104
Medical Care Facility	bed	0.2359940	\$0.3741	\$5.6114
Office	sq. ft.	0.0000230	\$0.0000	\$0.0005
Medical/Dental Office	sq. ft.	0.0000801	\$0.0001	\$0.0019
Retail	sq. ft.	0.0001149	\$0.0002	\$0.0027
Leisure Facilities	sq. ft.	0.0001017	\$0.0002	\$0.0024
Restaurant/Lounge	sq. ft.	0.0002743	\$0.0004	\$0.0065
Industrial/Manufacturing	sq. ft.	0.0000144	\$0.0000	\$0.0003
Church/Non-Profit	sq. ft.	0.0000691	\$0.0001	\$0.0016
Education	student	0.0067038	\$0.0106	\$0.1594
Special Public Facilities	sq. ft.	0.0000327	\$0.0001	\$0.0008

Exhibit 3-27 calculates the capital cost per unit of development for utility vehicles for fire/other incidents. The incident rate (from Exhibit 3-17) is multiplied by the utility vehicle cost per fire/other incident (\$2.02 from Exhibit 3-10). The result is then multiplied by the 15-year useful life of a utility vehicle to calculate the capital cost per unit of development for utility vehicles.

Exhibit 3-27. Utility Vehicle Cost per Fire/Other Incident, per Unit of Development

Land Use Type	Unit of Development	Annual Fire/Other Incident Rate	Utility Vehicle Cost at \$2.02 per Incident, per Unit of Development	Utility Vehicle Life Cost per Unit of Development at 15-Year Life
Single-Family Residential	d.u.	0.0464716	\$0.0941	\$1.4111
Multi-Family Residential	d.u.	0.0637911	\$0.1291	\$1.9370
Hotel/Motel/Resort	room	0.0719314	\$0.1456	\$2.1842
Medical Care Facility	bed	0.2359940	\$0.4777	\$7.1661
Office	sq. ft.	0.0000230	\$0.0000	\$0.0007
Medical/Dental Office	sq. ft.	0.0000801	\$0.0002	\$0.0024
Retail	sq. ft.	0.0001149	\$0.0002	\$0.0035
Leisure Facilities	sq. ft.	0.0001017	\$0.0002	\$0.0031
Restaurant/Lounge	sq. ft.	0.0002743	\$0.0006	\$0.0083
Industrial/Manufacturing	sq. ft.	0.0000144	\$0.0000	\$0.0004
Church/Non-Profit	sq. ft.	0.0000691	\$0.0001	\$0.0021
Education	student	0.0067038	\$0.0136	\$0.2036
Special Public Facilities	sq. ft.	0.0000327	\$0.0001	\$0.0010

Exhibit 3-28 calculates the capital cost per unit of development for small utility vehicles for fire/other incidents. The incident rate (from Exhibit 3-17) is multiplied by the other small utility vehicle cost per fire/other incident (\$0.41 from Exhibit 3-10). The result is then multiplied by the 15-year useful life of other small utility vehicles to calculate the capital cost per unit of development for other small utility vehicles.

Exhibit 3-28. Small Utility Vehicle Cost of Response to Fire/Other Incident, per Unit of Development

Land Use Type	Unit of Development	Annual Fire/Other Incident Rate	Small Utility Vehicles Cost at \$0.41 per Incident, per Unit of Development	Small Utility Vehicles Life Cost per Unit of Development at 15-Year Life
Single-Family Residential	d.u.	0.0464716	\$0.0189	\$0.2833
Multi-Family Residential	d.u.	0.0637911	\$0.0259	\$0.3888
Hotel/Motel/Resort	room	0.0719314	\$0.0292	\$0.4384
Medical Care Facility	bed	0.2359940	\$0.0959	\$1.4384
Office	sq. ft.	0.0000230	\$0.0000	\$0.0001
Medical/Dental Office	sq. ft.	0.0000801	\$0.0000	\$0.0005
Retail	sq. ft.	0.0001149	\$0.0000	\$0.0007
Leisure Facilities	sq. ft.	0.0001017	\$0.0000	\$0.0006
Restaurant/Lounge	sq. ft.	0.0002743	\$0.0001	\$0.0017
Industrial/Manufacturing	sq. ft.	0.0000144	\$0.0000	\$0.0001
Church/Non-Profit	sq. ft.	0.0000691	\$0.0000	\$0.0004
Education	student	0.0067038	\$0.0027	\$0.0409
Special Public Facilities	sq. ft.	0.0000327	\$0.0000	\$0.0002

Exhibit 3-29 calculates the capital cost per unit of development for other apparatus/equipment to fire/other incidents. The incident rate (from Exhibit 3-17) is multiplied by the other apparatus/equipment cost per fire/other incident (\$0.48 from Exhibit 3-10). The result is then multiplied by the 15-year useful life of other apparatus/equipment to calculate the capital cost per unit of development for other apparatus/equipment.

Exhibit 3-29. Other Apparatus/Equipment Cost of Response to Fire/Other Incident, per Unit of Development

Land Use Type	Unit of Development	Annual Fire/Other Incident Rate	Other Apparatus/Equip. Cost at \$0.48 per Incident, per Unit of Development	Other Apparatus/Equip. Life Cost per Unit of Development at 15-Year Life
Single-Family Residential	d.u.	0.0464716	\$0.0222	\$0.3335
Multi-family	d.u.	0.0637911	\$0.0305	\$0.4578
Hotel/Motel/Resort	room	0.0719314	\$0.0344	\$0.5162
Medical Care Facility	bed	0.2359940	\$0.1129	\$1.6937
Office	sq. ft.	0.0000230	\$0.0000	\$0.0002
Medical/Dental Office	sq. ft.	0.0000801	\$0.0000	\$0.0006
Retail	sq. ft.	0.0001149	\$0.0001	\$0.0008
Leisure Facilities	sq. ft.	0.0001017	\$0.0000	\$0.0007
Restaurant/Lounge	sq. ft.	0.0002743	\$0.0001	\$0.0020
Industrial/Manufacturing	sq. ft.	0.0000144	\$0.0000	\$0.0001
Church/Non-Profit	sq. ft.	0.0000691	\$0.0000	\$0.0005
Education	student	0.0067038	\$0.0032	\$0.0481
Special Public Facilities	sq. ft.	0.0000327	\$0.0000	\$0.0002

Exhibit 3-30 calculates the capital cost per unit of development for fire stations that house apparatus. The fire/other incident rate (from Exhibit 3-17) is multiplied by the fire station cost per fire/other incident (\$49.06 from Exhibit 3-12). The result is then multiplied by the 50-year useful life of fire stations to calculate the capital cost per unit of development for fire stations.

Exhibit 3-30. Fire Station Cost of Response to Fire/Other Incident, per Unit of Development

Land Use Type	Unit of Development	Annual Fire/Other Incident Rate	Fire Station Cost at \$49.06 per Incident, per Unit of Development	Fire Station Life Cost per Unit of Development at 50-Year Life
Single-Family Residential	d.u.	0.0464716	\$2.2798	\$113.99
Multi-family	d.u.	0.0637911	\$3.1295	\$156.48
Hotel/Motel/Resort	room	0.0719314	\$3.5289	\$176.44
Medical Care Facility	bed	0.2359940	\$11.5776	\$578.88
Office	sq. ft.	0.0000230	\$0.0011	\$0.06
Medical/Dental Office	sq. ft.	0.0000801	\$0.0039	\$0.20
Retail	sq. ft.	0.0001149	\$0.0056	\$0.28
Leisure Facilities	sq. ft.	0.0001017	\$0.0050	\$0.25
Restaurant/Lounge	sq. ft.	0.0002743	\$0.0135	\$0.67
Industrial/Manufacturing	sq. ft.	0.0000144	\$0.0007	\$0.04
Church/Non-Profit	sq. ft.	0.0000691	\$0.0034	\$0.17
Education	student	0.0067038	\$0.3289	\$16.44
Special Public Facilities	sq. ft.	0.0000327	\$0.0016	\$0.08

Exhibit 3-31 combines the capital costs of all types of apparatus and station (from Exhibit 3-18 through Exhibit 3-30) to show the total capital cost of responses to fire/other incidents for one single-family unit.

Exhibit 3-31. Example of Calculation of Total Cost of Response to Fire/Other Incidents for a Single-Family Residential Dwelling Unit

Cost Component	Cost
Engine	\$37.65
Ladder	\$11.11
Aid Unit	\$1.23
Hazardous Materials Vehicle	\$5.33
Brush Truck	\$6.84
Command Vehicle	\$9.03
Dive Apparatus	\$0.72
Service Vehicle	\$0.38
Staff Vehicle	\$1.10
Utility Vehicle	\$1.41
Small Utility Vehicle	\$0.28
Other Equipment/Apparatus	\$0.33
Fire Station	\$113.99
Total	\$189.41

This example is repeated for each land use to combine its capital costs of all types of apparatus and station in Exhibit 3-32.

Exhibit 3-32. Total Capital Cost of Response to Fire/Other Incidents, per Unit of Development

Land Use Type	Unit of Development	Fire/Other Incidents: Life Cost of All Apparatus & Stations per Unit of Development
Single-Family Residential	d.u.	\$189.41
Multi-Family Residential	d.u.	\$260.00
Hotel/Motel/Resort	room	\$293.17
Medical Care Facility	bed	\$961.85
Office	sq. ft.	\$0.09
Medical/Dental Office	sq. ft.	\$0.33
Retail	sq. ft.	\$0.47
Leisure Facilities	sq. ft.	\$0.41
Restaurant/Lounge	sq. ft.	\$1.12
Industrial/Manufacturing	sq. ft.	\$0.06
Church/Non-Profit	sq. ft.	\$0.28
Education	student	\$27.32
Special Public Facilities	sq. ft.	\$0.13

3.4.9 Formula F-9: Apparatus Cost per EMS Incident

The calculation of apparatus cost per EMS incident is similar to the calculation of costs per fire/other incident in Exhibit 3-9. The total apparatus cost per EMS incident is calculated by multiplying the cost per apparatus per response by the percent of EMS incidents each type of apparatus responds to. This calculation accounts for the fact that multiple apparatuses are dispatched to many incidents, and that some apparatus are only dispatched to specific types of incidents. The result of this calculation is a weighted average total cost of apparatus per EMS incident.

$$\text{Formula F-9:} \quad \text{Apparatus Cost Per Response} \times \text{Apparatus Percent of EMS Responses} = \text{Apparatus Cost Per EMS Incident}$$

There are no new variables used in formula F-9. The first variable is identical to the data from Exhibit 3-6, and the second variable concerning the percent of EMS responses works identically to Variable F, but using EMS responses instead of fire/other responses.

Different types of EMS incidents need different types or combinations of apparatus. As a result, the usage of apparatus varies among the types of apparatus. This variance is an important factor in determining the cost per incident. The percent of EMS responses by each type of apparatus is calculated in Exhibit 3-33 by dividing the annual EMS responses for each type of apparatus by the total annual EMS incidents from Exhibit 3-7. The result of the calculation in Exhibit 3-33 is the percent of EMS incidents responded to by each type of apparatus. For example, engines provided 9,040 responses to the 16,046 EMS incidents, equaling 56.3% of all EMS incidents. Another way to understand this data is that one average EMS incident involved 0.563 engines therefore the cost of responding to an EMS incident includes 56.3% of the cost of an engine.

Exhibit 3-33. EMS Response per Incident Rate by Apparatus Type

Apparatus Type	Annual EMS-Related Responses for Apparatus	Annual EMS-Related Incidents	Apparatus Response per EMS Incident Rate
Engine	9,040		0.563
Ladder	1,191		0.074
Aid Unit	6,487		0.404
Hazardous Materials Vehicle	3		0.000
Brush Truck	0		0.000
Command Vehicle	360		0.022
Dive Apparatus	26		0.002
Service Vehicle	816		0.051
Total	17,923	16,046	

The final step in calculating the apparatus cost per EMS incident is shown in Exhibit 3-34. The cost per response for each type of apparatus (from Exhibit 3-6) is multiplied by the percent of EMS incidents dispatched to (from Exhibit 3-33) resulting in the total apparatus cost per EMS incident. The “bottom line” in Exhibit 3-34 is the apparatus cost per EMS incident of \$64.81. In other words, every EMS incident “uses up” \$64.81 worth of apparatus.

Exhibit 3-34. Apparatus Cost per EMS Incident

Apparatus Type	Apparatus Cost Per Response	Apparatus Response per EMS Incident Rate	Apparatus Cost per EMS Incident
Engine	\$65.52	0.563	\$36.91
Ladder	\$138.43	0.074	\$10.27
Aid Unit	\$34.81	0.404	\$14.07
Hazardous Materials Vehicle	\$167.89	0.000	\$0.03
Brush Truck	\$2,548.81	0.000	\$0.00
Command Vehicle	\$104.91	0.022	\$2.35
Dive Apparatus	\$320.69	0.002	\$0.52
Service Vehicle	\$12.80	0.051	\$0.65
Total			\$64.81

3.4.10 Formula F-10: Annual EMS Incident Rate per Unit of Development

Formula F-10 is the same as Formula F-7. The annual EMS incident rate per unit of development is calculated using the same methodology as described for fire/other incidents in Exhibit 3-14 through Exhibit 3-30. There are no new variables used in formula F-10. The variables are identical to those used in Formula F-7, but using EMS incidents instead of fire/other incidents.

$$\text{Formula F-10: } \frac{\text{Annual EMS Incidents at Each Type of Land Use}}{\text{Number of Dwelling Units or Square Feet of Each Type of Land Use}} = \text{Annual EMS Incidents Per Unit of Development}$$

As shown in Exhibit 3-35, RRFA responded to 16,046 EMS incidents during 2022. Of these incidents, 13,805 were coded to a specific property type related to one of the 13 land use categories used in this study. 1,028 incidents occurred in roads and streets (in most cases these are traffic-related). The records for the remaining 1,213 were not coded to one of the 13 land use categories or roadways. These include incidents with no code at all or those at other kinds of properties such as vacant land or construction sites. To account for all incidents, these 1,213 incidents were allocated proportionally to properties or roads and streets.

Exhibit 3-35. EMS Incidents by Location

Incident Location	EMS Incidents Identifiable by Location	Percent of Identifiable EMS Incidents	EMS Incidents Not Identifiable by Location	Unidentifiable EMS Incidents Allocated to Location	Total EMS Incidents
At Properties	13,805	93.07%		1129	14,934
In Roads and Streets	1,028	6.93%		84	1,112
Total	14,833		1,213		16,046

Exhibits 3-36 through 3-39 present the allocation of EMS incidents among types of land use:

- Exhibit 3-36 shows the EMS incidents that were identifiable by land use type.
- Exhibit 3-37 shows the EMS incidents that were in roads and streets.
- Exhibit 3-38 combines the EMS incident data (at properties and in road and streets).
- Exhibit 3-39 shows the EMS incident rate per unit of development.

Exhibit 3-36 shows the distribution of the 13,805 EMS incidents that are traceable to a land use type along with the percent distribution of these incidents. In the last column, the total 14,934 EMS incidents (13,805 traceable to land use type + 1,129 that are not) are allocated among the land use types using the percent distribution column. The result is the total annual EMS incidents at each of the land use types.

Exhibit 3-36. EMS Incidents at Specific Land Uses

Land Use Type	Annual EMS Incidents Identifiable to Land Use	Percent of All EMS Incidents Identifiable to Land Use	Allocate Total Property Related EMS Incidents (14,934) to Land Uses
Single-Family Residential	5,399	39.11%	5,841
Multi-Family Residential	5,905	42.77%	6,388
Hotel/Motel/Resort	199	1.44%	215
Medical Care Facility	118	0.85%	128
Office	363	2.63%	393
Medical/Dental Office	215	1.56%	233
Retail	1,140	8.26%	1,233
Leisure Facilities	49	0.35%	53
Restaurant/Lounge	120	0.87%	130
Industrial/Manufacturing	96	0.70%	104
Church/Non-Profit	43	0.31%	47
Education	133	0.96%	144
Special Public Facilities	25	0.18%	27
Total	13,805		14,934

The EMS incidents in roads and streets are allocated to land uses on the basis of the amount of traffic generated by each type of land use. In Exhibit 3-37, the number of dwelling units and square feet of non- residential construction in the service area is multiplied by the number of trips that are generated by each land use type in the same manner as Exhibit 3-15. The result is the total trips associated with each land use type. The percent of trips associated with each land use type is calculated from the total of all trips.

In the final calculation in Exhibit 3-37 the total 1,112 annual EMS incidents that are in roads and streets (1,028 traceable + 84 allocated) are assigned to the land use types using the percent of trips generated.

Exhibit 3-37. EMS Incidents in Roads and Streets - Allocated to Land Uses

Land Use Type	Units of Development ²¹		ITE Trip Generation Rate ²²	Total Trips	Percent of Trips Generated	Annual EMS Incidents in Roads and Streets Per Unit of Development
Single-Family Residential	30,564	d.u.	9.43000	288,219	28.57%	318
Multi-Family Residential	23,725	d.u.	6.74000	159,907	15.85%	176
Hotel/Motel/Resort	1,850	room	7.99000	14,782	1.47%	16
Medical Care Facility	381	bed	22.32000	8,504	0.84%	9
Office	8,726,719	sq. ft.	0.01084	94,598	9.38%	104
Medical/Dental Office	978,096	sq. ft.	0.03600	35,211	3.49%	39
Retail	5,485,938	sq. ft.	0.03701	203,035	20.13%	224
Leisure Facilities	501,843	sq. ft.	0.02882	14,463	1.43%	16
Restaurant/Lounge	302,629	sq. ft.	0.10720	32,442	3.22%	36
Industrial/Manufacturing	15,244,876	sq. ft.	0.00475	72,413	7.18%	80
Church/Non-Profit	861,468	sq. ft.	0.00760	6,547	0.65%	7
Education	20,721	students	1.94000	40,199	3.99%	44
Special Public Facilities	1,700,841	sq. ft.	0.02259	38,422	3.81%	42
Total				1,008,740		1112

²¹ Non-residential units of development exclude structured parking. Single-family units include duplexes (see footnote 7 for explanation). Multi-family residential includes units in all structures larger with more than two units plus mobile homes.

²² Daily trip generation rates are from the 11th Edition of Trip Generation by the Institute of Transportation Engineers (ITE).

Exhibit 3-38 summarizes the results of the analysis of EMS incidents. The total annual EMS incidents is a combination of the EMS incidents allocated among direct responses to land use types (from Exhibit 3-36) and the allocation of incidents in roads and streets based on trip generation rates (from Exhibit 3-37).

Exhibit 3-38. Total EMS Incidents by Land Use

Land Use Type	Annual Property Related EMS Incidents by Land Use	Annual EMS Incidents in Roads and Streets Assigned to Land Use	Total Annual EMS Incidents by Land Use
Single-Family Residential	5,841	318	6,158
Multi-Family Residential	6,388	176	6,564
Hotel/Motel/Resort	215	16	232
Medical Care Facility	128	9	137
Office	393	104	497
Medical/Dental Office	233	39	271
Retail	1,233	224	1,457
Leisure Facilities	53	16	69
Restaurant/Lounge	130	36	166
Industrial/Manufacturing	104	80	184
Church/Non-Profit	47	7	54
Education	144	44	188
Special Public Facilities	27	42	69
Total	14,934	1,112	16,046

The final step in determining the annual EMS incident rate per unit of development is shown in Exhibit 3-39. The total annual EMS incidents for each type of land use (from Exhibit 3-38) are divided by the number of dwelling units or square feet of structures to calculate the annual EMS incident rate per dwelling unit or square foot. The units of development are the same as was used to assign incidents in roads and streets to land use types (see Exhibit 3-39). The results in Exhibit 3-39 show how many times an average unit of development has an EMS incident to which the RRFA responds.

Exhibit 3-39. Annual EMS Incident Rate by Land Use

Land Use Type	Total Annual EMS Incidents Attributed to Land Use	Units of Development		Annual EMS Incidents Per Unit of Development
Single-Family Residential	6,158	30,564	d.u.	0.2014872
Multi-Family Residential	6,564	23,725	d.u.	0.2766778
Hotel/Motel/Resort	232	1,850	room	0.1251726
Medical Care Facility	137	381	bed	0.3596449
Office	497	8,726,719	sq. ft.	0.0000569
Medical/Dental Office	271	978,096	sq. ft.	0.0002775
Retail	1,457	5,485,938	sq. ft.	0.0002656
Leisure Facilities	69	501,843	sq. ft.	0.0001374
Restaurant/Lounge	166	302,629	sq. ft.	0.0005471
Industrial/Manufacturing	184	15,244,876	sq. ft.	0.0000120
Church/Non-Profit	54	861,468	sq. ft.	0.0000624
Education	188	20,721	students	0.0090822
Special Public Facilities	69	1,700,841	sq. ft.	0.0000408
Total	16,046			

3.4.11 Formula F-11: EMS Incident Capital Cost per Unit of Development

The capital cost of EMS incidents per unit of development is determined by multiplying the annual EMS incidents per unit of development (from Exhibit 3-39) times the annual capital cost per EMS incident of each type of apparatus (Exhibit 3-34) and fire station (from Exhibit 3-12), then multiplying that result times the useful life of the apparatus or fire station.²³

$$\text{Formula F-11: } \frac{\text{Annual EMS Incidents}}{\text{per Unit of Development}} \times \frac{\text{Annual Cost Per}}{\text{EMS Incident}} \times \frac{\text{Useful Life of}}{\text{Apparatus or Station}} = \frac{\text{EMS Incident Capital}}{\text{Cost per Unit of Development}}$$

There are no new variables used in formula F-11. The variables are identical to those used in Formula F- 8 but using EMS incident rates and costs instead of fire/other incident rates and costs.

In Exhibit 3-40 through Exhibit 3-52, each EMS incident rate (from Exhibit 3-39) is multiplied by the annual capital cost per EMS incident. The result is then multiplied by the useful life of the apparatus or station to calculate the capital cost per unit of development for each type of apparatus and station.

²³ Footnote 20 applies to F-11 as well as F-8.

Exhibit 3-40 calculates the EMS related capital costs of an engine per unit of development. For example, single-family residential units average 0.2018895 EMS incidents per year (i.e., 20% of an EMS incident per year). Multiplying this by the annual capital cost of \$36.91 per incident (from Exhibit 3-34) results in a cost of \$7.43 per dwelling unit to provide it with engines for one year. Since the engine lasts on average 14.67 years on average, the residential dwelling needs to pay for 14.67 times the annual rate, for a total of \$109.10.

Exhibit 3-40. Engine Cost of Response to EMS Incidents, per Unit of Development

Land Use Type	Unit of Development	Annual EMS Incident Rate	Engine Cost at \$36.91 per EMS Incident, per Unit of Development	Engine Life Cost per Unit of Development at 14.67-Year life
Single-Family Residential	d.u.	0.2014872	\$7.4369	\$109.1000
Multi-Family Residential	d.u.	0.2766778	\$10.2122	\$149.8136
Hotel/Motel/Resort	room	0.1251726	\$4.6202	\$67.7776
Medical Care Facility	bed	0.3596449	\$13.2746	\$194.7381
Office	sq. ft.	0.0000569	\$0.0021	\$0.0308
Medical/Dental Office	sq. ft.	0.0002775	\$0.0102	\$0.1502
Retail	sq. ft.	0.0002656	\$0.0098	\$0.1438
Leisure Facilities	sq. ft.	0.0001374	\$0.0051	\$0.0744
Restaurant/Lounge	sq. ft.	0.0005471	\$0.0202	\$0.2963
Industrial/Manufacturing	sq. ft.	0.0000120	\$0.0004	\$0.0065
Church/Non-Profit	sq. ft.	0.0000624	\$0.0023	\$0.0338
Education	students	0.0090822	\$0.3352	\$4.9178
Special Public Facilities	sq. ft.	0.0000408	\$0.0015	\$0.0221

Exhibit 3-41 calculates the capital cost per unit of development for ladders responding to EMS incidents. The incident rate (from Exhibit 3-39) is multiplied by the ladder capital cost per EMS incident (\$10.27 from Exhibit 3-34). The result is then multiplied by the ten-year average useful life of a ladder to calculate the capital cost per unit of development for ladders.

Exhibit 3-41. Ladder Cost of Response to EMS Incidents, per Unit of Development

Land Use Type	Unit of Development	Annual EMS Incident Rate	Ladder Cost at \$10.27 per EMS Incident, per Unit of Development	Ladder Life Cost per Unit of Development at 10-Year life
Single-Family Residential	d.u.	0.2014872	\$2.07	\$37.2644
Multi-Family Residential	d.u.	0.2766778	\$2.84	\$51.1706
Hotel/Motel/Resort	room	0.1251726	\$1.29	\$23.1502
Medical Care Facility	bed	0.3596449	\$3.70	\$66.5151
Office	sq. ft.	0.0000569	\$0.00	\$0.0105
Medical/Dental Office	sq. ft.	0.0002775	\$0.00	\$0.0513
Retail	sq. ft.	0.0002656	\$0.00	\$0.0491
Leisure Facilities	sq. ft.	0.0001374	\$0.00	\$0.0254
Restaurant/Lounge	sq. ft.	0.0005471	\$0.01	\$0.1012
Industrial/Manufacturing	sq. ft.	0.0000120	\$0.00	\$0.0022
Church/Non-Profit	sq. ft.	0.0000624	\$0.00	\$0.0115
Education	students	0.0090822	\$0.09	\$1.6797
Special Public Facilities	sq. ft.	0.0000408	\$0.00	\$0.0075

Exhibit 3-42 calculates the capital cost per unit of development for aid units responding to EMS incidents. The incident rate (from Exhibit 3-39) is multiplied by the aid unit capital cost per EMS incident (\$14.07 from Exhibit 3-34). The result is then multiplied by the ten-year average useful life of an aid vehicle to calculate the capital cost per unit of development for aid units.

Exhibit 3-42. Aid Vehicle Cost of Response to EMS Incidents, per Unit of Development

Land Use Type	Unit of Development	Annual EMS Incident Rate	Aid Vehicle Cost at \$14.07 per EMS Incident, per Unit of Development	Aid Vehicle Life Cost per Unit of Development at 10-Year life
Single-Family Residential	d.u.	0.2014872	\$2.8355	\$28.3549
Multi-Family Residential	d.u.	0.2766778	\$3.8936	\$38.9364
Hotel/Motel/Resort	room	0.1251726	\$1.7615	\$17.6153
Medical Care Facility	bed	0.3596449	\$5.0612	\$50.6122
Office	sq. ft.	0.0000569	\$0.0008	\$0.0080
Medical/Dental Office	sq. ft.	0.0002775	\$0.0039	\$0.0390
Retail	sq. ft.	0.0002656	\$0.0037	\$0.0374
Leisure Facilities	sq. ft.	0.0001374	\$0.0019	\$0.0193
Restaurant/Lounge	sq. ft.	0.0005471	\$0.0077	\$0.0770
Industrial/Manufacturing	sq. ft.	0.0000120	\$0.0002	\$0.0017
Church/Non-Profit	sq. ft.	0.0000624	\$0.0009	\$0.0088
Education	students	0.0090822	\$0.1278	\$1.2781
Special Public Facilities	sq. ft.	0.0000408	\$0.0006	\$0.0057

Exhibit 3-43 calculates the capital cost per unit of development for hazardous materials vehicles responding to EMS incidents. The incident rate (from Exhibit 3-39) is multiplied by the hazardous materials vehicle capital cost per EMS incident (\$0.03 from Exhibit 3-34). The result is then multiplied by the 21-year average useful life of a hazardous materials vehicles to calculate the capital cost per unit of development for hazardous materials vehicles.

Exhibit 3-43. Hazardous Materials Vehicle Cost of Response to EMS Incidents, per Unit of Development

Land Use Type	Unit of Development	Annual EMS Incident Rate	Hazardous Materials Vehicle Cost at \$0.03 per EMS Incident, per Unit of Development	Hazardous Materials Vehicle Life Cost per Unit of Development at 21-Year life
Single-Family Residential	d.u.	0.2014872	\$0.0063	\$0.1328
Multi-Family Residential	d.u.	0.2766778	\$0.0087	\$0.1824
Hotel/Motel/Resort	room	0.1251726	\$0.0039	\$0.0825
Medical Care Facility	bed	0.3596449	\$0.0113	\$0.2371
Office	sq. ft.	0.0000569	\$0.0000	\$0.0000
Medical/Dental Office	sq. ft.	0.0002775	\$0.0000	\$0.0002
Retail	sq. ft.	0.0002656	\$0.0000	\$0.0002
Leisure Facilities	sq. ft.	0.0001374	\$0.0000	\$0.0001
Restaurant/Lounge	sq. ft.	0.0005471	\$0.0000	\$0.0004
Industrial/Manufacturing	sq. ft.	0.0000120	\$0.0000	\$0.0000
Church/Non-Profit	sq. ft.	0.0000624	\$0.0000	\$0.0000
Education	students	0.0090822	\$0.0003	\$0.0060
Special Public Facilities	sq. ft.	0.0000408	\$0.0000	\$0.0000

Exhibit 3-44 calculates the capital cost per unit of development for brush trucks responding to EMS incidents. The incident rate (from Exhibit 3-39) is multiplied by the brush trucks capital cost per EMS incident (\$0.00 from Exhibit 3-34). The result is then multiplied by the ten-year average useful life of a brush truck to calculate the capital cost per unit of development for brush trucks.

Exhibit 3-44. Brush Truck Cost of Response to EMS Incidents, per Unit of Development

Land Use Type	Unit of Development	Annual EMS Incident Rate	Brush Truck Cost at \$0.00 per EMS Incident, per Unit of Development	Brush Truck Life Cost per Unit of Development at 10-Year Life
Single-Family Residential	d.u.	0.2014872	\$0.0000	\$0.0000
Multi-Family Residential	d.u.	0.2766778	\$0.0000	\$0.0000
Hotel/Motel/Resort	room	0.1251726	\$0.0000	\$0.0000
Medical Care Facility	bed	0.3596449	\$0.0000	\$0.0000
Office	sq. ft.	0.0000569	\$0.0000	\$0.0000
Medical/Dental Office	sq. ft.	0.0002775	\$0.0000	\$0.0000
Retail	sq. ft.	0.0002656	\$0.0000	\$0.0000
Leisure Facilities	sq. ft.	0.0001374	\$0.0000	\$0.0000
Restaurant/Lounge	sq. ft.	0.0005471	\$0.0000	\$0.0000
Industrial/Manufacturing	sq. ft.	0.0000120	\$0.0000	\$0.0000
Church/Non-Profit	sq. ft.	0.0000624	\$0.0000	\$0.0000
Education	students	0.0090822	\$0.0000	\$0.0000
Special Public Facilities	sq. ft.	0.0000408	\$0.0000	\$0.0000

Exhibit 3-45 calculates the capital cost per unit of development for command vehicles responding to EMS incidents. The incident rate (from Exhibit 3-39) is multiplied by the command vehicle capital cost per EMS incident (\$2.35 from Exhibit 3-34). The result is then multiplied by the ten-year average useful life of a command vehicle to calculate the capital cost per unit of development for command vehicles.

Exhibit 3-45. Command Vehicle Cost of Response to EMS Incidents, per Unit of Development

Land Use Type	Unit of Development	Annual EMS Incident Rate	Command Vehicle Cost at \$2.35 per EMS Incident, per Unit of Development	Command Vehicle Life Cost per Unit of Development at 10-Year Life
Single-Family Residential	d.u.	0.2014872	\$0.4742	\$4.7423
Multi-Family Residential	d.u.	0.2766778	\$0.6512	\$6.5120
Hotel/Motel/Resort	room	0.1251726	\$0.2946	\$2.9461
Medical Care Facility	bed	0.3596449	\$0.8465	\$8.4648
Office	sq. ft.	0.0000569	\$0.0001	\$0.0013
Medical/Dental Office	sq. ft.	0.0002775	\$0.0007	\$0.0065
Retail	sq. ft.	0.0002656	\$0.0006	\$0.0063
Leisure Facilities	sq. ft.	0.0001374	\$0.0003	\$0.0032
Restaurant/Lounge	sq. ft.	0.0005471	\$0.0013	\$0.0129
Industrial/Manufacturing	sq. ft.	0.0000120	\$0.0000	\$0.0003
Church/Non-Profit	sq. ft.	0.0000624	\$0.0001	\$0.0015
Education	students	0.0090822	\$0.0214	\$0.2138
Special Public Facilities	sq. ft.	0.0000408	\$0.0001	\$0.0010

Exhibit 3-46 calculates the capital cost per unit of development for dive apparatus responding to EMS incidents. The incident rate (from Exhibit 3-39) is multiplied by the dive apparatus capital cost per EMS incident (\$0.52 from Exhibit 3-34). The result is then multiplied by the 21-year average useful life of a dive apparatus to calculate the capital cost per unit of development for dive apparatus.

Exhibit 3-46. Dive Apparatus Cost of Response to EMS Incidents, per Unit of Development

Land Use Type	Unit of Development	Annual EMS Incident Rate	Dive Apparatus Cost at \$0.52 per EMS Incident, per Unit of Development	Dive Apparatus Life Cost per Unit of Development at 21-Year Life
Single-Family Residential	d.u.	0.2014872	\$0.1047	\$2.1987
Multi-Family Residential	d.u.	0.2766778	\$0.1438	\$3.0192
Hotel/Motel/Resort	room	0.1251726	\$0.0650	\$1.3659
Medical Care Facility	bed	0.3596449	\$0.1869	\$3.9245
Office	sq. ft.	0.0000569	\$0.0000	\$0.0006
Medical/Dental Office	sq. ft.	0.0002775	\$0.0001	\$0.0030
Retail	sq. ft.	0.0002656	\$0.0001	\$0.0029
Leisure Facilities	sq. ft.	0.0001374	\$0.0001	\$0.0015
Restaurant/Lounge	sq. ft.	0.0005471	\$0.0003	\$0.0060
Industrial/Manufacturing	sq. ft.	0.0000120	\$0.0000	\$0.0001
Church/Non-Profit	sq. ft.	0.0000624	\$0.0000	\$0.0007
Education	students	0.0090822	\$0.0047	\$0.0991
Special Public Facilities	sq. ft.	0.0000408	\$0.0000	\$0.0004

Exhibit 3-47 calculates the capital cost per unit of development for service vehicles. The incident rate (from Exhibit 3-39) is multiplied by the service vehicle capital cost per incident (\$0.52 from Exhibit 3-34). The result is then multiplied by the 15-year average useful life of a service vehicle to calculate the capital cost per unit of development for service vehicles.

Exhibit 3-47. Service Vehicle Cost per EMS Incident, per Unit of Development

Land Use Type	Unit of Development	Annual EMS Incident Rate	Service Vehicle Cost at \$0.52 per Incident, per Unit of Development	Service Vehicle Life Cost per Unit of Development at 15-Year Life
Single-Family Residential	d.u.	0.2014872	\$0.1312	\$1.9681
Multi-Family Residential	d.u.	0.2766778	\$0.1802	\$2.7025
Hotel/Motel/Resort	room	0.1251726	\$0.0815	\$1.2226
Medical Care Facility	bed	0.3596449	\$0.2342	\$3.5129
Office	sq. ft.	0.0000569	\$0.0000	\$0.0006
Medical/Dental Office	sq. ft.	0.0002775	\$0.0002	\$0.0027
Retail	sq. ft.	0.0002656	\$0.0002	\$0.0026
Leisure Facilities	sq. ft.	0.0001374	\$0.0001	\$0.0013
Restaurant/Lounge	sq. ft.	0.0005471	\$0.0004	\$0.0053
Industrial/Manufacturing	sq. ft.	0.0000120	\$0.0000	\$0.0001
Church/Non-Profit	sq. ft.	0.0000624	\$0.0000	\$0.0006
Education	students	0.0090822	\$0.0059	\$0.0887
Special Public Facilities	sq. ft.	0.0000408	\$0.0000	\$0.0004

Exhibit 3-48 calculates the capital cost per unit of development for staff vehicles. The incident rate (from Exhibit 3-39) is multiplied by the staff vehicle capital cost per incident (\$1.59 from Exhibit 3-10). The result is then multiplied by the 15-year average useful life of a staff vehicles to calculate the capital cost per unit of development for staff vehicles.

Exhibit 3-48. Staff Vehicles Cost of Response to EMS Incident, per Unit of Development

Land Use Type	Unit of Development	Annual EMS Incident Rate	Staff Vehicle Cost at \$1.59 per Incident, per Unit of Development	Staff Vehicle Life Cost per Unit of Development at 15-Year Life
Single-Family Residential	d.u.	0.2014872	\$0.3194	\$4.7909
Multi-Family Residential	d.u.	0.2766778	\$0.4386	\$6.5788
Hotel/Motel/Resort	room	0.1251726	\$0.1984	\$2.9763
Medical Care Facility	bed	0.3596449	\$0.5701	\$8.5515
Office	sq. ft.	0.0000569	\$0.0001	\$0.0014
Medical/Dental Office	sq. ft.	0.0002775	\$0.0004	\$0.0066
Retail	sq. ft.	0.0002656	\$0.0004	\$0.0063
Leisure Facilities	sq. ft.	0.0001374	\$0.0002	\$0.0033
Restaurant/Lounge	sq. ft.	0.0005471	\$0.0009	\$0.0130
Industrial/Manufacturing	sq. ft.	0.0000120	\$0.0000	\$0.0003
Church/Non-Profit	sq. ft.	0.0000624	\$0.0001	\$0.0015
Education	students	0.0090822	\$0.0144	\$0.2160
Special Public Facilities	sq. ft.	0.0000408	\$0.0001	\$0.0010

Exhibit 3-49 calculates the capital cost per unit of development for utility vehicles. The incident rate (from Exhibit 3-39) is multiplied by the utility vehicle capital cost per incident (\$2.02 from Exhibit 3-10). The result is then multiplied by the 15-year average useful life of a utility vehicle to calculate the capital cost per unit of development for utility vehicles.

Exhibit 3-49. Utility Vehicle Cost of Response to EMS Incident, per Unit of Development

Land Use Type	Unit of Development	Annual EMS Incident Rate	Utility Vehicle Cost at \$2.02 per Incident, per Unit of Development	Utility Vehicle Life Cost per Unit of Development at 15-Year Life
Single-Family Residential	d.u.	0.2014872	\$0.4079	\$6.1182
Multi-Family Residential	d.u.	0.2766778	\$0.5601	\$8.4014
Hotel/Motel/Resort	room	0.1251726	\$0.2534	\$3.8009
Medical Care Facility	bed	0.3596449	\$0.7281	\$10.9208
Office	sq. ft.	0.0000569	\$0.0001	\$0.0017
Medical/Dental Office	sq. ft.	0.0002775	\$0.0006	\$0.0084
Retail	sq. ft.	0.0002656	\$0.0005	\$0.0081
Leisure Facilities	sq. ft.	0.0001374	\$0.0003	\$0.0042
Restaurant/Lounge	sq. ft.	0.0005471	\$0.0011	\$0.0166
Industrial/Manufacturing	sq. ft.	0.0000120	\$0.0000	\$0.0004
Church/Non-Profit	sq. ft.	0.0000624	\$0.0001	\$0.0019
Education	students	0.0090822	\$0.0184	\$0.2758
Special Public Facilities	sq. ft.	0.0000408	\$0.0001	\$0.0012

Exhibit 3-50 calculates the capital cost per unit of development for small utility vehicles. The incident rate (from Exhibit 3-39) is multiplied by the small utility vehicle capital cost per incident (\$0.41 from Exhibit 3-10). The result is then multiplied by the 15-year average useful life of a small utility vehicle to calculate the capital cost per unit of development for small utility vehicles.

Exhibit 3-50. Small Utility Vehicle Cost of Response to EMS Incident, per Unit of Development

Land Use Type	Unit of Development	Annual EMS Incident Rate	Small Utility Vehicle Cost at \$0.41 per Incident, per Unit of Development	Small Utility Vehicle Life Cost per Unit of Development at 15-Year Life
Single-Family Residential	d.u.	0.2014872	\$0.0819	\$1.2281
Multi-Family Residential	d.u.	0.2766778	\$0.1124	\$1.6864
Hotel/Motel/Resort	room	0.1251726	\$0.0509	\$0.7630
Medical Care Facility	bed	0.3596449	\$0.1461	\$2.1921
Office	sq. ft.	0.0000569	\$0.0000	\$0.0003
Medical/Dental Office	sq. ft.	0.0002775	\$0.0001	\$0.0017
Retail	sq. ft.	0.0002656	\$0.0001	\$0.0016
Leisure Facilities	sq. ft.	0.0001374	\$0.0001	\$0.0008
Restaurant/Lounge	sq. ft.	0.0005471	\$0.0002	\$0.0033
Industrial/Manufacturing	sq. ft.	0.0000120	\$0.0000	\$0.0001
Church/Non-Profit	sq. ft.	0.0000624	\$0.0000	\$0.0004
Education	students	0.0090822	\$0.0037	\$0.0554
Special Public Facilities	sq. ft.	0.0000408	\$0.0000	\$0.0002

Exhibit 3-51 calculates the capital cost per unit of development for other apparatus/equipment. The incident rate (from Exhibit 3-39) is multiplied by the other apparatus/equipment capital cost per incident (\$0.48 from Exhibit 3-10). The result is then multiplied by the 15-year average useful life of other apparatus/equipment to calculate the capital cost per unit of development for other apparatus/equipment.

Exhibit 3-51. Other Apparatus/Equipment Cost of Response to EMS Incident, per Unit of Development

Land Use Type	Unit of Development	Annual EMS Incident Rate	Other Apparatus/Equip Cost at \$0.48 per Incident, per Unit of Development	Other Apparatus/Equip Life Cost per Unit of Development at 15-Year Life
Single-Family Residential	d.u.	0.2014872	\$0.0964	\$1.4461
Multi-Family Residential	d.u.	0.2766778	\$0.1324	\$1.9857
Hotel/Motel/Resort	room	0.1251726	\$0.0599	\$0.8984
Medical Care Facility	bed	0.3596449	\$0.1721	\$2.5812
Office	sq. ft.	0.0000569	\$0.0000	\$0.0004
Medical/Dental Office	sq. ft.	0.0002775	\$0.0001	\$0.0020
Retail	sq. ft.	0.0002656	\$0.0001	\$0.0019
Leisure Facilities	sq. ft.	0.0001374	\$0.0001	\$0.0010
Restaurant/Lounge	sq. ft.	0.0005471	\$0.0003	\$0.0039
Industrial/Manufacturing	sq. ft.	0.0000120	\$0.0000	\$0.0001
Church/Non-Profit	sq. ft.	0.0000624	\$0.0000	\$0.0004
Education	students	0.0090822	\$0.0043	\$0.0652
Special Public Facilities	sq. ft.	0.0000408	\$0.0000	\$0.0003

Exhibit 3-52 calculates the capital cost per unit of development for fire stations that house EMS apparatus. The EMS incident rate (from Exhibit 3-39) is multiplied by the fire station capital cost per fire/other and EMS incident (\$49.06 from Exhibit 3-12). The result is then multiplied by the 50-year useful life of a fire station to calculate the capital cost per unit of development for fire stations.

Exhibit 3-52. Fire Station Cost of Response to EMS Incident, per Unit of Development

Land Use Type	Unit of Development	Annual EMS Incident Rate	Fire Station Cost at \$49.06 per Incident, per Unit of Development	Fire Station Life Cost per Unit of Development at 50-Year Life
Single-Family Residential	d.u.	0.2014872	\$9.8847	\$494.24
Multi-Family Residential	d.u.	0.2766778	\$13.5735	\$678.68
Hotel/Motel/Resort	room	0.1251726	\$6.1408	\$307.04
Medical Care Facility	bed	0.3596449	\$17.6438	\$882.19
Office	sq. ft.	0.0000569	\$0.0028	\$0.14
Medical/Dental Office	sq. ft.	0.0002775	\$0.0136	\$0.68
Retail	sq. ft.	0.0002656	\$0.0130	\$0.65
Leisure Facilities	sq. ft.	0.0001374	\$0.0067	\$0.34
Restaurant/Lounge	sq. ft.	0.0005471	\$0.0268	\$1.34
Industrial/Manufacturing	sq. ft.	0.0000120	\$0.0006	\$0.03
Church/Non-Profit	sq. ft.	0.0000624	\$0.0031	\$0.15
Education	students	0.0090822	\$0.4456	\$22.28
Special Public Facilities	sq. ft.	0.0000408	\$0.0020	\$0.10

Exhibit 3-53 combines the capital costs of all types of apparatus and station (from Exhibit 3-40 through Exhibit 3-52) to show the total capital cost of responses to EMS incidents for one unit of single-family residential development.

Exhibit 3-53. Example of Calculation of Total Cost of Response to EMS Incidents for a Single-Family Residential Dwelling Unit

Cost Component	Cost
Engine	\$109.10
Ladder	\$37.26
Aid Unit	\$28.35
Hazardous Materials Vehicle	\$0.13
Brush Truck	\$0.00
Command Vehicle	\$4.74
Dive Apparatus	\$2.20
Service Vehicle	\$1.97
Staff Vehicle	\$4.79
Utility Vehicle	\$6.12
Small Utility Vehicle	\$1.23
Other Equipment/Apparatus	\$1.45
Fire Station	\$494.24
Total	\$691.58

This example is repeated for each land use to combine its capital costs of all types of apparatus and stations in Exhibit 3-54.

Exhibit 3-54. Total Capital Cost of Response to EMS Incidents, per Unit of Development

Land Use Type	Unit of Development	EMS Incidents: Life Cost per Unit of Development of All Apparatus & Stations
Single-Family Residential	d.u.	\$691.58
Multi-Family Residential	d.u.	\$949.66
Hotel/Motel/Resort	room	\$429.64
Medical Care Facility	bed	\$1,234.44
Office	sq. ft.	\$0.20
Medical/Dental Office	sq. ft.	\$0.95
Retail	sq. ft.	\$0.91
Leisure Facilities	sq. ft.	\$0.47
Restaurant/Lounge	sq. ft.	\$1.88
Industrial/Manufacturing	sq. ft.	\$0.04
Church/Non-Profit	sq. ft.	\$0.21
Education	students	\$31.17
Special Public Facilities	sq. ft.	\$0.14

3.4.12 Formula F-12: Total Cost per Unit of Development

The fire/other and EMS costs per unit of development are combined in Exhibit 3-55 to determine the total fire/other and EMS cost per dwelling unit or nonresidential square foot.

$$\text{Formula F-12:} \quad \begin{array}{c} \text{Fire Incident Capital Cost} \\ \text{Per Unit of Development} \end{array} \times \begin{array}{c} \text{EMS Incident Capital Cost} \\ \text{Per Unit of Development} \end{array} = \begin{array}{c} \text{Total Cost of Response Per} \\ \text{Unit of Development} \end{array}$$

There are no new variables used in formula F-12. Both variables were developed in previous formulas and exhibits.

Exhibit 3-55. Total Cost of Response to All Incidents by Land Use Category

Land Use Type	Unit of Development	Fire/Other Incident Life Cost of All Apparatus & Station (Impact Cost of Fire/Other)	EMS Incident Life Cost of All Apparatus & Station (Impact Cost of EMS)	Total Cost of Response to EMS, Fire, & Other Incidents Per Unit of Development by Land Use Category
Single-Family Residential	d.u.	\$189.41	\$691.58	\$880.99
Multi-Family Residential	d.u.	\$260.00	\$949.66	\$1,209.66
Hotel/Motel/Resort	room	\$293.17	\$429.64	\$722.82
Medical Care Facility	bed	\$961.85	\$1,234.44	\$2,196.29
Office	sq. ft.	\$0.09	\$0.20	\$0.29
Medical/Dental Office	sq. ft.	\$0.33	\$0.95	\$1.28
Retail	sq. ft.	\$0.47	\$0.91	\$1.38
Leisure Facilities	sq. ft.	\$0.41	\$0.47	\$0.89
Restaurant/Lounge	sq. ft.	\$1.12	\$1.88	\$3.00
Industrial/Manufacturing	sq. ft.	\$0.06	\$0.04	\$0.10
Church/Non-Profit	sq. ft.	\$0.28	\$0.21	\$0.50
Education	students	\$27.32	\$31.17	\$58.50
Special Public Facilities	sq. ft.	\$0.13	\$0.14	\$0.27

3.5 CAPITAL PROJECTS ELIGIBLE FOR IMPACT FEES

As discussed in Section 3.2, the City is expected to grow during the period of 2023 to 2029. This growth, and the new development associated with it, will create increased demands for fire and emergency response services. This chapter first projects increased apparatus needs and the proportion of those needs that are related to expected growth within the City only. This is to identify the proportion of capital facility costs that can be funded with City fire impact fee revenues. Following the summarization of apparatus needs is a summarization of growth-related projects at stations needed to increase operational capacity for emergency response.

3.5.1 Projected Growth in the RRFA Service Area

Exhibit 3-56 presents estimated population in the RRFA in 2022 as well as net population growth projections for the years 2023 through 2029.²⁴ The total service area population is expected to grow by 7,057 residents, of which 6,053 are City residents. This is 86% of the total population growth forecasted for the RRFA service area.

Exhibit 3-56. RRFA Service Area Population and Projected Growth

Description	2022	Growth 2023-2029
City of Renton Population	107,900	6,053
KCFD 25 Population	7,947	87
KCFD 40 Population	22,148	917
Total Service Area Population	137,995	7,057
City of Renton Share of Population Growth		86%

3.5.2 2029 Incident Projections

The number of incidents in the service area is expected to grow with population. Exhibit 3-57 compares population estimates area to total emergency incidents for the years 2019 through 2022.²⁵ This study assumes that the average annual rate of growth in incidents per capita will continue. By 2029, the rate is assumed to be 0.1902.

²⁴ Source: City of Renton, Economic Development Division.

²⁵ Source: Renton RFA, 2019-2022 Annual Reports.

Exhibit 3-57. Total Incidents Per Capita, RRFA Service Area

Description	2019	2020	2021	2022
City of Renton Population	101,100	105,500	106,785	107,900
KCFD 25 Population	7,942	7,924	6,402	7,947
KCFD 40 Population	21,317	21,605	21,317	22,148
Total Service Area Population	130,359	135,029	134,504	137,995
Total Incidents	17,789	17,474	19,722	20,720
Total Incident per Capita	0.1365	0.1294	0.1466	0.1502

As shown in Exhibit 3-56, the City is projected to grow by 6,053 between 2023 and 2029. Exhibit 3-58 shows the projected number of annual incidents associated with this growth in population, using the projected incidents per capita rate for 2029.

Exhibit 3-58. Projection of Annual Incidents Associated with City of Renton Growth, 2029

Description	Value	Source
City of Renton Projected Population Growth, 2024-2029	6,053	RRFA Analysis of City of Renton Forecast
Incidents per Capita, 2029	0.1902	RRFA projection based on historic trend (2019-2022)
Annual Incidents Associated with City of Renton Population Growth	1,151	RRFA Calculation

3.5.3 Projected Growth-Related Apparatus Needs through 2029

In 2022, the RRFA operated with seven front-line engines, one front-line ladder and three front-line Aid Units. Exhibit 3-59 presents baseline responses per incident and average annual responses per front-line apparatus. Unlike the calculations in Chapter 3, these calculations combine both EMS and fire/other incidents to determine response rates per incident. This measure represents the total annual response capacity for each type of vehicle. For the purpose of projecting service demands in 2029, this analysis assumes the proportion of incidents by type (fire, EMS, etc.) will not change. This assumption is supported by analysis of incident data between 2019 and 2022.

Exhibit 3-59. Baseline Front-Line Apparatus Responses per Incident, 2022

Apparatus Type	Count of Front-Line Apparatus	Annual Responses	Annual Incidents	Response Rate per Incident	Annual Responses per Front-Line Apparatus
Engine	7	12,980		0.6264	1,854
Ladder	1	1,741		0.0840	1,741
Aid Unit	3	6,841		0.3302	2,280
Total			20,720		

Exhibit 3-60 calculates the number of additional apparatus needed to serve new growth projected in the City. First it calculated projected growth-related responses by apparatus type by multiplying the projected growth-related annual incidents from Exhibit 3-59 by the annual response rate per incident from Exhibit 3-60. Next, these growth-related responses are divided by the annual responses per front-line apparatus from Exhibit 3-60. It shows that RRFA will need 0.39 new engines, 0.06 new ladders and 0.17 new Aid Units to serve projected growth inside the City.

Exhibit 3-60. Projected Apparatus Need Associated with City of Renton Growth, 2024 - 2029

Apparatus Type	Annual Incidents Associated with Renton Population Growth, 2029	Response Rate per Incident	Projected Growth- Related Responses	Annual Responses per Front- Line Apparatus	Additional Front- Line Apparatus Needed to Serve Renton Growth, 2029
Engine		0.6264	721	1,854	0.39
Ladder		0.0840	97	1,741	0.06
Aid Unit		0.3302	380	2,280	0.17
Total	1,151				

Exhibit 3-61 shows the planned apparatus additions to fleet to address anticipated needs in the entire RRFA service area. It also calculates the percentage of these total planned additions to fleet that are associated with City growth-related needs. Exhibit 3-60 identifies the need for apparatus to respond to an additional 380 aid unit responses and 818 non-aid unit responses per year due to new growth. As discussed in the capital facilities plan, much of the growth in the RRFA service area will come in the form of infill development and increased density within the City. As the growth occurs, the RRFA intends to add additional apparatus units to address the anticipated increase in multi-story housing (ladder) and emergency medical calls for service (aid unit).

Exhibit 3-61. Impact Fee Eligible Costs Associated with Planned Additions to Fleet

Apparatus Type	Total Planned Additions to Fleet, 2024-2029	Additional Front-Line Apparatus Needed to Serve Renton Growth, 2029	Percentage Related to City of Renton Growth, 2024-2029	Unit Cost of Apparatus ²⁶	Impact Fee Eligible Costs	Cost of Future Reserve Capacity
Engine	0	0.00	86%	\$0	\$0	\$0
Ladder	1	0.44	86%	\$2,591,449	\$2,222,764	\$368,686
Aid Unit	1	0.17	86%	\$421,371	\$361,422	\$59,948

²⁶ Unit Cost of apparatus reflects estimated cost in 2025, the year of replacement.

3.5.4 System Improvement Costs Already Incurred

As discussed in Section 3.2, the RRFA has excess capacity at stations systemwide to accommodate increased emergency response staffing. Between 2024 and 2029, the RRFA intends to increase response operations staffing by 20% from 142 to 170 FTE systemwide. Exhibit 3-62 calculates the total station value associated the station capacity needed to accommodate this increase in response operations staffing, systemwide.

Exhibit 3-62. Value of Station Capacity Needed for Growth-Related Response Staffing Increases

Description	Value
A. Total station square feet in RRFA inventory (from Exhibit 3-4)	101,253.00
B. Total cost per building square foot (from Exhibit 3-11)	\$800.00
C. Total value of RRFA station inventory (A multiplied by B)	\$81,002,400.00
D. Baseline percentage of RRFA station capacity in use (from Exhibit 3-2)	63%
E. Value of station capacity in use (C multiplied by D)	\$50,825,035.29
F. Percent increase in response and EMS staffing, 2024-2029	20%
G. Value of increased in usage of station capacity (E multiplied by F)	\$10,021,837.95
H. Percentage of projected service area growth inside City of Renton (from Exhibit 3-56)	86%
I. Value of increased usage of station capacity needed to accommodate City of Renton growth (G multiplied by H)	\$8,596,030.19

Exhibit 3-63 shows the estimated debt service on RRFA capital facilities. The anticipated debt service for capital facilities does not exceed the total value of increased station capacity needed to accommodate response staffing needed to serve Renton growth (row I in Exhibit 3-62). Therefore, the entire amount of this debt service is impact fee eligible.²³

Exhibit 3-63. Impact Fee Eligible Costs Associated with System Improvements

Station Name	Address	Debt Service Payments 2024-2029
Fire Station 16/Maintenance		\$15,064,544

²⁷ Note that RCW 82.02.050(2) states that “...the financing for system improvements to serve new development ... cannot rely solely on impact fees.” Exhibit 3-66 identifies other revenue sources to be applied to comply with this requirement.

3.5.5 Summary of Impact Fee Eligible Project Costs

Exhibit 3-64 present RRFA’s capital cost for apparatus during the six-year period of 2024-2029. It includes both replacements to existing apparatus as well as fleet expansions necessitated by new growth.

Exhibit 3-64. Capital Costs for Apparatus, 2024-2029

Project Description	Quantity	Average Unit Cost 2024-2029	Total Cost in Year of Replacement	Percentage Related to City of Renton Growth, 2024-2029	Impact Fee Eligible Costs (2029)
Apparatus Replacements					
Engine	3	\$1,103,258	\$3,826,688	0%	\$0
Ladder	1	\$2,591,449	\$2,591,449	0%	\$0
Aid Unit	2	\$421,371	\$842,741	0%	\$0
HazMat Vehicle	0	N/A	\$0	0%	\$0
Brush Truck	1	\$354,413	\$354,413	0%	\$0
Command Vehicle	4	\$123,442	\$493,769	0%	\$0
Dive Apparatus	0	N/A	\$0	0%	\$0
Service Vehicle	1	\$110,086	\$110,086	0%	\$0
Staff Vehicle	2	\$40,845	\$81,689	0%	\$0
Utility Vehicle	0	N/A	\$0	0%	\$0
Sm. Utility Vehicle	0	N/A	\$0	0%	\$0
Other Apparatus/Equipment	3	N/A	\$135,332	0%	\$0
Apparatus Fleet Expansions					
Aerial	1	\$2,591,449	\$2,591,449	86%	\$2,222,764
Aid Unit	1	\$421,371	\$421,371	86%	\$361,422
Apparatus Total			\$7,622,299		\$2,584,186

Exhibit 3-65 presents RRFA’s capital facility costs for stations during the six-year period of 2024-2029. It includes debt service payments, and renovations for operational needs as well as the proportion of that cost that is reasonably related to serving new growth in the City of Renton.

Exhibit 3-65. Capital Facility Costs for Stations, 2024-2029

Project Description	Total Cost (2024-2029)	Percentage Related to City of Renton Growth	Impact Fee Eligible Costs
Station Debt Servicing			
Fire Station 16/ Maintenance Debt Service Payments	\$15,064,544	18%	\$2,711,618
Station Renovations for Operational Needs			
Admin Headquarters Facility Improvements	\$0	0%	\$0
Fire Station 11 Facility Improvements	\$571,225	0%	\$0
Fire Station 12 Facility Improvements	\$883,022	0%	\$0
Fire Station 13 Facility Improvements	\$852,489	0%	\$0
Fleet Shop Facility Improvements	\$0	0%	\$0
Fire Station 14 Current Facility Improvements	\$320,319	0%	\$0
Tower Facility Improvements	\$0	0%	\$0
OFM Facility Improvements	\$0	0%	\$0
Fire Station 15 Facility Improvements	\$0	0%	\$0
Fire Station 16 Current Facility Improvements	\$190,542	0%	\$0
Fire Station 16 Future Facility Improvements	\$0	0%	\$0
Future Fleet Shop Facility Improvements	\$0	0%	\$0
Fire Station 17 Facility Improvements	\$1,069	0%	\$0
Total Station Costs	\$17,883,211		\$2,711,618

3.6 IMPACT FEE RATE ADJUSTMENTS

Exhibit 3-66 summarizes total impact fee eligible costs and accounts for revenues that RRFA plans to use for funding a portion of impact fee eligible costs. The remaining impact fee eligible costs are \$5,074,209, or 96 percent of total impact fee eligible costs.

Exhibit 3-66. Impact Fee Eligible Costs Compared to Projected Impact Fee Revenues, 2024-2029

Description	Estimated Cost/Revenue
Total Impact Fee Eligible Costs (Apparatus + Stations)	\$5,295,804
Payments from Other Revenue Sources	\$221,594
Remaining Impact Fee Eligible Costs	\$5,074,209
Percentage of Impact Fee Eligible Costs to be Funded with Impact Fee Revenues	96%
Projected Impact Fee Revenues Assuming Renton Adopts Total Cost Per Unit of Development ²⁸	\$10,593,583
Projected Revenues in Excess of Remaining Impact Fee Eligible Costs	\$5,519,373
Impact Fee Eligible Costs as a Percentage of Maximum Projected Revenues	48%

Also shown in Exhibit 3-62 are projected impact fee revenues, assuming the city implements an impact fee schedule equal to the full capital costs per unit of development shown in Exhibit 3-55.²⁹ Remaining impact fee eligible costs amount to about 48 percent of these projected revenues. Therefore, to avoid collecting more impact fee revenue than impact fee eligible capital costs, the full capital costs per unit of development are multiplied by 48 percent to determine the fire impact fee rate.

²⁸ Assumes City of Renton implements an impact fee schedule equal to the full capital costs per unit of development shown in Exhibit 3-55.

²⁹ Projected impact fee revenues are based on projections provided by the City of Renton and contained within the "Current Key Development (May 2023)" as shown in Appendix A.

Exhibit 3-67. 2022 RRFA Fire Impact Fee Rate Schedule

Land Use	Unit	Total Cost of Response Per Unit of Development	Percentage Needed for Eligible Costs	Fire Impact Fee
Single-Family Residential	d.u.	\$880.99	48%	\$421.98
Multi-Family Residential	d.u.	\$1,209.66	48%	\$579.41
Hotel/Motel/Resort	room	\$722.82	48%	\$346.22
Medical Care Facility	bed	\$2,196.29	48%	\$1,052.00
Office	sq. ft.	\$0.29	48%	\$0.14
Medical/Dental Office	sq. ft.	\$1.28	48%	\$0.61
Retail	sq. ft.	\$1.38	48%	\$0.66
Leisure Facilities	sq. ft.	\$0.89	48%	\$0.42
Restaurant/Lounge	sq. ft.	\$3.00	48%	\$1.44
Industrial/Manufacturing	sq. ft.	\$0.10	48%	\$0.05
Church/Non-Profit	sq. ft.	\$0.50	48%	\$0.24
Education	students	\$58.50	48%	\$28.02
Special Public Facilities	sq. ft.	\$0.27	48%	\$0.13

RCW 82.02.050(2) requires that “...the financing for system improvements to serve new development ... cannot rely solely on impact fees.” As shown in Exhibit 3-67, the remaining impact fee eligible costs used as the basis for the impact fee calculation amount to just 48 percent of total impact fee eligible costs.

Therefore, the rates in Exhibit 3-67, which are based on only 48 percent of total impact fee eligible costs, comply with RCW82.02.050(2).

[illegible]