Gainesville
Florida

Growth and Expansion Feasibility Master Plan 2021

ESCI Emergency Services Consulting International

Providing Expertise and Guidance that Enhances Community Safety

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ACKNOWLEDGMENTS

Emergency Services Consulting International wishes to extend its sincere appreciation to the Gainesville City Commission, its dedicated staff, and the neighbors they serve as well as specifically recognizing the following individuals. Without their input, tours, and feedback, completion of this report would not have been possible.

City Commission

Lauren Poe
Mayor (At Large)

Gigi Simmons
Commissioner (District I)

Harvey Ward
Commissioner (District II)

David Arreola
Mayor- Pro Tem, Commissioner (District III)

Adrian Hayes-Santos
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Gail Johnson
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City Manager

Fire Rescue Department

Joseph Dixon
Fire Chief

Stephen Hesson
Assistant Chief

Shawn Hillhouse
Deputy Chief

Sean Campbell
District Chief

Jason Hendricks
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Kathy Steidley
Admin Asst to Fire Chief

Marjorie Houston
Senior Account Clerk

Artie Chestnut
GFR IT

Danny Williams
GFR IT

Others

Ed Gable
Facilities Manager

David Risor
Assistant Facilities Manager

...and the firefighters and staff of the City of Gainesville Fire Rescue Department, who selflessly serve their neighbors and visitors with compassion and professionalism.

EXECUTIVE SUMMARY

Project Overview

In February 2021, the City of Gainesville retained Emergency Services Consulting International (ESCI) to conduct a Growth & Expansion Feasibility Master Plan for the Gainesville Fire Rescue (GFR) department. ESCI began this study in Spring, 2021 with a project kick-off meeting to ensure a full understanding of department and city needs and develop the project timeline. Project team members then reviewed considerable information submitted by GFR staff, including historical incident data, demographic data, local hazard mitigation studies, capital assets and maintenance programs, finance data, and population and economic growth projections. This data review was followed by multiple site visits to gather additional information about GFR and its neighbors. A team of architects and engineers visited all GFR facilities and held extensive discussions throughout the week on site with various GFR members to both quantify issues with existing facilities and determine how best to meet future needs. A team of fire service consultants comprised of former fire chiefs then visited with GFR staff over several days to ground truth preliminary findings from the data review.

ESCI and GFR team members held biweekly meetings as well as other offline discussions throughout the project to ensure that the ESCI team did not miss anything, and that conclusions and recommendations were based on a sound understanding of all operational and administrative factors affecting the department.

The Fire Rescue Growth & Expansion Feasibility Master Plan provides GFR with a detailed analysis of current resource deployment as it applies to fixed facilities, including apparatus and personnel assigned to its nine fire stations. It is designed to assist GFR with quantifying current service delivery, evaluating service delivery and response performance, and developing strategies to optimize facility location decisions that will meet anticipated needs and resultant future service demand. Further, the study provides the city with a conceptual facility design and construction cost as well as a proposed, prioritized plan to replace existing facilities. A financial analysis using the decision unit concept is provided that will give GFR and city management an idea of the relative cost over each of the next five years of adding various resources, whether individual personnel or fully staffed units, up to and including fully staffed and equipped fire stations.

The project is documented in four separate sections. The most important part of the study consists of three components, beginning with an *Evaluation of Current Conditions*. In this step, ESCI reviewed existing facilities and conducted a detailed analysis of current GFR service delivery and response performance. These observations and findings are compared with industry standards and best practices, accompanied by recommendations for changes where needed.

The next section of the study documents *Growth and Expansion Considerations*. ESCI uses a combination of historical population data, census information, comprehensive plans, and past incident history to project anticipated future workload and identify community risk. A station location optimization study, including traffic calming, was conducted to identify either existing or potential locations that would best position GFR response relative to current and future service demand which city planners believe is most likely to be vertical with some lateral expansion. A space needs analysis was completed and the ESCI team offered some thoughts on modernization versus replacement of facilities followed by a conceptual fire station plan based upon extensive discussion with GFR staff.

The third section of the report uses the information gathered in the prior two sections as well as financial data found in Appendix B to identify and evaluate *Recommendations and Financial Impacts* to meet long-range needs. Specifically, ESCI provides GFR and city leadership with the financial basis for cost projections, a notional facilities master plan and lastly, other recommendations and strategies for consideration. The approaches may include modification or replacement of existing facilities, relocation of current stations, and potential locations of future stations based upon the station optimization study. The notional facilities master plan addresses all facility needs, not just fire stations, and includes the Public Safety Hub concept.

The final section of the study, Appendices A-F, contains a great deal of supporting data and information that GFR may find useful as it develops a final implementation plan. This section provides a series of appendices covering the following subjects: Development of Future Service Demand Model, Financial Analysis and Status Quo Projection, Current Staffing Analysis, Capital Apparatus Inventory, and the detailed Capital Facility Inventory. ESCI hopes that our analysis and recommendations will assist the City of Gainesville and Gainesville Fire Rescue in successfully navigating any unanticipated negative impacts, and that the implementation of our recommendations will ensure the continued provision of high quality and efficient fire department services well into the future.

Assessment of Existing Facilities

A comprehensive survey of each GFR facility can be found in Appendix D. Given that the average age of the City-owned facilities is approximately 44 years, the intuitive understanding of facility condition and remaining useful life is fair to poor at best. A snapshot of the facility assessments is presented below:

Station/Facility	Condition				Notes/Comments
	Exceptional	Good	Fair	Poor	
Fire Station # 1	X				Newest Facility
Logistics-Supply Warehouse	X				Co-Location w/ Station 1
Fire Station # 2				X	46-Year-Old Facility
Fire Station # 3				X	61-Year-Old Facility
Training Tower - Burn Bldg.			X		Co-Location w/ Station 3
Fire Station # 4			X		57-Year-Old Facility

Fire Station # 5				X	56-Year-Old Facility
Fire Station # 6	X				3-Year-Old Facility (Airport Authority)
Fire Station # 7				X	40-Year-Old Facility
Fire Station # 8		X			10-Year-Old Facility
Fire Station # 9				X	Temporary Facility
Annex – Bldg. A				X	45-Year-Old Facility
Annex – Bldg. B				X	45-Year-Old Facility
Annex – Bldg. C				X	45-Year-Old Facility
Modular Training Classroom			X		Temporary Facility
Safety City		X			Educational Campus Facility

In summary, many of GFR's facilities are in the "Fair" to "Poor" condition. While understanding the current facility conditions is one important consideration, another key factor in understanding facility usefulness is that design requirements for this facility type have changed over the life of the facility which presents a compound assessment concern. Many years of service, constant and sustained heavy use as well as environmental exposure suggest that the assessment outcome is neither atypical nor unusual. Additionally, given the specific use (emergency services), code-mandated design requirements have escalated since the original date of service to assure that the services expected are available. As with any similar facility, there is a time when continued investment of resources is likely not prudent.

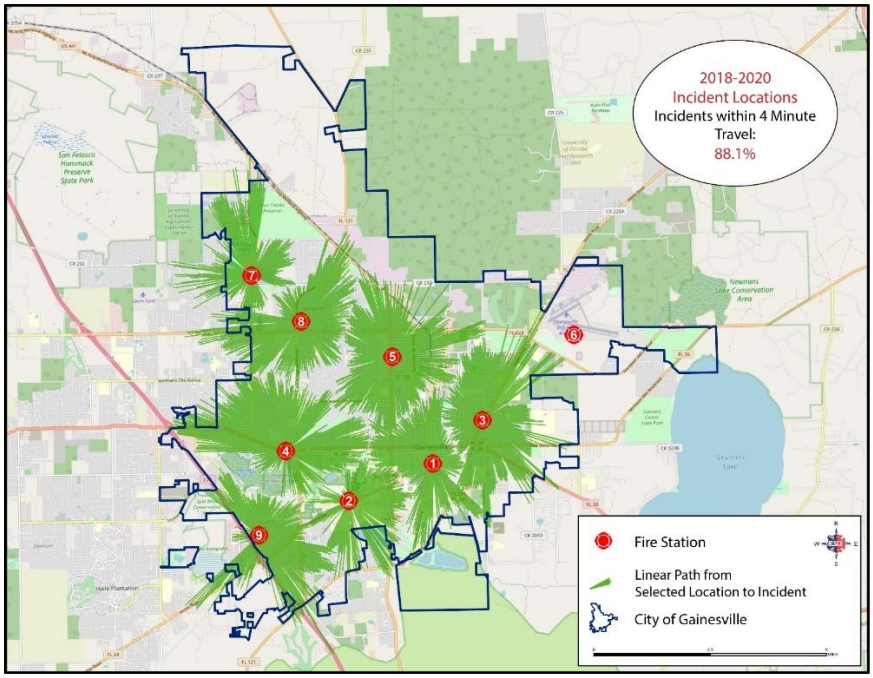
Fire Station Location Optimization

At the heart of this growth and expansion feasibility study is optimal fire station location and the deployment strategy used to address current and future workload. Since many current stations will require a substantial investment in replacement cost, the question of whether it is better to reconstruct on the current sites versus alternative locations is a fundamental question. To assist GFR in evaluating the effectiveness of the current fire station locations, a GIS model was constructed using current deployment strategy as a baseline for comparison to subsequent optimization models. The model accounted for current and future traffic calming devices that the city is currently installing. Throughout this process, GFR staff was updated and provided input in an iterative process resulting in the final deployment model, suggested station locations, and the order in which stations would be relocated.

The baseline model simulates real world performance using general parameters that:

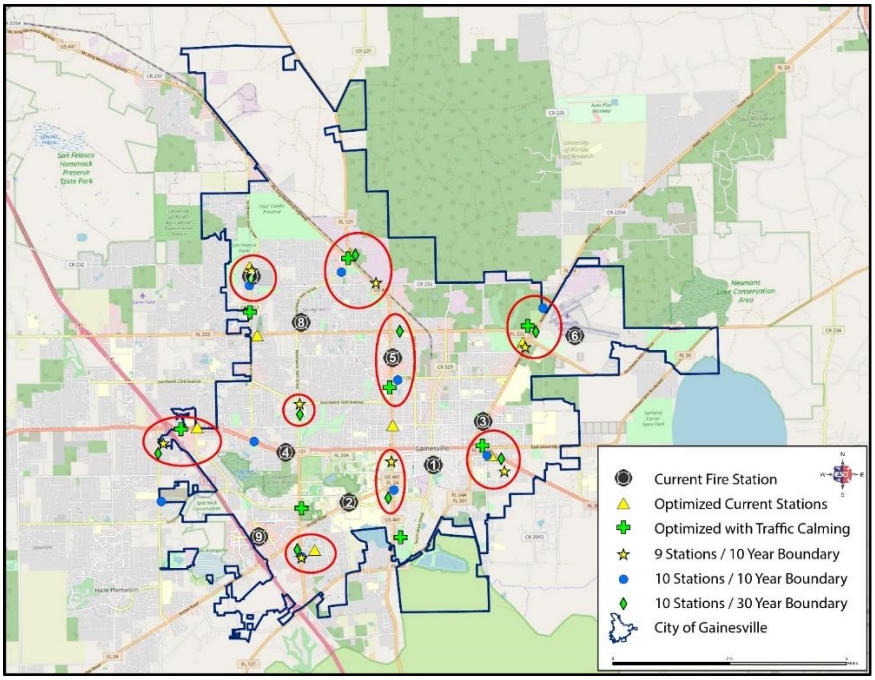
- Capture as many incidents as possible within a four-minute travel time.
- Establish the largest service area possible based on historical demand while accounting for impact of adjacent fire station service areas.
- Evaluate the impact of traffic calming devices on response times.

GFR response data from 2018-2020 was used for incident demand points which were dispersed throughout the city, as well as the current automatic aid boundaries which extend into unincorporated Alachua County. The results of the model predict that GFR could respond to 88.1% of incidents occurring in 2018 through 2020 within a four-minute travel time.

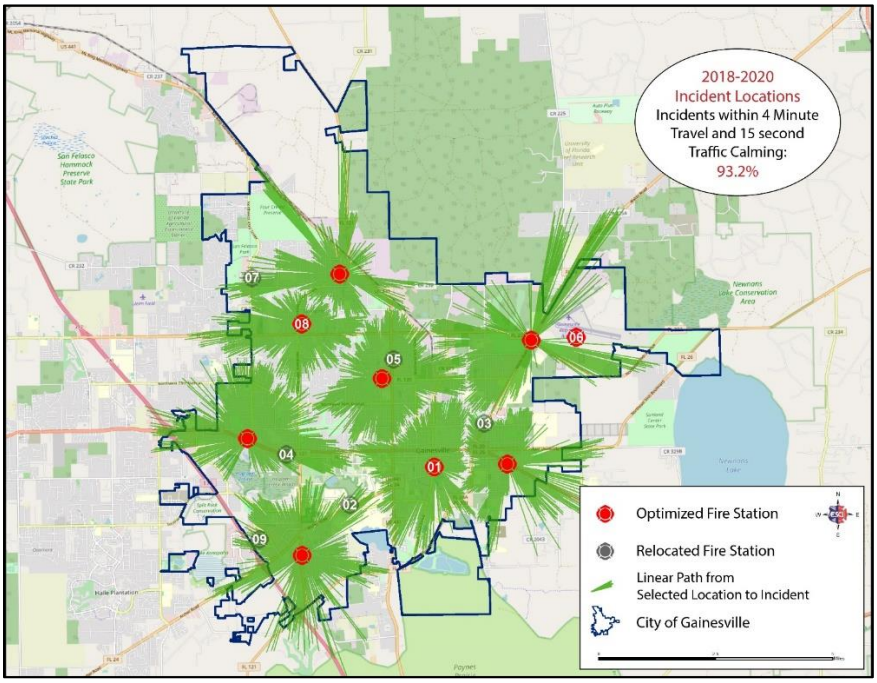


Initial optimization modeling used the same parameters as the baseline model and assumed all current fire stations were candidates for relocation and that the city would continue to densify and build upwards within its more urban core. Limitations were that, in any given circumstance, if a given location produced slightly better results than another, the better location was selected despite little difference in performance; that varying daily and seasonal traffic patterns that influence travel time could not all be accounted for; and that the timing, exact location, and extent of future development were unknown.

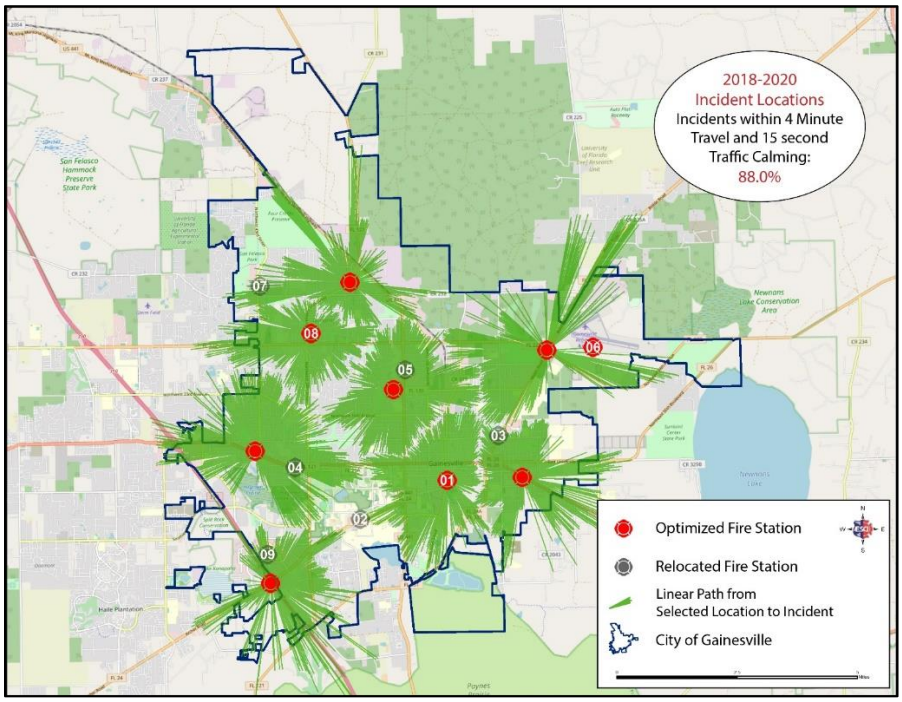
Multiple, varied models were run to establish areas or locations repeatedly demonstrating the need for a facility, thus increasing reliability of the result. Results of one model are not the only consideration and factors such as comparison with other models, site suitability of current locations, age and condition of current facilities, land availability, community impact, and internal knowledge and understanding of the community should all be factored into a global view on most suitable final locations. Results from multiple analyses are shown in the composite below. Red circles were added to indicate areas where grouping of locations based upon various models occurred.



Based on initial results GFR staff provided significant input from local knowledge. With staff concurrence, additional modeling fixed the location of fire stations 1 and 8 due to their relatively new age and required locations near the intersections of NE 39th Avenue and Waldo Road, Hawthorne Road and Southeast 20th Street, and at Northwest 23rd Avenue and Northwest 16th Terrace with Station 4 splitting the difference between its current location and the cluster (shown in red) to its west due to land availability. The results of this analysis, shown below, improve the predicted capabilities of GFR from previously modeled locations, extending coverage to the southwest, the north, and east, which are the areas predicted to grow and become annexed into the City of Gainesville in the future.



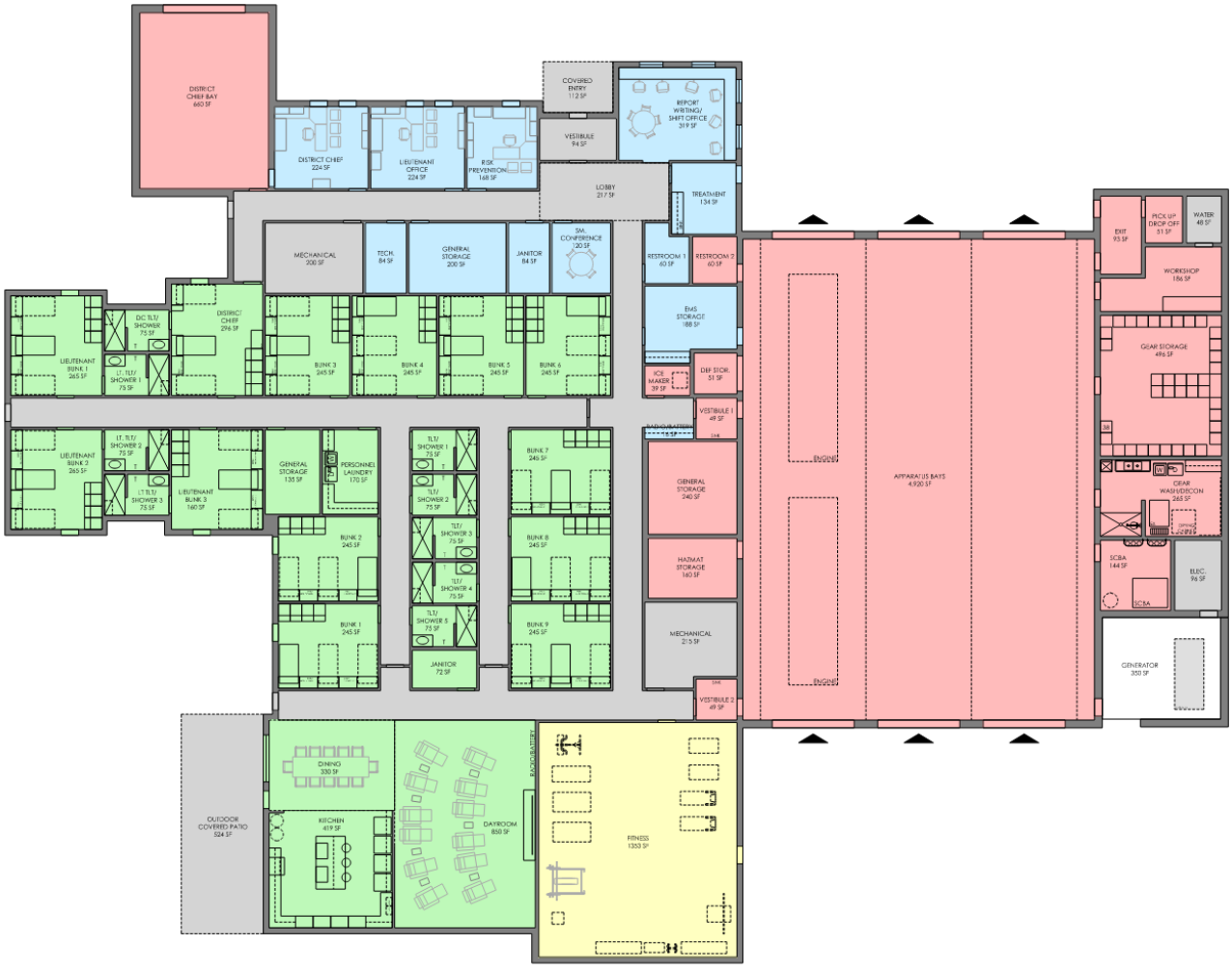
While modeling provided insights about the ideal location for fire stations based on road network and historical incident locations, it did not consider other factors such as land availability, the costs of that land, traffic flow patterns that change throughout the day, or where future incident locations may occur. To assist GFR in comparing the theoretical model performance with the closest feasible location, the model below was run showing the most southwesterly station relocated to the intersection of Archer Road and Interstate 75.



Although call coverage decreases from 93.2% to 88.0%, this is a more realistic model as GFR's ability to locate a facility in this location is more likely. Additionally, this represents only one finding and multiple other factors should be considered. The model's parameters provide a cutoff at 4 minutes travel time. Areas that fall outside of a four-minute travel time would most likely be captured if parameters were extended by 15 to 30 seconds. Next, future development and densification will likely occur to the south and west of this proposed location. By moving this station farther west and on the area's major roadways, future response capabilities should be improved. Finally, the primary area falling outside of the strict 4-minute travel occurs on or near the southern boundary of the University of Florida campus.

Space Needs Analysis and Prototype Fire Station Design

GFR and city leaders anticipated the conclusions presented in this study, therefore, the scope of the study included planning for potential facility replacement. WSKF, in collaboration with engineering partners, undertook an exercise to determine the prototypical space needs for replacement facilities the results of which are discussed in the section titled, "Space Needs Analysis" later in this study. This portion of the study examined not only fire station needs but all GFR facility needs from administration and training through the Community Resource Paramedic Program. Cost estimates for the various space needs and occupancy types based upon function are provided. The largest cost for the facility program is the cost of replacing fire stations and a prototype was developed based upon an iterative process during the space needs portion of the study.



The areal requirement for the GFR Prototype Station is approximately 21,000 GSF. The station would be designed to meet current "Essential Facilities" design criteria as well as current best practices for firefighter health, safety, and wellness. The estimated value of this type of building is approximately $425 to $450 per square foot. This would place the cost of this building at approximately $8.925 to $9.45 M. The estimated value of fixtures, furniture, and equipment (FF&E) is $0.425 M. The total construction and equipment cost is approximately $9.35 to $9.875 M. These costs are exclusive of land purchase, design, and apparatus costs.

Notional Facilities Master Plan

The city has been provided with a detailed assessment of existing facilities, a space needs analysis for all GFR functions, a conceptual fire station design and costing for the various spaces needing replacement in this study. While some GFR facilities are in good condition, operating within industry standards those below are recommended for replacement.

Station/Facility	Condition				Notes/Comments/Costs*
	Exceptional	Good	Fair	Poor	
Fire Station # 2				X	Age-46; Replace; $9.35 - $9.875M
Fire Station # 3				X	Age-61; Replace; See above
Training Tower - Burn Bldg.			X		Age-Varies; Replace; $14.4 - $15.6M
Fire Station # 4			X		Age-57; Replace; See above
Fire Station # 5				X	Age-56; Replace; See above
Fire Station # 7				X	Age-40; Replace; See above
Fire Station # 9				X	New Station; See above
Annex – Bldg. A				X	Age-45; Replace; See Training Tower – Burn Bldg. above
Annex – Bldg. B				X	Age-45; Replace; $3.0 - $3.25M
Annex – Bldg. C				X	Age-45; Replace; $4.85 - $5.25M

*Costs are exclusive of land purchase costs, site development costs and FF&E costs unless otherwise included refer to narrative for each facility

The total estimated construction costs for GFR facility replacement needs, exclusive of the items noted above, is approximately $73.35 to $83.35 M. In addition to these costs, soft costs (design services, permitting, testing & inspections and similar costs) would need to be included. Obviously, the total cost is significant when compared to incremental and individual project costs. While there are significant GFR facility needs, not all facilities likely have the same priority. The WSKF Design Team offers the following facilities priority for city consideration.

Station/Facility	Replace Priority	Timing-Duration*	Notes/Comments
Fire Station # 2	1	D-yr. 1/C-1 yr.	Age-46; Replace; $9.35 - $9.875M
Fire Station # 5		D-yr. 2/C-yr. 2	Age-56; Replace; See above
Fire Station # 7		D-yr. 3/C-yr. 3	Age-40; Replace; See above
Fire Station # 9	2	D-yr. 4/C-yr. 4	New Station; See above
Fire Station # 3	3	D-yr. 5/C-yr. 5	Age-61; Replace; See above
Training Tower - Burn Bldg.		D-yr. 5/C-yr. 6-7	Age-Varies; Replace; $14.4 - $15.6M

Annex – Bldg. A		D-yr. 5/C-yr. 6-7	Age-45; Replace; See Training Tower – Burn Bldg. above
Fire Station # 4	4	D-yr. 8/C-yr. 8	Age-57; Replace; See above
Annex – Bldg. B		D-yr. 9/C-yr. 9	Age-45; Replace; $3.0 - $3.25M
Annex – Bldg. C		D-yr. 8/C-yr. 8	Age-45; Replace; $4.85 - $5.25M

*D – Design; C - Construction

The capital requirements associated with the recommended facility replacement priorities are generally as follows:

- Priority 1-Design; $3.0 M; Construction; $30.0 M = $33.0 M
- Priority 2-Design; $1.0 M; Construction; $10.0 M = $11.0 M
- Priority 3-Design; $1.6 M; Construction; $16.0 M = $17.6 M
- Priority 4-Design; $1.9 M; Construction; $19.0 M = $20.9 M

The above projected costs are exclusive of land purchasing costs and timeframe, site development costs (except for stations; station costs include site development costs) and soft costs other than projected design fees. Additionally, some projects will require FF&E costs that are generally excluded except for station costs; FF&E cost is included in the station cost.

Other Recommendations and Strategies

The primary focus of the Growth and Expansion Feasibility Master Plan was the analysis of current facilities, their optimal location, and a recommended prioritization and costing for renovation and/or replacement of those facilities to best provide for the GFR mission moving into the future. The notional facilities master plan presented above is accompanied by the following series of short- and mid-term (six months – three years) recommendations based on the observations and analysis of GFR operations. Facilitating adoption and implementation of many of these recommendations will take significant commitment, time, and resources (including financial). Environmental conditions and circumstances may provide challenges or opportunities to address a recommendation(s) outside of the time frames identified here.

Lastly, these recommendations are just that—recommendations. They are ESCI's best effort in providing guidance in addressing issues and opportunities for enhancement identified during the study period. City leaders and their neighbors hold the ultimate authority in embracing, revising, or discounting the following guidance.

- **Recommendation 1-A:** GFR should staff a dedicated employee for data collection and analysis.
- **Recommendation 1-B:** GFR should increase the number of Fire Inspectors to bring inspection frequency into compliance with NFPA 1730.
- **Recommendation 1-C:** GFR should increase the number of Fire and Life Safety Educators on staff.
- **Recommendation 1-D:** GFR should increase the number of firefighters in the department who have the technical training and certifications to staff the department's specialty teams.

- **Recommendation 1-E:** GFR should evaluate its current recruitment, hiring, and employee management practices to assure that they are attracting and retaining premium employees with a desire to grow within the organization.
- **Recommendation 1-F:** GFR should evaluate the feasibility of alternative deployment models to meet the increasing demands of the community.
- **Recommendation 1-G:** GFR should increase administrative staffing.
- **Recommendation 1-H:** GFR should establish a formal feedback/input mechanism to receive necessary end-user feedback about its training program.
- **Recommendation 1-I:** GFR should regularly assess the workload of the Training Division to determine whether additional staffing is necessary to ensure that effective training is delivered on a continual basis.
- **Recommendation 1-J:** GFR should analyze the financial impacts of high staff turnover.
- **Recommendation 1-K:** GFR should review its fire assessment program including allocation of costs and methodology.
- **Recommendation 1-L:** GFR should ensure that it is collecting all available revenue under its hazmat revenue recovery ordinance.
- **Recommendation 1-M:** GFR should conduct a study of EMS within the City of Gainesville, to include patient transport services.

INTRODUCTION

In February 2021, the City of Gainesville, Florida, retained Emergency Services Consulting International (ESCI) to conduct a Growth & Expansion Feasibility Master Plan for the Gainesville Fire Rescue (GFR) department. The Fire Rescue Growth & Expansion Feasibility Master Plan provides GFR with a detailed analysis of current resource deployment as it applies to fixed facilities, including apparatus and personnel assigned to its nine fire stations. It is designed to assist GFR with quantifying current service delivery, evaluating service delivery and response performance, and developing strategies to make facility location decisions that will meet anticipated needs and resultant future service demand. Further, the study provides the city with a conceptual facility design and construction cost as well as a proposed plan to renovate and/or replace existing facilities.

In brief, the planning process answers three questions:

- Where is the organization today? This is achieved via a detailed evaluation of GFR as it is currently configured, including an analysis of all other relevant GFR facility and other studies, strategic plans, and standards of cover reports.
- Where does GFR need to be in the future? This is based on GFR's status and ESCI's analysis of past and future population growth and forecast future service demand.
- How will GFR get there? Providing short- and long-range future strategies designed to address estimated future needs.

The project consists of three components, beginning with an Evaluation of Current Conditions. In this step, ESCI reviews existing facilities and conducts a detailed analysis of current service delivery and response performance. These observations and findings are compared with industry standards and best practices, accompanied by recommendations for changes where needed.

The next step is the development of Future Service Demand Forecasts. ESCI uses a combination of historical population data, census information, comprehensive plans, and past incident history to project anticipated future workload and identify community risk.

Finally, the report uses the information gathered to identify and evaluate Future Strategies to meet long-range needs. The approaches may include modification or replacement of existing facilities, relocation of current stations, and potential locations of future stations based upon a station optimization study.

SECTION I:
Evaluation of Current Conditions

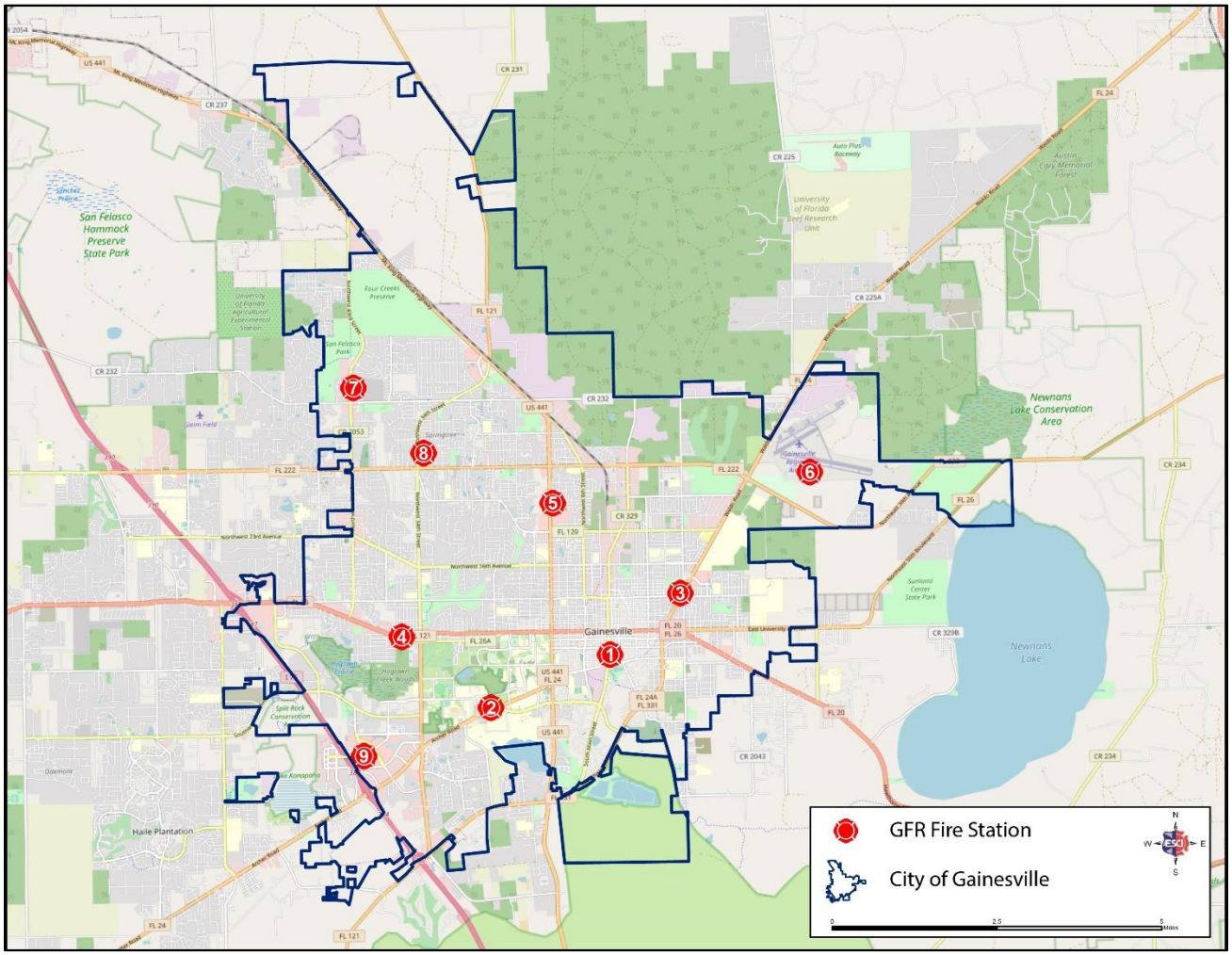
COMMUNITY & ORGANIZATIONAL OVERVIEW

The following section provides a general overview of the City of Gainesville and Gainesville Fire Rescue (GFR).

The City of Gainesville is in northwest Florida, between Jacksonville and Ocala. Spanning 63.75 square miles, the city is the largest in Alachua County as well as the county seat. Gainesville is home to Florida's largest and oldest university, the University of Florida, and is one of the state's centers of education, medicine, cultural events, and athletics. The University of Florida and Shands Hospital at UF are the leading employers in Gainesville and provide jobs for many neighbors from within the city and surrounding counties.

Gainesville is the home of the first sports drink – Gatorade – and the nation's first butterfly city. Famous residents of the city (past and present) include Tom Petty, River Phoenix, Bob Vila, and Tim Tebow, among others.

Figure 1: GFR Study Area Map



City Government

The City of Gainesville provides a full range of municipal services, including police and all hazards fire protection and Emergency Medical Services (EMS); comprehensive land use planning and zoning services; code enforcement and neighborhood improvement; streets and drainage construction and maintenance; traffic engineering services; refuse and recycling services through a franchised operator; recreation and parks; cultural and nature services; as well as the administrative services to support these activities. Additionally, the city owns the Gainesville Regional Transport System, Gainesville Regional Airport, a 72-par championship golf course, and Gainesville Regional Utilities, which is the fifth largest municipal electrical supplier in Florida.

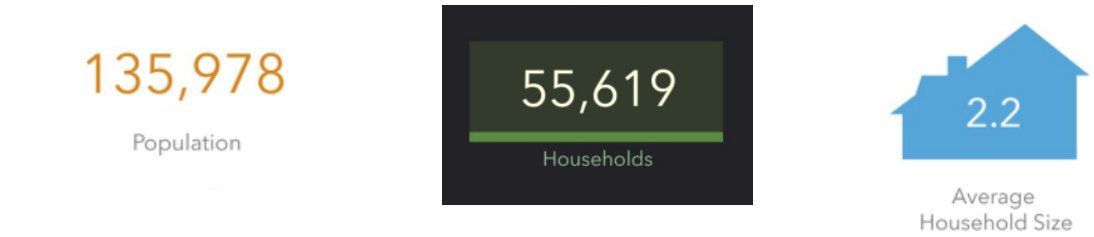
Gainesville was incorporated in 1927 with the adoption of Chapter 12760, Laws of Florida, 1927, as amended. The city uses a Council-Manager form of government with a city commission comprised of seven elected members. The City Commission is charged with providing policy direction to several charter officers, including the City Manager who is responsible for all personnel, departments, and divisions of the City's General Government, as well as for preparing and recommending an annual budget to the Commission.

Gainesville Demographics

Unless otherwise specified, the demographic information presented in this section is referenced from the Environmental Systems Research Institute (ESRI), which is an international supplier of geographic information system software, web Graphic Information Systems (GIS) and geodatabase management applications.

The population of Gainesville is comprised of 135,978 neighbors who live in 55,619 households. The average household size is 2.2 persons.

Figure 2: Population and Households

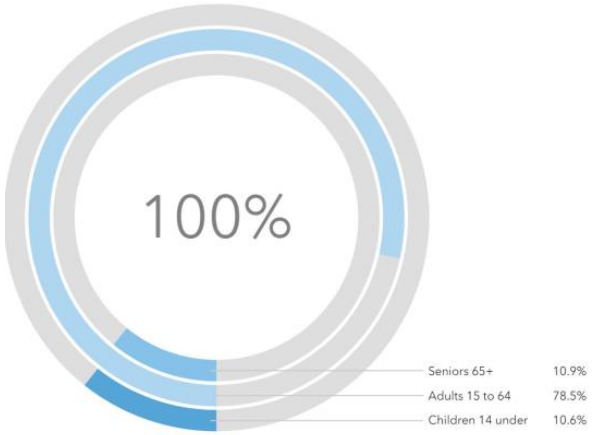


The city boasts 6,523 businesses that employ 107,599 employees.

Figure 3: Businesses and Employees

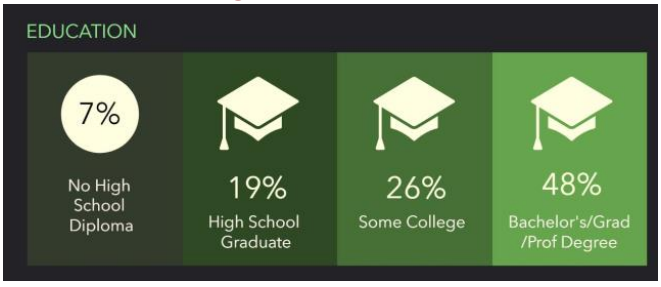
The age makeup of Gainesville is predominately adults aged 15-64 (78.5%) followed by seniors aged 65 and older (10.9%) and then children under the age of 14 years old (10.6%).

Figure 4: Age



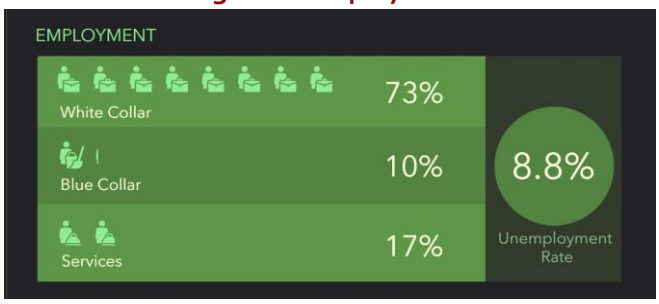
The population in Gainesville is highly educated, with 48% having completed a college degree and an additional 26% having attended some college.

Figure 5: Education



Most workers within the City are employed in "white collar" or office (73%) or service jobs (17%), with 10% working in "blue collar" or trades work. The city's unemployment rate is 8.8%.

Figure 6: Employment

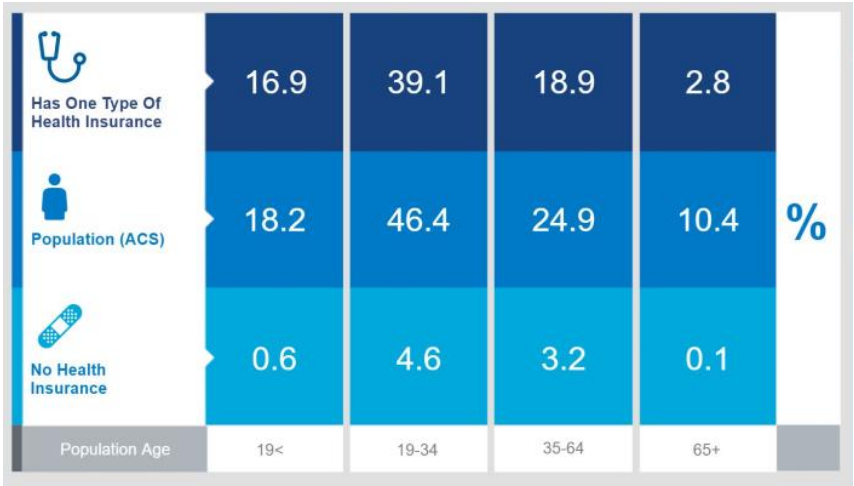


The median household income in Gainesville is $38,723, which is less than both Florida's statewide median household income of $59,227 and the national median household income of $63,179.

Figure 7: Median Household Income, Per Capita Income and Median Net Worth

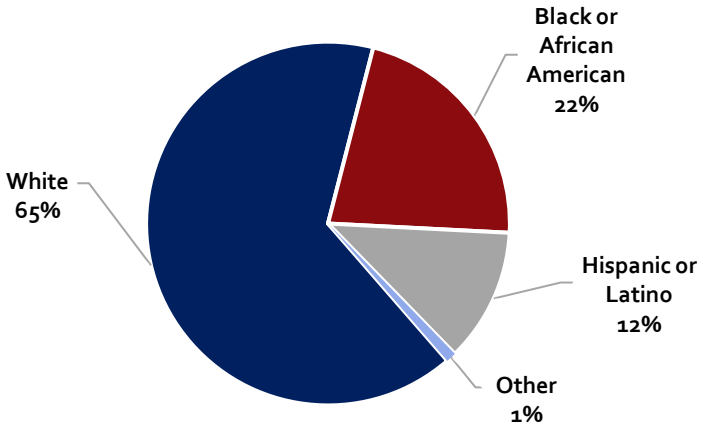
Among City neighbors, 8.5% do not have health insurance. Within this group, the largest concentration (4.6%) is between the ages of 19 and 34 years old.

Figure 8: Residents with Medical Insurance



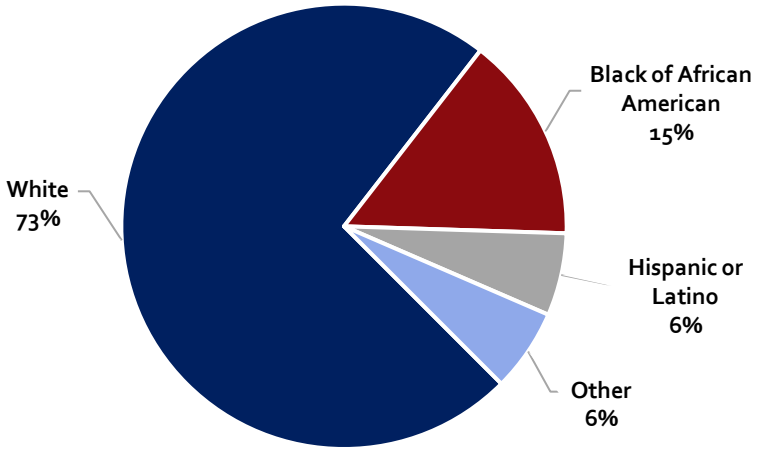
The population in Gainesville is predominately white (65.4%). Black or African American neighbors make up 21.8% of the community and 11.9% are Hispanic or Latino.

Figure 9: Race of Gainesville Neighbors



GFR has made a concerted effort to make sure that its membership reflects the community it serves. To that end, GFR has recruited a demographic mix of firefighters that is approaching that observed within the City of Gainesville. GFR is comprised of 73% White firefighters, 15% Black or African American, and 6% Hispanic or Latino.

Figure 10: Race of Gainesville Firefighters



Within the City of Gainesville, at risk-populations include Households with Disabilities (8,582), neighbors that are over the age of 65 and speak Spanish with no English (109) and households without a vehicle (645).

Figure 11: At Risk Populations

GAINESVILLE FIRE RESCUE

Gainesville Fire-Rescue (GFR) is an all-hazards department, providing fire suppression, hazardous materials mitigation, technical rescue, aircraft rescue and firefighting, and advanced life support services including community paramedicine. GFR does not provide emergency medical transport (ambulance) services; Alachua County Fire-Rescue (ACFR) provides ambulance service from facilities throughout Alachua County and within the city limits.

Gainesville Fire Rescue is tasked with providing fire service to the City by the Gainesville Code of Ordinances Part I Article I Section 1.04 (13) which states that, "In addition to its general powers, the city may…Provide fire protection and other governmental services within and without the city limits and enter into contracts for such purposes."

Gainesville Fire-Rescue staffs three 24-hour shifts – A-Shift, B-Shift and C-Shift. The shifts rotate sequentially, for example, firefighters that are assigned to A-Shift will work for 24 hours and then be off for the next 48 hours while B-Shift and C-Shift work their respective shifts. After 48-hours off, the firefighters assigned to A-Shift will return and work for another 24-hours.

GFR operates 19 apparatus out of nine fire stations. The department also operates both a CRP ambulance and an armored SWAT ambulance, neither of which are automatically dispatched or currently licensed for patient transport.

Figure 12: GFR Stations and Associated Apparatus

Station	Address	Apparatus
Fire Station # 1	525 South Main Street	Engine 1 Tower 1 Squad 1 District 1 A/T 1 (Cross-Staffed)
Fire Station # 2	2210 SW Archer Road	Engine 2 Tower 2 HazMat 2 (Cross-Staffed)

Fire Station # 3	900 NE Waldo Road	Engine 3 Squad 3 Brush 3 (Cross-Staffed)
Fire Station # 4	10 SW 36th Street	Engine 4
Fire Station # 5	1244 NW 30th Avenue	Engine 5
Fire Station # 6	3638 NE 39th Avenue	Crash 6-1 Crash 6-3
Fire Station # 7	5601 NW 43rd Street	Engine 7
Fire Station # 8	3223 NW 42nd Avenue	Quint 8 District 2
Fire Station # 9	4213 SW 30th Avenue	Quint 9

Organizational Structure

GFR is comprised of 200 full time employees, 188 of these employees are sworn and 12 are civilians. The department is organized into four divisions – Administration, Risk Reduction, Training and Operations.

Fire Administration

Typical responsibilities of the administration and support staff include planning, organizing, directing, coordinating, and evaluating the various programs within GFR. Information Technology support is also provided by Fire Administration. This list of functions is not exhaustive, and other functions may be added. It is also important to understand these functions do not occur linearly and can more often occur simultaneously. This requires the Fire Chief and administrative support staff to focus on many different areas concurrently.

Risk Reduction

The focus of Risk Reduction Bureau (RRB) efforts is on decreasing all community risks, including fires. The RRB does this through a combination of public education, plans review, fire inspections, and fire investigations.

Training

The GFR Training Bureau provides ongoing training and professional development for all GFR Firefighters. GFR provides occupational health and safety training throughout a firefighter's career, which emphasizes cancer and mental health awareness, appropriate use of all personal safety and protective equipment, such as self-contained breathing apparatus, accountability systems, personal alert safety systems, station exhaust systems, body substance isolation, decontamination, fall prevention, as well as any new technology and techniques orientation. GFR's Training Bureau schedules annual training to meet or exceed Insurance Services Office (ISO) Requirements.

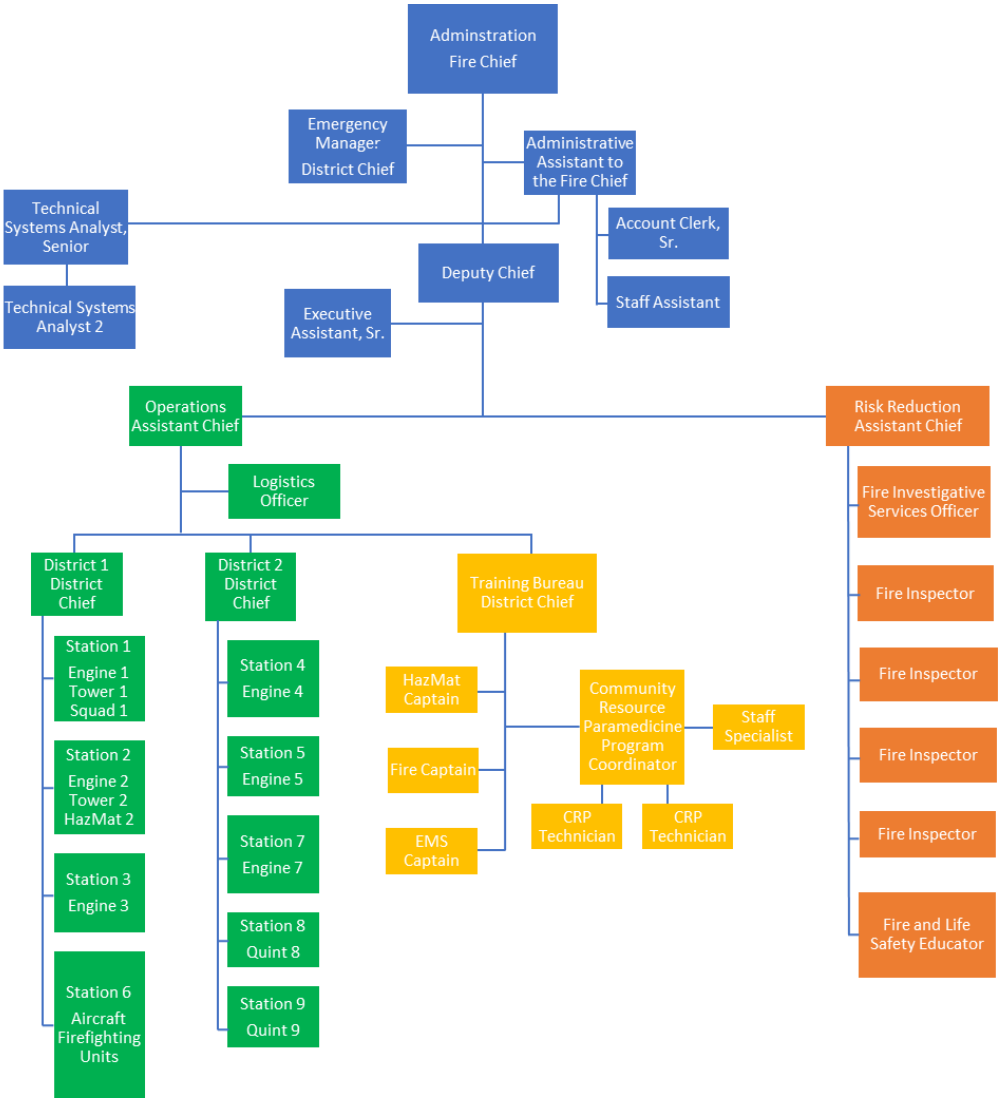
The Training Bureau houses the Community Resource Paramedicine Program (CRP), which has a stated goal to, "educate people about and guide them through the solutions and resources they need to address their social and medical needs, thus reducing their dependence on the emergency medical system and improving their quality of life." The CRP Program is focused on four pillars: Community Health, Mobile Integrated Healthcare, Chronic Disease Management, and Overdose Response and Recovery. The program operates in two divisions: Community Health and Individualized Care.

Operations

The Operations Division is responsible for all-hazards response including advanced life support (ALS) pre-hospital emergency medical, tactical medical, fire, technical rescue, hazardous material, and aircraft response under the direction of the Assistant Fire Chief of Operations (ACO). The ACO is third in command to the Fire Chief.

The following figure illustrates the Organizational Chart for GFR.

Figure 13: GFR Organization Chart



CURRENT FACILITIES ASSESSMENT

WSKF Architects and engineering partners, PKMR Engineers and Tillman & Associates (Design Team), completed facility surveys and assessments for each of Gainesville Fire Rescue's (GFR's) sixteen owned and/or operated facilities. This work was completed over a one-week time frame. Each of the respective Design Team members was able to personally view and assess each facility on a one-on-one basis. Generally, facility assessments include the following parameters:

- Exterior Assessment
  - Exterior Wall & Roof Finish Materials
  - Exterior Wall Fenestration Conditions (windows & doors)
  - Exterior Site Conditions (drives, parking, walks, etc.)
  - Site Mechanical/Electrical/Plumbing Conditions
  - Site Landscaping Conditions
  - Exterior Sustainability Conditions
  - Exterior ADA Condition
- Interior Assessment
  - Overall Building Condition
  - General Building Design/Interior Configuration
  - Level of Service Capability of Existing Facility to Accommodate Use or Function
  - Interior Finishes Condition
  - Interior Wall Fenestration Conditions (windows & doors)
  - General Mechanical/Electrical/Plumbing Conditions
  - Interior Life Safety Conditions
  - Exterior ADA Condition

A comprehensive survey form for each of the facilities assessed can be found in Appendix D of this Study. Given that the average age of the City-owned facilities is approximately 44 years of age, the intuitive understanding of facility condition and remaining useful life is fair to poor at best. A snapshot of the facility assessments is presented below:

Figure 14: GFR Existing Facilities Survey Assessment Overview

Station/Facility	Condition				Notes/Comments
	Exceptional	Good	Fair	Poor	
Fire Station # 1	X				Newest Facility
Logistics-Supply Warehouse	X				Co-Location w/ Station 1

Fire Station # 2				X	46-Year-Old Facility
Fire Station # 3				X	61-Year-Old Facility
Training Tower - Burn Bldg.			X		Co-Location w/ Station 3
Fire Station # 4			X		57-Year-Old Facility
Fire Station # 5				X	56-Year-Old Facility
Fire Station # 6	X				3-Year-Old Facility (Airport Authority)
Fire Station # 7				X	40-Year-Old Facility
Fire Station # 8		X			10-Year-Old Facility
Fire Station # 9				X	Temporary Facility
Annex – Bldg. A				X	45-Year-Old Facility
Annex – Bldg. B				X	45-Year-Old Facility
Annex – Bldg. C				X	45-Year-Old Facility
Modular Training Classroom			X		Temporary Facility
Safety City		X			Educational Campus Facility

The overall assessment summarized in the figure above is that many of GFR's facilities are in the "Fair" to "Poor" condition. While understanding the current facility conditions is one important consideration, another key factor in understanding facility usefulness is that design requirements for this facility type have changed over the life of the facility which presents a compound assessment concern. The years of service, the environmental exposure, and the fact that these facilities are in constant use suggests that the outcome of the assessment is neither atypical nor unusual. Additionally, given the specific use (emergency services), code-mandated design requirements have escalated since the original date of service to assure that the services expected are available. As with any similar facility, there is a time when continued investment of resources is likely not prudent.

GFR understood that the conclusions presented above might be the anticipated outcome, therefore, the scope of the Study included planning for potential facility replacement. To address this anticipated outcome, WSKF, in collaboration with our engineering partners, undertook an exercise to determine the prototypical space needs for replacement facilities the results of which are discussed in the section titled, "Space Needs Analysis" later in this study.

Engaging Stakeholders

The Design Team's first step in preparing prototypical space needs was to meet with the City/GFR project manager, project stakeholders, and other chosen project members to complete a roundtable space planning discussion to ensure a common understanding of project goals.

Discussions with the involved stakeholders provided both the overall objectives as well as the details of facility needs. The WSKF Design Team led discussions as well as visioning sessions to fully vet and define GFR's current and future, anticipated facility needs. With WSKF's extensive experience in designing fire facilities, in-depth discussions were completed to fully define GFR's facility needs.

Each of the facility types (fire station, fire training, operational facilities, etc.) were discussed and assessed for respective space needs. While it is likely that facility vision and needs will continue to evolve over time, the Design Team captured and created the facility needs presented. The reader should refer to the "Space Needs Analysis" section for more detailed discussion and documentation.

The overall design objectives identified during the sessions with project stakeholders, included the following:

- Overall space planning and balancing the physical and operational requirements of GFR
- Efficient and functional flow and layout
- Turnout efficiency: path of travel effectiveness
- Design for health & wellness
- Design for homelike and restorative environment setting
- Design that supports department's ability to recruit, retain and motivate fire crews
- Fitness space designed around full range of crews' workout regimens
- Safety and security for crews as well as visitors
- Tactical training elements that meet best practices across training needs
- Alignment with NFPA standards

Site Infrastructure Assessment

Site infrastructure assessment of existing facilities was provided by Tillman Engineers (Civil engineer & landscape architecture) to assess existing conditions and document facility needs. The study scope included review and assessment of all GFR occupied and operated facilities. To assure that the assessments were completed in a comprehensive and uniform fashion, the following general criteria were used:

- Site ingress and egress, lines of sight, safety & security, etc.
- Site circulation and maneuvering (crews plus visitors)
- Community presence and presentation
- General condition of site infrastructure (apron, parking, walkways, site lighting, retaining walls, signage, etc.)
- Environmental impact conditions (natural & manmade)
- Site sustainability as to best practices aligning with City Guidelines

The exterior conditions are quite dynamic as the environmental conditions are constantly changing. Additionally, the surrounding community development/changes also present changing conditions for the facilities. However, there are also conditions that are rather stable (apparatus, crew traffic, etc.).

As might be understood, the facility conditions noted above are generally reflected in the site conditions and resulting assessments. Facility sites that have been in service for decades will display worn and worn-out conditions. Additionally, the dynamics of service area changes present the need for service apparatus and equipment changes (i.e., the development of high-rise structures in the service area results in changes for equipment and service needs). These service demand changes impact the site design requirements including changes in pavement, changes in circulation, changes in staffing, and similar dynamic conditions.

Fire Stations & Administrative Campus Facilities

While fire station assessment was the predominant task completed by the WSKF Design Team, those facilities were not the only facilities reviewed and assessed (as indicated by the preceding overview). Other facilities reviewed included:

- Fire Training Facilities (tower and live-burn facilities)
- Annex Buildings A, B & C (CRP, Training, Support Services & Administration, respectively)
- Modular Classroom Building (temporary classroom building)
- Safety City (Kiwanis funded demonstration facilities)

The Fire Training Facilities combined service time is unknown, but these facilities appear to have been in service for some time. The training facilities include the following:

- Multi-story tower (4-story tower)
- Live-burn containers (4 Conex boxes ganged for training purposes)
- Commercial Ag Containers (2 containers)

The training tower exhibits some structural deterioration in the concrete structure as well as metal components. However, the deterioration does not appear to be a point of structural concern. This structure would appear to have continued life expectancy but should be inspected annually.

The Conex box training elements are beginning to exhibit deterioration of some concern. As these elements are metal and subject to environmental exposure, the metal is beginning to show signs of rust that will impact the future structural integrity of the containers. Additionally, Class A (live fire) burn exercises are conducted using the Conex boxes. The approach appears to use a tender box type for training exercises which reduces the normal heating/cooling stresses on the box, but there are still some stresses to the metal even with this approach. The greater issue with the metal box training is the lack of training flexibility and training variability. Once a training scenario is set up, the ability to change-up the scenario is limited by the dimensions of the box.

The Annex Buildings provide for classroom (clean) training, operational support services (community outreach) and administrative services spaces. These functions are housed in three different buildings but grouped on the same "campus" location. There does not appear to be any requirement for these services to be co-located, but the grouping of these services does facilitate interaction and offers some efficiency. The fact that one of the buildings (Building B) has experienced a structural failure suggests that all facilities should be considered for replacement. The structural failure has necessitated the temporary use of the Modular Classroom Building.

The modular classroom building is being used for group classroom training functions (because of the partial structure collapse in Building B). While this facility provides for a backup for training purposes, it is not well-suited for long-term use as it is disconnected from the main training facilities. Being disconnected makes training operations difficult for operational interaction and functionality. The air conditioning is non-functional, and its placement makes it prone to vandalism.

Safety City is a phenomenal resource for fire (and police) educational opportunities. Given the size and configuration of this facility, multiple users are afforded access and accommodation at one time which provides for staffing efficiency and convenience. However, the noted efficiency and convenience is the result of the proximity of this facility to the training staff on this campus.

SERVICE DELIVERY & PERFORMANCE

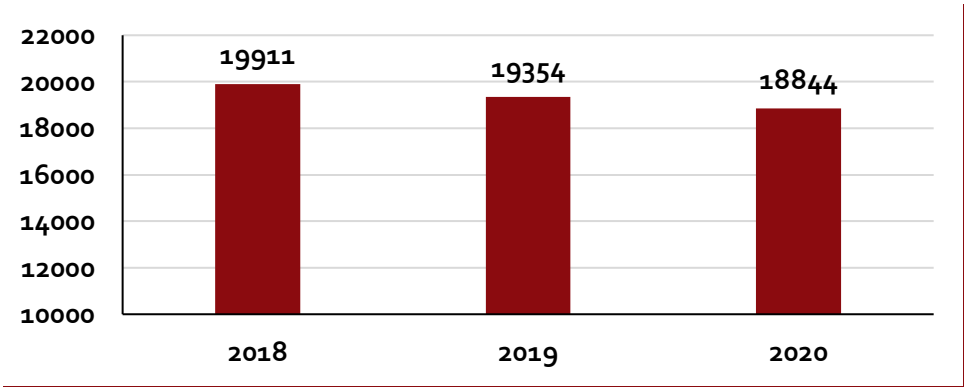
Service Demand Analysis

The demand for services drives GFR's mission to create a safe and vibrant community through risk reduction, preparedness, and a proactive all hazards response capability. The ways in which GFR units and personnel are deployed, the types of services provided, and the way training is accomplished should be reflective of the types of incidents to which the department responds or may respond, the level of risk associated with those incidents or potential incidents, and the relative frequency of occurrence of these incident types. For example, while there has not been a documented call to the Level III+ BioHazard lab or the nuclear reactor in the city center, this is a potential risk that the department must be prepared to respond to.

Trends in the data provided can provide insights into how service demand may change year-to-year and across the major categories of incident types. Knowledge of when high demand periods occur will assist GFR in determining whether staffing levels are sufficient for that demand, and in scheduling additional duties such as training, fire safety inspections, and vehicle maintenance.

First, annual calls for service by calendar year are displayed.

Figure 15: Annual Calls for Service (2018-2020)



From 2018 to 2019, annual service demand decreased by 2.8% and in 2020, demand for service decreased an additional 2.6%; however, with the impact of the COVID-19 pandemic, ESCI has witnessed a decline in service demand nationwide during 2020. Modifications to the Automatic Aid agreement with Alachua County have reduced responses outside the city to only those of a higher priority. The COVID-19 pandemic specifically reduced responses to University of Florida athletic events and other community functions. It should be anticipated that demand for service will rebound and increase in 2021, like the demand experienced prior to the pandemic.

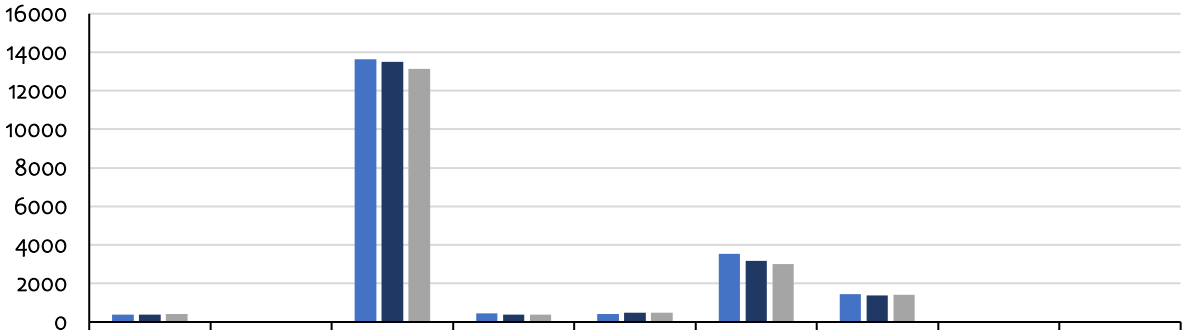
Next, service demand by incident type was evaluated. Categories used in this analysis are based upon the National Fire Incident Reporting System (NFIRS) guidelines for grouping of incident types. Within the NFIRS classifications, the following incident types are grouped within the corresponding series:

- 100 Fires

- 200 Overheat/Overpressure
- 300 EMS
- 400 Hazardous Conditions
- 500 Service Call
- 600 Good Intent
- 700 False Alarms
- 800 Severe Weather
- 900 Special Incident

The following figure displays service demand during the period 2015–2019 by general NFIRS classifications.

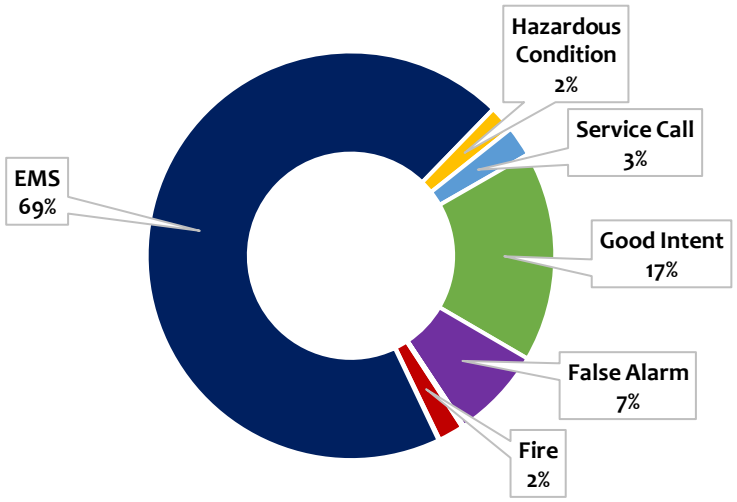
Figure 16: Service Demand by NFIRS Classification (2018-2020)



	Fire	Overheat	EMS	Hazardous Condition	Service Call	Good Intent	False Alarm	Severe Weather	Special Incident
2018	384	19	13631	437	430	3531	1451	8	20
2019	385	19	13516	389	479	3163	1372	3	28
2020	403	17	13129	367	489	3001	1408	9	21

Finally, the distribution of call types is presented as a pie chart to provide an understanding of service demand relative to incident categories.

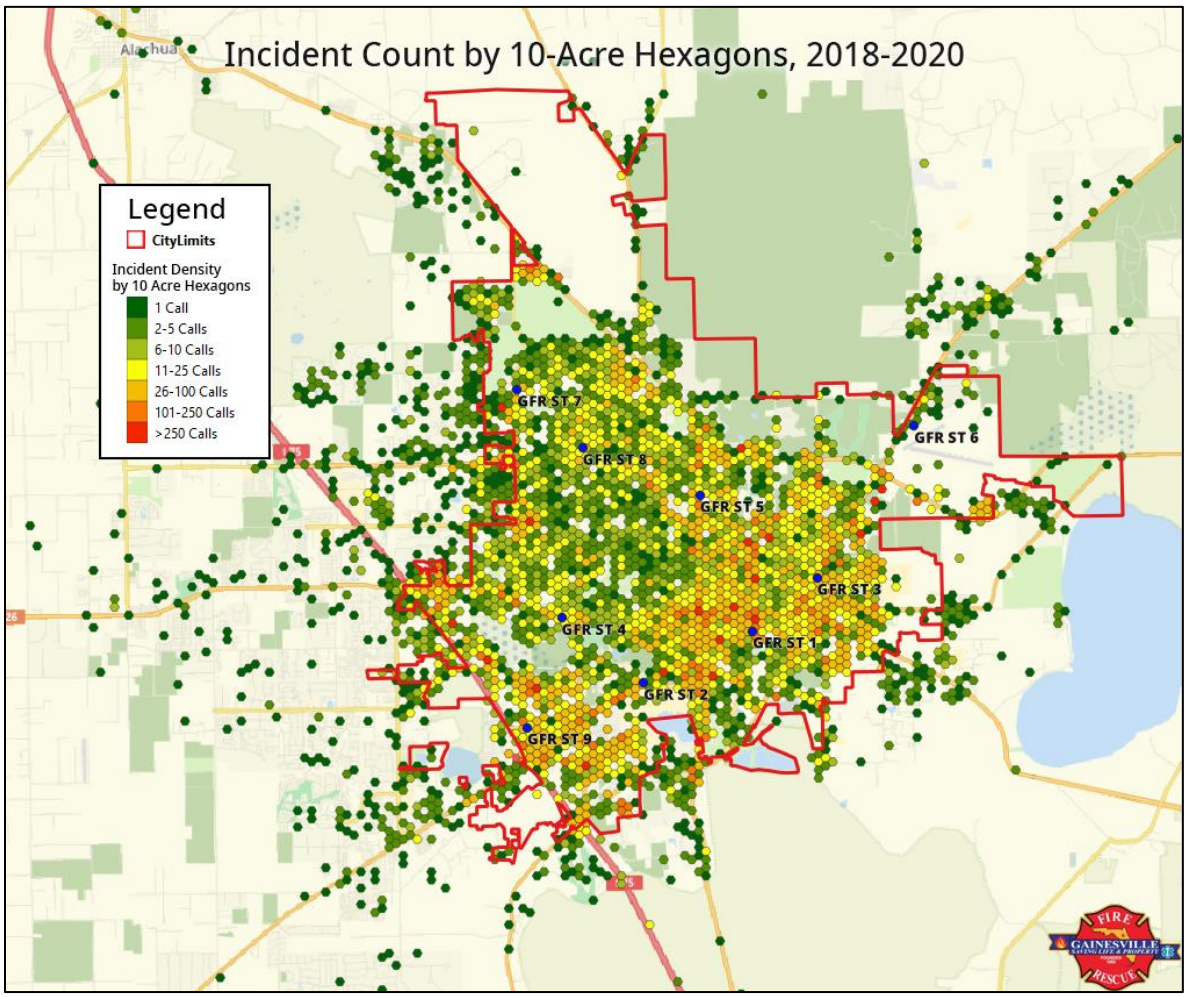
Figure 17: Service Demand by Incident Frequency (2018-2020)



Demand for EMS incidents represents the majority of GFR's responses (69%), followed by Good Intent/Cancelled Enroute (17%), False Alarms (7%), Service Calls (3%), and Fires and Hazardous Conditions (2%). This distribution by call type is typical of fire departments within the State of Florida.

GIS software was used to create a 10-acre hexagon grid across the City of Gainesville showing density of calls for service. Geocoded incident locations were added, and the number of incidents that occurred within each hexagon calculated and presented. Dark green hexagons represent one incident occurred within the hexagon while red hexagons represent incident counts greater than 250 within that hexagon.

Figure 18: Incident Count by 10-Acre Hexagons (2018-2020)

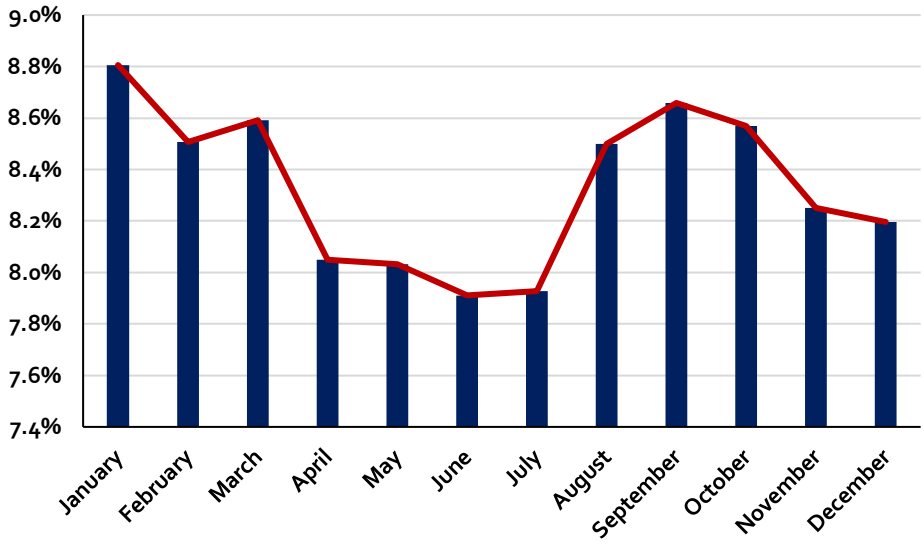


Generally, the eastern and southern halves of the city experience the highest levels of demand while the northwestern area of the city displays relatively lower demand. By understanding where demand for services occurs and at what rate, decisions about the number of units and personnel needed by geographic area can be established leading to proper placement of fire stations.

Temporal Variation

Analysis of temporal variation explores the patterns of activity occurring over certain periods of time. In this section, these patterns are displayed by month, day, and hour to provide GFR with insights as to when increases and decreases in service demand based on historical patterns are anticipated. First, the temporal variation by month-of-year for Gainesville is shown.

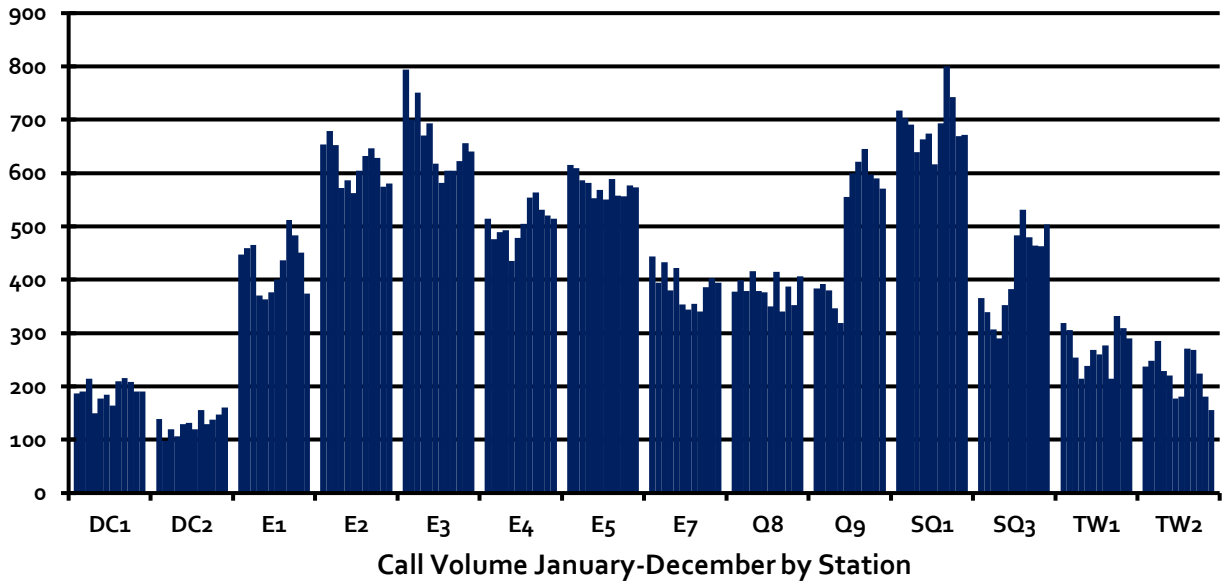
Figure 19: Service Demand by Month (2018-2020)



As the home to the University of Florida, Gainesville's demand for services is greatest when classes are in session and are highest at the beginning of the fall and spring semesters. Additionally, retirees can also influence this pattern as they tend to return to Florida from cooler, out-of-state locations from October through March. In considering staffing peak demand units, January through March and August through October provide the most impact to level of service and unit availability.

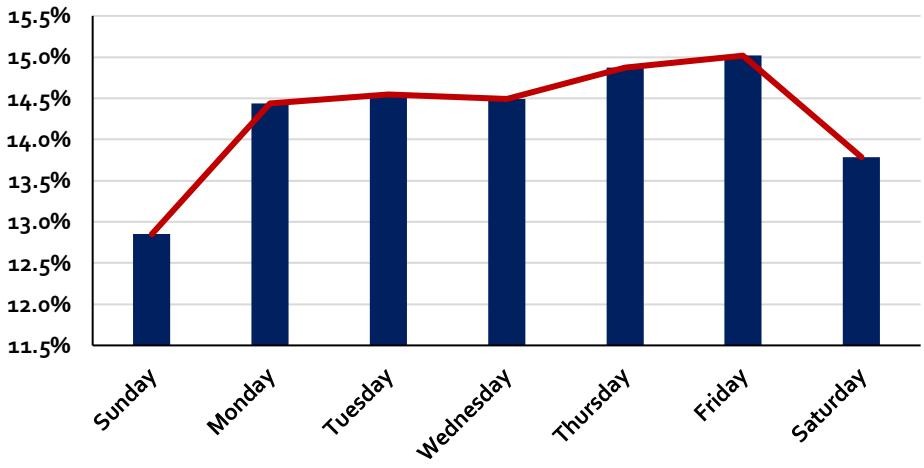
As demand patterns change throughout the year on a department-wide basis, patterns also fluctuate from station to station. The next figure provides temporal variation by month for each suppression unit. It should be noted that SQ3, shown in the figure below, is a 12-hour peak-time unit and is quite busy.

Figure 20: Service Demand by Unit / January-December / 2018-2020



While temporal patterns by month are similar for most units, each displays unique variations throughout the year. The next figure continues the temporal analysis with an examination of service demand by the day-of-the-week.

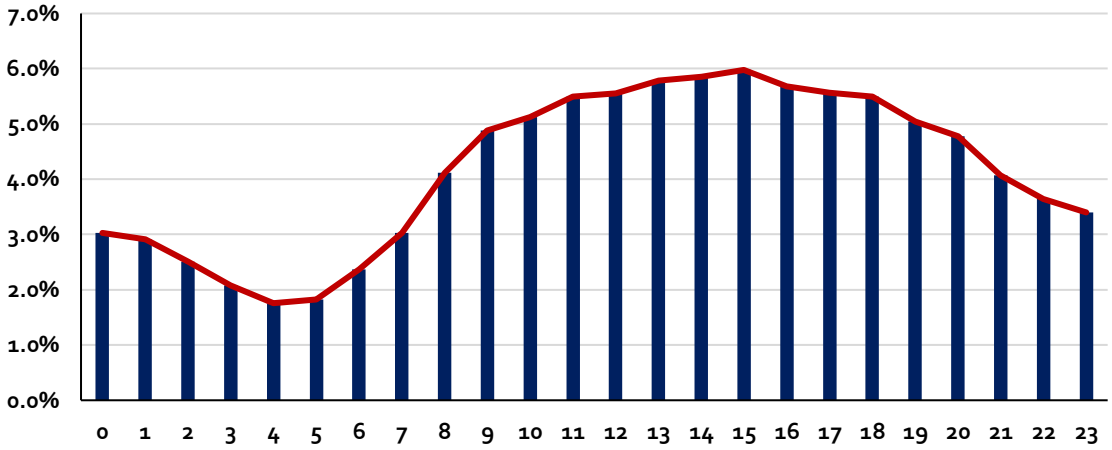
Figure 21: Service Demand by Day of Week (2018-2020)



Demand for fire and rescue services is highest during the workweek, increasing from Monday to Friday, then tapering off on Saturday and Sunday. This is also a common pattern for requests for services seen throughout the state and nation.

Finally, demand by hour-of-day is illustrated.

Figure 22: Service Demand by Hour of Day (2018-2020)



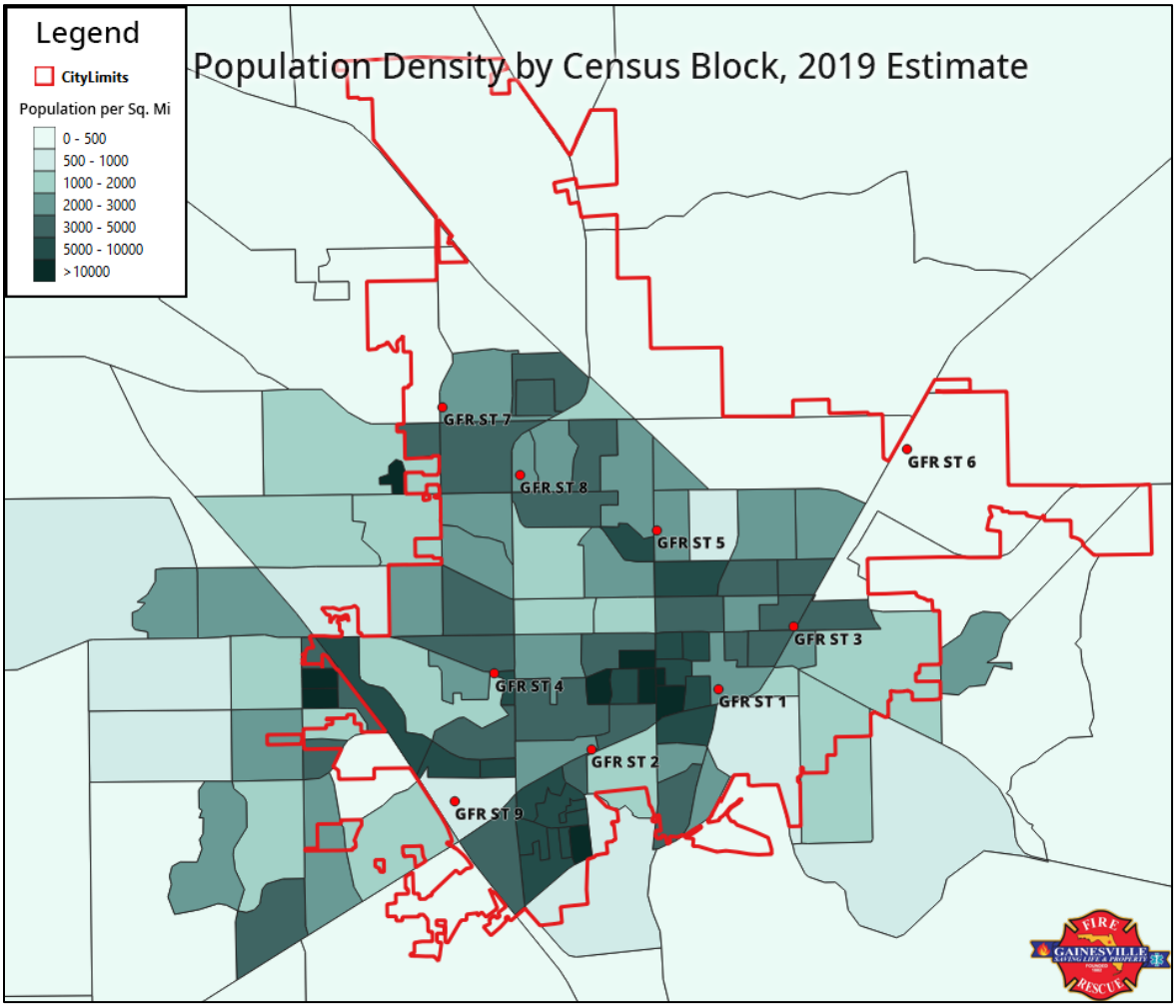
Demand for service begins to increase at 6 a.m. then steadily rises to its peak at 3 p.m. and declines through the afternoon and evening to its low point at 4 a.m. This pattern is consistent with a normal routine of activity with 11 a.m. through 7 p.m. representing 45.4% of responses.

Population Density & Geographic Service Demand

A major contributing factor to the levels of service demand experienced by GFR is the population density of the areas served within its jurisdiction as well as the demographic make-up of the population. The City of Gainesville is an urban municipality, with many of its developed areas exceeding population densities of 3,000 people per square mile.

The following figure displays population density by U.S. Census blocks, the smallest unit of division available from the census bureau. Block data provides the greatest level of detail for population density patterns for the City of Gainesville. Detailed census block information is updated every ten years following the completion of the U.S. Census survey.

Figure 23: Population Density by Census Block, 2019 Estimates



Most of Gainesville's population is located within the city center and spreads outward from there. Areas of development west of Gainesville's boundaries are continuing to develop and, while currently undeveloped to a great extent, areas to the east and north also possess future development potential. As outward expansion and increasing urban densification continue, demand for services will most likely increase over time. Discussion with City planning staff indicated that the City Commission desires future development to focus primarily on infill with multi-family occupancies replacing single family occupancies. In other words, population density will increase in generally the same footprint currently experienced although the city will likely continue to annex.[1] However, there also appears to be pressure for lateral development near the periphery and expanding beyond current City limits.

[1] This information was received during the May 4, 2021, meetings with the City Building Official and the City Director of Sustainable Development /Planning

Resource Distribution

To determine how the current deployment model of the fire department affects coverage throughout the city the current performance of the department must first be evaluated. Using fire service industry standards to include National Fire Protection Association (NFPA) standards and Insurance Services Office (ISO) criteria, Gainesville Fire Rescue's deployment model and performance were evaluated.

In the first section, NFPA criteria specific to fire department performance were applied and GFR's performance evaluated.

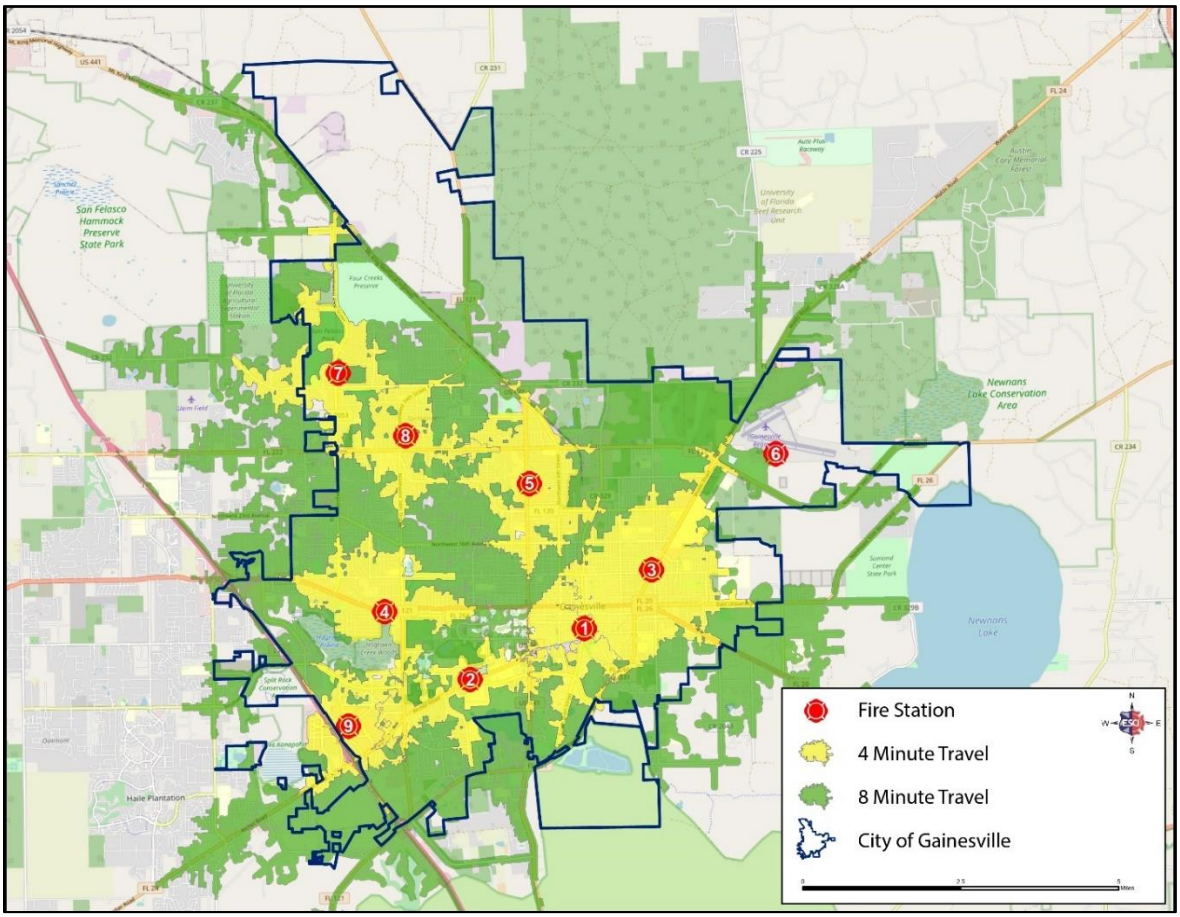
NFPA 1710 Criteria

The National Fire Protection Association (NFPA) is an industry trade association that develops and provides standards and codes for fire department and emergency medical services for use by local governments. One of these standards, NFPA 1710: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments, serves as a national consensus standard for career fire department performance, operations, and safety. Within this standard, a travel time of 240 seconds, or 4 minutes, is identified as the benchmark for career departments to reach emergency calls within their jurisdiction with the first arriving unit. Additionally, the balance of the response (called the effective response force or ERF) is required to arrive at the incident within 480 seconds, or 8-minutes.

The next figure provides a synopsis of Gainesville's ability to meet these standards based upon predicted travel times using historical traffic data from ESRI for traffic patterns at 8 a.m. on Monday mornings. This assumes that units are in quarters and available to respond to calls. Unshaded pockets indicate areas that fall outside of the model's maximum extension from the road network. Station 6, located at Gainesville Regional Airport, was excluded as their primary purpose is to provide coverage to the airport and its crew rarely leaves the airport complex.

The following map illustrates the current boundaries of the GFR response area in dark blue. ESCI's site visit included discussions with multiple elected and appointed officials that referenced the possibility of future annexation that could increase the GFR Response Area. The maps included in this section include all areas to which GFR currently meets industry standards for travel time, or road mileage for engines, ladder trucks and fire stations whether they are inside or outside of the municipal boundaries of the current response area. This information is included to illustrate where GFR can currently provide this coverage outside of its current response area boundaries, and where additional resources would be required if a particular area were to be annexed.

Figure 24: NFPA 1710 4 and 8-Minute Travel



The fire department should have the capability to meet the NFPA 1710 first responding unit requirement of a 4-minute travel to the central core of the city. All of Gainesville, except for sparsely populated areas in the extreme north of the city, lies within an 8-minute travel time of a fire station and areas outside of the 4-minute travel fall within a 4 to 8-minute travel.

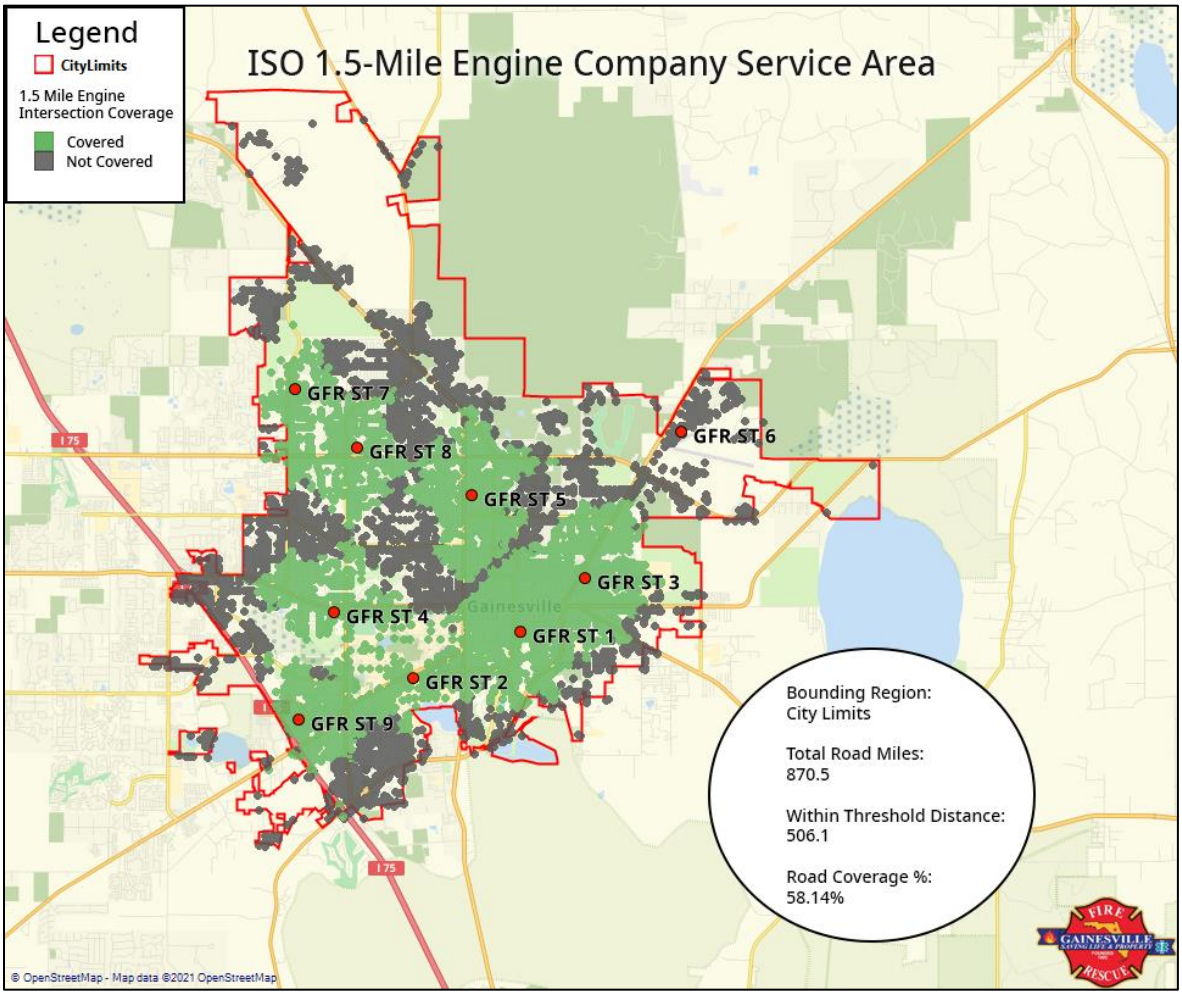
ISO Criteria

The Insurance Services Office (ISO) is a New Jersey-based advisory organization that provides insurance carriers with a classification rating of a local community's fire protection. The Property Protection Class (PPC®) score or rating classifies communities based upon an overall scale of 1 (best protection) to 10 (no protection) and assesses all areas related to fire protection. These areas are broken into four major categories which include: emergency dispatch and communications (10 percent of the rating), water supply system and distribution capabilities (40 percent), the fire department (50 percent), and Community Risk Reduction efforts (an additional 5.5 percent credit is available above 100 percent).

Engine Company Performance

A key area of credit towards a jurisdiction's PPC® score is the degree to which structures protected by the fire department fall within a 1.5 road mile service area of a fire station. This 1.5 road-mile standard is used to approximate a 4-minute travel time for first responding units as required by NFPA 1710. Next, an analysis was completed for current fire stations with areas in yellow indicating those structures within a 1.5-mile driving distance. Based on the ISO engine company travel criteria, approximately 58.14% of Gainesville is included within the 1.5-mile travel distance. As with the NFPA analysis, Station 6 was excluded as its primary function is to provide Aircraft Rescue and Firefighting (ARFF).

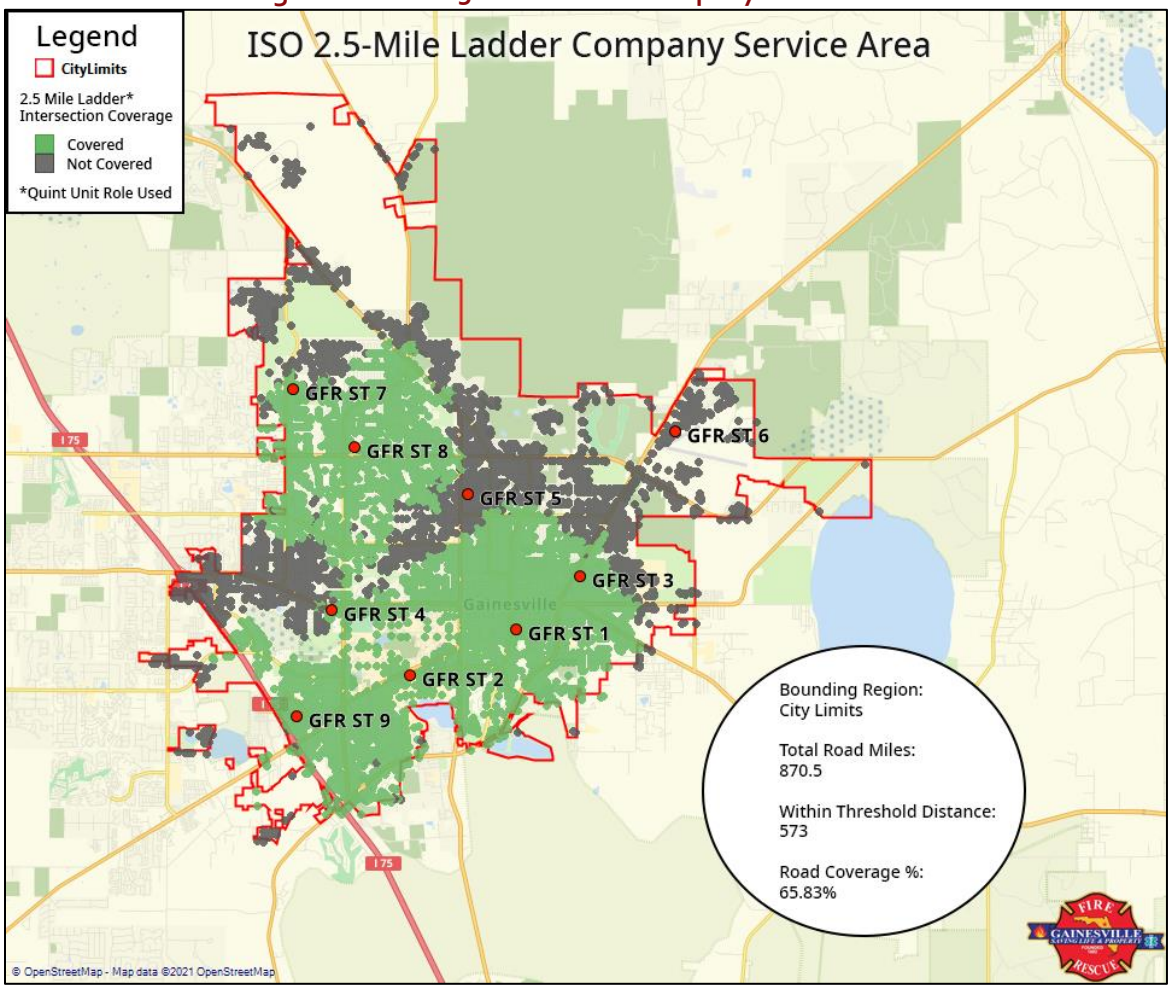
Figure 25: ISO 1.5-Mile Engine Company Service Area



Ladder Company Performance

In many jurisdictions across the country, ladder companies are deployed only to certain types of incidents and are not necessarily considered as the first due unit for all other incident types. Because of this, ISO uses a 2.5 road-mile travel distance for ladder companies to approximate an 8-minute travel time in urban and suburban areas by ladder companies to provide the balance of personnel and equipment needed for incidents such as working fires. The following figure displays GFR's ladder company performance within the city.

Figure 26: ISO 2.5-Mile Ladder Company Service Area

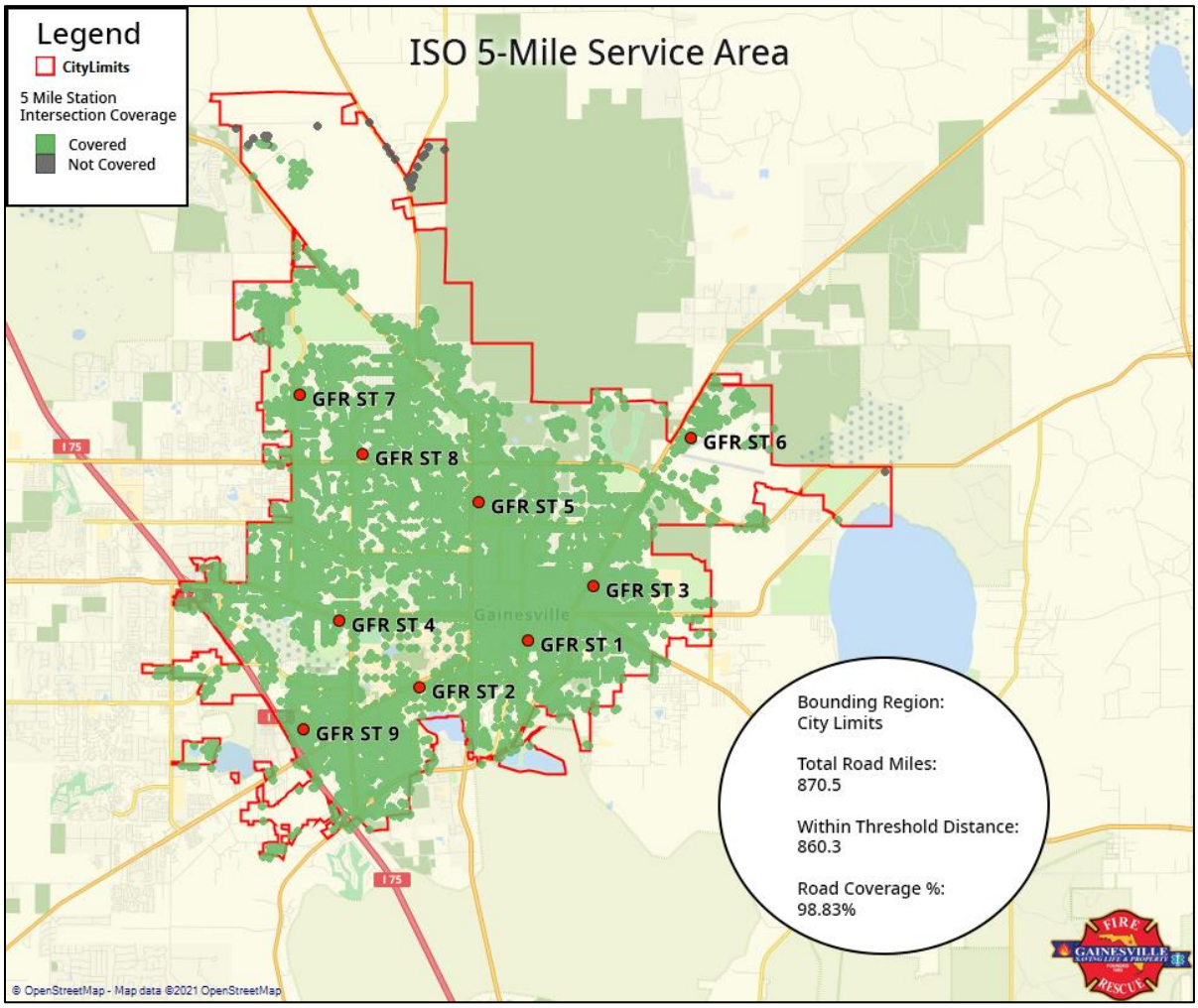


When GFR's ladder company response is evaluated, the performance is like that of the engine company with 66.8% coverage meeting the benchmark across the city. As illustrated in this figure, a large portion of ladder company coverage falls within the municipal boundaries.

ISO Fire Station Coverage

For a jurisdiction to receive a PPC® rating from ISO that indicates fire coverage is available, structures must generally be located within 5-miles of a fire station. Areas outside of 5-miles are essentially given a PPC® rating of 10, meaning that no fire department coverage is available regardless of whether they are protected by an organized fire department. Within the City of Gainesville, nearly all areas lie within 5-miles of a fire station and are eligible to receive a rating based upon the overall performance of the fire department.

Figure 27: ISO 5-Mile Service Area

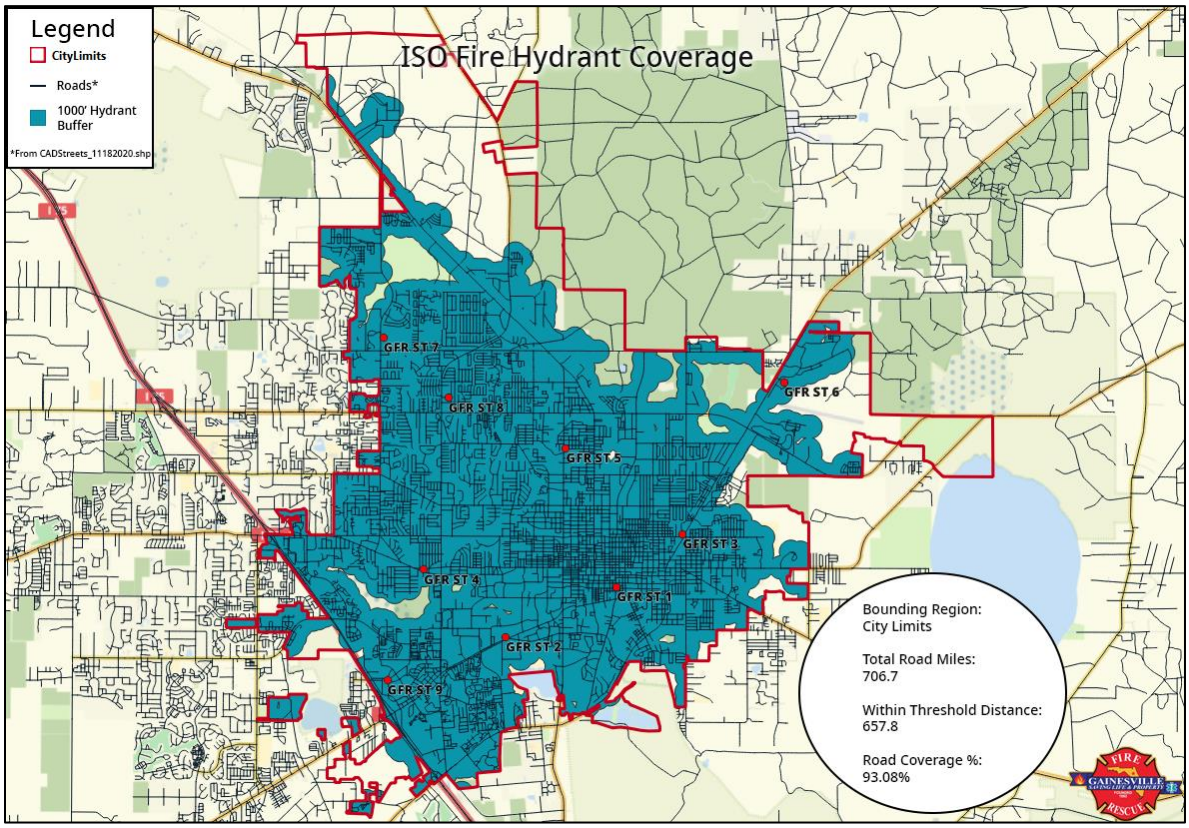


Water Supply and Hydrant Locations

Access to water is a fundamental requirement for fire suppression in urban settings. Without an adequate supply of water, fire suppression operations are challenging. Additionally, the access point for this water supply must be located close enough to the structure to allow for rapid access by the fire department.

In the next figure, fire hydrant coverage within Gainesville is displayed using the ISO requirement that structures must be located within 1,000 feet of a fire hydrant.

Figure 28: ISO Hydrant Coverage



When a 1,000-foot ring is placed around each of the fire hydrants on Gainesville's water supply system and consolidated, the city provides coverage to 93.0% of its road base within the municipal boundaries. Other factors to consider when evaluating water supply are flow rates and capacities, inspections, flow testing, and record keeping.

General ISO Considerations

The City of Gainesville possesses the ability to improve upon their current ISO PPC® rating of ISO 2 and potentially receive an ISO 1 rating at some point in the future. A review of the fire department's latest ISO survey indicates that significant credit was lost within the training section of the evaluation which subsequently contributed to a relatively high divergence (loss in credit due to disparity between the fire department and water supply system). The next figure contains the scoring summary from the latest evaluation.

Figure 29: September 2019 ISO Credit Awarded

FSRS Feature	Earned Credit	Credit Available
Emergency Communications		
414. Credit for Emergency Reporting	3.00	3
422. Credit for Telecommunicators	3.69	4
432. Credit for Dispatch Circuits	3.00	3
440. Credit for Emergency Communications	9.69	10
Fire Department		
513. Credit for Engine Companies	5.58	6
523. Credit for Reserve Pumpers	0.50	0.50
532. Credit for Pump Capacity	3.00	3
549. Credit for Ladder Service	2.08	4
553. Credit for Reserve Ladder and Service Trucks	0.35	0.50
561. Credit for Deployment Analysis	5.99	10
571. Credit for Company Personnel	9.70	15
581. Credit for Training	7.77	9
730. Credit for Operational Considerations	2.00	2
590. Credit for Fire Department	36.97	50
Water Supply		
616. Credit for Supply System	22.30	30
621. Credit for Hydrants	3.00	3
631. Credit for Inspection and Flow Testing	7.00	7
640. Credit for Water Supply	32.30	40
Divergence	-1.36	--
1050. Community Risk Reduction	4.81	5.50
Total Credit	82.41	105.50

With near maximum available credit for emergency communications and community risk reduction, the primary areas of potential improvement for GFR lie within the fire department and water supply sections. Of importance is the effect of divergence when changes occur within either of these categories. Divergence is applied when differences in the level of protection exist between the fire department and water supply scores. For example, on the latest evaluation GFR received approximately 74% of the available credit for the fire department while the water supply received 80%. This difference resulted in -1.36 penalty applied to the overall score. To achieve balance between these scores, the fire department would have needed to improve its score to 40 points, or 80% credit. This would result in an additional 4.4 points, taking the final score to 86.81.

At the current state, GFR will need to improve the water supply score and personnel score (the average number of firefighters on duty daily) while accounting for divergence to achieve an ISO 1. It should also be noted that adding additional fire stations will likely result in a reduction in the personnel score that outweighs the improvements to deployment, while adding additional personnel to staff new units in existing stations will marginally improve credit awarded (up to 12 firefighters per station). In either case, significant investments in personnel and in water supply capacity would be required for GFR to reach and sustain an ISO 1 rating. The City would need to balance the continuing cost of these improvements against the benefits of moving from a PPC rating of 2 to 1 which typically only affects individually rated properties rather than residential property owners.

Resource Concentration

While most responses within Gainesville are EMS in nature and are typically handled by one to two units, some incidents require greater apparatus, equipment, and personnel resources to mitigate the emergency and reduce loss safely and effectively. The ability of GFR to effectively deploy multiple units to an incident within a timely manner will often make the difference between minor damage and a total loss.

NFPA 1710 requires that for moderate or greater risk incidents (for example a fire in a 2,000 square foot residential dwelling), the balance of needed resources arrive at the scene within an 8-minute travel time. To achieve this, the concentration of GFR's resources were evaluated to determine how the spacing of multiple resources (the response apparatus within their respective fire stations) are arranged so that an initial Effective Response Force (ERF) can arrive on scene within the time frames outlined in the on-scene performance expectations. An effective response force is defined as "the minimum amount of staffing and equipment that must reach a specific emergency zone location within a maximum prescribed total response time and is capable of initial fire suppression, EMS, and/or mitigation. The ERF is the result of the critical tasking analysis conducted as part of a community risk assessment."

To determine GFR's ability to assemble an effective response force (ERF), incident data from 2017 through 2020 was evaluated by primary call type and a summary of that performance is provided in the figure below.

Figure 30: Effective Response Force Total Response Time (2017-2020)

	Urban/Suburban/Metro				Rural			
	2017	2018	2019	2020	2017	2018	2019	2020
All Structure Fires	12:01	11:53	10:44	13:38	15:08	12:19	12:18	12:45
Resid. Strct. Fire	16:47	11:59	11:25	12:26	17:03	09:55	12:40	10:57
Comm. Strct. Fire	24:04	16:39	13:02	29:41	16:54	13:46	11:15	11:28
Tech Rescue	07:45	08:03	12:55	01:15	14:35	11:54	12:40	19:24
Haz Mat	14:46	15:46	15:19	15:50	22:49	18:13	19:18	18:38
EMS	10:08	10:02	10:09	10:20	11:15	11:40	11:55	11:57
ARFF					11:38	10:29	12:26	15:39

When examining the response performance data for the assembly of GFR's effective response force, GFR has historically not achieved or approached their total response goals, although an improvement is generally observed from 2017 to 2019. Given that total response time includes call processing, which is out of the direct control of GFR (Alachua County Combined Communication Center responsibility), and NFPA 1710 does not provide performance criteria for total response time, GFR should re-examine its separate goals for response, travel, or turnout performance time or some combination of those component elements and assess opportunities for improvement or adoption of more achievable goals given available resources and deployment.

Resource Reliability

In this section, resource reliability is evaluated using several metrics to establish a global perspective on GFR's ability to provide sufficient responding resources to meet service demand within the City. When all units are available and in quarters, supplying sufficient resources is typically not a problem. However, when multiple calls occur simultaneously or when units are committed to incidents for extended periods of time, or when insufficient resources exist to mitigate an emergency safely and effectively, further preparation and planning must be completed.

Call Concurrency

First, call concurrency is evaluated. Call concurrency is a comparison of how often multiple calls occur placing additional demand on resources. In the figure below, a concurrent call is identified when a second unit is dispatched to a separate incident prior to the first unit clearing the scene and becoming available. When two incidents are occurring simultaneously and a third separate incident is dispatched, three concurrent calls are present and so on.

Figure 31: Call Concurrency (2018-2020)

Call Concurrency	
Single Incident	47.8%
2	33.8%
3	13.4%
4	3.8%
5 or more	1.2%

Based upon the data provided by GFR, the call concurrency is moderate within the City. The results of the analysis indicate that approximately half of the time that a unit is committed to an incident, an additional one or more units are committed as well. Further review of the response data suggests that this occurs most frequently during the middle of the day; however, the availability of other units to assemble an effective response force should be considered when examining deployment options.

Unit Hour Utilization

Another component that must be considered when evaluating Resource Reliability is Unit Hour Utilization (UHU)[2]. UHU is an industry standard method of expressing emergency incident workload placed on the crew assigned to that unit and can also describe the amount of time that a unit is not available for response because it is already committed to another incident. The larger the percentage, the greater its utilization, and the less available it is for assignment to subsequent calls for service, training, and ancillary duties. UHU rates are expressed as a percentage of the total hours in a year.

In May 2016, Henrico County (VA) Division of Fire published an article after studying its department's workload for EMS transport units. As a result of the study, Henrico County Division of Fire developed a general commitment factor scale for its department by analyzing the percentage of time that each crew was committed to responding throughout the year. The next figure is a summary of the findings as it relates to commitment factors.

Figure 32: Commitment Factors as Developed by Henrico County (VA) Division of Fire, 2016

Factor	Indication	Description
0.16–0.24	Ideal Commitment Range	Personnel can maintain training requirements and physical fitness and can consistently achieve response time benchmarks. Units are available to the community more than 75% of the day.
0.25	System Stress	Community availability and unit sustainability are not questioned. First-due units are responding to their assigned community 75% of the time, and response benchmarks are rarely missed.
0.26–0.29	Evaluation Range	The community served will experience delayed incident responses. Just under 30% of the day, first-due ambulances are unavailable; thus, neighboring responders will likely exceed goals.
0.30	"Line in the Sand"	Not Sustainable: Commitment Threshold—the community has less than a 70% chance of timely emergency service and immediate relief is vital. Personnel assigned to units at or exceeding 0.3 may show signs of fatigue and burnout and may be at increased risk of errors. Required training and physical fitness sessions are not consistently completed.

[2] UHU can be expressed either in decimal or percentage format. For example, a UHU of 0.1 is the same as a UHU of 10%. Both mean that a unit is occupied on emergency calls 10% of the time that it can perform some duty (whether an emergency response or a non-emergency function).

The UHUs of GFR units are displayed in the following figure with their relative workloads from January 1, 2018, through December 31, 2020, and can be compared to the Henrico (VA) standard. While other units responded to incidents within the city during this time frame, their response activity levels were below 1% (or less than 1,000 responses) and are not, therefore, included in this figure.

Figure 33: GFR Unit Hour Utilization (2018-2020)

	Calls	Sum	UHU
DC1	2282	595:17:37	2.3%
DC2	1575	444:45:13	1.7%
E1	5137	1426:16:32	5.4%
E2	7371	2248:00:42	8.5%
E3	7936	2524:42:51	9.6%
E4	6075	1901:49:32	7.2%
E5	6918	2165:47:39	8.2%
E7	4651	1747:44:24	6.6%
HZ2	814	372:39:59	1.4%
Q8	4579	1426:59:15	5.4%
Q9	6000	1884:42:52	7.2%
SQ1	8280	2280:33:23	8.7%
SQ3	4962	1541:55:32	5.9%
SQ9	873	284:11:50	1.1%
TW1	3283	838:18:38	3.2%
TW2	2678	673:40:11	2.6%

Although the Henrico County method does not fully capture or consider GFR's local service and system conditions, there is value in evaluating data derived using the best available published standard. Based on the UHU rates from the data provided, GFR units generally perform within an acceptable range for emergency response activity. In addition to responding to calls, crews must also have time available to perform other tasks such as training, public education, additional duties, and time for meals.

Unit hour utilization is intended to assess the emergency response workload of the crews assigned to a 24-hour shift. While this analysis provides some insight into the levels of emergency response activity for specific apparatus and respective crews, it does not lend itself to describing crew workloads as personnel move from one unit to another throughout the day. And, while emergency response is the primary mission of the fire department, there are many other supporting daily duties and responsibilities required by GFR to ensure that crews are prepared to respond appropriately and professionally to any potential emergency experienced by City neighbors and visitors. GFR has developed a formula to account for the entire breadth of this workload which is reviewed in the following section.

GFR Unit Total Workload Capacity

In 2018, GFR expanded upon the Unit Hour Utilization (UHU) concept to include additional mandatory elements associated with providing fire and emergency medical response in Gainesville. While the previous UHU analysis strictly addresses the percentage of time annually that a crew on a specific unit is committed to emergency response, other secondary duties must also be accomplished throughout the day to facilitate effective, safe, and timely emergency response to neighborhood emergencies. These items include morning vehicle and equipment inspections and maintenance, in-service training and multi-company drills, continuing education, recertification, fire safety pre-plan inspections, hydrant testing, and other additional duties. Since crews work a 24-hour shift, other needs include time for meals, physical fitness, rest, and other personal time.

Using this formula, many of GFR's units are approaching or exceeding capacity to accomplish all primary, secondary, and tertiary duties and activities. As referenced in the Henrico County study above, when the crew primary response activity rate reaches a certain level, travel time goals, as well as secondary and ancillary duties cannot be accomplished, mistakes become more frequent, and burn out and fatigue are a constant issue. It is worth noting that the Henrico County study is specific to that jurisdiction and the Commonwealth of Virginia requirements and that the amount of time required to be committed to other duties by crews can vary drastically from department to department. The level of detail and internal knowledge specific to GFR's system is outside of the scope of this project; however, a summary of GFR's internal findings is displayed in the figure below to provide additional insight on true crew activity rates throughout the year.

Figure 34: GFR Response Capacity 2000-2019

GFR Unit Responses

Annual Unit Capacity 3039	2000	2001	2002	2003 N/A	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	% Unit Capacity
DC1	1109	1152	1254		1242	588	1149	1125	629	424	589	565	573	641	599	628	657	738	722	685	NA
DC2	1022	995	1040		1095	539	1065	1035	532	342	495	412	350	343	424	420	434	422	462	509	NA
E1	1774	2052	1929		2070	1820	1816	1850	1680	1717	1689	1697	1717	1657	1870	1858	1892	1866	1682	1757	57.8%
E2	2582	2748	2674		2848	2654	2491	2707	2331	2584	2646	2716	3179	3322	3103	3031	3191	2897	2534	2381	78.3%
E3	2831	3045	2627		2787	2748	2924	3026	2925	2797	2961	3010	2839	2935	3058	3412	3792	3890	3159	2519	82.9%
E4	2245	2304	2163		2274	2176	2178	2123	1871	1901	2043	1927	2032	2031	1948	1943	1980	2049	2086	2094	68.9%
E7	1997	2140	1894		1911	2017	2064	2247	2099	2301	2259	1843	1652	1559	1649	1711	1816	1870	1598	1518	50.0%
HZ6/HZ2	259	429	291		374	389	394	393	360	344	234	225	298	296	313	349	336	375	310	249	NA
E5/Q5/TR5	2243	2467	1966		2340	2240	2265	2397	2389	2436	2477	2366	2205	2230	2274	2402	2608	2607	2570	2190	72.1%
R1/SQ1	2817	3073	2411		2789	2651	2753	2995	2953	3273	3340	3016	3125	3050	2935	2708	2793	2988	2777	2759	90.8%
SQ2/SQ9/E9/Q9															694	1136	1955	1958	2274	2390	78.6%
SQ3 Peak Unit 6/20/18																			1043	1857	76.4%
Q1/TW1/TR1	1086	1273	1018		1431	1211	1091	1214	1079	992	1254	1257	1275	1306	1341	1452	1437	1479	1274	1147	37.7%
Q2/TW2/TR2	1484	1611	1353		1995	1340	1444	1454	1248	1183	1279	1332	1475	1582	1527	1603	1688	1500	1190	962	31.7%
Q8/TR8												774	1503	1476	1552	1560	1720	1686	1596	1524	50.1%
CR61										13	23	22	28	29	20	27	31	34	37	38	NA
CR63										19	28	25	30	30	23	31	37	35	38	38	NA
ARFF	25	49	31		41	26	26	39													
Subtotal Routine Ops	21474	23338	20651	0	23197	20399	21660	22605	20096	20326	21317	21187	22281	22487	23330	24271	26367	26394	25352	24617	
DC3																		17	18	6	
MRU4 Spec Ev/EM																	33	31	38	40	
EC1 SQ3 CRP																		44	85	451	
E8					66			1										12	0		
E9					52													21	See Q9		
All Total Incl Storms/SE/CRP	21474	23338	20651	0	23315	20399	21660	22606	20096	20326	21317	21187	22281	22487	23330	24271	26400	26519	25493	25114	
Multi-Company Stations (excludes DC)																					
Station 1	6786	7550	6612		7532	6270	6809	7184	6341	6406	6872	6535	6690	6654	5929	6018	6122	6332	5733	5663	
Station 2 + HZ	4325	4788	4318		5217	4383	4329	4554	3939	4111	4159	4273	4952	5200	4943	4983	5215	4772	4034	3592	
Average Unit Response for Engine/Quint	2279	2459	2209		2372	2276	2290	2392	2216	2289	2346	2260	2161	2173	2208	2274	2428	2409	2175	1998	
Average Unit Response for Tower	1285	1442	1186		1713	1276	1268	1334	1164	1088	1267	1295	1375	1444	1434	1528	1563	1490	1232	1055	
5-year SQ1 Average (ex. 2010 is avg of 2006-2010)											3063	3115	3141	3161	3093	2967	2922	2895	2840	2805	

2/18/2020 \\gg\cog\Public Folders\GFR\Fire MGR and Staff\ADMINISTRATION\Performance Measurement\Calls For Service Stats\ANNUAL INCIDENT and RESPONSE STATS\Incident and Response Reports and Summaries\GFR ANNUAL TOTALS\GFR Response Totals Per Year.xlsx

As illustrated above, the R1/S1 crew was nearly at full capacity while E2, E3, E5/Q5/TR5, SQ2/SQ9/E9/Q9, and the SQ3 Peak Unit were approaching full capacity. GFR will need to further evaluate and prioritize various activities based upon its workload formula to determine how best to accomplish its primary mission and its supporting activities. The department may need to explore alternative scheduling or staffing options.

Response Performance Summary

The most visible element of Gainesville Fire Rescue is its response performance. How quickly units arrive on the scene and the efficiency with which they resolve an emergency is typically the only interaction most residents will have with the fire department. To evaluate the fire department's performance, NFPA 1710 was used as it is the applicable standard for career fire departments.

Response time performance is comprised of the following components:

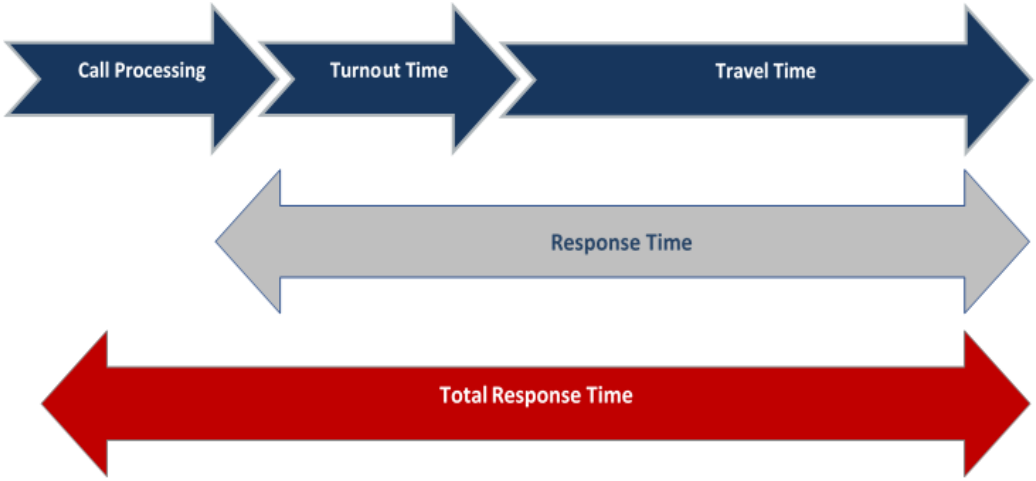
- **Call-Processing Time:** The amount of time between when a call is answered by the 911 Primary Public Safety Answering Point, or dispatch center, and when resources are dispatched.
- **Turnout Time:** The time interval between when units are notified of the incident and when the apparatus responds.
- **Travel Time:** The amount of time the responding unit spends on the road traveling to the incident until arrival at the scene. This is a function of speed and distance.

- **Response Time:** This time is calculated from the time the fire department is dispatched to the arrival of the first apparatus. Response Time equals the sum of "Turnout Time" and "Travel Time." Although this is a combination of Turnout and Travel Time, Response Time is the metric in which NFPA 1710 provides a performance standard.
- **Total Response Time:** This is the most apparent time to the caller requesting emergency services. Total response time is the amount of time that occurs from the time they place the emergency call until units arrive. This time often includes factors both within and outside the control of the fire department, particularly when another agency provides dispatch services.

Tracking the individual components of response time enables GFR to identify deficiencies and areas for improvement. Once department leadership understands the current performance for Call Processing, Turnout Time, and Travel Time, this information can be used to develop or adjust response goals and standards that are both relevant and achievable. Fire service best practices recommend that fire service organizations monitor and report the components of Total Response Time.

The Time Continuum is comprised of the three elements described above, Call-Processing, Turnout Time, and Travel Time. Total Response Time is the sum of all time segments starting with the call-processing time, turnout time, and travel time. The components of GFR's Response Time Continuum will each be evaluated in further detail in the next sections. The following figure is an illustration of the total response time continuum.

Figure 35: Total Response Time Continuum



Historically, fire rescue service providers have used the performance measurement of average response time to describe the levels of performance. The average is a commonly used descriptive statistic, also called the mean of a data set. Averages may not accurately reflect the performance for the entire data set because the average can be significantly skewed by data outliers, especially in small data sets. One extremely good or bad value can skew the "average" for the entire data set. Furthermore, the more widely spaced the data points are around the average value, the less that value accurately describes the true performance.

Percentile or fractile measurements are a better measure of performance since they show that most of the data set has achieved a particular level of performance. The 90th percentile means that 90% of responses were equal to or better than the performance identified, and that the other 10% can be attributed to data outliers, inaccurate data, or situations outside of normal operations that delayed performance. This can be compared to the desired performance objective to determine the degree of success in achieving the goal.

An important consideration when evaluating fractile performance is that the results of each category are not additive, meaning that the sum of two or more constituent metrics cannot be simply added together to find the sum. This is because each dataset is discrete and, as such, must be observed individually, particularly when data quality is an issue. If a metric, such as response time possesses most of its data points, while turnout time is not accurately documented, a significant difference can exist between the response time calculated using the fractile descriptive and the sum of turn out time and travel.

In evaluating the various response time components using the fractile analysis method, each component must be evaluated and quantified separately, as the available data—and the quality of the data may vary significantly.

To analyze GFR performance to emergency calls, the following assumptions were made:

- Non-emergency incident types were removed.
- Mutual and auto aid given were removed.
- Other aid given was removed.
- NFIRS call types within the 500, 600, 800, and 900 series were removed.
- Cells containing zeros or no value were removed.
- Call Processing Time Performance

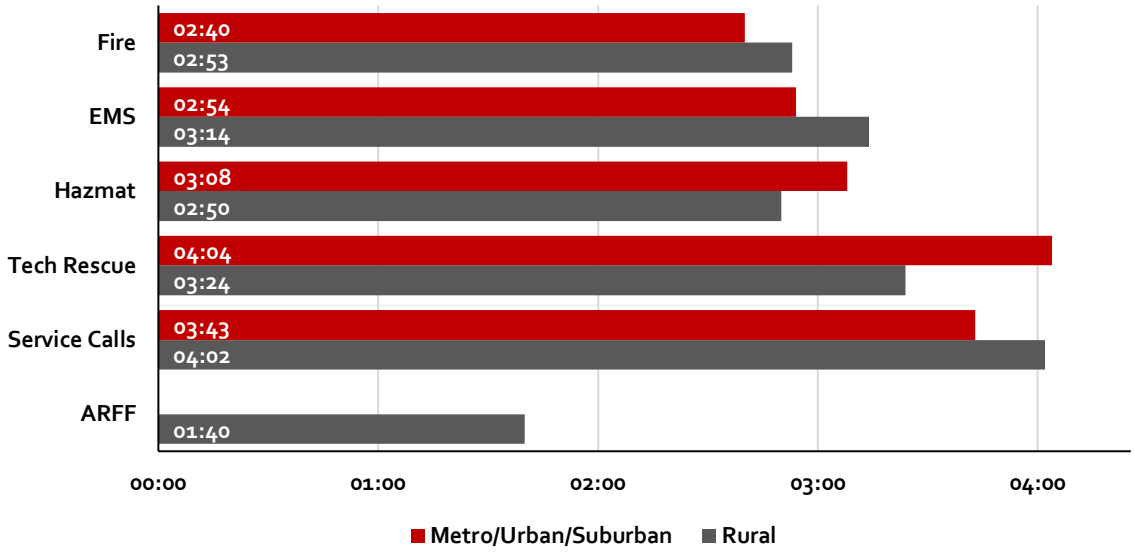
Call Processing Time Performance

The industry standard for call processing (or alarm handling) is NFPA 1221: Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems. This standard relates specifically to communications/dispatch centers[3] and states that processing time for incoming emergency calls should not exceed 60 seconds, 90% of the time. For special operations, calls requiring translation, or other factors described in the standard, times should not exceed 90 seconds at the 90th percentile.

Examination of GFR's 2020 data revealed that call processing time exceeded the benchmark across all categories. Data containing missing time stamps or zero-time stamps for call processing were not included.

[3] As discussed, NFPA 1221 is the industry standard for dispatch/communications center detailing requirements for their organization, procedures, and performance while NFPA 1710 is the industry standard for fire departments and their performance. Both standards quote the same metric for call processing time.

Figure 36: Call Processing Time, 90th Percentile 2020



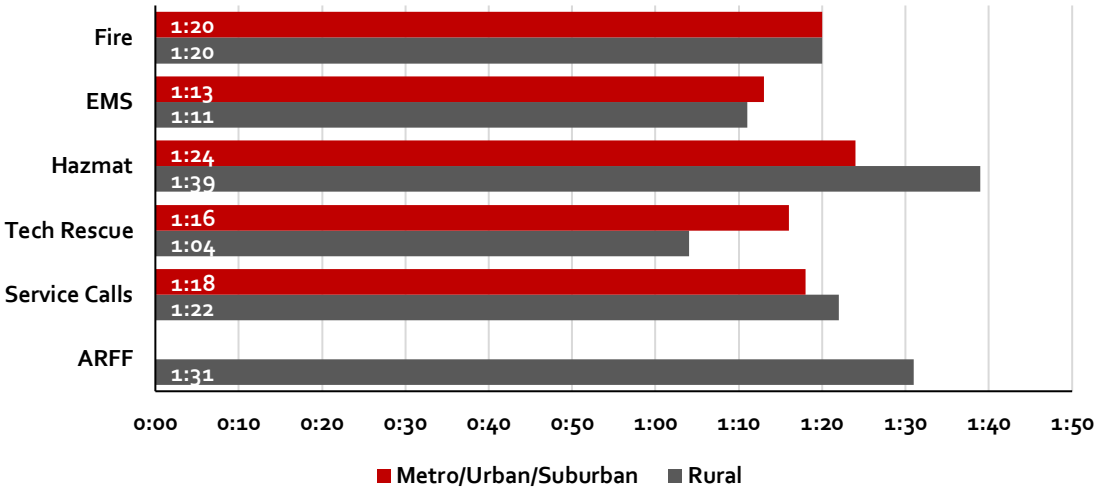
Call processing time performance exceeds the NFPA metric of 64 seconds found both in NFPA 1221 and NFPA 1710. Ideally, the Alachua County Combined Communications Center, which dispatches for GFR, would meet, or exceed this standard; however, it is ESCI's experience that most agencies do not. At 2 minutes, 40 seconds for fire, call processing time for GFR is well above industry standards. While ESCI understands that the communications center is not under the supervision of GFR, it is recommended that GFR work with the ACSO Combined Communications Center to improve call processing performance to meet the standards set forth in NFPA 1221 and NFPA 1710.

Turnout Time Performance

The second component of the response continuum, and one that is directly affected by GFR response personnel, is turnout performance. Turnout time is the time it takes personnel to receive the dispatch information, move to the appropriate apparatus, and begin responding to the incident.

NFPA 1710 calls for a 90th percentile turnout time performance of 80 seconds for fire and special operations calls and 60 seconds for EMS incidents. The following figure illustrates the turnout time performance for Gainesville Fire Rescue.

Figure 37: Turnout Time Performance, 90th Percentile 2020

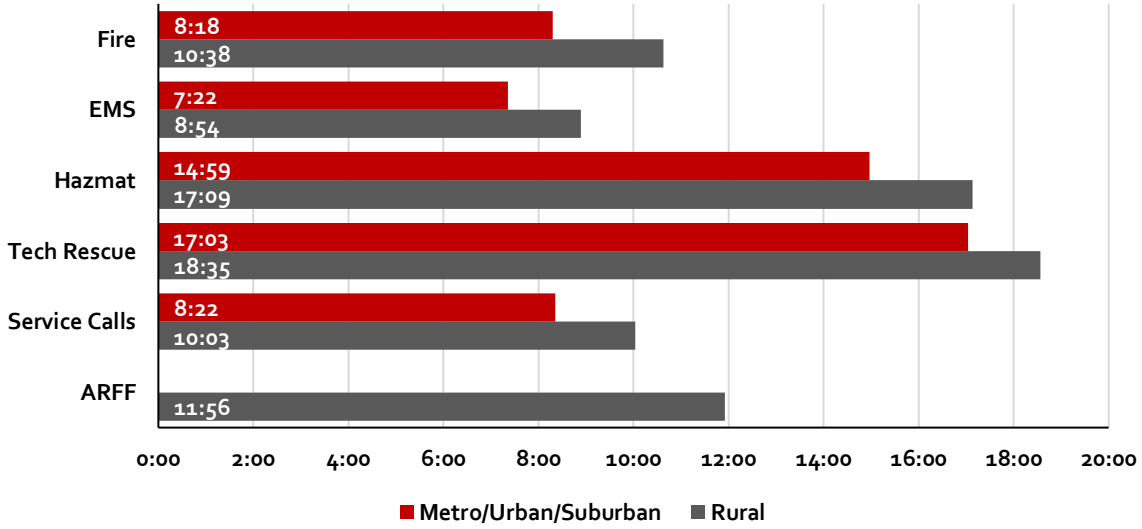


When turnout performance is evaluated, GFR meets or exceeds industry standards for fires and technical rescue at 80 seconds and approaches the industry standard of 60 seconds for other call types. The outlier in this data set is ARFF response, which because of low call volume, leads to low reliability within the dataset.

Travel Time Performance

The third component of the response continuum is travel time. It is important to understand that travel time is not specifically a factor of speed as much as it is the result of proper placement of fire stations from which emergency response begins. Travel time is the amount of time between when the apparatus departs for the call and when it arrives on the scene and is measured at the 90th percentile. NFPA 1710 requires that the first due fire or EMS unit arrive on the scene within a 4-minute, or 240-second, travel time. The following figure provides the travel time performance for 2020.

Figure 38: Travel Time, 90th Percentile 2020

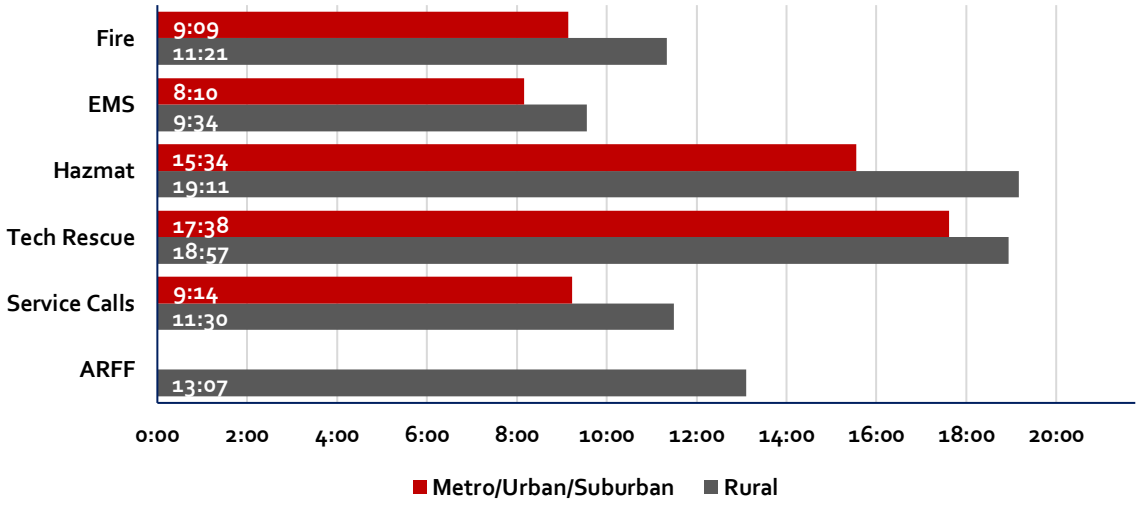


GFR's travel time performance for the first due unit is nearly double NFPA 1710 standards for fire and EMS responses. GFR has created a categorization for emergent versus nonemergent calls to better track travel response and is tracking monthly performance focused on building fires and priority EMS calls. Due to the COVID-19 pandemic of 2020, some data points may be skewed due to low call volume or other extraordinary factors related to the pandemic; however, GFR may consider further investigation into the excessive travel times observed.

Response Time Performance

Response time is the amount of time from initial notification to the fire department until the first unit arrives on-scene. While not specifically addressed by NFPA 1710, it is a combination of turnout and travel time standards or 5 minutes, 4 seconds for most responses, and 5 minutes, 24 seconds for fire and special operations calls.

Figure 39: Response Time, 90th Percentile 2020



GFR's best response times are to EMS calls in Metro/ Urban/Suburban areas at 8 minutes, 10 seconds at the 90th percentile. This exceeds the national standard by 3 minutes, 6 seconds. All other response times exceed the national standard by even greater intervals. Travel times are the most significant contributor to these response times.

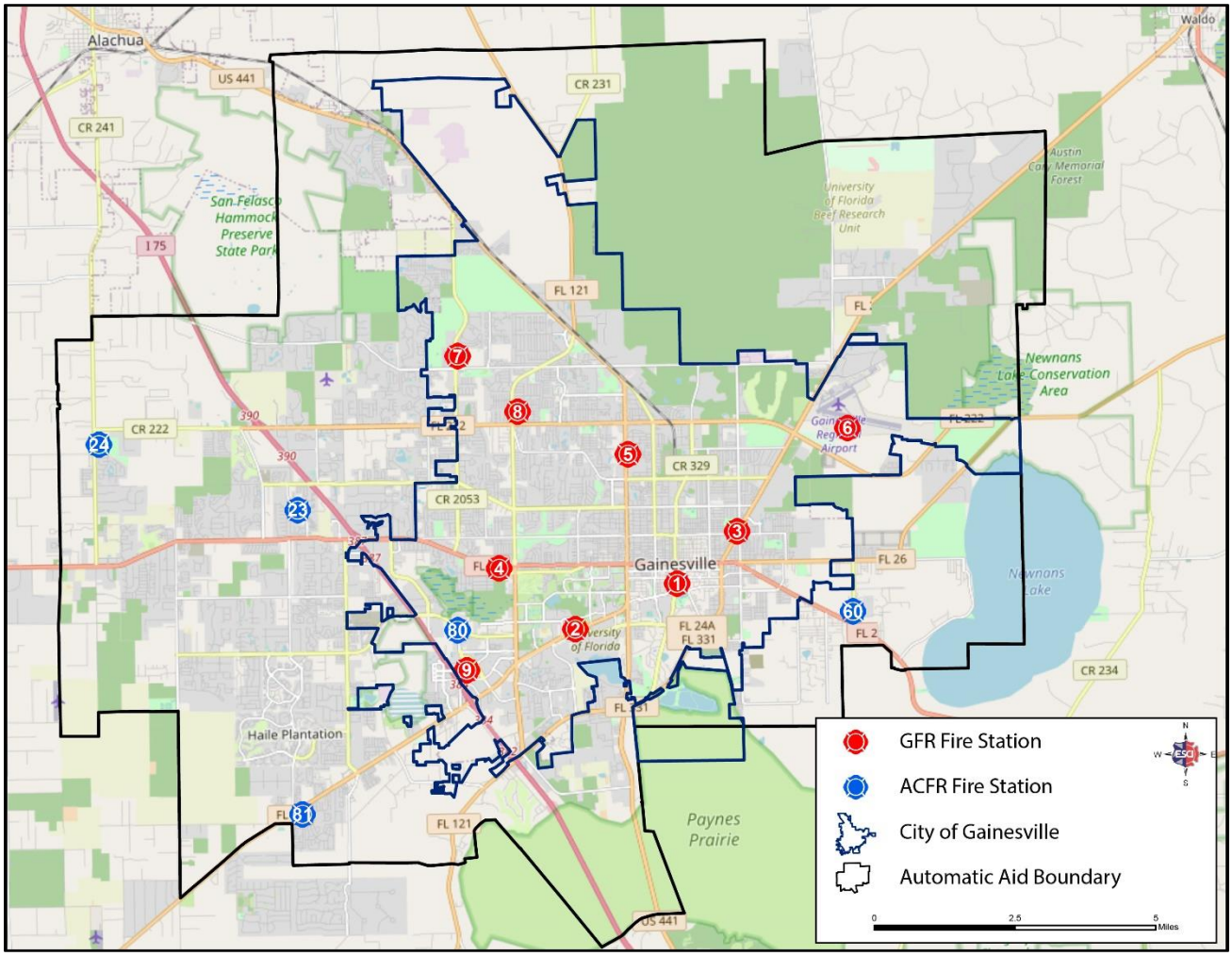
Mutual & Automatic Aid Systems

Few, if any, organizations possess all the resources needed to mitigate all possible types of incidents. Additionally, when mutually beneficial agreements are possible, particularly when they occur at little cost to the organizations, good governance suggests that these opportunities should be seized upon to provide higher service levels to the communities involved. Two types of agreements are discussed in this section, mutual and automatic aid agreements.

In mutual aid agreements, two or more organizations agree that, when requested, they will supply the other agency with the requested resources if available. For emergency services, this request typically occurs through the request of responding or on scene personnel.

The other type of agreement, automatic aid, occurs as the name implies, automatically. When an emergency call is received by the dispatch center, all available resources are examined based on the appropriate unit type and their proximity to the call, typically with the closest unit responding regardless of the jurisdiction in which the incident occurred. The following figure presents the locations of GFR stations, as well as the locations of automatic aid fire stations within the automatic aid boundaries of Gainesville.

Figure 40: Alachua County Fire Rescue Automatic Aid Locations



Currently an automatic aid agreement exists between GFR and Alachua County Fire Rescue (ACFR) and extended automatic aid boundaries were created for both organizations to provide additional automatic support to one another. At the end of each year, total responses within each other's areas are tallied and a payment provided to one or the other depending upon whether an imbalance between responses existed. In recent years, GFR has provided more responses for automatic aid than Alachua County which has produced a financial strain for ACFR. Additionally, Alachua County is a rural county, except for the City of Gainesville.

As new construction occurs nears Gainesville's current borders, the city can provide incentives for annexation that Alachua County cannot match. As Gainesville annexes areas of development once in the County, the revenue stream generated by those developments is no longer available to support ACFR services. Because ACFR provides ALS transport to all areas of the County, it is faced with the dilemma of providing sufficient resources to meet the demand in and around the City of Gainesville, while simultaneously attempting to provide those services, as well as fire suppression to the rural, remainder of the unincorporated County.

Finally, ACFR is preparing to move an engine company from Fire Station 80 located within the municipal boundaries of Gainesville in the southwest region of the city. With relocation of that ACFR engine company, additional service demand will be experienced primarily by GFR Stations 4 and 9. Given the current UHU rates for those units as previously discussed, this demand should fall within the acceptable levels of crew emergency activity based on the data provided. However, based upon GFR's formula for total workload, additional units may be required.

SECTION II:
Growth &
Expansion Considerations

RESPONSE STANDARDS & TARGETS

There are three main factors that lead to successful mitigation of emergencies; sufficient well-trained personnel, arriving on reliable and well-equipped apparatus appropriate to the task at hand, and quickly enough to make a positive difference in lives saved and property preserved. Other sections of this report have laid out the current staffing levels, facilities and equipment, and response performance for GFR. The following section describes the consequences of failing to deliver sufficient personnel and equipment early enough to mitigate the emergency addressed.

Dynamics of Fire in Buildings

Most fires within buildings develop in a predictable fashion unless influenced by highly flammable material. Ignition, or the beginning of a fire, starts the sequence of events. It may take several minutes or even hours from the time of ignition until a flame is visible. This smoldering stage is very dangerous, especially during times when people are sleeping, since large amounts of highly toxic smoke may be generated during this phase.

Once flames appear, the sequence continues rapidly. Combustible material adjacent to the flame heats and ignite, which in turn heats and ignites other adjacent materials if sufficient oxygen is present. As the objects burn, heated gases accumulate at the ceiling of the room. Some of the gases are flammable and highly toxic.

The spread of the fire from this point continues quickly. Soon the flammable gases at the ceiling as well as other combustible material in the room of origin reach ignition temperature. At that point, an event termed "flashover" occurs; the gases and other material ignite, which in turn ignites everything in the room. Once flashover occurs, damage caused by the fire is significant and the environment within the room can no longer support human life. Flashover usually occurs about five to eight minutes from the appearance of flames in typically furnished and ventilated buildings. Since flashover has such a dramatic influence on the outcome of a fire event, the goal of any fire agency is to apply water to a fire before flashover occurs.

Although modern codes tend to make fires in newer structures more infrequent, today's energy-efficient construction (designed to hold heat during the winter) also tends to confine the heat of a hostile fire. In addition, research has shown that modern furnishings generally ignite more quickly and burn hotter (due to synthetics) releasing more and different toxic and carcinogenic products than historically encountered. In the 1970s, scientists at the National Institute of Standards and Technology found that after a fire broke out, building occupants had about 17 minutes to escape before being overcome by heat and smoke. Today, that estimate is as short as three minutes. The necessity of effective early warning (smoke alarms), early suppression (fire sprinklers), and firefighters arriving on the scene of a fire in the shortest span of time is more critical now than ever.

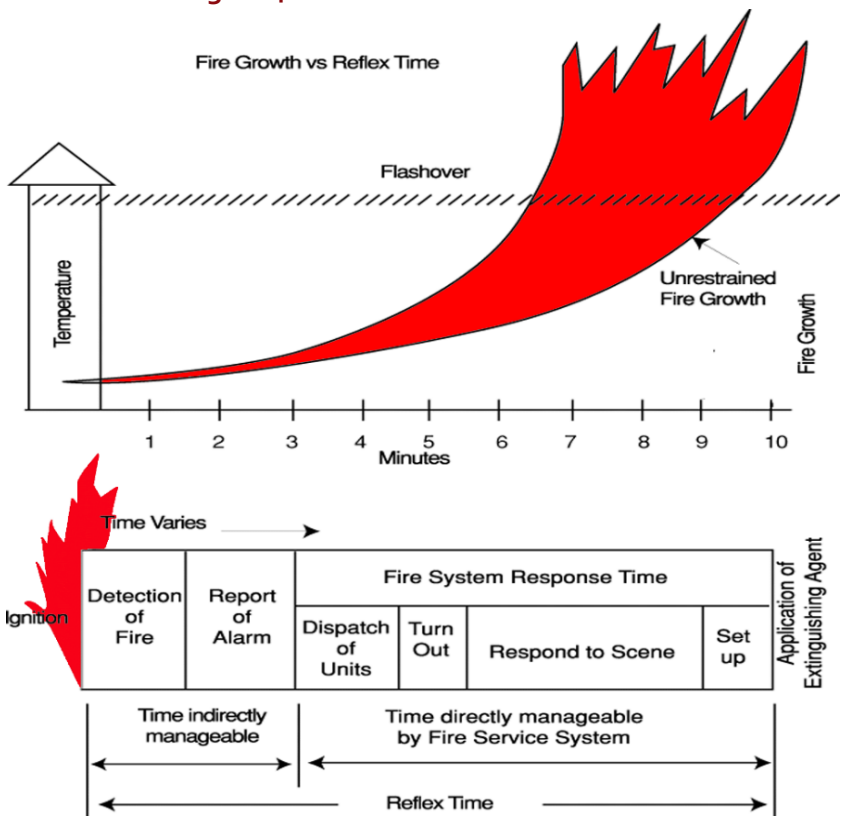
The prompt arrival of at least four personnel is critical for structure fires. Federal regulations (CFR 1910.120) as well as Florida requirements found in Florida Statues 633.508(3) require that personnel entering a building involved in fire must be in groups of two. Further, before personnel can enter a building to extinguish a fire, at least two personnel must be on scene and assigned to conduct search and rescue in case the fire attack crew becomes trapped. This is referred to as the two-in, two-out rule. However, if it is known that victims are trapped inside the building, a rescue attempt can be performed without additional personnel ready to intervene outside the structure. Further, there is no requirement that all four arrive on the same response vehicle. Many fire departments rely on more than one unit arriving to initiate interior fire attack.

Perhaps as important as preventing flashover is the need to control a fire before it does damage to the structural framing of a building. Materials used to construct buildings today are often less fire resistive than the heavy structural skeletons of older frame buildings. Roof trusses and floor joists are commonly made with lighter materials that are more easily weakened by the effects of fire. "Light weight" roof trusses fail after five to seven minutes of direct flame impingement. Plywood I-beam joists can fail after as little as three minutes of flame contact. This creates a dangerous environment for firefighters.

In addition, the contents of buildings today have a much greater potential for heat production than in the past. The widespread use of plastics in furnishings and other building contents rapidly accelerate fire spread and increase the amount of water needed to effectively control a fire. All these factors combine to make the need for early application of water essential to a successful fire outcome.

The next figure illustrates the sequence of events during the growth of a structure fire over time.

Figure 41: Fire Growth vs. Reflex Time



As is apparent by this description of the sequence of events, application of water in time to prevent flashover is a serious challenge for any fire department. It is critical, though, as studies of historical fire losses can demonstrate.

The National Fire Protection Association found that fires contained to the room of origin (typically extinguished prior to or immediately following flashover) had significantly lower rates of death, injury, and property loss when compared to fires that had an opportunity to spread beyond the room of origin (typically extinguished post-flashover). As evidenced in the following figure, fire losses, casualties, and deaths rise significantly as the extent of fire damage increases.

Figure 42: Fire Extension in Residential Structures, United States, 2011–2015

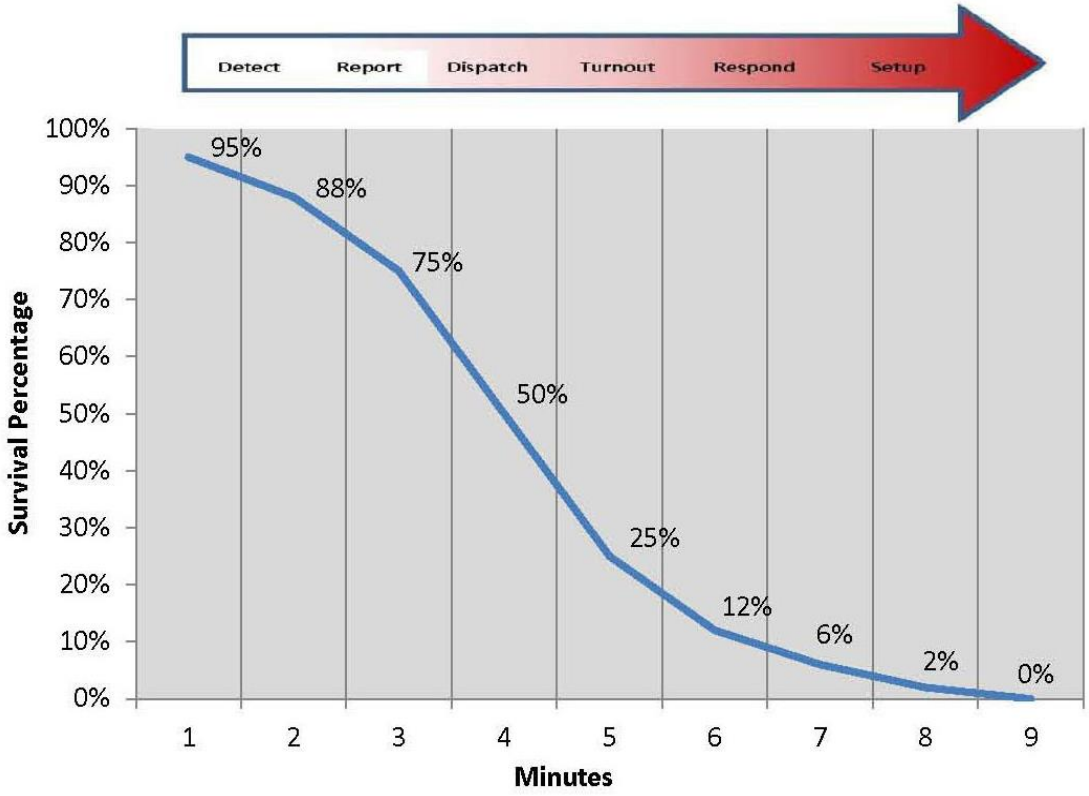
Fire Extension	Rates per 1,000 Fires		
	Civilian Deaths	Civilian Injuries	Average Dollar Loss Per Fire
Confined to room of origin or smaller	1.8	24.8	$4,200
Confined to floor of origin	15.8	81.4	$36,300
Confined to building of origin or larger	24.0	57.6	$67,600

Source: National Fire Protection Association

EMERGENCY MEDICAL EVENT SEQUENCE

As with response to emergencies involving fire, safe and effective response to medical emergencies also involves time as a critical element to successful outcomes. Cardiac arrest is the most significant life-threatening medical event in emergency medicine today. A victim of cardiac arrest has mere minutes in which to receive lifesaving care if there is to be any hope for resuscitation. The American Heart Association (AHA) issued a set of cardiopulmonary resuscitation guidelines designed to streamline emergency procedures for heart attack victims, and to increase the likelihood of survival. The AHA guidelines include goals for the application of cardiac defibrillation to cardiac arrest victims. Cardiac arrest survival chances fall by 7 to 10 percent for every minute between collapse and defibrillation. Consequently, the AHA recommends cardiac defibrillation within five minutes of cardiac arrest. As with fires, the sequence of events that leads to emergency cardiac care can be graphically illustrated, as in the following figure.

Figure 43: Cardiac Arrest Event Sequence



The opportunity for recovery (or survival rate as represented by percentages in the figure above) from cardiac arrest drops quickly as time progresses. The stages of medical response are very similar to the components described for a fire response. Recent research stresses the importance of rapid cardiac defibrillation and administration of certain medications as a means of improving the opportunity for successful resuscitation and survival.

People, Tools, and Time

Time matters a great deal in the achievement of an effective outcome to an emergency event. Time, however, is not the only factor. Delivering sufficient, properly trained and appropriately equipped personnel within the critical period completes the equation.

For medical emergencies this can vary based on the nature of the emergency. Many medical emergencies are not time critical. However, for serious trauma, stroke, cardiac arrest, or conditions that may lead to cardiac arrest, a rapid response is essential. Equally critical is delivering enough personnel to the scene to perform all the concurrent tasks required to deliver quality emergency care. For a cardiac arrest, this can be up to six personnel; two to perform CPR, two to set up and operate advanced medical equipment, one to record the actions taken by emergency care workers, and one to direct patient care. GFR reported rates for Return of Spontaneous Circulation (ROSC) in cardiac arrest patients ranging from 31.5% to 42.4% for three- and four-person staffed units; respectively. Thus, for a medical emergency, the real test of performance is the time it takes to provide the personnel and equipment needed to deal effectively with the patient's condition, not necessarily the time it takes for the first person to arrive.

Critical Tasks, Risk, and Staffing Performance

The goal of any fire service organization is to provide adequate resources within a prescribed time frame to reasonably mitigate an emergency event. However, all emergency events inherently carry their own set of special circumstances and will require varying levels of staffing based upon factors surrounding the incident. Properties with high fire risk often require greater numbers of personnel and apparatus to effectively mitigate the fire emergency. Staffing and deployment decisions should be made with consideration of the level of risk involved. Common risk categories used in the fire service are:

- Low Risk: Areas and properties used for agricultural purposes, open space, low-density residential, and other low intensity uses.
- Moderate Risk: Areas and properties used for medium density single family residences, small commercial and offices uses, low intensity retail sales, and equivalently sized business activities.
- High Risk: Higher density businesses and structures, mixed use areas, high density residential, industrial, warehousing, and large mercantile structures.

Fire emergencies are even more resource critical. Again, the true test of performance is the time it takes to deliver sufficient personnel to initiate application of water to a fire. This is the only practical method to reverse the continuing internal temperature increases and ultimately prevent flashover. The arrival of one person with a portable radio does not provide fire intervention capability and should not be counted as "arrival" by the fire department.

NFPA 1710, *Standard for Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments* addresses apparatus staffing, response time, and the effective firefighting force (also referred to as the effective response force), which is the minimum number of firefighters to carry out essential fireground tasks.

The number and types of tasks needing simultaneous action dictate the minimum number of firefighters required to combat different types of fires. In the absence of adequate personnel to perform concurrent action, the commanding officer must prioritize the tasks and complete some in chronological order, rather than concurrently. These tasks include:

Command	Water supply
Scene safety	Pump operation
Search and rescue	Ventilation
Fire attack	Back-up/rapid intervention

While it is the community served that must establish the levels of fire and rescue services provided, considerable debate surrounds the matter of firefighter staffing. Frequently, this discussion is set in the context of firefighter safety. The 2020 Edition of NFPA 1710 specifies the number of firefighters assigned to a particular response apparatus, often characterized as a "minimum of four personnel per engine company."

ESCI notes that the more critical issue is the number of firefighters that are assembled at the scene of an incident in conjunction with the scope and magnitude of the job tasks expected of them, regardless of the type or number of vehicles that arrive. Setting staffing levels is a determination that is made at the community level based on risk, capability, citizen expectations and willingness/ability to fund. There are not mandated requirements that fit all situations, although NFPA 1710 has objectives to meet regarding the number required for some typical scenarios.

Some terms are used nearly interchangeably, such as the assembly of firefighters on an incident, which may be called the "Initial Full Alarm Assignment," the "Effective Firefighting Force" (EFF), or the "Effective Response Force" (ERF). ESCI outlines the NFPA 1710 levels for this effective response force for three different scenarios in the figure below.

The following figure describes initial full alarm assignments for a residential structure fire, open-air shopping center fire, and an apartment fire. All three of these types of occupancies are common throughout the City of Gainesville. These are generalizations representative of different types of structures and risks. Each department may handle these types of fires with fewer or more personnel; however, this describes the work functions that must take place for the handling of a fire.

NFPA 1710 states that in response zones with high-number incidents, geographical restrictions, geographical isolations, or urban areas the engine and truck staffing should be increased to five, while in response zones with tactical hazards, high-hazard occupancies, or dense urban areas, the staffing should be increased to six. The standard defines the term *geographical isolation* as areas where over 80% of the response area is outside of a 10-minute response of the next closest fire suppression unit, and *geographical restriction* as being where there are predictable response delays.

Figure 44: NFPA 1710 Initial Full Alarm Assignments

2,000 SF Residential Structure Fire		Open-Air Shopping Center (13,000 SF to 196,000 SF)		1,200 SF Apartment (3-story garden apartment)	
Incident Commander	1	Incident Commander	2	Incident Commander	2

Water Supply Operator	1	Water Supply Operators	2	Water Supply Operators	2
2 Application Hose Lines	4	3 Application Hose Lines	6	3 Application Hose Lines	6
1 Support Member per line	2	1 Support Member per line	3	1 Support Member per line	3
Victim Search and Rescue Team	2	Victim Search and Rescue Team	4	Victim Search and Rescue Team	4
Ground Ladder Deployment	2	Ground Ladder Deployment	4	Ground Ladder Deployment	4
Aerial Device Operator	1	Aerial Device Operator	1	Aerial Device Operator	1
Rapid Intervention Crew	4	Rapid Intervention Crew	4	Rapid Intervention Crew	4
		EMS Care	2	EMS Care Crew	2
Total	**17**	**Total**	**28**	**Total**	**28**

The minimum response to the benchmark structures is 17 firefighters for a residential structure, 28 for an open-air shopping center, and 28 for an apartment. The previous standard was 15 members. The two additional positions required in the 2020 standard result from an increase in the recommended size of the rapid intervention crew (RIC). Also required is a minimum of a team with at least two members located outside an immediately dangerous to life and health (IDLH) atmosphere to monitor and provide emergency rescue for responders until a more formalized rapid intervention crew is created; this is generally referred to as "two-in/two-out." The four-person RIC outlined in the revised standard must consist of an officer and three firefighters.

These are generalizations that are representative of different types of structures and risks. Fire departments may handle these types of fires with fewer or more personnel, however, this describes the work functions that must take place for the mitigation of a fire.

When a fire escalates beyond what can be handled by the initial assignment, unusual characteristics such as a wind-driven fire are present, or the fire is accelerated with a highly flammable compound, additional personnel will be needed. Other scenarios such as mass casualty incidents, explosions, tornadoes, etc., may also require additional staffing. It is difficult or impossible to staff for these worse case incidents, which is why a strong mutual aid or automatic aid plan is needed.

Response Time Performance Objectives

To initiate the process of developing performance objectives, several items must be considered. Although the specific information needed to complete this process will vary with each organization, the following items will generally need to be addressed during this process. Historical call data must be collected and analyzed to determine current performance baselines and identify any gaps in data required; response zones must be established based on agreed-upon criteria (i.e., population zones, geographic boundaries, etc.); and benchmarks established as goals for these demand zones.

Current Response Goals

ESCI emphasizes the importance of establishing and regularly monitoring performance metrics for the deployment of resources. These metrics serve as the foundation for determining whether the organization is meeting the expectations of the community that it serves or not. Without regular and consistent performance evaluation, it is impossible to set and achieve goals established to meet community expectations.

Gainesville Fire Rescue has established response time goals in its Standards of Cover document last updated in 2021. Within this document, GFR has developed 12 Fire Management Zones (FMZ)s to reflect the City's mix of urban and rural areas. Each of the FMZ's are classified into one of five service area classes recommended by the Commission on Fire Accreditation International (CFAI) for determining service level objectives in the Standards of Cover based on population density:

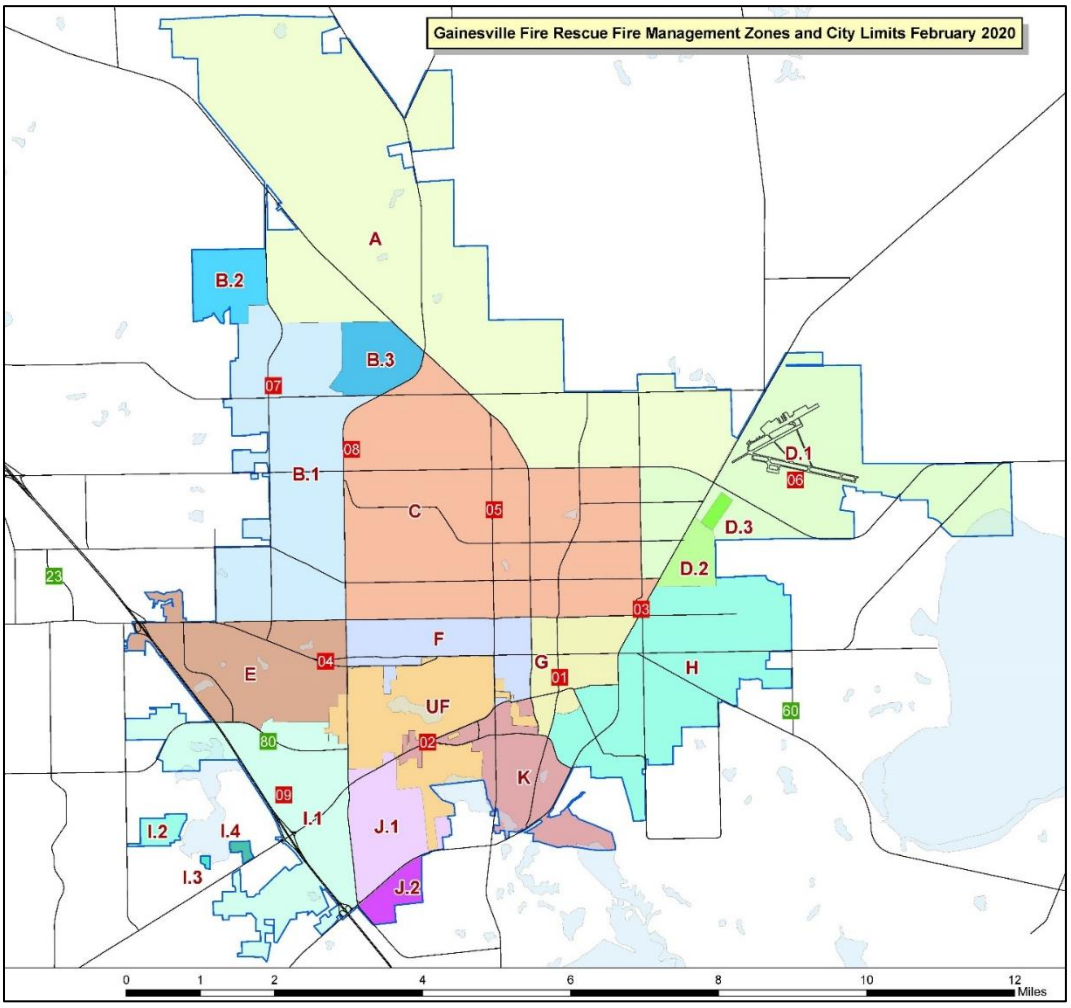
- Metropolitan – greater than 3,000 people per square mile
- Urban – greater than 2,000 / less than 3,000
- Suburban – greater than 1,000 / less than 2,000
- Rural – less than 1,000
- Wilderness – inaccessible by public or private road

Within these classifications, there are two response classification areas:

- Metro-Urban-Suburban: FMZ B, C, E, F, G, H, I, J, K, UF
- Rural: FMZ A, D

The figure below provides an overview of GFR's FMZs as they relate to population density and location within the City of Gainesville. GFR's Rural Response Classifications are located to the north and east of the response areas. These areas, labeled A and D, are colored in light green.

Figure 45: Fire Management Zones



For each major response type and FMZ, GFR has established total response time performance goals for various levels of fire, hazardous materials, technical rescue, EMS, and aircraft rescue and firefighting. Total Response Time is the amount of time from when an emergency call is received at the Communications Center until the first arriving unit arrives on scene. A summary of these response goals and are presented below.

Figure 46: GFR Total Response Time Goals at 90th Percentile 2021

Fire

All Structure Fires

- First Due Unit
  - 1 Officer, 3 Firefighters
  - 6 minutes 20 seconds for metro/urban/suburban
  - 12 minutes 20 seconds for rural

Residential Structure Fires

- Effective Response Force

- Total of 13 Firefighters and Officers
- 10 minutes 20 seconds for metro/urban/suburban
- 16 minutes 20 seconds for rural

Commercial Structure Fires

- Effective Response Force
  - Total of 20 Firefighters and Officers
  - 14 minutes 20 seconds for metro/urban/suburban
  - 20 minutes 20 seconds for rural

Technical Rescue

First Due Unit

- Engine Companies
  - 1 Officer, 2 Firefighters
  - 6 minutes 20 seconds for metro/urban/suburban
  - 12 minutes 20 seconds for rural
- Truck Companies
  - 1 Officer, 3 Firefighters
  - 6 minutes 20 seconds for metro/urban/suburban
  - 12 minutes 20 seconds for rural

Effective Response Force

- Total of 10 Firefighters and Officers (including technical rescue response team)
  - 10 minutes 20 seconds for metro/urban/suburban
  - 16 minutes 20 seconds for rural

Hazardous Materials

First Due Unit

- Engine Companies
  - 1 Officer, 2 Firefighters
  - 6 minutes 20 seconds for metro/urban/suburban
  - 12 minutes 20 seconds for rural
- Truck Companies
  - 1 Officer, 3 Firefighters
  - 6 minutes 20 seconds for metro/urban/suburban
  - 12 minutes 20 seconds for rural

Effective Response Force

- Total of 18 Firefighters and Officers (including hazardous materials response team)

- 10 minutes 20 seconds for metro/urban/suburban
- 16 minutes 20 seconds for rural

Emergency Medical Services

First Due Unit

- 1 Paramedic, 1 EMT
- 6 minutes 20 seconds for metro/urban/suburban
- 12 minutes 20 seconds for rural

Effective Response Force (Maximum Risk ERF)

- Total of 10 Firefighters and Officers (3 companies and a District Chief)
  - 10 minutes 20 seconds for metro/urban/suburban
  - 16 minutes 20 seconds for rural

Aircraft Rescue and Firefighting

First Due Unit

- 1 Officer, 1 Firefighter
- 6 minutes 20 seconds

Effective Response Force (Maximum Risk ERF)

- Total of 15 Firefighters and Officers
  - 10 minutes 20 seconds

With the above performance goals established in the department's Standards of Cover document, GFR staff then monitors actual performance against goals. When significant deviations from the adopted goals are encountered, reasons are examined, and corrections are made as required. Sustained deviation may require the department to adjust performance goals as actual performance improves or declines.

Actual Performance versus Response Goals

In GFR's 2018 SOC document, NFPA 1710 performance criteria were used to establish performance goals as outlined in the previous section. To provide GFR with additional insights based on the findings of this study, unit response time (initial notification by the Alachua County Combined Communications Center until the first unit arrives on scene) was selected as opposed to total response time (initial receipt of the emergency call at the communications center until the first unit arrives on scene). Response time was selected because GFR has no control over the performance of the Alachua County Combined Communications Center and performance issues by either organization would be effectively buried in the data when using total response time. The following figure compares unit response time (call processing time excluded) to total response time goals (call processing is an added time element in the SOC goal). And, while this is not a direct "Apples-to-apples" comparison, it does provide GFR with some insight into how realistic its total response time goals are.

Figure 47: Summary of Response Performance versus Total Response Time Goals at the 90th Percentile

Incident Type	Actual Response Time Metro/Urban/Suburban	Total Response Time Goal Metro/Urban/Suburban	Actual Response Time Rural	Total Response Time Goal Rural
All Structure Fires	9:09	6:20	11:21	12:20
Technical Rescue	17:38	6:20	18:57	12:20
Hazardous Materials	15:34	6:20	19:11	12:20
EMS	8:10	6:20	9:34	12:20
ARFF	N/A	N/A	13:07	6:20

Based on the results of actual performance (again this does not include call processing time which would increase time above that shown), GFR may consider revising some of its performance goals and continuing to track and monitor performance. For example, the first arriving EMS unit in the metro/urban/suburban area at the 90th percentile was 8 minutes 10 seconds with a goal of 6 minutes 20 seconds while in the rural area the actual performance was 9 minutes 34 seconds with a goal of 12 minutes 20 seconds. GFR may consider changing its rural EMS goal to a target better than actual performance, such as 8 minutes, while maintaining the metro/urban/suburban goal at its present level. Likewise, performance for fires, while broken into several categories for performance goals, do not contain sufficient data to support such a detailed approach. GFR may consider creating performance goals by increment (call processing, turnout, and travel time) and historic service demand that can be more easily tracked and monitored with the data anticipated to be available.

STATION LOCATION OPTIMIZATION

At the heart of this growth and expansion feasibility study is the location of fire stations and the deployment strategy used to address current and future workload. Additionally, as many current stations will require a substantial investment in either renovation or replacement cost, the question of whether it is better to rehabilitate or reconstruct on the current sites versus alternative locations is a fundamental question. To assist GFR in evaluating the effectiveness of their current fire station locations, GIS software was used to develop a model of the current deployment strategy as a baseline for comparison to subsequent optimization models. Additionally, this model accounted for current and future traffic calming devices that the City of Gainesville is currently installing. Throughout this process, GFR was updated and provided input regarding interim results which ultimately resulted in the development of the final deployment model, suggested station locations, and the order in which stations would be relocated.

BASELINE MODEL

The baseline model was developed using GIS data provided by the City of Gainesville to simulate real world performance. The general parameters of the model sought to establish demand zones that:

- Capture as many incidents as possible within a four-minute travel time.
- Establish the largest service area possible based on historical demand while accounting for the impact of adjacent fire station service areas.
- Evaluate the impact of traffic calming devices on response times.

The City of Gainesville provided a data layer containing current and planned traffic calming devices. In total, 677 traffic calming locations were provided, including speed humps, speed tables, and roundabouts. To determine the impact caused by these traffic calming devices, a Federal Highway Administration document developed through the Department of Transportation was used to obtain a metric to apply to these devices[4]. The document states that on average, the time increase experienced by a motorist traversing one traffic calming device is 33 seconds. Given that nearly 85% of the traffic calming devices planned by the City of Gainesville were either speed humps, speed tables, or islands, and that fire department vehicles responding with emergency lights and sirens would potentially increase travel speed through these areas, a delay of 15 seconds per device was applied as an assumption to the model.

Travel time was calculated using the posted speed limits and road segment distances to establish the four-minute travel areas across the road network. For the purposes of this and the following analysis, GFR Station 6, located at the Gainesville Regional Airport, was not included as its primary role is to provide coverage for aircraft rescue and firefighting to the airport as mandated by the Federal Aviation Administration and these units rarely, if ever, leave that facility. GFR response data from 2018-2020 was used for incident demand points which were dispersed throughout the City of Gainesville, as well as the current automatic aid boundaries which extend into unincorporated Alachua County. The resulting automatic aid boundary used for the baseline model and the model itself are shown in the following two figures.

4 FHWA Course on Bicycle and Pedestrian Transportation, 2013

Figure 48: GFR Automatic Aid Boundary

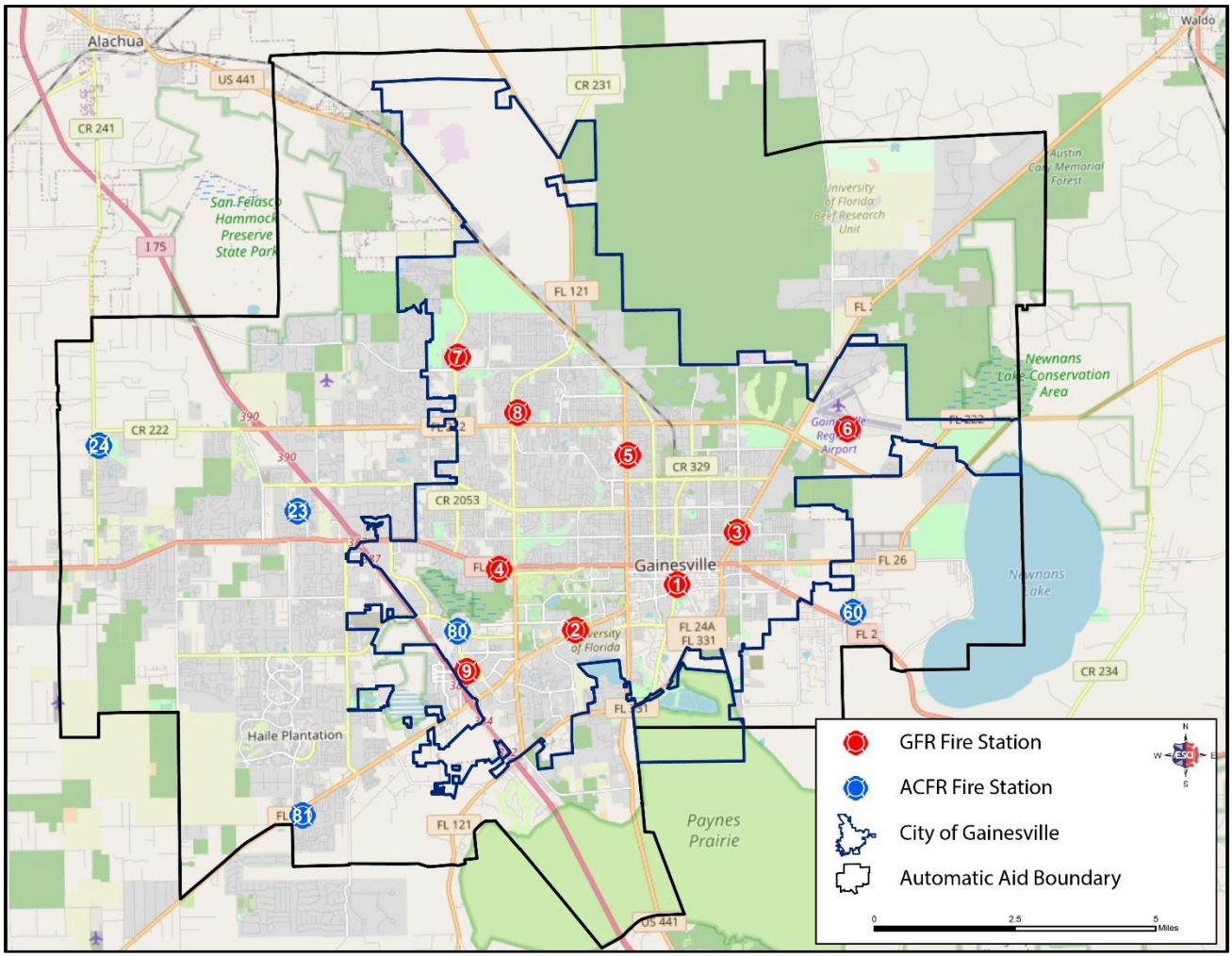
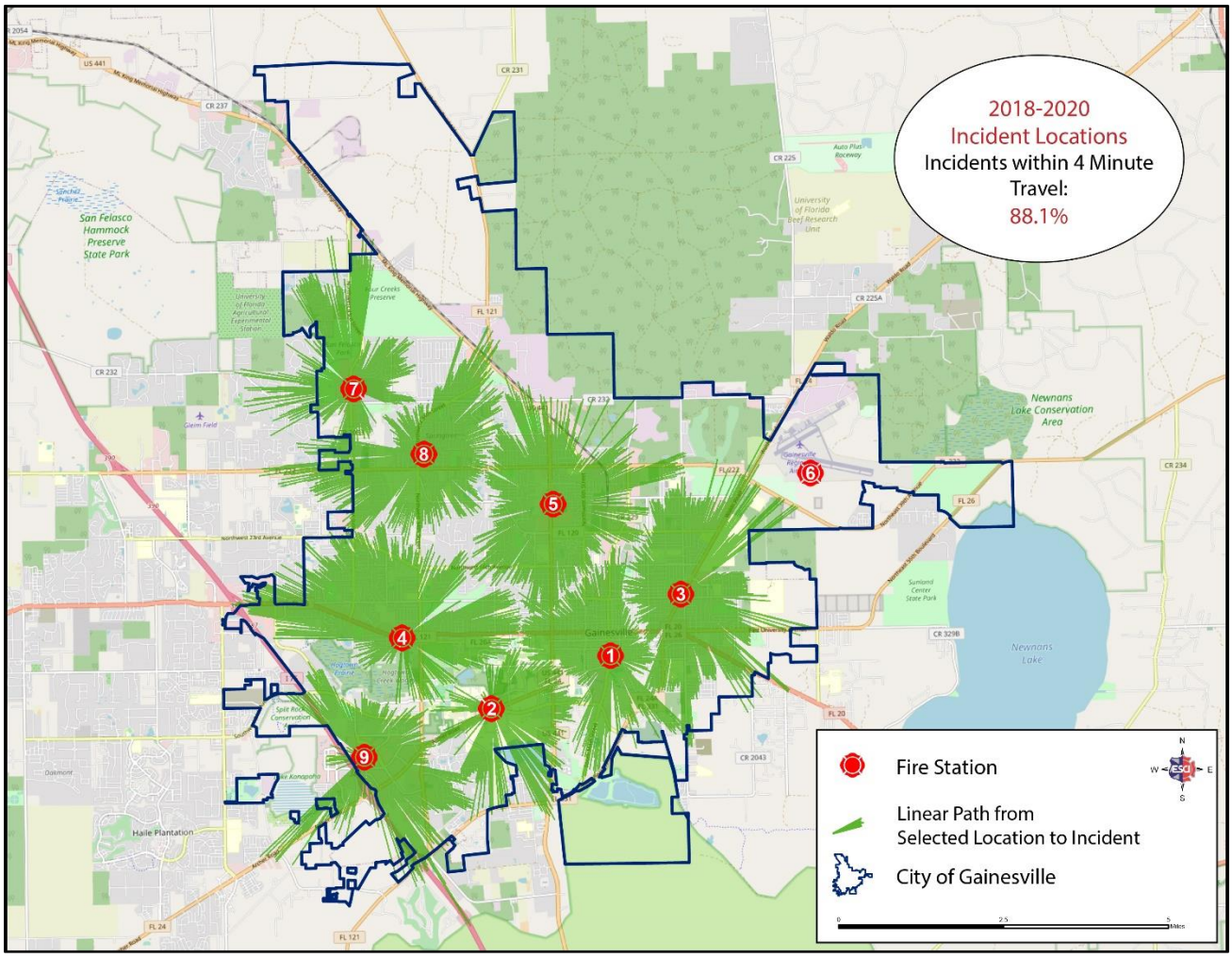


Figure 49: GFR Baseline Performance Model with 4-Minute Travel and Traffic Calming (2018-2020)



The results of the model predict that GFR could respond to 88.1% of incidents occurring in 2018 through 2020 within a four-minute travel time.

Optimization Modeling

The initial optimization modeling that follows used the same parameters as the baseline model and assumed that all current fire stations were candidates for relocation and that the city would continue to densify and build upwards within its more urban core. Limitations of this model were that, in any given circumstance, if a given location produced slightly better results than another, the better location would be selected despite little difference in performance; that varying daily and seasonal traffic patterns that influence travel time could not all be accounted for; and that the timing, exact location, and extent of future development were unknown.

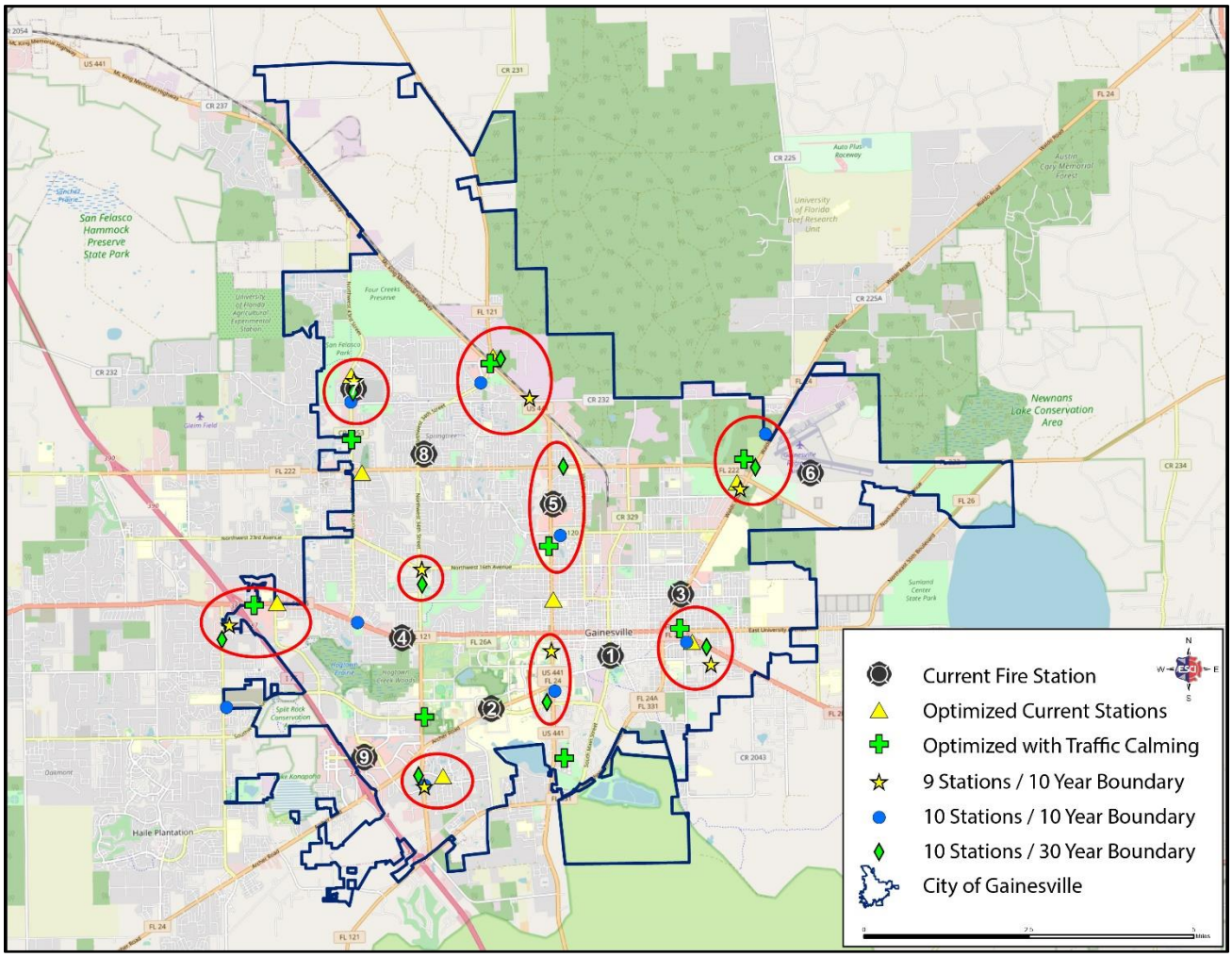
Given the city's current plan[5] to become more densely populated within its core and downtown area and to incentivize future construction of multistory buildings, weight was given to coverage of existing areas in lieu of expansion of its current boundaries. If, at some point in the future, annexation leads to the need for an additional fire station outside of its current city limits, the City of Gainesville should work with GFR, the Planning Department, and developers to satisfy service demand needs in those areas.

To establish potential future station locations, a set of 2,500 randomly placed points, simulating potential fire station locations, were distributed equally through the current and estimated 10-year and 30-year growth boundaries, based on information provided by city staff. These points were then used in subsequent analyses. Additionally, analyses were performed with and without traffic calming devices for the current City of Gainesville boundaries and an additional station was added in the 10- and 30-year boundary on a trial basis for comparison with the nine-station model.

The purpose for running multiple varied models was to establish which areas or locations repeatedly demonstrated the need for a facility, thus increasing the reliability of the result. As with any analysis, the results of one trial should not be the only consideration given to a decision. Factors such as comparisons with other modeled results, site suitability of current locations, age of and condition of current facilities, land availability, community impact, and internal knowledge and understanding of the community should all be factored into a global view on most suitable final locations. The results of these multiple analyses are shown in the following figure. Red circles were added to indicate areas where grouping of locations based upon various models occurred and to assist in initial conversations with GFR staff.

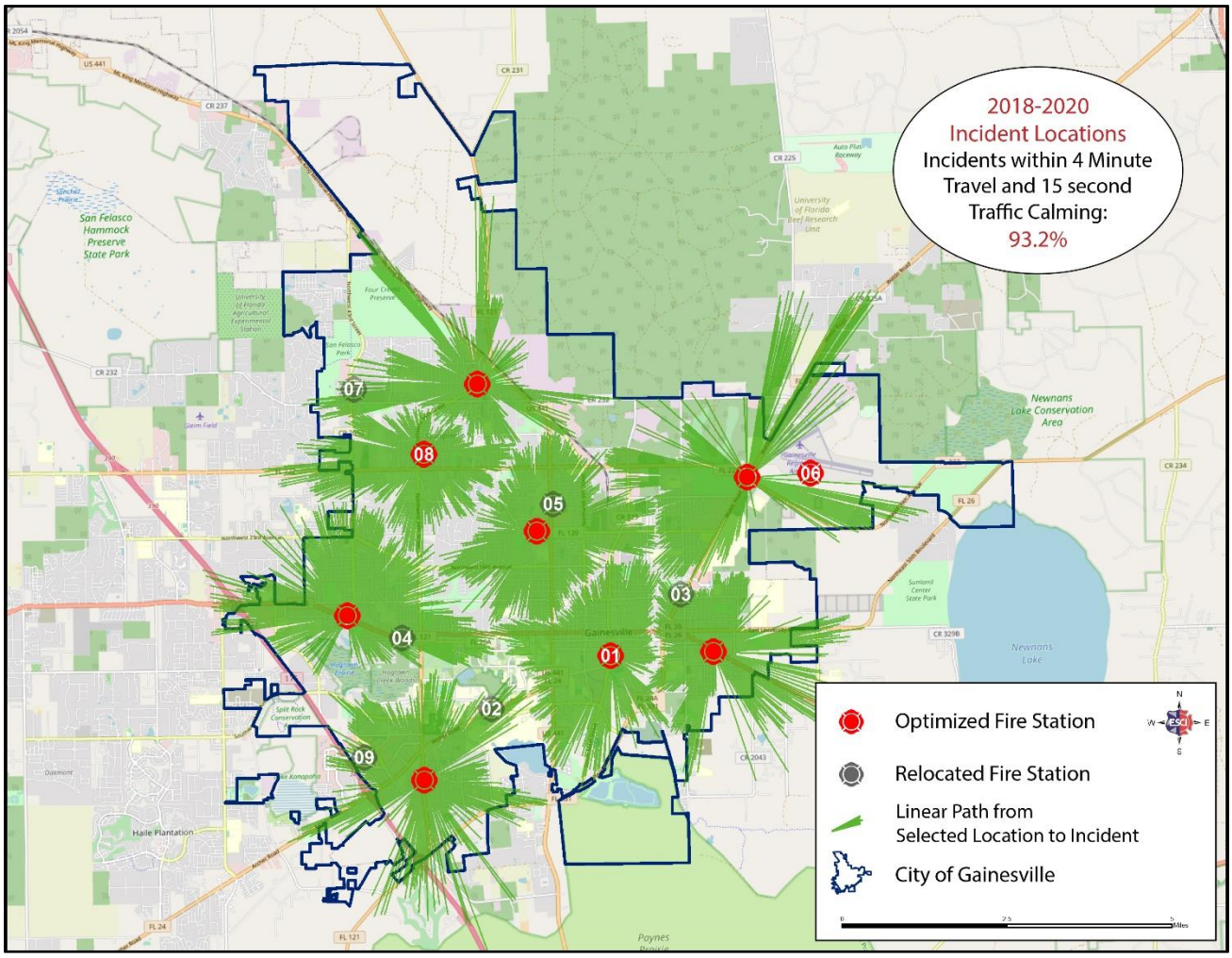
[5] This information was received during the May 4, 2021, meetings with the City Building Official and the City Director of Sustainable Development /Planning

Figure 50: Results and Grouping of Multiple Station Optimization Analyses



Based on these initial results which led to the clustering shown in red, GFR staff provided significant input based upon local knowledge. With staff concurrence, a decision was made to maintain fire stations 1 and 8 as required locations in future analyses, due to the relatively new age of those buildings, and to locate required locations near the intersections of NE 39th Avenue and Waldo Road, Hawthorne Road and Southeast 20th Street, and at Northwest 23rd Avenue and Northwest 16th Terrace with Station 4 splitting the difference between its current location and the cluster (shown in red) to its west due to land availability. The results of this new modeling are shown in the figure below.

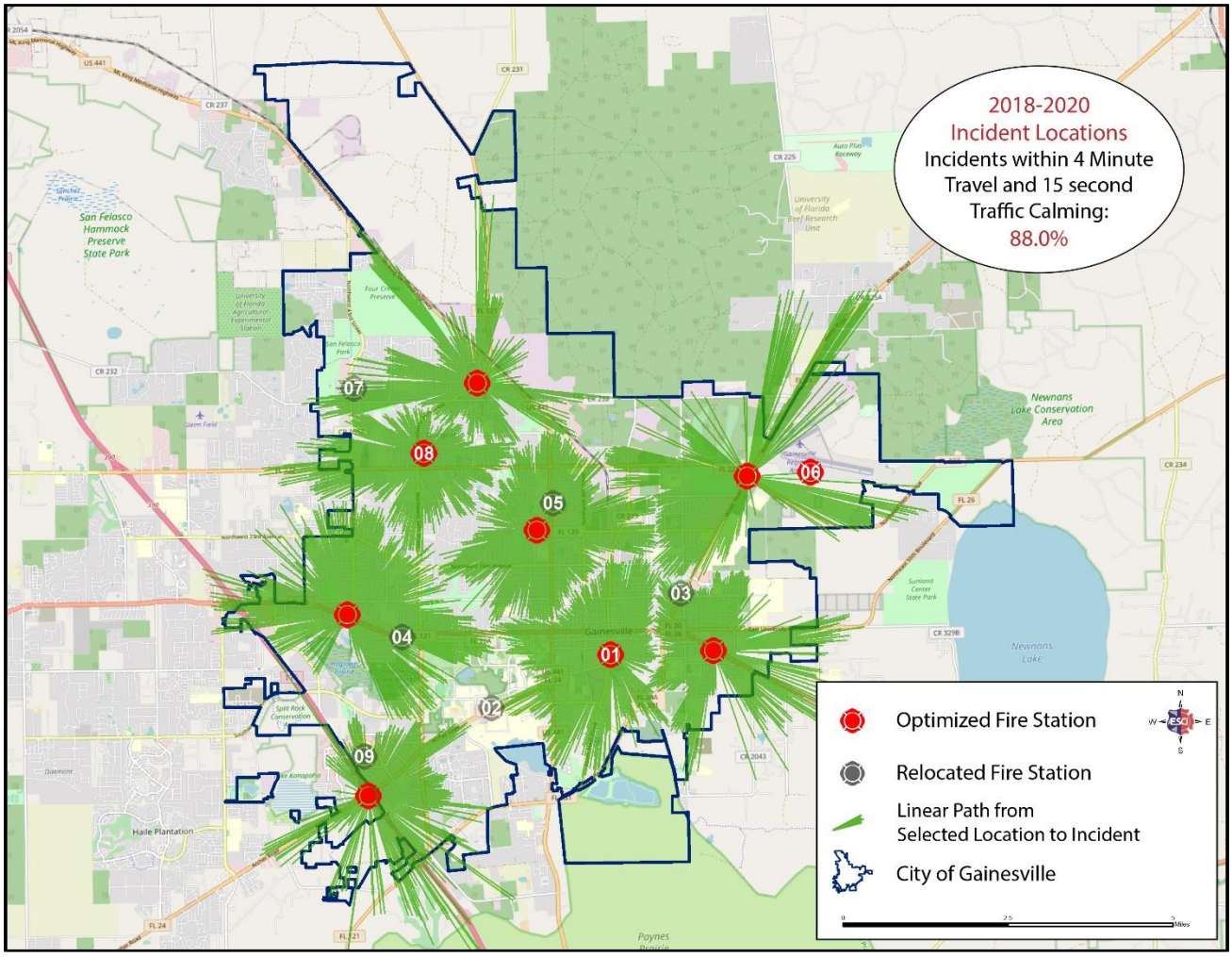
Figure 51: Final Station Optimization Analysis



The results of this analysis improve upon the predicted capabilities of GFR from previous modeled locations and utilized internal knowledge of available sites, traffic patterns, and service demand to reconfigure GFR's deployment model. This model extends coverage to the southwest and to the north and east, which are the areas predicted to grow and become annexed into the City of Gainesville in the future. These locations also preserve GFR's ability to address increased service demand as the city grows upwards in its core areas.

While the models presented above are used to provide insights as to the ideal location for a fire station based upon road network and historical incident locations, it cannot consider other factors such as land availability, the costs of that land, traffic flow patterns that change throughout the day, or where future incident locations may occur. To assist GFR in comparing the theoretical model performance with the closest feasible location, the next figure shows the most southwesterly station relocated to the intersection of Archer Road and Interstate 75.

Figure 52: Feasible Site Location Evaluation



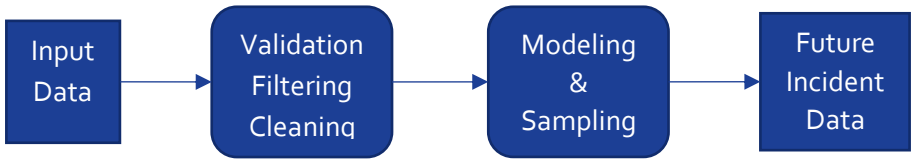
Based on the parameters of this model specified by GFR, performance would decrease from 93.2% to 88.0%. However, this is a more realistic model as GFR's ability to locate a facility in this location is more likely. Additionally, this represents only one finding and multiple other factors should be considered. The model's parameters provide a cutoff at 4 minutes travel time. The areas in this figure that fall outside of a four-minute travel time would most likely be captured if the parameters were extended by 15 to 30 seconds. Next, future development and densification will likely occur to the south and west of this proposed location. By moving this station farther west and on the area's major roadways, future response capabilities should be improved. Finally, the primary area falling outside of the strict 4-minute travel occurs on or near the southern boundary of the University of Florida campus.

FUTURE SERVICE DEMAND

FUTURE INCIDENT DEMAND

An important component of the master planning process is consideration and projection of future service demand. For this component of the study, Levrum used proprietary future incident modeling tools in conjunction with manual data-cleaning, validation, and analysis procedures. The overall objective of this analysis was to create predictive models for high, medium, and low levels of growth in service demand over the next five years. The goal of this modeling approach is to provide GFR with the ability to test its performance under different levels of demand. Levrum's tools generate a service demand forecast range with a high level of confidence. By analyzing how the organization may perform under different levels of demand within this range, its resilience to change was quantified and areas of improvement were identified.

Figure 53: Future Incident Modeling Process Overview



At a high level, the modeling process, as shown in the figure above, involved the following components:

- Input data was obtained from various sources. This data included GFR incident history, existing and planned high-rise development data, and city GIS data, among other elements.
- A process of validation, filtering, and cleaning was applied to ensure data quality and marshal data in forms usable by the modeling process.
- This resulted in a master set of data used for the modeling process.
- Statistical models of GFR service demand were developed from the master data set, using machine learning techniques. This included the development of high, medium, and low models.
- These models were sampled to generate projected future incident datasets, which were subsequently used to compute statistics on projected future incident demand, and to perform deployment analysis on strategic alternatives for handling projected growth.

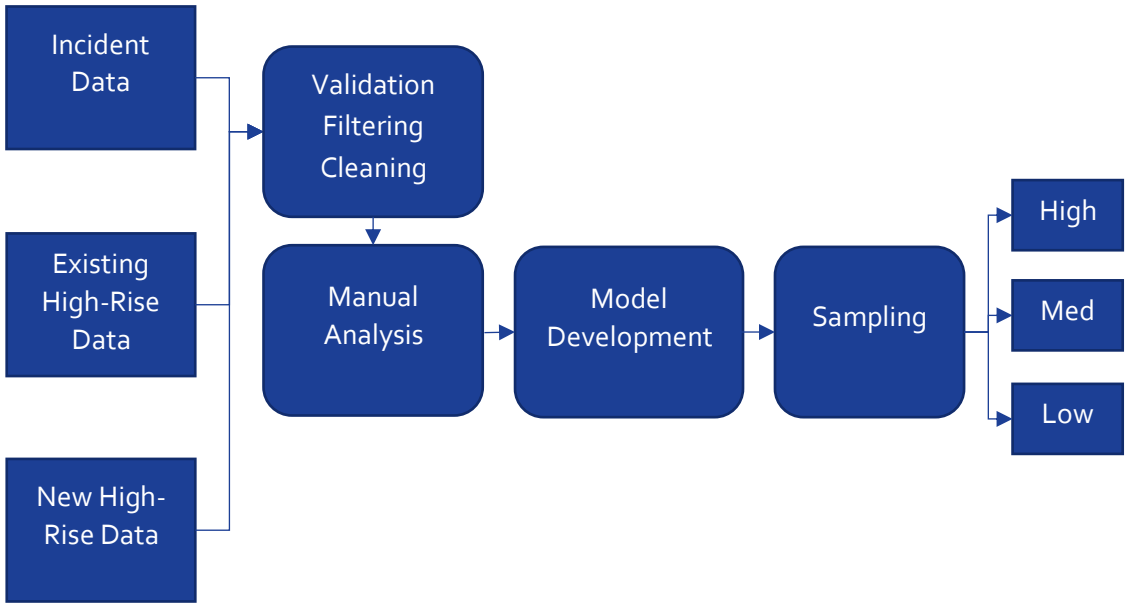
The following discussion provides details on the methods employed in, and findings developed by this modeling process.

Development of the Future Incident Model

Future incident modeling is the development of statistical model(s) to forecast future incident volume. As part of this process, simulated incident datasets were generated which were then used by Code3 Strategist to measure the effectiveness of different deployment options to address possible future conditions. This section provides an overview of the methods used to develop and employ the models to generate incident volume forecasts.

Available data are validated, filtered, and cleaned as described later in this section. Data were fed into the Code3 Visionary tool which applied Levrum's forecasting algorithms to generate high, medium, and low mathematical growth models. Code3 Visionary then sampled incident datasets for each of these growth models to generate future incident datasets. The analysis, learning, modeling, and sampling processes are described in detail below.

Figure 54: Future Incident Modeling Process



Future incident modeling required various data about the city, including historical incident details consisting of incident characteristics (type, time, location), planning data, and new development information. Several of the key data sources used to acquire this data are shown in the table below.

Figure 55: Future Incident Modeling Datasets

Data Source	Origin / Format	Content / Usage
Historical incidents	Provided by GFR from CAD	Incident cause, location, and time / Baseline for predictive models
New and existing high-rise development data	Tabular data provided by GFR	Development address, type, number of stories, and size / Future event modeling
Gainesville zoning data	Shapefile provided by GFR	Key zoning attributes / Geographic incident classification

Phase 1: Data Preparation

The first phase of the future incident modeling process prepared the data to be used in building the models. Data from various sources was combined, aggregated, filtered, and cleaned using the following steps:

- Raw zoning codes were aggregated into high-level categories meaningful for incident prediction: Residential, Commercial, Industrial, Office, Agricultural, Educational, Medical, and Road.
- Nature codes were aggregated into high-level categories meaningful for incident prediction: EMS, Aircraft Emergency, Fire, Service, Tech Rescue, and Hazmat.
- A zoning attribute was added to each incident indicating the zone type in which an incident occurred.
    - Many incidents occurred in areas that had no zoning classification. Most of these areas were roads so all incidents in areas without a zoning classification were given a zoning classification of "Road".
- Historical incident data was corrected for data anomalies.
    - Midway through 2018, GFR negotiated and implemented a new automatic aid agreement with Alachua County Fire Rescue (ACFR) that significantly reduced the call types that would trigger a closest unit response without regard to jurisdictional boundaries. This caused the total annual incident volume to decrease significantly. To correct for this level shift, incident volume in years prior to 2018 was decreased by a fixed percentage. Because the shift occurred halfway through 2018, 2018 volume was decreased by a smaller percentage.
    - Due to effects of the COVID-19 pandemic on service demand, incidents from 2020 were excluded.

Phase 2: Predictive Model Development

The second phase of the process developed the models used to forecast future incidents. Challenges encountered in this phase included:

- The latest three years of incident data were problematic as it included two major data anomalies as described above.
- There were many missing values and the fields in the new development data did not align with those in the existing development data.

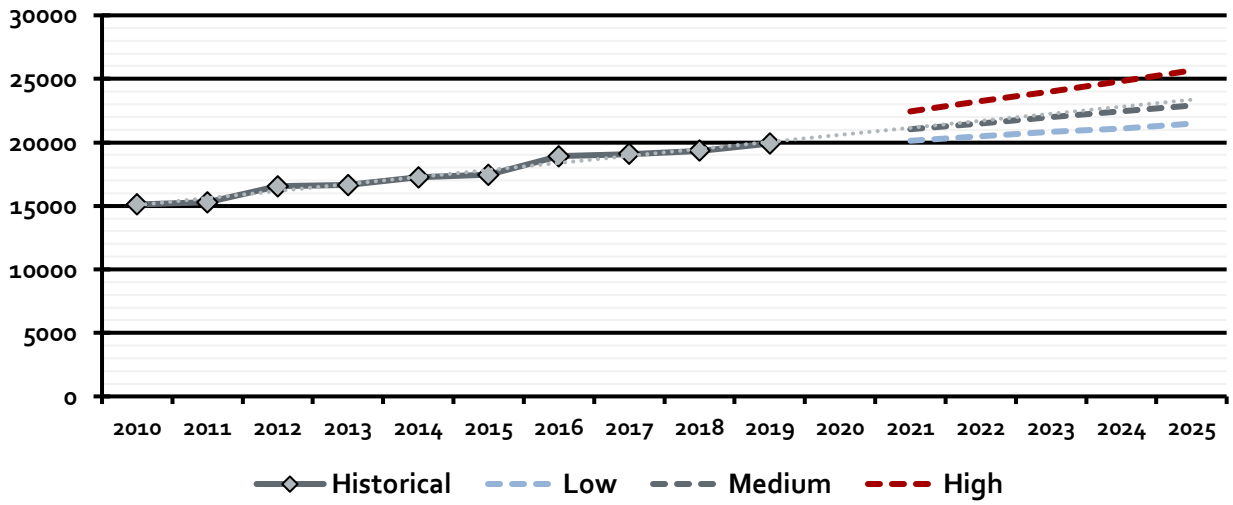
Due to the data issues described above, as well as others, the typical automated data cleaning and analysis procedures could not be applied. Instead, Levrum data experts performed the data cleaning and analysis steps manually. While this added complexity to the project, Levrum was ultimately able to correct for the data issues and salvage enough of the data to build robust models.

Impact of High-rise Growth on the Model

To refine the growth models generated by the time series forecasting algorithms, models for key high-rise developments were built as well. GFR indicated that their growth has become less outward and more vertical in nature. This vertical growth comes in the form of new high-rise buildings. GFR provided data on key high-rises that are being built soon, as well as data on existing high-rises in the city. Predictive models were built from the data on existing high-rises. The existing data was first categorized by the type of building such as residential, hotel, etc. Then, a statistical analysis was performed for each category of high-rise to construct a model for each category. This analysis considered factors such as the annual incident volume time series of each high-rise and the relationship of building size to incident volume, among others.

A model for the growth of incident demand was built using historical incident data from 2011 to 2019 (shown in solid grey in the figure below). The corrected time series data was fed into Code3 Visionary's ensemble forecasting algorithms which produced high, medium, and low five-year growth models (red, grey, and blue dashed lines, respectively). The historical data and the modeled datasets are shown in the figure below. The medium growth model approximates a linear extension of the historical growth trend.

Figure 56: Historical and Future Incident Demand



Phase 3: Performing Prediction / Generating Sample Incident Datasets

Phase three of the modeling process employed the predictive models to generate total future incident forecasts. The output of this phase were high, medium, and low one-year future incident datasets containing the incidents forecasted to occur during 2025 and shown in the figure above. The model does not just generate future call volume but, perhaps more importantly for deployment analysis, provides details related to future calls such as location, temporal information, and nature of the call. Specifically, the future incidents were generated with a predicted nature code, date/time, and location using the process described below:

- A predicted date and time were generated for each incident.
  - Historical incident data was used to build a distribution of incident dates and times. This distribution was sampled from and used to produce incident date/time predictions.

  - For the high-rise developments, a separate distribution was built for each category of high-rise using historical incidents that occurred at the existing high-rises.
- A predicted location was generated for each incident.
  - Historical incident data were used to build a distribution of incident locations. This distribution was sampled from to produce incident location predictions.
  - For high-rise occupancies, incident locations were not sampled as the incidents were simply placed at the locations of the high-rises. Additionally, because the new development data contained addresses for each high-rise, but not latitude-longitude coordinates, the address of each development was geocoded to get accurate coordinates.
- Predicted nature codes were generated for each incident.
  - Historical incident data were used to build a distribution of incident types (or nature codes). This distribution was sampled from to produce incident type predictions.
  - For the high-rise developments, a separate distribution was built for each category of high-rise using incidents that occurred at the existing high-rises.

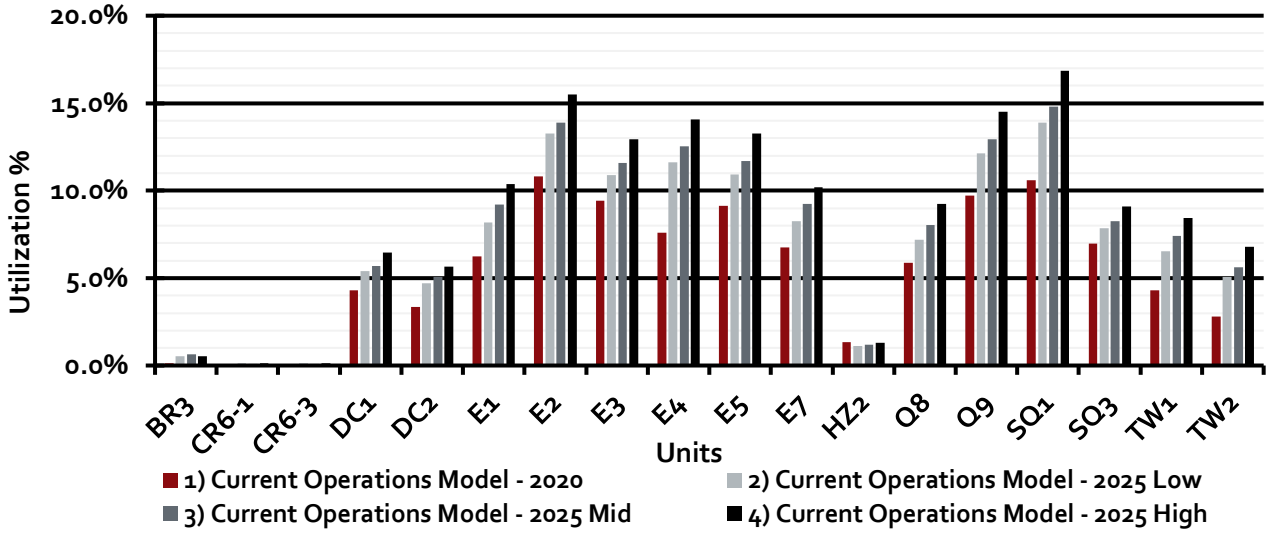
This process was executed for the high, medium, and low models. The result was three future incident datasets that were imported in the Code3 Strategist tool for use in evaluating alternate deployment strategies against the future growth scenarios.

Analysis of Operational Impacts

Impact of 2025 Call Volumes

Three scenarios with varying call volume were modelled through the year 2025 and were used to analyze the impact on the GFR response capability. By the year 2025, the low growth scenario had 21,473 calls, the medium growth scenario had 22,900 calls, and the high growth scenario had 25,658 calls. The process for generating these files is outlined in the preceding section of the study ("Future Incident Demand"). Unsurprisingly, without making any changes to the current deployment model, unit utilization increases across the board. It should be noted here that BR3, while shown in the model, is not a staffed first-line unit and should probably either be removed from the model or combined with E3.

Figure 57: Increased Unit Workload (%) for Various 2025 Growth Scenarios



As with increase in unit workload, response times at the 90th and 50th percentiles also rise across all units as shown in the following two figures. The studied areas were created using the fire management zones (FMZs) and were built upon with the 10-year expansion area polygon. The "Unknown/Other" category is used for calls that occurred outside of each of these zones. For more details, the reader is referred to Appendix A "Fire Management Zones Study Areas".

Figure 58: Average Initial Response Times by Fire Management Zone for 2025 Growth Scenarios Under Current Deployment

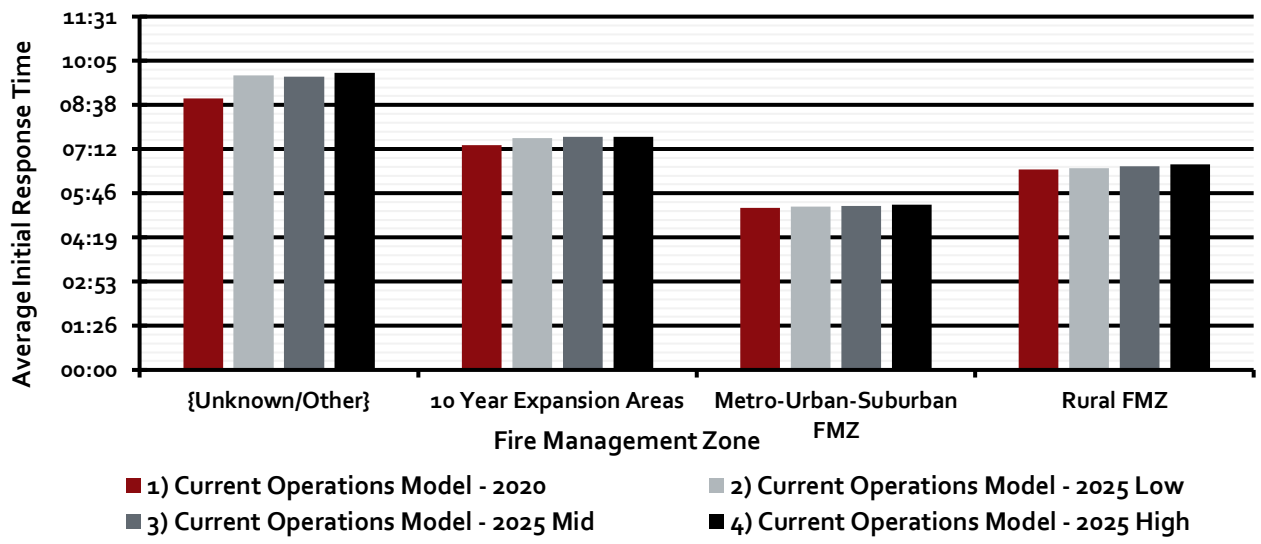
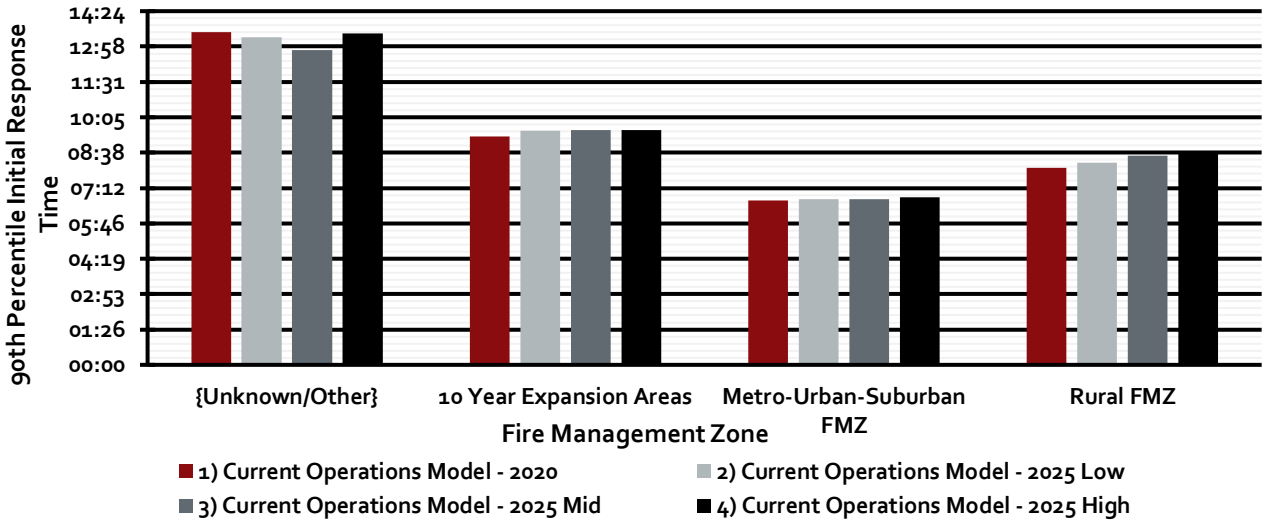


Figure 59: 90th Percentile Initial Response Times by Fire Management Zone for 2025 Growth Scenarios Under Current Deployment



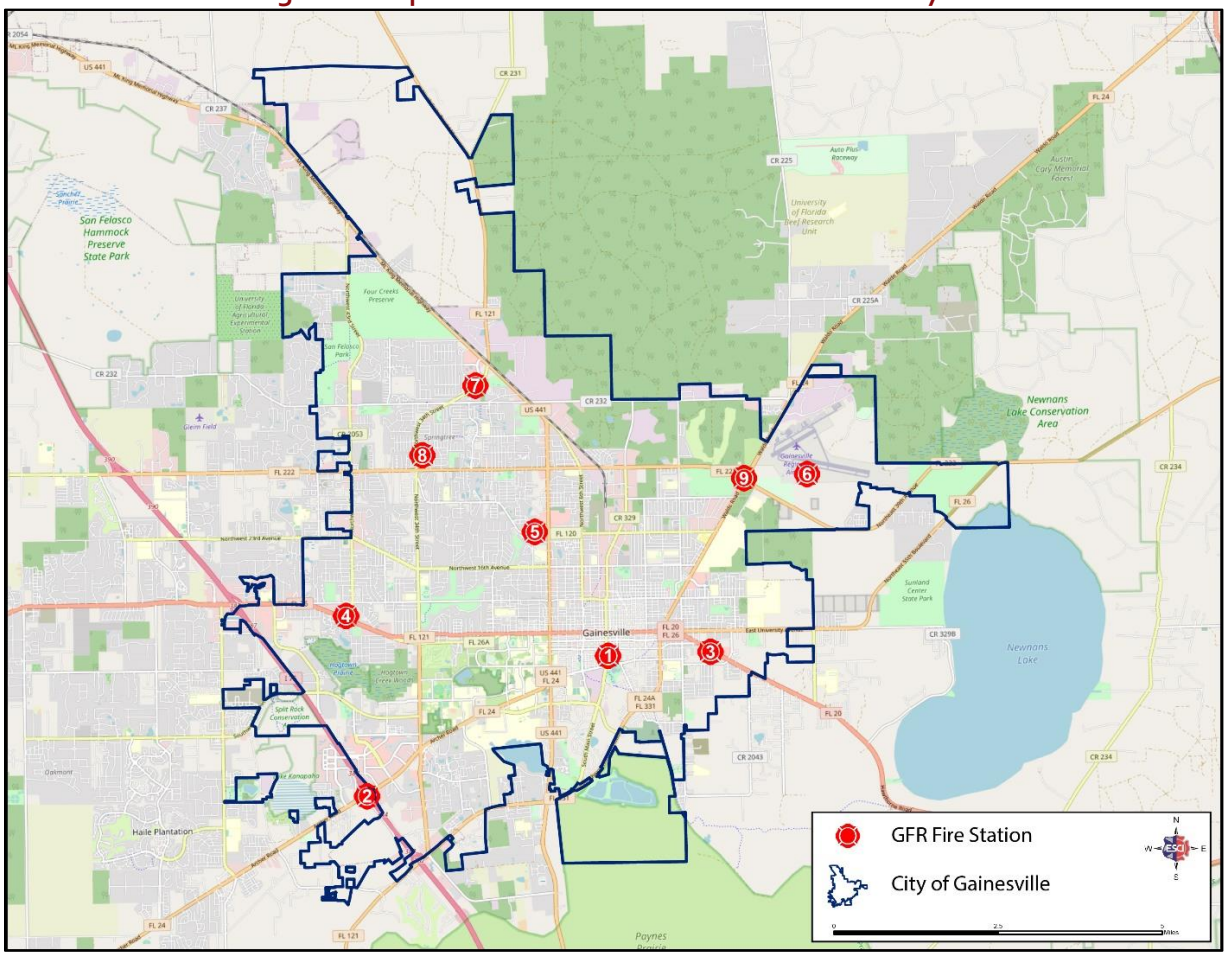
None of these results were too surprising since increased call volume is expected to increase unit workloads. Increased unit workloads then lead to longer response times as the unit that would be closest to the call is less likely to be able to respond. The variance in the Unknown/Other category was due to low call count generation leading to a handful of calls having an oversized impact on benchmarks.

Impacts of Optimized Station Locations

In the optimized station location model, stations 2, 3, 4, 7, and 9 were relocated. These locations were generated by ESCI with feedback from GFR command staff. A detailed discussion of this process can be found in a subsequent section of this study titled, "Station Location Optimization".

- Station 2 was moved to a block south of Archer Road @ Interstate 75
- Station 3 was moved to Hawthorne Rd (FL 20) @ SE 20th St
- Station 4 was moved to Newberry Rd (FL 26) @ NW 43rd St
- Station 5 was moved to NW 23rd Ave @ NW 16th Terrace
- Station 7 was moved to NW 23rd Terrace @ NW 34th St
- Station 9 was moved to NE 39th Ave @ NE Waldo Road

Figure 60: Optimized Station Locations Used for Analysis



Impact on 90th Percentile Initial Response Times

90th percentile initial response times, an industry standard response metric, saw improvements in almost every studied area with the greatest benefits being felt in the rural fire management zones (FMZ) and in areas outside of the city limits. Rural FMZs had 90th percentile response times improved by between 41-53 seconds depending on the growth scenario. All 90th percentile response times for all three growth scenarios are shown in the following figure.

Figure 61: 90th percentile initial response times given each growth scenario

90th Percentile Initial Response Times				
Model	**Fire Management Zone**	**2025 Low**	**2025 Mid**	**2025 High**
Current Operations	Metro-Urban-Suburban	06:44	06:44	06:49
Optimized Locations	Metro-Urban-Suburban	06:42	06:45	06:49
Current Operations	Rural	08:14	08:30	08:40
Optimized Locations	Rural	07:33	07:37	07:50
Current Operations	10 Year Expansion Areas	08:14	08:30	08:39
Optimized Locations	10 Year Expansion Areas	07:31	07:33	07:44
Current Operations	{Unknown/Other}	13:20	12:49	13:30
Optimized Locations	{Unknown/Other}	12:31	12:37	12:40

In general, this means that units would be more dispersed throughout the jurisdiction more uniformly with respect to where calls are expected to occur and therefore, a unit is able to arrive on scene more quickly. This impact is felt most greatly in areas where there isn't currently a station nearby.

Impact on Unit Utilizations

Figure 62: Unit Utilization Percentages for Various Scenarios

Unit Utilization Percentage				
Unit	**Model**	**2025 Low**	**2025 Mid**	**2025 High**
E1	Current Operations	8.2%	9.2%	10.4%
E1	Optimized Locations	9.5%	10.5%	12.0%
E2	Current Operations	13.3%	13.9%	15.5%
E2	Optimized Locations	16.0%	17.0%	19.0%
E3	Current Operations	10.9%	11.6%	12.9%
E3	Optimized Locations	8.3%	9.0%	10.1%
E4	Current Operations	11.6%	12.5%	14.1%
E4	Optimized Locations	13.0%	13.8%	15.8%
E5	Current Operations	10.9%	11.7%	13.2%
E5	Optimized Locations	13.0%	13.9%	15.6%
E7	Current Operations	8.2%	9.2%	10.2%
E7	Optimized Locations	7.4%	8.5%	9.3%
Q8	Current Operations	7.2%	8.0%	9.2%
Q8	Optimized Locations	7.7%	8.6%	9.8%
Q9	Current Operations	12.1%	12.9%	14.5%
Q9	Optimized Locations	5.8%	6.3%	6.9%
SQ1	Current Operations	13.9%	14.8%	16.9%
SQ1	Optimized Locations	16.2%	17.1%	19.4%
SQ3	Current Operations	7.8%	8.2%	9.1%
SQ3	Optimized Locations	5.9%	6.0%	6.7%
TW1	Current Operations	6.5%	7.4%	8.4%

TW1	Optimized Locations	6.9%	7.8%	9.0%
TW2	Current Operations	5.1%	5.6%	6.8%
TW2	Optimized Locations	6.4%	7.3%	8.5%

Those units with no change are not shown in the figure above. While unit workloads mostly increased for the primary GFR units, E3, E7, Q9, and SQ3 each saw their workloads decrease. This is largely due to their home stations being moved outwards from the urban core of the city. Those moves improve coverage but also make the units less likely to be the closest unit to a call. While the increases in workload were generally spread throughout all other units, stations 2 and 5 were the most impacted by the changes.

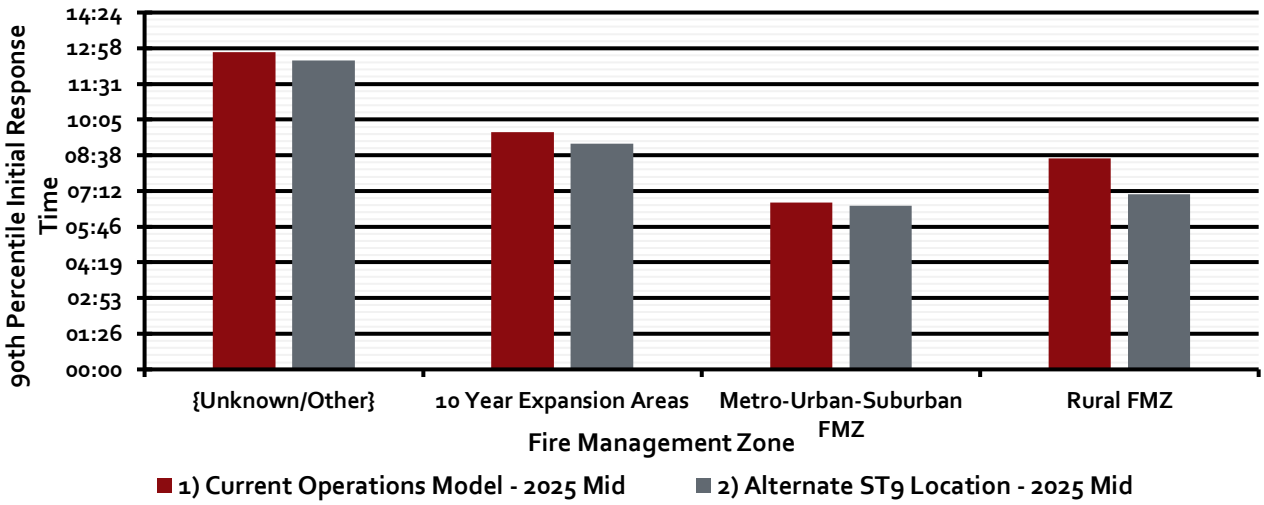
Optimized Station Locations - Alternate Unit Deployment Analysis

Given the new station locations, Levrum also analyzed the impact of moving units and staffing around to improve response times. The goal was to determine if, given the current units and staffing levels, response times or coverage could be improved. Although approximately 15 alternative models were tested, keeping the units at their current stations resulted in the best overall response time benchmarks and coverage. Changes to units/staffing were tested at both the moved stations as well as at stations that didn't move.

This is likely due to the increased level of coverage when the stations are moved to the optimized locations. Since the stations are more spread out, moving any unit causes a cascading effect leading to holes being formed in the coverage. For example, moving Q9 seemed like a good candidate since its workload decreased. Every possible station was tested and, in every case, the coverage gap that was created by the move increased response times more than keeping it at the new station 9 location.

The only alternative unit deployment scenario that had a positive impact was when ST9 was moved closer to the Gainesville Regional Airport (around Waldo Road/NE 39th Avenue). While moving it closer to the urban core improved 90th percentile response times, it also had a negative impact on the ISO coverage metrics and response times to areas north of the airport. Similar gains could likely be achieved by adding additional units and staffing to other stations.

Figure 63: Alternative ST9 Location - 90th Percentile Response Time by Fire Management Zone



Other stations were tested in various locations to see if there would be similar impacts, but none were found to improve response times.

Evaluation of Alternate Deployment Strategies

Separately from testing new station locations against increased future workload, Levrum was tasked by GFR command staff with determining the impact of several different deployment models involving new unit types. Every alternative deployment model contains at least one Quick Response Vehicle (QRV) which are first due EMS response units. In addition, one model included Heavy Squad (HS) units which would respond primarily to technical rescue and hazardous materials calls. It is important to note that the response plans aren't identical between the different models. This means that total response counts across models are not identical. These changes are minor but do have an impact. A more detailed discussion of these models is presented in Appendix A. Models and units in the various models are shown in the figure below.

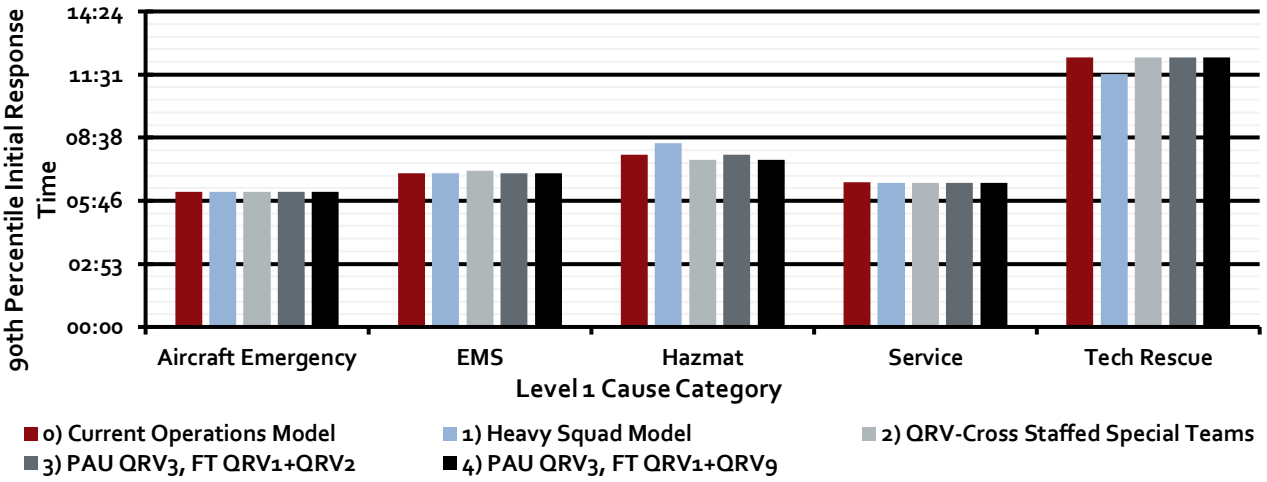
Figure 64: Unit Differences Between Various Models

Model	HS 1	HS 2	QRV 1	QRV 2	QRV 3	QRV 9	SQ 1	SQ 3	E 2	E 9	TW 1	TW 2	TW 9	Q 2	Q 9
0) Current Operations															
1) Heavy Squad															
2) QRV-Cross Staffed Special Teams															
3) PAU QRV3, FT QRV1+QRV2															
4) PAU QRV3, FT QRV1+QRV9															

Full-time unit:	
Peak activity unit (PAU):	
Cross staffed unit:	
Not Deployed:	

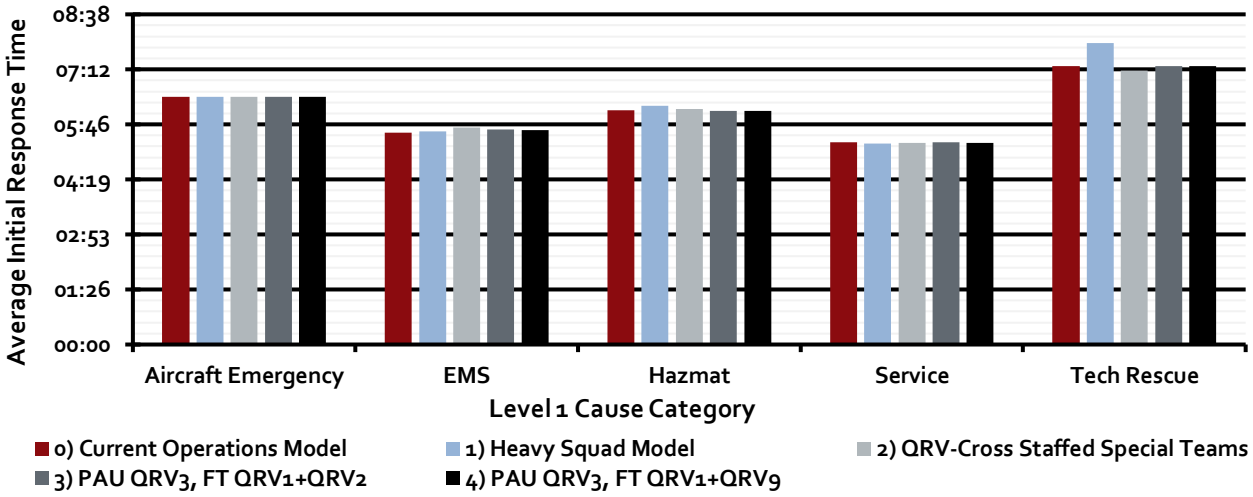
The impacts on the 90th percentile initial response times varied per model but overall, the impacts were minor. The biggest standout was for the tech rescue/hazmat calls in the heavy squad model.

Figure 65: Alternate Deployment Strategies - 90th Percentile Initial Response Times by Level 1 Cause



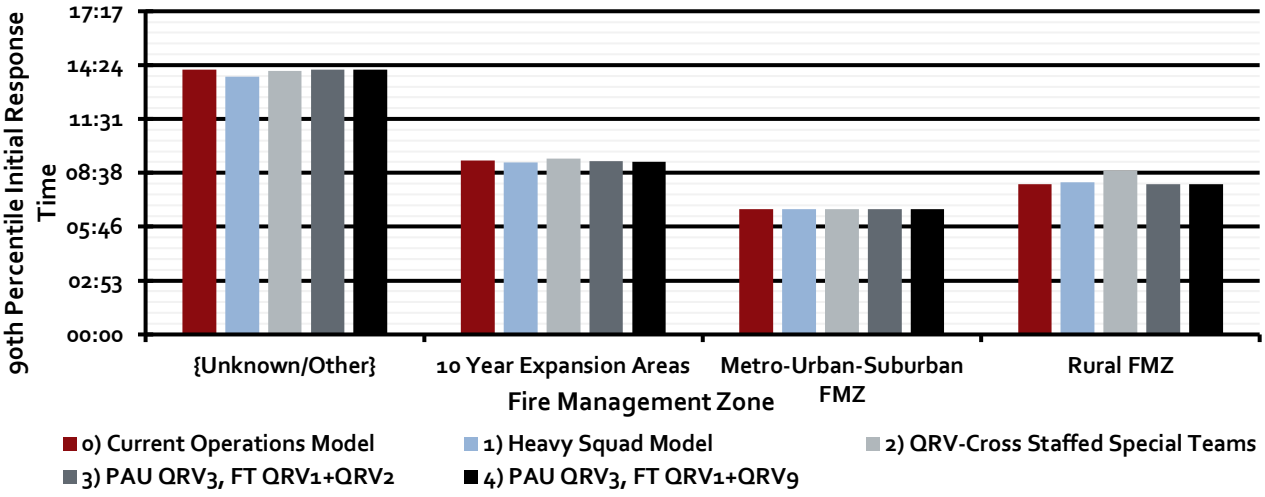
Tech rescue only had 32 calls in the dataset so the 90th percentile ended up being more of an anomaly. In this case, using the average makes more sense and by doing so, we see that the response times increase in both categories for the heavy squad model in the figure below. This was largely driven by the Heavy Squads being further away than the closest engine which would have otherwise responded to the scene.

Figure 66: Alternate Deployment Strategies - Average Initial Response Times by Level 1 Cause



The impacts are similar when analyzing the 90th percentile initial response times by fire management zone. Once again, the impacts were minor. The heavy squad model did see some improvements outside of the city limits whereas the cross-staffed special unit model saw slightly worse metrics in the Rural FMZ.

Figure 67: Alternative Deployment Strategies - 90th percentile Initial Response Times by Fire Management Zone



Heavy Squad Model Findings

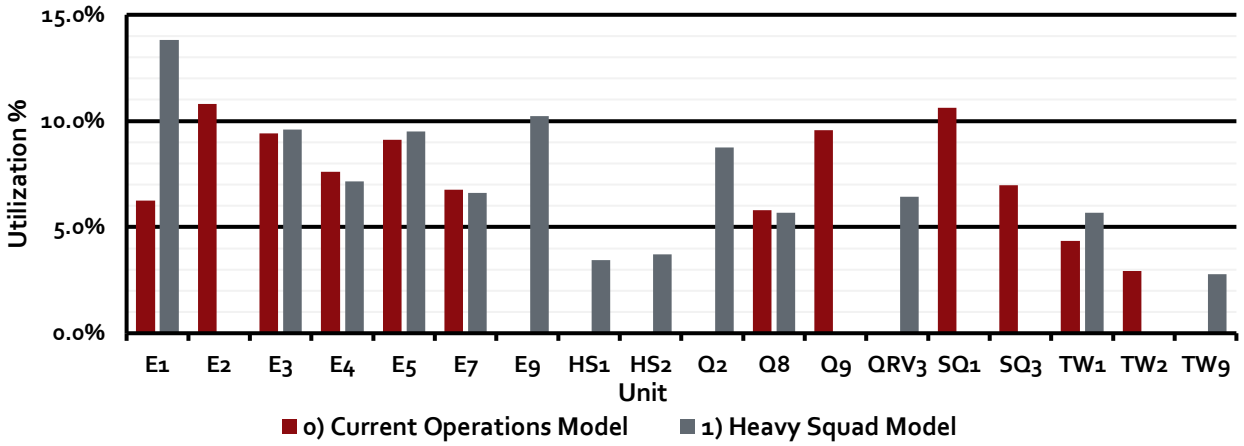
The key components for this model were the addition of two Heavy Squad units. HS1 would carry tech team gear and HS2 would carry hazmat gear. Additionally, a QRV would be added at station 3 and several units would be moved to different stations and renamed. For full details of the model, please see Appendix A.

Impacts on Unit Workloads

The following figure shows the difference in the impact on unit workload between the current deployment model and the Heavy Squad model.

- E1 picks up a significant number of calls that E2 would have gone on. Those additional calls take E1 from the least utilized engine to the most utilized.
- E9 picks up the rest of the calls that E2 had gone on previously.
- HS1/HS2 reduce reliance on the engines for tech rescue and hazmat calls. Removing SQ1/SQ3 ends up more than offsetting that difference, however, so total engine workload increases by 15.9%.
- Q2/TW9 take up the calls that are currently handled by Q9/TW2. Switching their home stations had minor impacts overall.

Figure 68: Unit Utilization Comparing Current Operations Model to Heavy Squad Model



Impacts on Response Times

- Metro-urban-suburban fire management zones showed no impact at the 90th percentile initial response times.
- Rural fire management zones saw an increase of 5 seconds at the 90th percentile initial response times.
- Areas outside of the city limits saw a decrease of 15 seconds at the 90th percentile initial response times.

Overall, the impacts on response times were relatively minor but rural FMZs were hurt slightly while areas outside of the city benefited slightly.

QRV-Cross Staffed Special Teams Model Findings

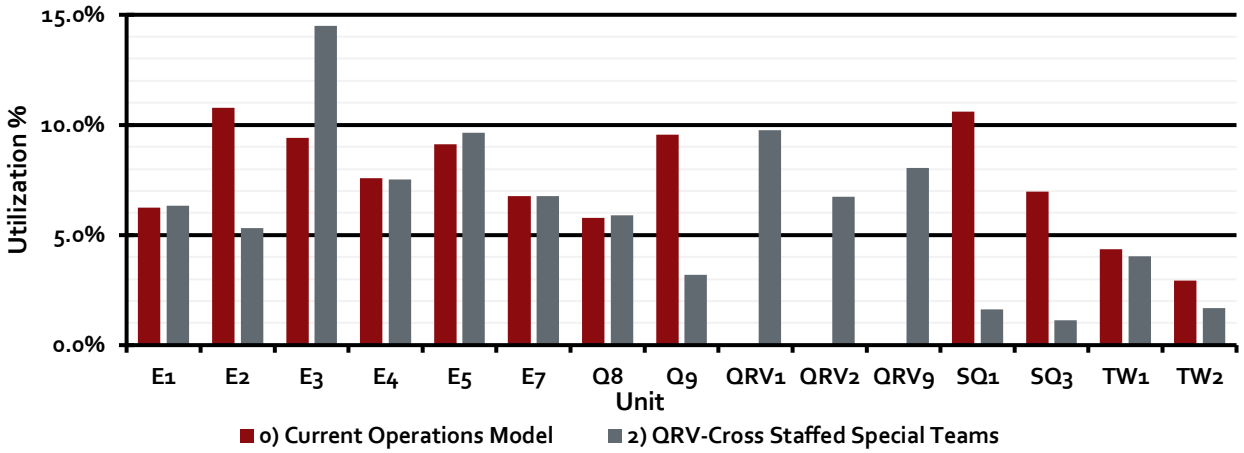
In this model, the goal was to add the QRVs and keep them available full time by cross-staffing them with the aerial units. If a given QRV was already responding to a call, the aerial it was cross staffed with could then be dispatched with just two staff and an additional QRV would be dispatched to fulfill staffing requirements. Additionally, the squad unit role was targeted more specifically at tech rescue calls.

Impact on Unit Workloads

The following figure shows the difference in the impact on unit workload between the current deployment model and the Cross-Staffed Special Team model.

- The QRV unit role generally reduced the reliance on specific units, such as Q9, for EMS related calls. This had a ripple effect where, for example, the calls E2 had responded to previously were better able to be covered by QRV2, QRV9, and Q9.
- E3 was another surprising standout. As a result of squads being shifted to focus more on tech rescue, it ended up picking up many of the calls SQ3 had previously covered. This provides strong evidence of the need for staffing a peak unit at Station 3 as is currently the case.
- E1/TW1 likely saw the same impacts but due to having QRV1 added, the effect was negated.

Figure 69: Unit Utilization Comparing Current Operations Model to Cross-Staffed Special Teams Model



Impacts on Response Times

- Response times were largely unaffected but did increase slightly across all studied areas.
- 90th percentile initial response times for Rural FMZs had the largest increase in response times of 43 seconds.

PAU QRV3, FT QRV1+QRV2 Model Findings

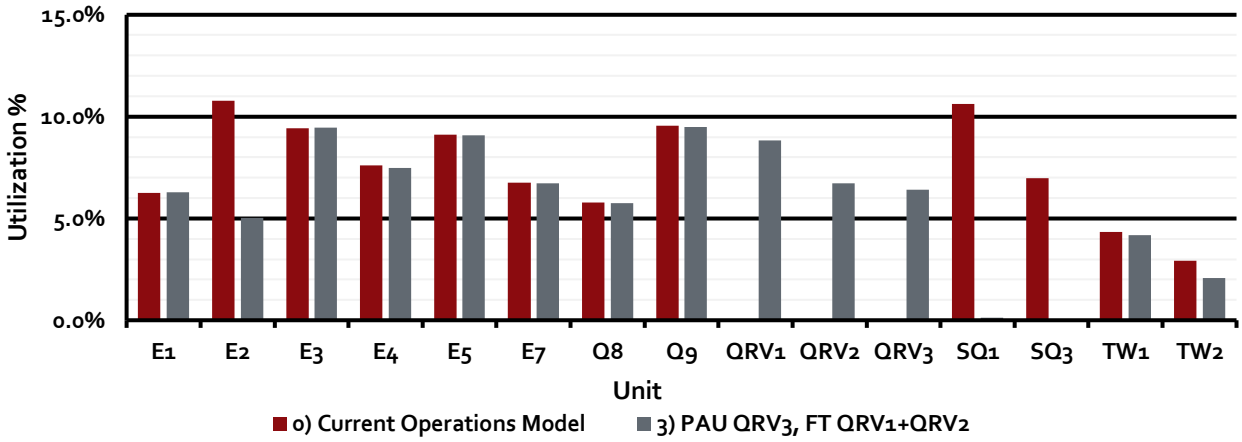
The third and fourth models were variations of each other. In this model, SQ3 would become a peak activity unit (PAU) QRV available from 0800-2000 and additional full time QRVs would be added at stations 1 and 2. SQ1 additionally would become cross staffed with TW1 and only respond to tech rescue calls.

Impact on Unit Workloads

The following figure shows the difference in the impact on unit workload between the current deployment model and the PAU QRV3, FT QRV1+QRV2 model.

- Most units were not impacted by the changes.
- Reducing the squad role and removing SQ3 largely shifted the workload they previously handled towards the engines. Adding the QRVs reduced the workload on the engines by almost an equal amount.
- The units at ST2 saw the greatest shift in workload since they didn't lose a squad unit but did gain a QRV.

Figure 70: Unit Utilization Comparing Current Operations Model to QRV Model with QRV2



Impacts on Response Times

- Impacts were very subtle overall.
- Fire response times decreased by up to 2 seconds.
- EMS response times increased by up to 5 seconds.

PAU QRV3, FT QRV1+QRV9 Model Findings

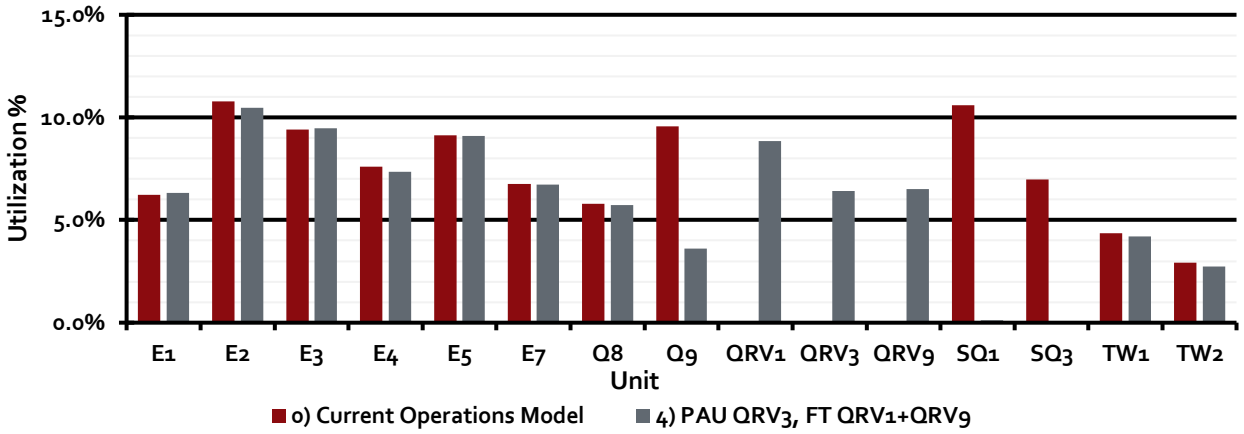
As stated above, the third and fourth models were variations of each other. In this model, SQ3 would become a peak activity unit (PAU) QRV available from 0800-2000 and additional full time QRVs would be added at stations 1 and 9. SQ1 additionally would become cross staffed with TW1 and only respond to tech rescue calls.

Impact on Unit Workloads

The following figure shows the difference in the impact on unit workload between the current deployment model and the PAU QRV3, FT QRV1+QRV9 model.

- Overall, the impacts were very similar to model 3. Workloads shifted around with the net result of QRVs taking on the workload of the squads.
- Q9 had the greatest reduction in workload with QRV9 being able to respond to medical calls.

Figure 71: Unit Utilization Comparing Current Operations to QRV model with QRV9



Impacts on Response Times

- Again, differences were very subtle.
- Fire response times decreased by up to 3 seconds.
- EMS response times increased by up to 4 seconds.

SPACE NEEDS ANALYSIS

To arrive at GFR's envisioned conceptual design for a fire station, WSKF completed interactive discussions with stakeholders to both vet and test space needs as the first step. Fire stations are "zoned" for functionality and purpose. Typical station zones include:

- Lobby/Administration/Support Services
- Apparatus/Apparatus Support
- Health & Wellness
- Living Quarters
- Site Elements (parking, drives, storage, trash, etc.)

A series of spreadsheets were developed to both chronicle and document the space needs for a conceptual facility. While there may be some space requirement nuances for GFR, generally, the spaces that were included in the program are representative of WSKF's data base and our extensive experience and expertise with similar facilities throughout the country. Additionally, the space programming includes "grossing factors" to account for space required but not specifically listed. A representation of such unaccounted spaces includes:

- Corridors and circulation spaces
- Wall thicknesses (interior & exterior)
- Mechanical chases and similar space elements

The grossing factor will vary from area to area or zone to zone based on functions or spaces included in those areas. Office and similar areas have much higher grossing factors than apparatus bays and similar uses. The 'Site Elements' component of the space program is included to provide documentation of particular design requirements for the prototype facility. This component is not intended to provide GFR with site area or geometry requirements. However, WSKF has provided some general parameters for site selection elsewhere in this study.

While space needs may vary from station to station, the following figure documents general space requirements by usage category which have been agreed upon by GFR staff for the conceptual fire station design.

Figure 72: GFR Conceptual Fire Station Space Needs by Use

Conceptual Station Space Requirements	
Type of Space	**Sq. Ft. Required**
Lobby, Administration & Support Services	2,910
Apparatus Bays[1] & Support Spaces	8,196
Health & Wellness	1,809
Living Quarters	7,850
Total	**20,765**

[1]Three double deep, drive through bays

It should be noted that the "Space Needs Program" is the framework for a preliminary design. Completion of a preliminary design will "prove" the final space or area requirements because of the created design. Additionally, the space program is general in nature as no specific apparatus or other space-defining elements have been selected by GFR for the station. While this approach is general in nature, it is still valid given the overall need for station apparatus selection and use based on station service area. Many factors are taken into consideration that are specific to this building type and to the needs of GFR. Based on the WSKF's Design Team experience and expertise with fire station design and our knowledge of GFR facility needs, we created the prototype station.

MODERNIZATION VERSUS REPLACEMENT

The decision-making process of determining whether to repair, renovate or replace facilities requires diligent assessment and consideration of multiple options before making a recommendation. Each facility was assessed based on its respective conditions. Capital investment recommendations were made through condition assessments as well as prudent facilities judgement.

Repair recommendations can be made with relative ease; however, renovation and replacement decisions are much weightier and involved. Therefore, this discussion is focused on these two options.

Renovation consideration has a financial tipping point, that is, when the value of the renovation reaches 50 percent of the in-place value of the facility. When the scope of work reaches a 50 percent or greater value, a judgement needs to be made regarding the long-term value of the facility investment. Additionally, there are some renovation factors for fire stations that normally tip the scale towards replacement.

Fire stations, as "essential facilities" are required to meet structural performance criteria that exceed most other building types. Generally, when renovation costs reach the 50 percent level of the in-place value of the facility being considered, most city building departments mandate that the entire facility be renovated to current building standards. Given the challenges for existing facilities to meet modern essential facilities design criteria, this places the facility at a crossroad. If this code compliance is required, it rarely makes financial sense to renovate.

Additionally, most fire stations have a general life span for continued use. Based on WSKF's experience, fire stations have a maximum useful life of 40 to 50 years without significant financial investment. As advised elsewhere in this study, there are other factors (i.e., station location optimization) that also are to be considered before making the significant financial investment for renovation.

As noted previously, many of GFR's facilities are 40 years or more in age. While this reference is one point of consideration, each respective facility's overall and detailed system conditions are also to be considered. An overarching factor for station renovation is that of firefighter health and wellness. In the last 10 years, there have been a high number of firefighters developing work-related cancer of various types. It is well-documented that firefighters face a nine percent increase in cancer diagnoses, and a 14 percent increase in cancer-related deaths compared to the general population in the U.S.[6] These statistics are well documented and fire agencies across the country and GFR specifically have implemented practices and protocols that are aimed at addressing these risks. While many of these practices are immediately addressed with incident responses on scene or shortly thereafter, fire station design also has a role and responsibility in addressing these risks. Some of the identified facility recommendations can be readily implemented (diesel exhaust mitigation through filtration and whole-bay exhaust retrofitting) while other recommendations (Decon protocol, station pressurization, etc.) are not so easily applied or implemented.

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[6] Daniels RD, Kubale TL, Yiin JH, *et al*
Mortality and cancer incidence in a pooled cohort of US firefighters from San Francisco, Chicago, and Philadelphia (1950–2009) *Occupational and Environmental Medicine* 2014;**71**:388-397.

The higher incidence of cancer among firefighters is one area of occupational study, however, firefighter studies are also continuing around mental health.[7] Firefighter mental health became a focus of study because of firefighter health outcomes after the World Trade Center (WTC) event. While this area of study is ongoing, there is strong evidence to suggest that firefighter mental health is an occupational concern. Implementation of fire station design elements that are aimed at firefighter mental health are being suggested by the WSKF Design Team. Design elements that promote rest and restorative conditions are part of the recommendations. Additionally, the notion of applying biophilic design[8] elements is an area of continued research and study by the WSKF Design Team. Simple elements like daylighting are easily implemented, but other elements such as natural elements are more challenging and require more thoughtful design consideration.

[7] Assembling the Career Firefighter Health Study cohort: A methods overview
Rachel Zeig-Owens DrPH, MPH, Ankura Singh MPH, Suzanne Triplett BA, Joke Salako MPH, Molly Skerker MPH, Ariana Napier MA, BA, Eric Peele BA, Marshica Stanley MA, BS, Sridevi Sattaluri MS, BS, David Prezant MD, Mayris P. Webber DrPH, MPH, First published: 10 June 2021 https://doi.org/10.1002/ajim.23266

[8] APA (6th ed.) Kellert, S. R., Heerwagen, J., & Mador, M. (2008). Biophilic design: The theory, science, and practice of bringing buildings to life. Hoboken, N.J: Wiley.

CONCEPTUAL FACILITY DESIGN

PROTOTYPE FIRE STATION

To arrive at GFR's envisioned conceptual design for a fire station, WSKF completed interactive discussions with stakeholders to both vet and test space needs as the first step. Fire stations are "zoned" for functionality and purpose. Typical station uses zones include:

- Lobby/Administration/Support Services
- Apparatus/Apparatus Support
- Health & Wellness
- Living Quarters
- Site Elements

There are two overarching design criteria when designing fire stations: 1) apparatus bay space and layout and 2) proximity & path of travel (to bays). Bay proximity and travel path directly relate to turnout time, a time segment in the overall response time continuum. All other spaces are generally subservient and supportive of these two criteria. The prototype station design was created in the absence of any site considerations or station location. The final site selection will likely have an impact on the prototype design. Such site elements as surrounding streets, utility services locations, topography, adjacent development, etc. are all possible design impact elements.

Some of salient characteristics of the conceptual facility include:

- Lobby, Administration & Support Services: Provisions for staff security when greeting visitors, provision for a "Treatment Room" (EMS treatment services delivery), Visitor Restroom
- Apparatus & Apparatus Support: Provisions for demarcation between "red, yellow & green zones", creation of a "shelter" space, provision for station supplies "drop off" without compromising station security, drive-thru bays
- Health & Wellness: Adequate fitness space with quick and easy access to outdoor fitness, isolation of fitness space from station operations (sound isolation & control), provision for isolation of red laundry from green laundry
- Living Quarters: Provisions for 'cold bunk' concept, turn-out design efficiency, provisions for isolation of active and inactive space (sound management)

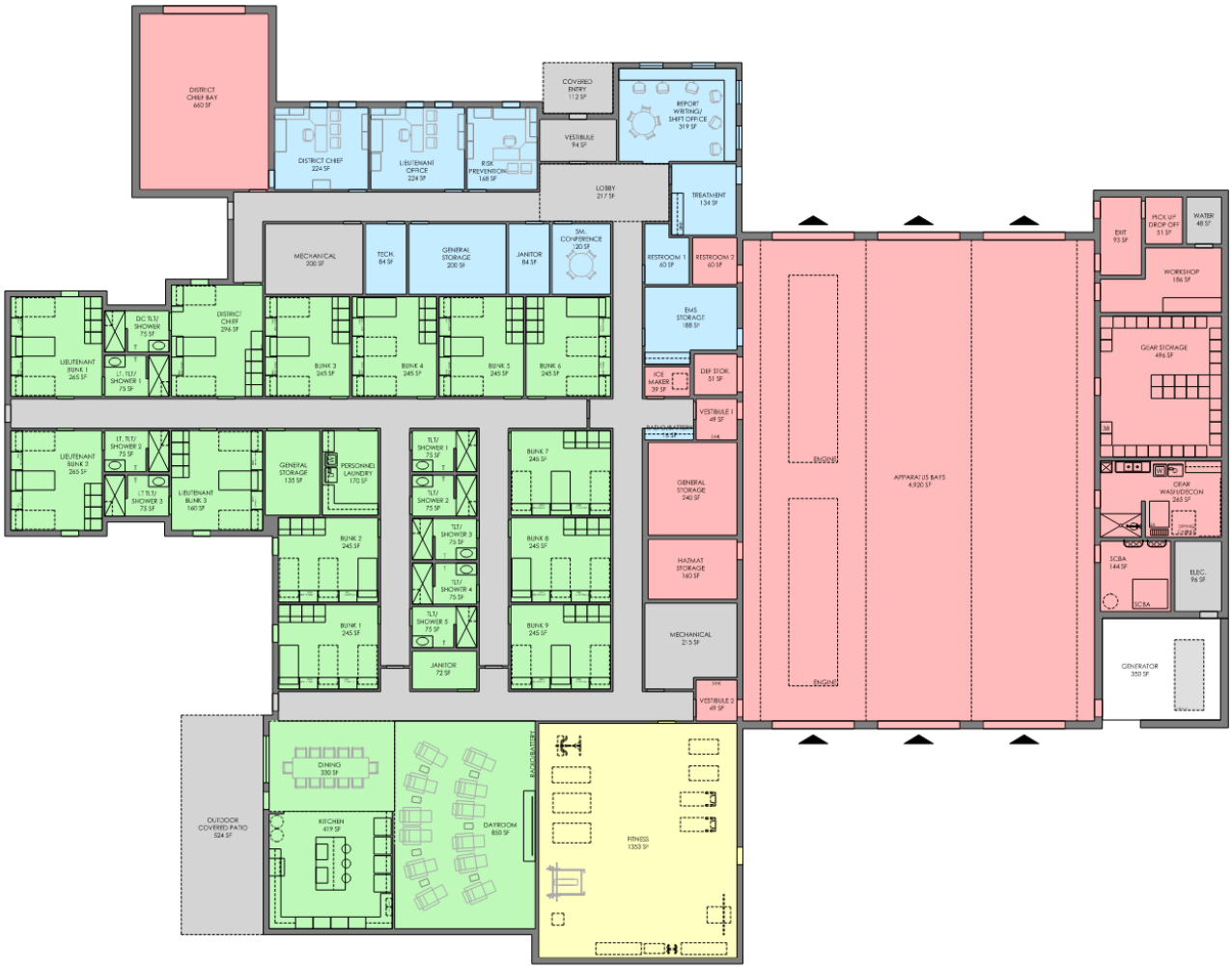
The "red, yellow and green zones" noted above are associated with the health and wellness aspect of the conceptual facility design. "Red Zones" are those areas of the station that are considered dirty or contaminated. An example of a red zone are the apparatus bays. The "Yellow Zones" are considered transitional areas within the station. The vestibules between the apparatus bays and the living quarters are examples of yellow zones. The "Green Zones" are considered zones without, or reduced, station contamination. These zones are considered the healthy zones within the station. Areas of the station that are representative of the green zones are bunkroom, dayroom, or similar uses.

The living quarters of the station are to provide for "cold bunk" design. This concept for bunkrooms provides for single user use of bunk beds. Additionally, the approach to bunkroom design allows for flexibility in bunking during events that may require additional crew members. While this approach to bunkroom design requires additional square footage, there is a great deal of crew flexibility achieved as well.

GFR has a practice of community outreach for delivering fundamental healthcare services (blood pressure checks, vital signs assessment and similar health screen assessments. The prototype design will extend this outreach in the station design through the inclusion of a small "treatment" room. This room will allow for station crews to efficiently deliver the outreach services within the station. While it is important to provide space for GFR outreach services, it is also important to provide for the safety, security, and health of the station crews. Provisions for access to the treatment rooms without compromising these station attributes is a driving design force of the proposed prototypical design.

The prototypical station design provides approximately 21,000 gross square feet of space. This area is based on the Space Needs Programming and is to be proven with the prototype (conceptual) design. As was noted earlier, the final area will likely vary from the space needs area. The image shown in the figure below is the final prototype design for GFR's future stations. This plan provides approximately 21,330 gross square feet.

Figure 73: GFR Conceptual Fire Station Design



The prototype design provides crew space for up to nine firefighters and four command staff as well as apparatus bay space for up to six vehicles, however, it is uncommon for all bay spaces to be occupied as flexibility in bay use is desired and required. Additionally, the design provides for drive-thru apparatus bays. A separate apparatus bay is provided for the District Chief to remove this vehicle traffic from the fire apparatus bays.

The fitness space is placed near the rear apparatus aprons for ease of personnel to use the aprons for fitness purposes (CrossFit fitness exercises). Additionally, the remote location helps to isolate the noise generated by the fitness use from the other areas of the station that could be impacted by such use.

As noted above, the floor area of the station is approximately 21,000 GSF. The site area for the station would need to include parking for staff and visitors as well as apparatus drive and circulation space. As there is living space for 13, this would translate to a minimum of 26 vehicle parking spaces. An average of 350 to 400 square feet per vehicle stall is appropriate. This planning would total 9,000 to 10,000 GSF. Visitor parking planning would be a three to four stalls. This would translate to 1,000 to 1,200 GSF. As the station will also experience delivery vehicle service, an additional space for this use is planned. To provide for drive-thru bays, front and rear aprons should be a minimum of 50 feet in depth. Minimum turning radii would be 40 feet; 45 feet would be recommended. The overall depth of the site recommended is 300 feet and the width would also be 300 feet. Generally, this area would translate to a typical city block or approximately two acres.

The ideal site would likely have roadways at the front and the back of the station. Additionally, the front roadway would be a local collector or similar status street that would provide for quick response conditions. The rear roadway would, ideally, be a local street; neighborhood street or similar with only neighborhood traffic congestion. Ideally, the front street speed limit would be 35 MPH or less and provide good lines of sight left and right; good lines of sight are defined as sight distance of 300 feet without curves, hills or similar obstructions and sight interference. If the front street is well-traveled (high volume traffic), a stoplight for apparatus egress and flow should be considered for the site. The site should not be located on dead-end or cul-de-sac type sites or near traffic calming elements.

Security fencing for select areas of the site should be considered. Security fencing for the living quarters as well as staff vehicles is recommended. As crews are not always at the station, this leaves the station somewhat vulnerable to visitors or others. Security fencing adds another level of security control and protection of the station. Adequate site lighting is also needed to supplement both the use of the station as well as security. Other important site elements include: 1) trash enclosure (rear of site with ease of use by personnel and ready access by service company), 2) fire hydrant (rear of site for apparatus fill purposes), 3) utility services near (water, sewer, electricity (3-phase service), gas and fiber (if available)), etc. Ideally, the site should have not overhead power lines to avoid conflicts with apparatus checks.

The ideal site would provide for some topography across the site with the high point being at the center of the apparatus bays. Ideally, the apparatus approach to the front street should be elevated above the roadway to support good lines of sight and overall view control of the street traffic. As stormwater management is a requirement, detention, if required, should be located at the rear of the site. Ideally, the detention basin would be located away from the living quarters.

As noted above, the area requirement for the GFR Prototype Station is approximately 21,000 GSF. The station would be designed to meet current "Essential Facilities" design criteria as well as current best practices for firefighter health, safety, and wellness. The estimated value of this type of building is a value of approximately $425 to $450 per square foot. This would place the value of this building at approximately $8.925 to $9.45 M. The estimated value of fixtures, furniture, and equipment (FF&E) is $0.425 M. The total construction and equipment cost is approximately $9.35 to $9.875 M. These costs are exclusive of land purchase, design, and apparatus costs.

GFR Fire Training Facilities

As noted in the GFR Existing Facilities Survey Assessment Overview, the existing Training Classroom facility has experienced a partial structural collapse and has been rendered generally unusable except for select areas of the building. Additionally, the tactical training facilities are in "fair" condition but offer limited functionality because of the training element characteristics (metal containers or boxes).

Figure 74: GFR Existing Training Facilities Survey Assessment Overview

Station/Facility	Condition				Notes/Comments
	Exceptional	Good	Fair	Poor	
Training Tower - Burn Bldg.			X		Co-Location w/ Station 3
Annex – Bldg. A				X	45-Year-Old Facility
Modular Training Classroom			X		Temporary Facility

The ideal facilities for training, both classroom type and tactical type, were profiled through a series of space needs programming sessions with GFR staff. The full space programming document is available for review in Appendix E of this Study while the overview of the space needs is presented below:

Figure 75: GFR Design/Space Needs Summary for Training Facilities

Building 1	Area
A. Lobby & Support Services	2,099
B. Office Space	3,921
C. Classrooms	19,470
Building 1 Total:	**25,489**
Building 2	
D. Covered Outdoor Classroom Building	6,294
Building 2 Total:	**6,294**
Building 3	
E. Training Tower	19,684
Building 3 Total:	**19,684**
Building 4	
F. EMS/HazMat Training Residence	1,596
Building 4 Total:	**1,596**
TOTAL BUILDINGS SF:	**53,063**

As noted in the figure above, the combined area required for the GFR Training facilities is approximately 54,000 GSF. It should be noted that Buildings 2, 3 and 4 are unoccupied buildings and are currently used for tactical and related training purposes only. Building 1 is generally comprised of "office" space.

Building 1 would be designed as a typical office building with provisions for various sizes of classrooms and classroom-related uses (computer labs, breakrooms, etc.). The estimated value of this type of building is approximately $325 to $350 per square foot. This would place the value of this building at approximately $8.5 to $9.0 M.

Building 2 would be designed as an outdoor classroom and services building; generally, a large outdoor covered structure. Structures of this type and nature are estimated at a value of approximately $150 to $175 per square foot. This would place the value of this building at approximately $1.0 to $1.1 M.

Building 3 would be designed for live burn tactical training with a Class A fuel source and various burn props for training exercises. Excluding the burn props, the estimated value of this Building is approximately $225 to $225 per square foot. This would place the value of this building at approximately $4.5 to $5.0 M.

Building 4 would be designed for both EMS and Hazmat training with no burn facility. This facility would be designed to look like a standard Gainesville residence. Excluding training props, the estimated value of this Building is approximately $250 to $275 per square foot. This would place the value of this building at approximately $0.4 to $0.5 M.

In total, the estimated value of Buildings 1, 2, 3 and 4 is approximately $14.4 to $15.6 M. These costs are exclusive of site development, land purchase and fixture, furniture & equipment costs.

While the building area requirements are one aspect of the GFR Training needs, site or land area requirements are another consideration. Based on Space Needs Programming sessions with GFR, the following figure presents the envisioned land area needs:

Figure 76: GFR Design/Space Needs Summary for Outdoor Training Spaces

Site (open area only)	
G. Outdoor Training	533,256
H. Outdoor Support Space	69,064
SITE TOTAL:	**602,320**
SITE TOTAL (acres):	13.83
BUILDINGS TOTAL (acres):	1.22
TOTAL ACRES:	**15.05**

The Outdoor Training area needs include: 1) Drafting Pit, 2) Open Grass Training, 3) Emergency Vehicle Operations Course (EVOC) Training, 4) Mock Intersection Training, 5) Tanker HazMat Training and similar training elements. The site design requirements are also envisioned to include: 1) Visitor Parking (80 spaces), 2) Staff Parking (12 spaces), 3) Apparatus Parking (4 spaces), 4) Trailer Parking (4 spaces), and similar related space. All parking is uncovered.

GFR Community Resources Paramedic Program Facilities

The City of Gainesville has a history of providing community outreach services to residents and visitors. These services have been historically delivered through mobile service vehicles (ambulances or re-purposed ambulances). These services are currently housed in Building A of the NE complex whose condition is summarized in the figure below.

Figure 77: GFR Existing Community Outreach Facility Assessment Overview

Station/Facility	Condition				Notes/Comments
	Exceptional	Good	Fair	Poor	
Annex – Bldg. A				X	45-Year-Old Facility

Figure 78: GFR Design/Space Needs for Community Resource Paramedic Program

Design/Space Needs Summary		Area
A. Lobby & Support Services		2,971
B. Office Space		4,086
C. Vehicle Storage		2,128
D. Outdoor Support Space		0
	Building & Site Total	9,185

As noted in the figure above, the combined area required for the GFR Community Resource Program as it currently stands is approximately 9,200 GSF. Should the city decide to expand the program, additional space would be required beyond what is shown here. Generally, the spaces included are: 1) Receiving/Waiting, 2) Telemedicine/Exam, 3) Staff Offices/Support Space, 4) Vehicle Storage/Parking, 5) Services Supplies/Storage and related spaces. This building would be designed as a typical medical office building with provisions for public access and staff access. The estimated value of this type of building is a value of approximately $325 to $350 per square foot. This would place the value of this building at approximately $3.0 to $3.25 M. These costs are exclusive of site development, land purchase and fixture, furniture & equipment costs.

GFR Public Safety Hub Facilities

GFR envisions efficient and effective services delivery could be achieved through a "Public Safety Hub" facility. This facility could aggregate services and facilities to offer a central location for GFR operational services including: 1) Fire Administration, 2) GFR Operational Services (fire inspections, fire investigations, community risk reduction, etc.), 3) Central Command Center (emergency services center), and related spaces. As was noted in the Facilities Assessment Survey Overview, these facilities were housed in Annex C at GFR's public safety campus. The current condition of this facility is assessed as "Poor" as shown in the figure below. This assessment is the result of both physical condition as well as the operational efficiency of the facility.

Figure 79: GFR Existing Administrative/Support Facility Assessment Overview

Station/Facility	Condition				Notes/Comments
	Exceptional	Good	Fair	Poor	
Annex – Bldg. C				X	45-Year-Old Facility

The Space Needs Assessment for the Public Safety Hub are listed in the figure below:

Figure 80: GFR Design/Space Needs for Public Safety Hub

Design/Space Needs Summary	Area
A. Lobby & Support Services	2,426
B. Administration	2,788
C. Risk Reduction	1,756
D. Command Center	6,115
E. Site	0
Building & Site Total	13,085

As noted above, the combined area requirements for the GFR Public Safety Hub are approximately 13,100 GSF. Generally, the spaces included are:

- Waiting/Lobby
- Reception/Conference/Restrooms
- Administrative Offices/Support Space
- Inspection/Risk Reduction Offices
- Command Center/Break-out Rooms, Operational Support/Storage, and related spaces

This building would be designed as a typical office building except for the Command Center which would be designed to meet storm shelter requirements. The estimated value of this type of building is a value of approximately $325 to $350 per square foot for the offices and $425 to $450 per square foot for the shelter spaces. This would place the value of this offices at $2.25 to $2.5 M and the shelter at approximately $2.6 to $2.75 M for a building total value of $4.85 to $5.25 M. These costs are exclusive of site development, land purchase and fixture, furniture & equipment costs.

SECTION III: Recommendations & Financial Impacts

FINANCIAL BASIS FOR COST PROJECTIONS

Most revenues and recurring expenditures, as well as minor non-recurring expenditures, comprising the annual funding and cost of operating the fire department are found in the City of Gainesville General Fund or GF (001). GFR recurring expenditures include a fixed amount transferred from the GF to the City Internal Service Fleet Fund (501) each year. Most apparatus purchases (primarily replacements) are made periodically from the Fleet Fund based upon a replacement plan. Other revenues and expenses can be found in the Gift Fund (123) and Grants Fund (115). Major capital facility construction projects and some large equipment expenditures are accounted for in City Capital Improvement Funds (Series 300) which include bond proceeds and related revenues. The City operates on an October 1 to September 30 fiscal year and uses a modified accrual basis with a current, financial resources focus for fund accounting. A detailed composite review of historical revenue and expense as well as a status quo forecast for the department has been provided elsewhere in Appendix A of this study.

To estimate the future costs of any service level enhancement opportunities, it is first necessary to understand current year (Fiscal Year 2021) estimated costs for various decision unit components such as firefighter salary/benefits, onboarding costs, apparatus and equipment costs, and fire station construction and operating costs. Depending upon when these components may be added to the system, the FY 21 costs can be escalated based upon known or anticipated increases due to such influences as projected inflation for each component, City Commission authorized pay increases, rising benefit costs, or some combination of factors.

Policy decisions regarding the adoption of any enhancements designed to improve service level are generally evaluated based upon projected initial and recurring cost versus the benefit provided. To understand the future costs of any enhancement, it is important to evaluate improvements in terms of decision units. A decision unit in the case of this Gainesville Fire Rescue Growth and Expansion Feasibility Master Plan can be considered a career-staffed engine or ladder company, non-transport rescue unit, shift district chief or an operating fire station with various staffed units. These decision units are comprised of components such as personnel with various associated initial and recurring costs, capital apparatus and facility acquisition, and recurring capital operating costs.

The following discussion uses actual or estimated GFR FY 21 costs, to the extent they are available, as a basis for costing of various decision unit components whose costs can then be escalated to that point in time when they may be added to the system. In other words, if the city determines that it needs to add an engine company to its operation in three years, the following FY 21 personnel, capital, and operating costs will serve as a basis for the addition of that unit after application of an escalation factor through FY 24 when the unit is added. The escalation factors for the various components of that decision unit, as estimated from various sources, are applied to show the future cost at the point in time the department wishes to add a particular decision unit.

Fiscal Year 2021 Personnel Costs

Salary and benefit information for uniformed (operational) positions discussed in the following section was provided by the department for FY 21. The next figure provides average annualized salary, benefits and the total compensation costs for various decision unit positions including Firefighter (which includes both Firefighter/EMT and Firefighter/Paramedic certified personnel), Driver/Operator, Lieutenant and District Chief. It is anticipated that additional, career-staffed suppression apparatus (engines, ladder trucks and non-transport rescue units) would require some combination of the Lieutenant, Driver/Operator and Firefighter (Firefighter/Paramedic and Firefighter/EMT) positions.

Figure 81: Annual Salary/Estimated Benefits Various GFR Uniformed Positions, FY 21

Position	Average Annual Salary	Average Benefits	Avg. Total Compensation
Firefighter	$ 48,266	$ 15,360	**$ 63,626**
Driver/Operator	$ 58,562	$ 18,034	**$ 76,596**
Lieutenant	$ 66,548	$ 20,617	**$ 87,165**
District Chief	$ 82,363	$ 24,613	**$ 106,975**

While it might be more appropriate to utilize entry level compensation figures for any additional positions added on various units, using the average for the position (except for Firefighter since these may be newly hired personnel) will give a conservative, more realistic cost scenario so that recommended improvements do not end up costing more than originally projected. Positions other than Firefighter are promotable positions and are generally filled by personnel who have significant tenure with the department and will likely not be promoted into the position at the base rate of pay.

When adding positions, it is also important to include first year on-boarding costs along with the recurring compensation cost of each new position. These costs generally vary from department to department but typically include such items as: background checks/polygraphs, physicals based upon the NFPA 1582 firefighter standard, recruit school costs, uniforms, SCBA facepieces, Personal Protective Equipment (PPE) or Turnout Gear and may include radio/technology packages or other items. For purposes of this study an estimated on-boarding cost of $7,500 was used for FY 21. After the initial year, these costs would not continue with the added position, and the only recurring costs associated would be the total annual compensation. However, it is also understood that the department's annual operating costs over time would increase due to added PPE replacement, training, and other associated employee costs. Further, with the addition of significant numbers of staff, other supporting department costs may also increase incrementally. These might include departments such as Human Resources, IT, Risk Management and Legal among other internal services.

A further factor must be considered when evaluating the potential cost of adding positions. As with any other City employee, firefighters receive time off for various reasons such as vacation, sick and funeral leave among others. The Gainesville Fire Rescue Department has determined minimum staffing requirements for various response units based upon risk and response protocols to emergency incidents. These minimum daily staffing needs require that when any firefighter is on leave and daily staffing drops below the minimum, his or her position must be covered by another firefighter. This leave coverage required to maintain minimum daily staffing is termed the "relief factor". Based upon historical leave accruals and actual usage, the GFR relief factor is approximately 1.25.

The current shift staffing schedule of 24 hours on duty followed by 48 hours off duty means that for every minimum daily riding position on an apparatus, three FTEs are required before considering any leave time (1 FTE x 3 shifts). The relief factor of 1.25 applied to each riding position means that 3.75 FTEs are required to maintain that position and meet minimum staffing requirements. For the purposes of the projections provided for the addition of units, partial FTEs are used to indicate the additional cost of covering leave time. This additional cost could either be accounted for with increased overtime or, as with the hiring of additional FTE as the level of need dictates. In other words, if one 24/48 position is added to the system, 3.75 FTEs are added; one for each shift and 0.75 FTE to cover the relief factor.

Fiscal Year 2021 Capital Apparatus/Equipment Costs

The next figure identifies FY 21 apparatus costs based upon the current GFR specifications for each apparatus class. Also included is the estimated cost to equip each type of vehicle. This table illustrates first year capital costs only and does not consider annual or recurring operating costs such as fuel, oil, and routine maintenance costs (parts and labor). To build the most accurate cost of adding each type of apparatus, these recurring costs would need to be considered for future years. The department has developed a comprehensive annual apparatus replacement program in conjunction with the Gainesville Fleet Management department. Replacement costs are based upon life expectancy and usage for each vehicle class. This is an industry standard practice and should incorporate an annual inflation factor. The GFR program is executed through the City Fleet Management department which does the actual apparatus replacement through the Fleet Fund.

Figure 82: Apparatus and Equipment Costs, FY 21

FY 21 Apparatus Cost			
Class	Apparatus	Equipment	Total
Ladder	$ 1,032,053	$ 167,000	$ 1,199,053
Engine (Pumper)	$ 503,180	$ 83,700	$ 586,880
Heavy Duty Rescue	$ 650,000	$ 150,000	$ 800,000
Light Duty Rescue	$ 165,000	$ 44,000	$ 209,000
SUV	$ 43,000	$ 12,000	$ 55,000

Fiscal Year 2021 Facility Capital/Operating Costs

The last category of costs considered as part of any potential future service level upgrade are those costs associated with fire station construction including both initial construction and annual operating costs. Land costs will vary considerably depending upon many factors, such as market condition, developer proffers, environmental, and other factors. Therefore, land costs are generally not included in the estimated costs of any notional new fire stations.

Based upon the space needs analysis discussed elsewhere in this study, WSKF Architects developed a conceptual fire station design plan following extensive, iterative discussions with GFR staff. Total square footage of the conceptual design is approximately 21,000 and includes three double-deep, drive-through bays. Construction costs are estimated at $425-450 per square foot and could be approximately 12% higher if LEED standards are desired. The base model for the decision unit analysis uses a construction cost of $438/sq ft. A&E fees are estimated to vary from 7.5-8.5% of construction costs and the model uses 8%. These costs could be as high as 8.5-10% if the city chooses to design to LEED standards. FF&E costs are estimated at 5.2% of construction costs.

Figure 83: Estimated Conceptual Fire Station Construction Costs, FY 21

FY 21 Conceptual Fire Station Costs	
Category	**Cost**
Land	Varies
A&E Fees	$735,840
Construction	$9,198,000
FF&E	$425,000
Total	**$10,358,840**
Station Operating	$90,000

The decision unit analysis and five-year projection uses the estimated costs for the conceptual fire station developed as part of this study and shown in the figure above. However, for comparison purposes, the following discussion examines estimated FY 21 costs for the last fire station constructed by the city. GFR Fire Station 1, essentially completed in FY 18, project costs are shown in the figure below. Fire station design and costing was likely completed in FY 15. A&E fees are estimated at 6.5% of the capital costs shown in the CIP expenditure report but may have been included in building costs. FF&E costs are only those shown in the CIP and may not be inclusive of FF&E purchased using other budgets/funds.

Estimated FY 21 costs for GFR Station 1 can be used as a comparison against the conceptual design costs and benchmark actual, local fire station construction costs. The forecast assumes that the pricing differential would be due to inflation of materials and labor costs.

Figure 84: GFR Fire Station 1 Construction Costs

FY 18 Fire Station #1 Costs

Category	Cost
Land	Varies
A&E Fees	$ 668,629
Construction	$10,286,592
FF&E	$183,155
Total	**$11,138,376**

Using Construction Analytics inflation factors for non-residential construction as found in Zarenski (2021)[9] the cost to design and build Station 1 in FY 21 and excluding land costs, would be approximately $12.3 million as shown in the next figure. These assumptions provide a very solid basis for projecting the cost of future fire station decision units using the GFR Station 1 design. Comparing construction costs of the conceptual design to Station 1, the city could expect to pay approximately $2 million less should it utilize the conceptual design versus that of Station 1 for its future stations.

Figure 85: Estimated Fire Station Construction Costs, FY 21

FY 21 Estimated Fire Station Costs	
Category	**Cost**
Land	Varies
A&E Fees	$739,804
Construction	$11,381,605
FF&E	$192,088
Total	**$12,313,497**
Station Operating	$90,000

After construction costs are considered, there is an annual operating cost for a new facility that will be comprised of multiple components. Many jurisdictions provide and charge facilities maintenance, utilities, and related operating costs for various fire department and other facilities on a square footage basis as an interfund charge. Fire departments will also budget for some routine station operating costs such as various O&M needs. Typical operating costs generally budgeted for by departments include printing/copying, telephone and internet, laundry and janitorial, office supplies, minor equipment, books and subscriptions and other operating supplies. Costs either paid directly or to other internal service departments may include utilities, routine maintenance and janitorial, grounds maintenance, refuse (including bio-medical) and pest control services, among others. For projection purposes, an average annual operating cost of $90,000 per station is assumed for FY 21.

[9] https://edzarenski.com/2021/01/26/2021-construction-inflation-e1/

Fiscal Year 21 Decision Unit Staffing Costs

To provide for relief staffing (sick/vacation and other overtime coverage), GFR should plan and budget for 3.75 personnel to cover each required seat on an apparatus that is staffed 24/7 using three shifts. In other words, the department will apply a relief factor of 1.25 to each new FTE added. This is shown in the single resource table in the following figure (the uppermost table) which also shows the total number of personnel needed by rank and compensation for a 3-person ALS engine or 4-person ALS engine or ladder company and an ALS non-transport rescue unit (staffed with at least one paramedic-certified Firefighter).

A GFR engine is staffed with a minimum of three firefighters on each of three shifts, one Firefighter, a Driver/Operator, and a Lieutenant. A ladder or aerial truck is staffed with four firefighters per shift so total staffing would include an additional 3.75 Firefighters versus a 3-person engine. While it is understood that GFR currently has a minimum staffing requirement of three per shift on its engine companies, the 4-person staffing table can be used to estimate costs should minimum engine staffing be increased.

Each 24-hour seat or riding position requires 3.75 budgeted FTE to ensure minimum daily staffing (one FTE for each of three shifts plus an additional 0.75 FTE as relief factor). The FY 21 cost per rank needed for one FTE is shown along with the total cost for all personnel required in each rank for all three shifts and relief coverage to maintain the minimum staffing.

Figure 86: Estimated Decision Unit Staffing Costs, FY 21

Single Resource			
Position	**FTEs**	**Unit Cost**	**Total Cost[1]**
Firefighter	3.75	$ 56,226	$ 210,849
Driver/Operator	3.75	$ 76,596	$ 287,234
Lieutenant	3.75	$ 87,165	$ 326,868
District Chief	3.75	$ 106,975	$ 401,158

[1]Total cost and FTE count provides for assumed relief factor of 1.25

3-Person ALS Engine Company			
Position	**FTEs**	**Unit Cost**	**Total Cost[1]**
Firefighter	3.75	$ 56,226	$ 210,849
Driver/Operator	3.75	$ 76,596	$ 287,234
Lieutenant	3.75	$ 87,165	$ 326,868
Crew Total	11.25		$ 824,951

[1]Total cost and FTE count provides for assumed relief factor of 1.25

4-Person ALS Engine/Ladder Company			
Position	**FTEs**	**Unit Cost**	**Total Cost[1]**
Firefighter	7.50	$ 56,226	$ 421,698
Driver/Operator	3.75	$ 76,596	$ 287,234
Lieutenant	3.75	$ 87,165	$ 326,868
Crew Total	15.00		$ 1,035,800

[1]Total cost and FTE count provides for assumed relief factor of 1.25

2-Person ALS Rescue (24/7 Staffing)			
Position	FTEs	Unit Cost	Total Cost[1]
Firefighter	7.50	$ 56,226	$ 421,698
Crew Total	7.50		$ 421,698

[1]Total cost and FTE count provides for assumed relief factor of 1.25

Decision Unit Cost Projection

Using the estimated FY 21 decision unit staffing costs provided as a starting point, and making various assumptions about cost increases over time, decision unit costs are projected through FY 26 in the following figure. Personnel salary and benefit costs have been projected to increase annually (based upon historical trends) at 1.01 percent and 6.09 percent; respectively. Since benefits have historically averaged 26.6% of total compensation, FTE costs are projected to increase at an aggregate 2.4% annually. Annual operating costs have been projected to increase by 1.6 percent annually based upon a four-year average for the Southern Region CPI-U, prior to the onset of the Covid19 pandemic, as reported by the US Bureau of Labor Statistics[10]. It is anticipated that this rate of inflation will continue once the nation recovers from the pandemic and the economy returns to pre-pandemic conditions. However, it should be noted that recent indications of potential inflationary pressures at the national level may make this assumption low.

Historical apparatus and equipment costs have been observed by ESCI to increase at approximately four percent annually. According to Zarenski (2019), non-residential construction costs are estimated to have increased at 4–5 percent over the past five years and are expected to continue increasing at that rate[11]. Construction costs can be as high as three times the Consumer Price Index and are heavily dependent upon labor and material costs as well as construction demand and backlog. Import tariffs on building materials such as steel and other commodities may have an increasing impact as well.

Figure 87: Projected Decision Unit Costs, FY 21 through FY 26

Decision Unit	Personnel Recurring Costs[1]					
	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Firefighter	$ 210,849	$ 215,823	$ 220,914	$ 226,125	$ 231,459	$ 236,919
Driver/Operator	$ 287,234	$ 294,010	$ 300,945	$ 308,044	$ 315,310	$ 322,748
Lieutenant	$ 326,868	$ 334,578	$ 342,470	$ 350,549	$ 358,818	$ 367,282
District Chief	$ 401,158	$ 410,620	$ 420,307	$ 430,221	$ 440,370	$ 450,757
3-Person ALS Company	$ 824,951	$ 844,411	$ 864,329	$ 884,718	$ 905,587	$ 926,949
4-Person ALS Company	$ 1,035,800	$ 1,060,233	$ 1,085,243	$ 1,110,843	$ 1,137,046	$ 1,163,868
2-Person ALS Rescue	$ 421,698	$ 431,646	$ 441,828	$ 452,250	$ 462,918	$ 473,838

[10] https://www.bls.gov/charts/consumer-price-index/consumer-price-index-by-category.htm

[11] Zarenski, Ed (2019); Construction Cost Inflation-Commentary 2019, in Construction Analytics Economics Behind the Headlines; see https://edzarenski.com/2018/02/15/inflation-in-construction-2019-what-should-you-carry/.

Decision Unit	Personnel On-Boarding Costs[2]					
	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Firefighter	$ 28,125	$ 28,575	$ 29,032	$ 29,497	$ 29,969	$ 30,448
Driver/Operator	$ 28,125	$ 28,575	$ 29,032	$ 29,497	$ 29,969	$ 30,448
Lieutenant	$ 28,125	$ 28,575	$ 29,032	$ 29,497	$ 29,969	$ 30,448
District Chief	$ 28,125	$ 28,575	$ 29,032	$ 29,497	$ 29,969	$ 30,448
3-Person ALS Company	$ 84,375	$ 85,725	$ 87,097	$ 88,490	$ 89,906	$ 91,344
4-Person ALS Company	$ 112,500	$ 114,300	$ 116,129	$ 117,987	$ 119,875	$ 121,793
2-Person ALS Rescue	$ 56,250	$ 57,150	$ 58,064	$ 58,993	$ 59,937	$ 60,896

Decision Unit	Capital Apparatus (Equipped) Cost[3]					
	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Engine	$ 586,880	$ 610,355	$ 634,769	$ 660,160	$ 686,566	$ 714,029
Ladder	$ 1,199,053	$ 1,247,015	$ 1,296,895	$ 1,348,771	$ 1,402,722	$ 1,458,831
Heavy Rescue	$ 800,000	$ 832,000	$ 865,280	$ 899,891	$ 935,887	$ 973,322
Light Rescue	$ 209,000	$ 217,360	$ 226,054	$ 235,097	$ 244,500	$ 254,280
Command Vehicle	$ 55,000	$ 57,200	$ 59,488	$ 61,868	$ 64,342	$ 66,916

Decision Unit	Capital Facility (Initial and Recurring) Cost[2, 4]					
	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Construction	$ 10,358,840	$ 10,824,988	$ 11,312,112	$ 11,821,157	$ 12,353,109	$ 12,908,999
Operating	$ 90,000	$ 91,440	$ 92,903	$ 94,389	$ 95,900	$ 97,434

[1]Cost increase based on projected annual total compensation increase of 2.4%; includes sufficient FTEs to cover 1.25 relief factor
[2]Cost increase based on pre-COVID19 4-year historical Southern Region CPI-U average of 1.6% as of December, 2019
[3]Cost increase based upon industry average annual increase of 4%
[4]Cost increase based upon historical non-residential construction cost increase over last four years of 4-5%

The first table in the figure shows total annual staff costs, including relief factor, for single resources (for example one shift Firefighter which requires 3.75 FTE in FY 21 costs $210,849), 3-person ALS engine and 4-person ALS engine or ladder companies as well as ALS non-transport rescue units as projected from FY 21 through FY 26.

The second table shows what the one-time on-boarding costs would be to hire the number of firefighters needed to fully staff each unit or individual position in any given year over the period. For example, if 11.25 FTE were added in FY 21 to staff a 3-person ALS engine company, it would cost $824,951 in personnel costs plus $84,375 in on-boarding costs for a total of $909,326 the first year. Personnel costs would then increase at 2.4 percent annually so that the personnel costs for the same 11.25 firefighters on that engine company would be $926,949 by FY 26. If a 4-person ladder company were to be added, the personnel costs would need to be escalated by 3.75 additional FTEs whenever it was planned. The four-person company would have two Firefighters, at least one of whom was paramedic-certified, a Driver/Operator and one company officer (Lieutenant) assigned per shift.

The following two tables in the figure show the capital costs; the first table shows the equipped apparatus cost throughout the projection period while the second table shows the facility construction and operating costs through FY 26 using the conceptual fire station design costs developed as part of this study. Using the projected costs, a standardized station based upon the conceptual design, excluding estimated land costs, would cost approximately $10.36 million to construct in FY 21 with an annual operating cost of $90,000. That same station, if constructed in FY 26 would cost approximately $12.9 million and have an operating cost of $97,000. Purchasing an equipped engine in FY 21 would cost $586,880 while that same engine in FY 26 would cost $714,029.

The projected figures for various decision unit components can be used as an approximate guide to determine the cost of implementing various potential enhancements as recommended in the study at whatever point over the next five years the City finds appropriate and is able to fund them.

NOTIONAL FACILITIES MASTER PLAN

PROVIDING A CLEAR PATH FORWARD

The earlier study narrative has provided GFR with an assessment of existing facilities, a recommendation for facility repair, renovation or replacement and a profile of the GFR prototype station as well as site parameters for the prototype station plus other GFR facility needs (Training Facilities, Community Resources Program and Public Safety Hub).

There are, obviously, GFR facilities that are in good condition and are operating within industry standards to assure a good public safety facility services facilities operational platform. Those facilities do not need nor warrant further discussion. Facilities requiring further discussion, and which are recommended for replacement include those shown in the following figure:

Figure 88: GFR Facilities Recommended for Replacement

Station/Facility	Condition				Notes/Comments/Costs*
	Exceptional	Good	Fair	Poor	
Fire Station # 2				X	Age-46; Replace; $9.35 - $9.875M
Fire Station # 3				X	Age-61; Replace; See above
Training Tower - Burn Bldg.			X		Age-Varies; Replace; $14.4 - $15.6M
Fire Station # 4			X		Age-57; Replace; See above
Fire Station # 5				X	Age-56; Replace; See above
Fire Station # 7				X	Age-40; Replace; See above
Fire Station # 9				X	New Station; See above
Annex – Bldg. A				X	Age-45; Replace; See Training Tower – Burn Bldg. above
Annex – Bldg. B				X	Age-45; Replace; $3.0 - $3.25M
Annex – Bldg. C				X	Age-45; Replace; $4.85 - $5.25M

*Costs are exclusive of land purchase costs, site development costs and FF&E costs unless otherwise included refer to narrative for each facility

The total estimated construction costs for GFR facility replacement needs, exclusive of the items noted above, is approximately $73.35 to $83.35 M. In addition to these costs, soft costs (design services, permitting, testing & inspections and similar costs) would need to be included. Obviously, the total cost is significant when compared to incremental and individual project costs. While there are significant GFR facility needs, not all facilities likely have the same priority. The WSKF Design Team offers the following facilities priority for GFR's consideration:

Figure 89: GFR Facilities Replacement Priority Recommendations

Station/Facility	Replace Priority	Timing-Duration*	Notes/Comments
Fire Station # 2	1	D-yr. 1/C-1 yr.	Age-46; Replace; $9.35 - $9.875M
Fire Station # 5		D-yr. 2/C-yr. 2	Age-56; Replace; See above
Fire Station # 7		D-yr. 3/C-yr. 3	Age-40; Replace; See above
Fire Station # 9	2	D-yr. 4/C-yr. 4	New Station; See above
Fire Station # 3	3	D-yr. 5/C-yr. 5	Age-61; Replace; See above
Training Tower - Burn Bldg.		D-yr. 5/C-yr. 6-7	Age-Varies; Replace; $14.4 - $15.6M
Annex – Bldg. A		D-yr. 5/C-yr. 6-7	Age-45; Replace; See Training Tower – Burn Bldg. above
Fire Station # 4	4	D-yr. 8/C-yr. 8	Age-57; Replace; See above
Annex – Bldg. B		D-yr. 9/C-yr. 9	Age-45; Replace; $3.0 - $3.25M
Annex – Bldg. C		D-yr. 8/C-yr. 8	Age-45; Replace; $4.85 - $5.25M

*D – Design; C - Construction

The capital requirements associated with the recommended facility replacement priorities are generally as follows:

- Priority 1-Design; $3.0 M; Construction; $30.0 M = $33.0 M
- Priority 2-Design; $1.0 M; Construction; $10.0 M = $11.0 M
- Priority 3-Design; $1.6 M; Construction; $16.0 M = $17.6 M
- Priority 4-Design; $1.9 M; Construction; $19.0 M = $20.9 M

The above projected costs are exclusive of land purchasing costs and timeframe, site development costs (except for stations; station costs include site development costs) and soft costs other than projected design fees. Additionally, some projects will require FF&E costs that are generally excluded except for station costs; FF&E cost is included in the station cost.

OTHER RECOMMENDATIONS & STRATEGIES

The primary focus of the Growth and Expansion Feasibility Master Plan was the analysis of current facilities, their optimal location, and a recommended prioritization and costing for renovation and/or replacement of those facilities to best provide for the GFR mission moving into the future. The notional facilities master plan presented above is accompanied by the following series of short- and mid-term (six months – three years) recommendations based on the observations and analysis of GFR operations as previously discussed. Facilitating adoption and implementation of many of these recommendations will take significant commitment, time, and resources (including financial). Environmental conditions and circumstances may provide challenges or opportunities to address a recommendation(s) outside of the time frames identified here.

Lastly, these recommendations are just that—recommendations. They are ESCI's best effort in providing guidance in addressing issues and opportunities for enhancement identified during the study period. City leaders and their neighbors hold the ultimate authority in embracing, revising, or discounting the following guidance.

Recommendation 1-A: GFR should staff a dedicated employee for data collection and analysis.

GFR relies on efforts from four city employees to complete data collection and analysis. Data-driven analyses are the future of the fire service and critical to providing policymakers with sound recommendations. To deploy resources in the most efficient manner, GFR should dedicate an employee to this function.

Recommendation 1-B: GFR should increase the number of Fire Inspectors to bring inspection frequency into compliance with NFPA 1730.

The present staffing level does not allow for regular inspections to be completed at all target hazard occupancies such as apartment complexes and multi-family dwellings.

NFPA 1730: Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations, 2019 Edition, specifies:

- 6.6* Required Personnel. The AHJ shall determine the minimum resources, personnel, and equipment levels necessary to perform code enforcement and inspection activities.
- 6.7 Minimum Inspection Frequency. Existing occupancy fire prevention inspection and code enforcement inspection frequencies shall not be less than those specified below:

Figure 90: Table 6.7 Minimum Inspection Frequency

Occupancy Risk Classification	Frequency
High	Annually
Moderate	Biennially
Low	Triennially
Critical Infrastructure	Per AHJ

Recommendation 1-C: GFR should increase the number of Fire and Life Safety Educators on staff.

GFR has a very robust Public Education Program. During 2019, the last full year before COVID-19 restrictions were put in place, the Public Education Division reached 38,112 individuals. This represents approximately 28% of the population of the City of Gainesville. The addition of a second Fire and Life Safety Educator (FLSE) could allow the Public Education Program to reach more than half of the City's neighbors.

Recommendation 1-D: GFR should increase the number of firefighters in the department who have the technical training and certifications to staff the department's specialty teams.

ARFF, Technical Rescue, Hazardous Materials Specialists and SWAT medics are all specialties that require advanced training and certifications. These functions are important, and the cost of the additional capability is incremental to the existing fire, rescue, and EMS mission. Although some justification has been provided for these teams in Appendix C, the department has sufficient data to more fully develop a risk-benefit analysis for these additional functions which is beyond the scope of this study.

The GFR Hazardous Materials Team is a state-recognized Type I Response Team. A Type I Hazardous Materials Team, when deployed for a state emergency, is required to initially respond with eight technicians and to have another seven technicians respond within one hour. Additional Hazardous Materials Technicians should be trained as GFR regularly does not have eight Hazardous Materials Technicians staffing Station 2.

GFR should design a succession plan to replace firefighters with these additional levels of training who have planned retirements as well as others who may choose to separate from employment with less notice.

Recommendation 1-E: GFR should evaluate its current recruitment, hiring, and employee management practices to assure that they are attracting and retaining premium employees with a desire to grow within the organization.

GFR has, in recent years, experienced an increase in employees leaving the organization after less than three years of service. ESCI's interviews with GFR personnel revealed several contributing factors, including higher salaries and lower required employee contributions for benefits being offered by other fire departments.

Additionally, there may be a correlation between the increased rate of employee turnover and the decision by GFR to use the National Testing Network (NTN) for entry-level testing. While NTN streamlines the new new-hire testing process, firefighters often apply for multiple jobs, accept the first one they are offered, and then leave that position when they are offered a position with a department that pays more or is in a more attractive location in the eyes of the employee. ESCI suggests that GFR may improve its ability to retain firefighters if, instead of using NTN, efforts were focused on hiring people who live in and around the City of Gainesville and who wish to live and work in North Central Florida.

While the testing process is part of this equation, GFR must also take steps to assure that the pay and benefits package offered to firefighters in the city is at least comparable to that which is offered by other area fire departments.

A caveat to this recommendation relates to the current resources allocated to the recruitment and hiring processes which is part of a larger discussion around the ability and processes required to recruit and retain the necessary employees to fulfill the GFR mission.

Recommendation 1-F: GFR should evaluate the feasibility of alternative deployment models to meet the increasing demands of the community.

Gainesville has seen significant growth in recent years, both geographically through annexation and three dimensionally through new construction. During the last five years, the city has seen the building count increase 25.2%, from 5,832 in 2014 to 7,800 in 2019. This rate of growth is anticipated to continue.

To ensure that it is positioned to meet the increasing demands of the city, GFR should evaluate the feasibility of alternative deployment models that increase efficiency and provide response flexibility including but not limited to:

- Heavy Squads should be a consideration for specialty teams. Call volume likely now justifies the need for two Heavy Squads – one on each district.
- GFR should consider a transition from multi-purpose squads to Quick Response Vehicles (QRV) to handle EMS calls instead of ladder companies. Sarasota County, FL has done this with great success and is a model worthy of GFR's consideration.
- GFR should consider peak demand units based on service demand. ESCI's review of historical data indicates that weekdays January through March and August through October would provide the most impact to level of service and unit availability.

As part of this evaluation, GFR should take care to ensure that resources are aligned with the people charged with supervising them. ESCI noted that the Technical Rescue Equipment is not located within the district of the District Chief in charge of overseeing the program.

ESCI suggests that the GFR's front-line firefighters are the best positioned to contribute their daily work experiences and knowledge to this evaluation. As such, a bottom-up approach to designing this future deployment plan would likely garner the best results for GFR.

Recommendation 1-G: GFR should increase administrative staffing.

GFR's administrative functions are led by the Fire Chief and supported by a Deputy Chief. ESCI noted that currently, the administrative and support staffing functions within GFR are comprised of eight full-time equivalent (FTE) positions. This represents 4% of the Department's total staffing of 200 full-time positions. It is ESCI's experience that effective administrative staffing totals for municipal fire department operations typically range from 12 to 15% of agency total staffing. After reviewing the functions and responsibilities assigned to these workgroups, ESCI concluded that the number of full-time equivalents (FTEs) assigned resides in the extreme lower range of the normally experienced administrative levels needed to support the responsibilities of GFR's administration appropriately.

Recommendation 1-H: GFR should establish a formal feedback/input mechanism to receive necessary end-user feedback about its training program.

ESCI recommends that GFR evaluate the use of a survey tool to collect performance feedback from firefighters about the training program. Examples of online survey tools that could be used for this purpose include SurveyMonkey, SurveyLegend, and Typeform. Gathering information directly from firefighters on an annual basis will allow department leadership to keep a focus on those aspects of the training program that firefighters indicate as being of high value. This type of feedback also enables leadership to key in on specific performance issues that may exist. The annual survey would be a good opportunity to encourage firefighters to share new ideas or other suggestions they may have about the GFR Training Program.

Recommendation 1-I: GFR should regularly assess the workload of the Training Division to determine whether additional staffing is necessary to ensure that effective training is delivered on a continual basis.

ESCI noted that in recent years, there had been increases in the number of new firefighters, promotional classes, and annual required training programs that were delivered by the Training Division. GFR Leadership should regularly assess the workload of the Training Division to ensure that adequate staff is dedicated to the division as demands placed on the staff continue to increase.

Recommendation 1-J: GFR should analyze the financial impacts of high staff turnover.

As pointed out in Appendix B, there is a cost associated with high staff turnover, including recruitment and onboarding costs. Further, with the loss of more experienced personnel and the lowering of average department tenure, there may be an undetermined and lesser understood cost related to potential for increased fire loss and neighbor/firefighter injuries associated with lesser experienced crews.

Another financial impact of high staff turnover is an artificial lowering of the annual rate of increase associated with employee costs. While higher staff turnover keeps average annual compensation costs down, this trend also artificially lowers the expected annual increase in salary and benefits usually observed with a longer-tenured work force. This makes future prediction of staff costs more problematic affecting the ability of financial planners to gauge future fire assessment and other GF revenue needs for the department.

Recommendation 1-K: GFR should review its fire assessment program including allocation of costs and methodology.

The annual non-ad valorem fire assessment is paid per parcel, regardless of the parcel's value at any given time. Therefore, unlike taxes, there are generally few blanket exemptions, and the homestead exemption does not apply. It may be beneficial for the City of Gainesville to re-examine how much of the GFR budget can be funded through NAV assessments versus taxes. Currently, approximately half of the GFR budget is funded through the NAV assessment under the theory that a large portion of the budget relates directly to EMS services which are not eligible for NAV assessment funding. While this may be appropriate for an agency that transports patients, GFR does not provide ambulance service and EMS non-transport services are incremental to the cost of providing a fire department to city neighbors. Therefore, it may be beneficial to revisit the current EMS allocation percentages and pay for a greater portion of the GFR budget through the NAV assessment.

Further, and more importantly, the current assessment methodology does not provide for a charge to the University of Florida and other governmental properties within the City of Gainesville to which GFR currently provides services. The City of Tallahassee, while the capital of Florida with many state buildings, is like the City of Gainesville in that it is home to a major university and uses a NAV fire assessment to fund a portion of its fire department, also a non-transport agency like GFR. Tallahassee uses a NAV assessment to charge non-governmental properties and a fire assessment fee, calculated in the same manner as the assessment, to charge governmental properties including Florida State University.[12]

Article II, Section 1 of the City of Tallahassee resolution referenced above states that, "A Fire Services Fee is hereby imposed against all Government Property within the City. Fire Services Fees shall be computed in the same manner… [as the NAV fire assessment]." Article IV, Section 2 of the resolution discusses how the fire services assessments (non-governmental property), and fees (governmental property) are to be collected. Specifically, the resolution states that, "The use of the utility bills for the collection of the Fire Service Assessment and Fees is a method of collection that is reasonably related and directed to those that derive the benefit received by the property…". This methodology could be used by the City of Gainesville since it also provides utility services and bills clients for that service through GRU.

Recommendation 1-L: GFR should ensure that it is collecting all available revenue under its hazmat revenue recovery ordinance.

As pointed out in Appendix B, the city has a cost recovery ordinance in place for GFR response and mitigation of hazardous materials incidents. This ordinance provides for recovery of all costs related to the response including personnel, supplies and equipment. Between FY 16 and FY 19 recovery declined from a high of $3,300 in FY 16 to a low of $450 in FY 19. In FY 20, it was just under $100,000. The city may also consider increasing its hazmat gross receipts tax to cover the annual recurring, incremental cost of maintaining this function.

[12] City of Tallahassee Resolution No. 20-R-33, "WHEREAS, the City Commission of the City of Tallahassee, Florida intends to continue to provide fire services, facilities and programs within the City and to fund such services through the existing mechanisms: a fire services assessment on non-government property and a fire services fee on government property."

Recommendation 1-M: GFR should conduct a study of EMS within the City of Gainesville, to include patient transport services.

Although the State of Florida imbues county governments with the authority to provide for[13] and regulate[14] ambulance service within all 67 counties, it is still important for each jurisdiction to understand all facets of EMS provision to its neighbors and visitors. An EMS study within the City of Gainesville should examine all facets of the EMS service delivery system from emergency and non-emergency responses, including both transports and non-transports, to payor mix and billing. Existing services provided by both GFR and ACFR should be reviewed. The state has given this authority to counties but that does not mean that counties must, or even should provide, ambulance service to the entire county. However, by cutting out more populated portions of counties, it becomes more expensive to provide ambulance service to more rural areas. That said, there are ways to allow multiple providers to coexist while still maintaining economies of scale.

As call volume continues to increase in Alachua County, ACFR will need to continue increasing ambulance unit hours. There are multiple ways to accomplish this. ACFR could fund these hours at 100% county cost. Conversely, the county could grant a COPCN to the City of Gainesville to provide some or all ambulance service to city neighbors and visitors. As a third alternative, GFR and ACFR could enter a partnership under the Alachua County COPCN whereby the county partly funds some GFR units to transport patients. Marion County and the former hospital-based ambulance service entered such a relationship in 1996 that functioned very well for over 10 years. This would be a potential methodology for ACFR to gain ambulance units hours at half the cost while also reducing some of the pressure on the City of Gainesville General Fund.

[13] F.S. Chapter 125.01 Powers and Duties, (e) Provide hospitals, ambulance service, and health and welfare programs

[14] F.S. Chapter 401.25 Licensure as a basic life support or an advanced life support service. (2)(d) The applicant has obtained a certificate of public convenience and necessity [the "COPCN" process] from each county in which the applicant will operate.

CONCLUSION

In February 2021, the City of Gainesville retained Emergency Services Consulting International (ESCI) to conduct a Growth & Expansion Feasibility Master Plan for the Gainesville Fire Rescue (GFR) department. ESCI began this study in Spring, 2021 with a project kick-off meeting to ensure a full understanding of department and city needs and develop the project timeline. Project team members then reviewed considerable information submitted by GFR staff, including historical incident data, demographic data, local hazard mitigation studies, capital assets and maintenance programs, finance data, and population and economic growth projections. This data review was followed by multiple site visits to gather additional information about GFR and its neighbors. A team of architects and engineers visited all GFR facilities and held extensive discussions throughout the week on site with various GFR members to both quantify issues with existing facilities and determine how best to meet future needs. A team of fire service consultants comprised of former fire chiefs then visited with GFR staff over several days to ground truth preliminary findings from the data review.

ESCI and GFR team members held biweekly meetings as well as other offline discussions throughout the project to ensure that the ESCI team did not miss anything, and that conclusions and recommendations were based on a sound understanding of all operational and administrative factors affecting the department.

The Fire Rescue Growth & Expansion Feasibility Master Plan provides GFR with a detailed analysis of current resource deployment as it applies to fixed facilities, including apparatus and personnel assigned to its nine fire stations. It is designed to assist GFR with quantifying current service delivery, evaluating service delivery and response performance, and developing strategies to optimize facility location decisions that will meet anticipated needs and resultant future service demand. Further, the study provides the city with a conceptual facility design and construction cost as well as a proposed, prioritized plan to renovate and/or replace existing facilities. A financial analysis using the decision unit concept is provided that will give GFR and city management an idea of the relative cost over each of the next five years of adding various resources, whether individual personnel or fully staffed units, up to and including fully staffed and equipped fire stations.

The project is documented in four separate sections. The most important part of the study consists of three components, beginning with an *Evaluation of Current Conditions*. In this step, ESCI reviewed existing facilities and conducted a detailed analysis of current GFR service delivery and response performance. These observations and findings are compared with industry standards and best practices, accompanied by recommendations for changes where needed.

The next step examined *Growth and Expansion Considerations*. ESCI uses a combination of historical population data, census information, comprehensive plans, and past incident history to project anticipated future workload and identify community risk. A station location optimization study, including traffic calming, was conducted to identify either existing or potential locations that would best position GFR response relative to current and future service demand which is most likely to be vertical with some lateral expansion. A space needs analysis was completed and the ESCI team offered some thoughts on modernization versus replacement of facilities followed by a conceptual fire station plan based upon extensive discussion with GFR staff.

The third phase of the report uses the information gathered in the prior two sections as well as financial data from Appendix B to identify and evaluate *Recommendations and Financial Impacts* to meet long-range needs. Specifically, ESCI provides GFR and city leadership with the financial basis for cost projections, a notional facilities master plan and lastly, other recommendations and strategies for consideration. The approaches may include modification or replacement of existing facilities, relocation of current stations, and potential locations of future stations based upon the station optimization study.

The final section of the study, Appendices A-F, contains a great deal of supporting data and information that GFR may find useful as it develops a final implementation plan. This section provides a series of appendices covering the following subjects: Development of Future Service Demand Model, Financial Analysis and Status Quo Projection, Current Staffing Analysis, Capital Apparatus Inventory, and the Capital Facility Inventory. ESCI hopes that our analysis and recommendations will assist the City of Gainesville and Gainesville Fire Rescue in successfully navigating any unanticipated negative impacts, and that the implementation of our recommendations will ensure the continued provision of high quality and efficient fire department services well into the future.

SECTION IV:

Appendices

Appendix A: Development of the Future Service Demand Model

Pre-Validation Analysis

Before building a model to analyze current and future operational deployment and the impact on response, significant data analysis and processing is required. The following discussion provides an overview of how various data files and mapping layers were built and used in the model.

Hydrant Layers

Fire hydrant locations were originally provided by Gainesville in the file "GRU_Hydrants.shp". After analysis, it was determined that the layer did not contain the fire hydrants that were located on the University of Florida campus. These were later provided as a separate file called "Fire Hydrants.shp". These two layers were then merged into a single layer.

Annexation Addresses

To model future growth, Levrum needed addresses for areas likely to be covered by Gainesville Fire Rescue (GFR) in the future. Since growth is expected to largely be vertical, the main changes would be in areas that were annexed by Gainesville. These addresses were obtained using two files:

- The current addresses were provided by the City of Gainesville in the file "ACFR DBO_AddressPoint.shp". It contains all addresses within Alachua County.
- 10-Year projected boundary was provided by ESCI in the file "TenYearExpansion.shp". It contains a polygon encompassing what are likely areas for expansion over the next ten years.

Once these two files were obtained, the annexation addresses were derived in a few steps. First, the 10-year expansion polygon was clipped by the Gainesville City Limits. This left just the areas outside of the current city limits but inside of the expansion areas. This clipped polygon was then used to trim the address points to only those within the expansion areas but outside of the city limits.

Incident File

Response data was provided in a file called "Data for ESCi.xlsx" and contained calls and responses ranging from 1/1/2010 to 12/31/2020. The spreadsheet was split into two sheets, "Data Set 1" and "Data Set 2". "Data Set 1" contained the response data for Gainesville Fire Rescue units and totaled 281,339 records. "Data Set 2" contained response data for Alachua County Fire Rescue on calls where they provided aid. "Data Set 2" contained 16,593 records. These two files were then combined into a single response file.

NFIRS Codes Added

NFIRS codes were made available in the field "NFIRSIncidentType" but 32.5% of incidents did not have a value. Since 97.2% of the missing values were for EMS related incidents, the code "321" was added for missing values. This change was confirmed as correct with Gainesville Fire command staff.

Figure 91: Breakdown of Missing NFIRS Fields by the "CallType" Field

CallType	Count	Missing NFIRS	% Missing	% Of Total Missing
FIRE	54705	1415	2.6%	1.5%

HAZ	9381	551	5.9%	0.6%
EMS	186971	94074	50.3%	97.2%
ALM	43753	497	1.1%	0.5%
SVC	3122	278	8.9%	0.3%

Cancellation Flag Added

When a response is cancelled before a unit arrives on scene, some benchmarks are not included. In the response records, these show as incidents where a unit has some benchmarks but not others. For example, a unit might have an assigned time and an enroute time but no arrival time. There are many reasons why a response may be cancelled but the key is that the responding unit(s) can return to service and become available for other calls.

Code3 Strategist uses a cancellation flag within the incident data to more closely approximate real-world performance. When a call is marked as cancelled, the units simply return directly from the scene rather than staying on scene for the duration of the call. They still respond to the call but just don't stay there. Without the cancellation flag being added, simulated unit utilizations would be artificially inflated due to units staying on scene despite not doing so in reality. Additionally, those units would be incorrectly marked as being busy leading to increased response times since units from further away stations would need to respond.

Since no cancellation flag was included in the provided response files, one was added based on the data. This was done by marking any incident where over half of the dispatched units didn't arrive on scene as being cancelled. A cancellation flag was added to 21,565 calls or just under 10% of the total call volume. With the added flag, benchmarks more accurately reflected real-world performance and a better base model was then created.

Import Into Code3 Strategist

Call and response data were imported into Code3 Strategist on 04/08/2021. While there were missing and invalid data, all were within expected ranges based on typical incident data.

- 220,492 calls were imported with 133 incidents being excluded due to missing or invalid coordinates.
- 297,632 out of the total of 297,932 responses were imported. Excluded responses were either due to the incident record being excluded or due to the response being a duplicated value.
- 2,122,169 total benchmarks were imported. 4,512 benchmarks were excluded due to the benchmarks leading to negative calculation intervals. An example of this would be a unit being marked as enroute before it was dispatched. Additionally, 1,350 benchmarks were excluded due to the benchmarks being anomalous and outside of a reasonable time range.

Base Model Generation

To analyze the impacts of increased call volume and changes to the department, a model of the existing deployment methodology and impact on response was created. This was done with files provided by the city, analysis of the response files, and with direct feedback from GFR command staff.

The goal of this model is to provide an approximation of how GFR would respond given a scenario. With this model, a comparison can be made between various changes and their impact on service. The model was used to study the impact of increasing call volume, moving fire stations, and the impact of various deployment models.

Resource Placement

- Stations were initially imported from the fire stations shapefile located on the City of Gainesville Open Data Portal. Station 9 was added, based on feedback from GFR Command Staff and Alachua County Fire Rescue (ACFR) stations were renamed based on "ACFR Station and Unit changes 100217.pdf" in Tab 16 – Apparatus.
- Apparatus and staffing were placed based on observations of the data and input from GFR Command Staff.

Operations

Each model has a set of rules that specify how the placed resources interact in each situation. The goal is to mimic reality for the base model and then use variations of that model to test different scenarios. These rules fall into the following categories.

Unit Roles

Unit roles specify what roles each unit can fill, what staff are required and what actions the units will take.

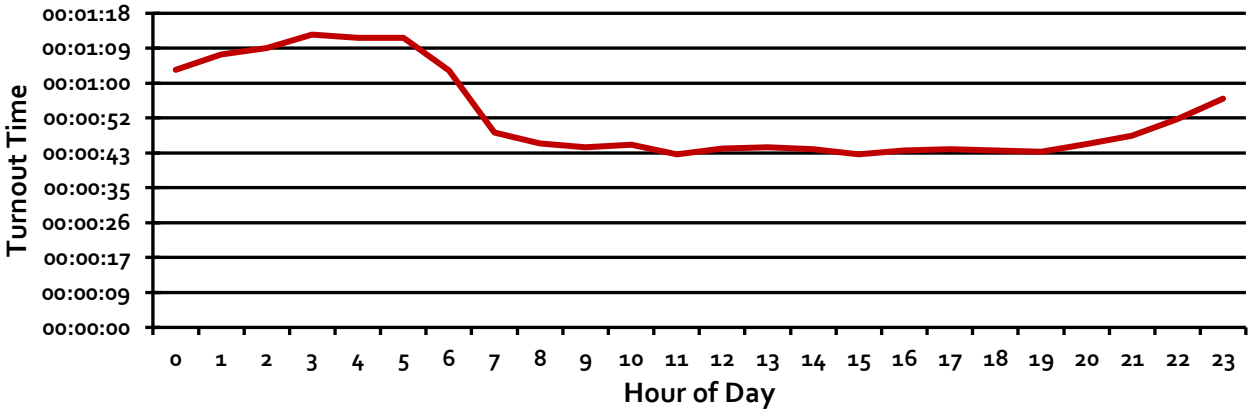
Unit roles are based on historical data and include ARFF, Brush Truck, Command, Engine, Hazmat, Quint, Squad, Tower, and Truck. Many units had more than one of these unit roles.

Unit roles were also created for a Heavy Squad and QRV as well as an aerial role that only required two staff.

Turnout Times

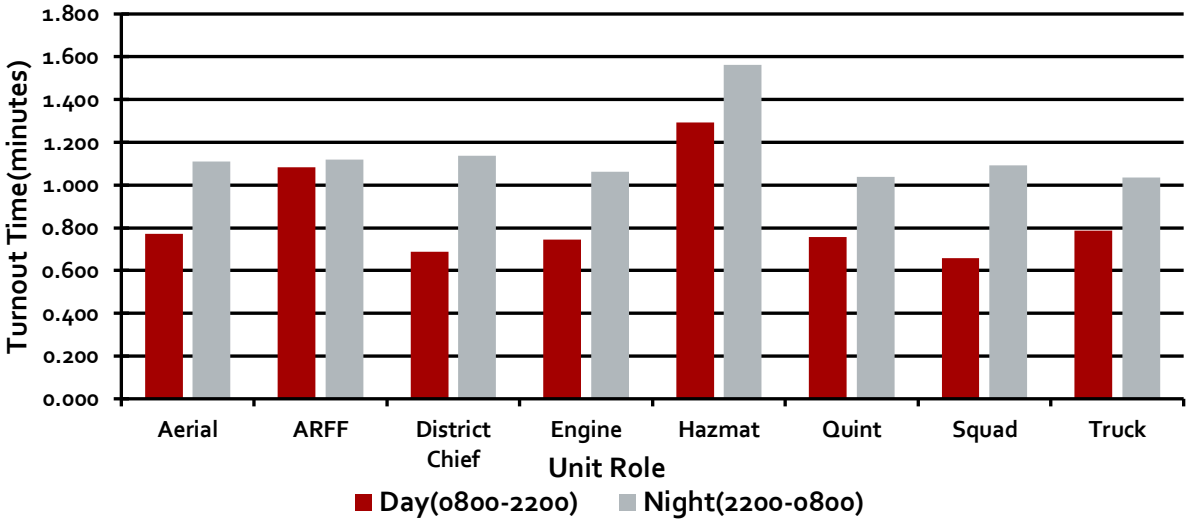
The model's turnout times determine how long it takes a unit to go from being dispatched to leaving the station. In the GFR models, the turnout time was set by taking the average observed turnout times for each unit role and applying that to the model. Since the time-of-day had a significant impact on these turnout times, each unit role was further broken down into day (0800-2200) and night (2200-0800) response. The following figure shows why these time distinctions were chosen.

Figure 92: Average Engine Turnout Time by Hour-of- the-Day



The following figure illustrates how turnout times vary during the day and night response segments for each unit type.

Figure 93: Turnout Time Variation by Unit Role and Time-of-Day



Running Order Table

Running order tables determine the order units are selected based on where a call happens. A running order table was created using the GFR station districts with the priority being determined by frequency of responses from a given station into that district. Since actual dispatching of GFR units is determined by which unit is closest, the running order table ended up not being used.

Figure 94: Response Frequency by Station and First Due District

		First Due District							
		ST 1	ST 2	ST 3	ST 4	ST 5	ST 7	ST 8	ST 9
Responding Station	1	82.9%	19.0%	19.6%	3.9%	18.6%	1.5%	3.6%	5.1%
	2	5.4%	70.8%	2.7%	8.2%	6.5%	5.2%	6.7%	23.3%
	3	7.1%	0.6%	74.1%	1.3%	3.8%	1.6%	0.8%	0.9%
	4	0.4%	4.3%	0.1%	51.9%	0.7%	1.7%	2.2%	11.8%

	5	3.5%	1.1%	2.6%	1.9%	61.4%	2.5%	9.5%	0.1%
	6	0.0%	0.2%	0.1%	0.5%	0.1%	0.7%	0.3%	0.8%
	7	0.0%	0.0%	0.1%	19.6%	1.3%	75.1%	10.4%	0.2%
	8	0.2%	0.1%	0.5%	6.0%	7.4%	11.1%	66.1%	0.3%
	9	0.4%	3.9%	0.2%	6.7%	0.1%	0.6%	0.3%	57.5%

Cause Tree

Code3 Strategist uses a cause tree to categorize various nature codes into broader categories for analysis and simulation. There were 477 observed nature codes within the response files which were processed into six broad categories (level 1 causes), 26 refined categories (level 2 causes), and numerous other highly refined categories. The highest level of refinement was used primarily to better match response plans to actual observed response. All categories were created based on files provided by GFR, observations within the response data, and multiple rounds of revisions with GFR Command Staff.

Examples of the level 1 cause groupings include EMS, Fire, and Tech Rescue. Examples of level 2 groupings include MVA, Structure Fire, and High Angle Rescue. Examples of the highest refinement level include MVA w/Entrapment, Outside Fire w/Exposure, and High-Risk Structure Fire.

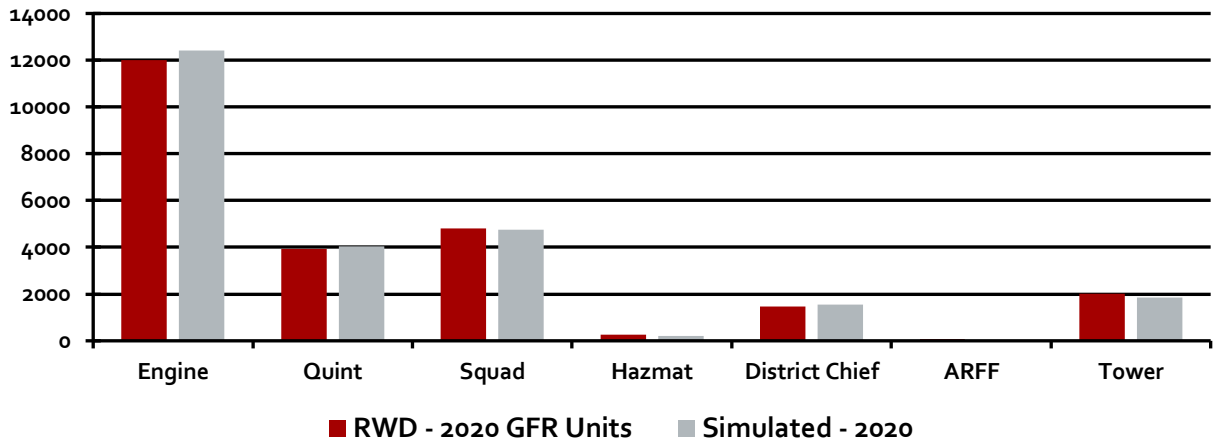
Dispatch Rules/Response Plans

Response plans are the instructions that tell Code3 Strategist what units need to be dispatched when triggered. These are then used by the dispatch rules to map to the cause tree. Both were developed first by analyzing the provided files and with observations within the response data. Input was then provided by GFR command staff to further refine them. In total, 33 dispatch rules with 31 response plans were developed. Again, each of these rules were developed over many iterations being driven by analysis of the data and input.

Analysis of the Base Model

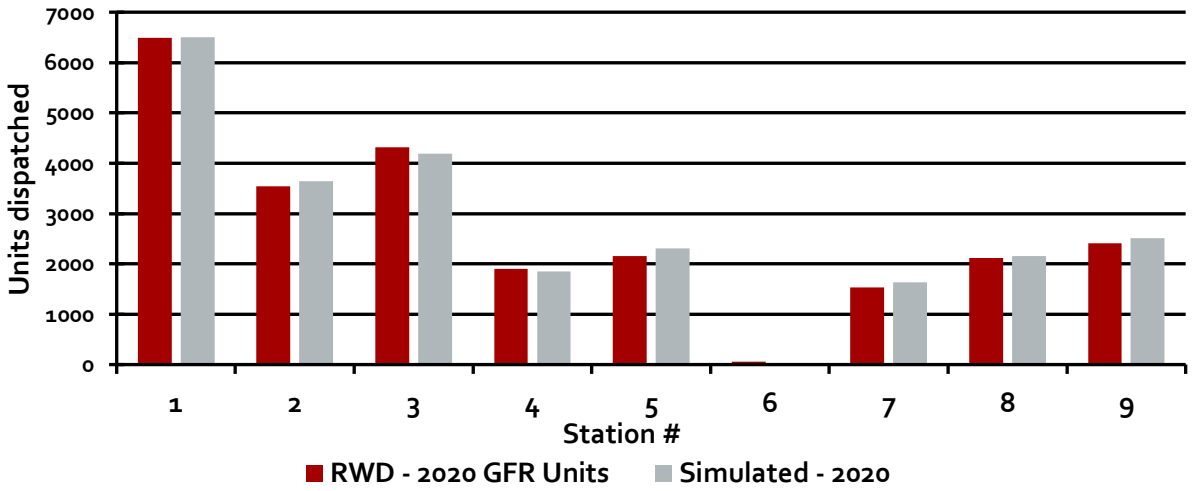
While simulations can never perfectly match reality, the base model came relatively close to matching the dispatched counts. The figure below provides a comparison between what was sent based upon real-world data (RWD) versus what was sent in the simulation. In total, the simulation over dispatched 308 units which is ~ 1.3% of the total responses.

Figure 95: Actual Versus Simulated Units Dispatched by Unit Role



When broken down by station in the following figure, some variation is observed but the simulated response very closely matches actual response by station. Developing a model that closely matches actual response provides greater certainty that the model will accurately predict response when various changes are made to deployment and other factors.

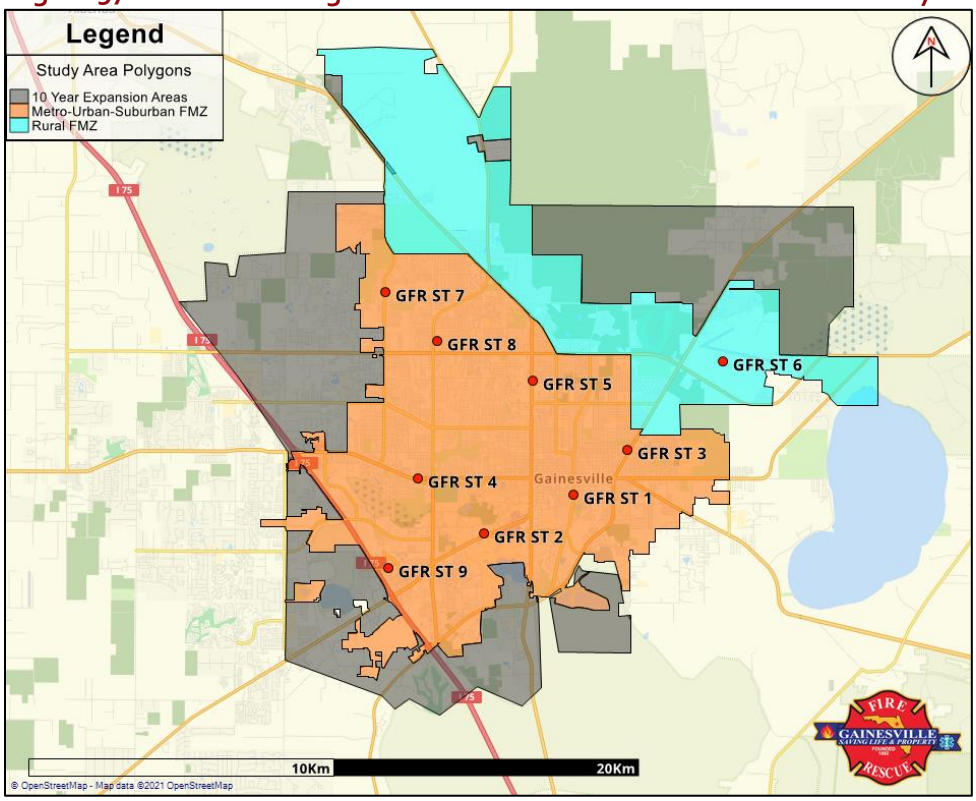
Figure 96: Comparison of Actual Versus Modeled Units Dispatched by Station



Fire Management Zones Study Areas

Fire Management Zones (FMZs) were provided by Gainesville in the file "FMZ_Modified_01262016.shp" and were then aggregated into the Metro-Urban-Suburban FMZ and Rural FMZ polygons. These were then augmented by adding in the 10-year expansion area polygon provided by ESCI. Anything labeled "{Unknown/Other}" are areas that fall outside of these polygons. The FMZs are shown in the following figure.

Figure 97: GFR Fire Management Zones and Growth Areas Used for Analysis



DEPLOYMENT MODELS

Figure 98: Breakdown of Response Time by Deployment Model and Level 1 Cause

Results	Level 1 Category	Avg Initial	Avg Full Complement	90th Percentile Initial
0) Current Operations Model	Aircraft Emergency	06:29	12:07	06:11
	EMS	05:33	05:35	07:00
	Fire	05:40	06:47	07:12
	Hazmat	06:08	09:59	07:52
	Service	05:18	05:18	06:37
	Tech Rescue	07:17	10:11	12:19
1) Heavy Squad Model	Aircraft Emergency	06:29	12:49	06:11
	EMS	05:35	05:37	07:00
	Fire	05:38	06:46	07:08
	Hazmat	06:15	10:11	08:23
	Service	05:15	05:15	06:34
	Tech Rescue	07:53	11:14	11:32
2) QRV-Cross Staffed Special Teams	Aircraft Emergency	06:29	12:05	06:11
	EMS	05:41	05:42	07:09
	Fire	05:41	06:48	07:13

	Hazmat	06:10	09:43	07:38
	Service	05:17	05:17	06:35
	Tech Rescue	07:10	10:11	12:19
3) PAU QRV3, FT QRV1+QRV2	Aircraft Emergency	06:29	12:05	06:11
	EMS	05:38	05:40	07:01
	Fire	05:40	06:45	07:11
	Hazmat	06:07	09:58	07:52
	Service	05:18	05:18	06:35
	Tech Rescue	07:17	10:11	12:19
4) PAU QRV3, FT QRV1+QRV9	Aircraft Emergency	06:29	12:05	06:11
	EMS	05:37	05:39	07:01
	Fire	05:39	06:45	07:09
	Hazmat	06:06	10:01	07:38
	Service	05:17	05:17	06:35
	Tech Rescue	07:17	10:11	12:19

Heavy Squad Model

The heavy squad model studied the impact of adding two heavy squad units to reduce the reliance on Engines for HazMat and Tech Rescue calls. HS1 would be located at station 1 and would contain gear for tech rescue teams. HS2 would contain HazMat gear. Both heavy squads would be deployed to tech rescue calls as well as HazMat 1/2/3. In addition, SQ3 would become a Quick Response Vehicle (QRV) that would be first due on EMS calls, Q9 would be moved to ST2, TW2 would be moved to ST9, and an Engine would be added at station 9.

Quick Response Vehicle (QRV)Models

Quick Response Vehicles (QRVs) would be new units that would be first due on EMS related calls. The impact of these were studied in three different models.

QRV-Cross Staffed Special Teams

In this model, a QRV would be added at stations 1, 2, and 9 each. The QRVs would be available 24-hour per shift but would be cross-staffed with aerial units. If the aerial unit is dispatched while the QRV is cross-staffed and already responding to another call, the aerial would be dispatched with 2 staff and an additional QRV would be dispatched to reach the required staffing levels. Another major change was reducing the Squad role to be tech rescue specific. This greatly reduced the reliance on these units.

Peak Activity QRV at ST3 and Full Time QRVs at ST1 and ST2

In this model, SQ3 would become QRV3 and additional QRVs would be added at stations 1 and 2. The QRV at station 3 would have dedicated 2-person staffing and would be available from 0800-2000. The QRVs at stations 1 and 2 would be available full time. Additionally, SQ1 would be cross staffed with TW1.

Peak Activity QRV at ST3 and Full Time QRVs at ST1 and ST9

In this model, SQ3 would become QRV3 and additional QRVs would be added at stations 1 and 9. The QRV at station 3 would have dedicated 2-person staffing and would be available from 0800-2000. The QRVs at stations 1 and 9 would be available full time but QRV1 would be cross staffed with TW1. QRV9 would have dedicated staffing.

QRVs would be first due on EMS related calls if they were the closest unit. Engines would be second due and quints would be third due.

Coverage Maps

The following discussion outlines how various maps were produced, and which are provided in the study section titled, "Service Delivery and Performance".

ISO 5-Mile Service Area

This map shows the intersections that fell within 5 miles of any GFR fire station in green. Any intersections that were greater than 5 miles from a fire station are shown as grey. All intersections were clipped to the Gainesville City limits. Roads were taken from OpenStreetMap© and station placements were taken from the Code3 Strategist model.

Partially covered roads were added to the coverage calculations in the proportion that they were covered. For example, if a road was 40% covered between two intersections, 40% of that distance was added to the total covered road millage. Only one intersection would show as covered on the maps.

ISO 1.5-Mile Engine Company Service Area

This map shows the intersections that fell within 1.5 miles of any GFR fire station that contained an engine in green. Stations 8/9 were also added as the quints can stand in for the engines. Any intersections that were greater than 1.5 miles from a qualifying fire station are shown as grey. All intersections were clipped to the Gainesville City limits. Roads were taken from OpenStreetMap© and station placements were taken from the Code3 Strategist model.

Partially covered roads were added to the coverage calculations in the proportion that they were covered. For example, if a road was 40% covered between two intersections, 40% of that distance was added to the total covered road millage. Only one intersection would show as covered on the maps.

ISO 2.5-Mile Ladder Company Service Area

This map shows the intersections that fell within 2.5 miles of any GFR fire station that contained a quint in green. Any intersections that were greater than 2.5 miles from a qualifying fire station are shown as grey. All intersections were clipped to the Gainesville City limits. Roads were taken from OpenStreetMap© and station placements were taken from the Code3 Strategist model.

Partially covered roads were added to the coverage calculations in the proportion that they were covered. For example, if a road was 40% covered between two intersections, 40% of that distance was added to the total covered road millage. Only one intersection would show as covered on the maps.

ISO Fire Hydrant Coverage

This map shows areas that fell within 1000 feet of a fire hydrant. The fire hydrant layers were provided by GFR and came in two files. "GRU_Hydrants.shp" contained City hydrants whereas "Fire Hydrants.shp" contained hydrants on the University of Florida campus. Both files were combined and had a 1000-foot buffer applied. The road network was provided by GFR in the file "CAD_Streets_11182020.shp". All files were clipped to the Gainesville city limits prior to being used in calculations.

Population Density by Census Block, 2019 Estimate

This map shows the projected population per census block within Gainesville. Values are based on 2019 census estimates.

Appendix B: Financial Analysis & Status Quo Projection

Historical Financial Analysis

Financial analysis is an important part of determining long-term sustainability of the Gainesville Fire Rescue Department (GFR) and its ability to achieve and maintain an acceptable level of service. To this end, a financial model was developed for the department which was designed to fairly represent monetary policies and practices in a consistent manner. Modeling is designed to neutralize the normal differences usually found in unilateral fiscal practices and to account for any financial peculiarities. This approach allows an estimation of the total public cost of the department's operation and provides a means for financial evaluation of sustainability under status quo conditions and various service level modifications.

The modeled status quo budget which follows the historical analysis yields a baseline estimate of the total cost of external and internal services provided by the department. In addition, the methodology facilitates projection of various service level changes into the future based upon the cost of adding various decision units from individual resources, engine and/or ladder companies, and peak response rescue units up to fully staffed fire stations. The cost, on an annual basis, of any major service level changes including the cost of building new fire stations is presented in the main body of this study under the section titled, "Financial Basis for Cost Projections".

The following section provides background information on the historical and current financial condition of GFR. Understanding of fire service financial resources and costs begins with an overview of the various revenues and expenditures which support the fire department and its operations across all programs. This includes a multi-year historical review of fire department-specific revenues and expenses followed by a status quo financial forecast from FY 22 through FY 26 utilizing historical trend data and key assumptions about future trajectory to the extent known or projected from historical trends. This analysis relies on extensive financial documentation provided by the department, including the actual and adopted budget documents from FY 16-21 and the City of Gainesville's comprehensive annual financial reports (CAFRs) and budget documents through FY 21 as adopted.

Fund Accounting

Local governments use an accounting system organized around a series of discrete funds to ensure appropriate accountability and segregation of revenues and expenses related to specific activities. The Governmental Accounting Services Board (GASB) is an independent organization that develops and adopts standards of accounting and reporting for all levels of government and defines a fund as, "...a fiscal and accounting entity with a self-balancing set of accounts recording cash and other financial resources, together with all related liabilities and residual equities or balances, and changes therein, which are segregated for the purpose of carrying on specific activities or attaining certain objectives in accordance with special regulations, restrictions or limitations."[15] In other words, a fund exists to capture all revenue, expense and fund balance activity related to a specific function or set of activities.

[15] GASB Codification Section 1300; www.gasb.org.

There are three fund categories: Governmental, which account for most governmental functions (fire suppression and rescue services, debt service and capital projects among others); Proprietary, or Enterprise which account for business-type activities (Utilities including electric, natural gas, water and sewer, and telecommunications, Refuse Collection, Stormwater Management, Building Code Enforcement and Mass Transit) and various Internal Services that can be billed out to other departments (Fleet, General Insurance and Employee Health Insurance); and Fiduciary, which account for assets held by the government as an agent (typically pension funds such as those held for the firefighter and police pension funds). Fire department primary and supporting functions are typically found in various Governmental funds which is the case with GFR.

Expenditures supporting fire department activities may, and often are, found in several different major[16] and minor[17] funds which may relate to how revenue is generated. Funds may be wholly dedicated to singular functions, or they may comprise multiple different functions including fire rescue services as is the case with the City's General, Capital Improvement Projects, Debt Service, Gift, Grants, and various Internal Service Funds. The analysis that follows compiles data from all pertinent funds to the extent that they contribute to and support the overall mission and various operations of the fire department. Specifically, the analysis includes expenditures from the General (Fund 001), Capital Improvement Projects (Fund 300), Gift (Fund 123) and Grant (Fund 115) Funds.

Transfers to the Fleet and Self-Insurance Funds are budgeted as expenditures in GFR's expenditure budget. Therefore, actual fire department-related expenditures from these funds are not shown below. It should also be noted that debt service on capital projects financed through various debt instruments is accounted for in the Debt Service Fund in aggregate along with other City projects. Specific debt for various fire department projects has not been included in the following analysis. The fire department-specific revenue analysis also includes "equivalent" revenue to offset actual expenditures each year from the CIP, Gift and Grant Funds to show the magnitude of other general revenues required each year to operate the department.

Further, while several internal service charges are included as expenditures in the GFR budget analysis below (primarily apparatus replacement/maintenance and insurance costs), other internal services such as Human Resources, Information Technology, Legal, Budget/Finance and City Administration costs are not directly allocated to the expenditure budget. A proportionate share of these costs (5-10% of the operating budget is typically seen as a reasonable estimate for support service costs) would be included in a true full cost analysis of the department.

[16] Major funds are those shown separately within the City of Gainesville CAFR such as the General, Utility and Special Obligation Revenue Bond Series 2020 Funds.

[17] Minor funds are those not considered separately in the City of Gainesville CAFR but rather are shown in aggregate. For example, seventy-seven of the City's seventy-nine governmental funds are shown in aggregate.

The City uses a current financial resources measurement focus and a modified accrual basis for budgeting and accounting in Governmental Funds. The City's fiscal year runs from October 1 through September 30 of the following year. All City budgets are adopted during a final public hearing in September each year. Since the Gainesville Fire Rescue department operates as a General Fund department, but expenditures are made from multiple budgets and funds as discussed above, the following analysis presents combined fire-related revenue and expense as a composite intended to illustrate to the reader total department-specific revenue and total expense in one table. The department expenditure budget is divided into the following functional units: Office of the Fire Chief, Operations, Risk Reduction Bureau, Fire Inspections, Fire & Life Safety Education, Fire Investigations, Emergency Management, Training Bureau, and the newly added Community Resource Paramedicine function.

Historical Revenue and Expense

Revenue

The following figure shows actual fire-related revenues in the General Fund as well as "equivalent" revenues (amount matching expenditure in any given fiscal year and not the actual revenue in those funds) for the CIP, Grant, and Gift Funds which are divided into recurring and non-recurring revenues. Recurring revenues are those such as the non-ad valorem assessment, fees for service (inspection and other related fees), contracts, permit fees and other income streams that are reasonably predictable in many cases and expected to continue, on a year-to-year basis. Non-recurring revenues on the other hand are more sporadic in nature and difficult to predict such as grant funds, penalties, donations, sales of surplus property and equipment and other one-time sources.

Figure 99: Gainesville Fire Rescue Revenues (FY 16–FY 20 Actual; FY 21 Adopted)

Revenue	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2021 Adopted
NAV Fire Assessment	5,286,002	5,152,411	6,699,501	6,765,703	8,909,335	8,435,982
Hazmat Gross Receipts Tax	111,667	126,253	-	235,505	123,789	129,330
Fire Inspection Fees	72,354	66,875	78,419	73,246	33,859	67,601
Billable Overtime	51,318	33,812	71,589	94,578	51,208	61,262
Airport Fire Station	494,083	508,905	524,172	539,897	553,956	556,094
Automatic Aid Agreement	-	-	-	474,763	613,024	500,000
Recurring Revenue:	**6,015,424**	**5,888,256**	**7,373,682**	**8,183,692**	**10,285,172**	**9,750,269**
Misc/Fees/Penalties	82,153	98,216	116,532	109,041	310,643	93,129
Fire Protection	-	-	1,005,379	-	-	-
CIP Fund[1]	627,684	3,068,476	8,535,066	1,137,862	1,585,096	376,947
Gift Fund[1]	21,324	23,314	106,626	11,116	61,714	10,056
Grant Fund[1]	542,010	242,533	17,393	708,363	1,102,558	491,611
Non-Recurring Revenue:	**1,273,170**	**3,432,539**	**9,780,995**	**1,966,382**	**3,060,011**	**971,742**
TOTAL REVENUE:	**7,288,594**	**9,320,795**	**17,154,677**	**10,150,074**	**13,345,183**	**10,722,011**

[1]Revenue shown here equal to annual actual annual GFR expenditure in this fund. Actual revenue may be more, or less, in this fiscal year.

Recurring fire-specific revenues supporting the department have increased at an average annual rate of approximately 13% between FY 16 and FY 20 driven by the non-ad valorem fire assessment, and comes from several sources outlined in the following:

- **Fire Assessment**— is a non-ad valorem service fee applied to all non-exempted parcels within the City (the "Benefit Unit") based upon the direct benefit of the City's fire service to those respective parcels as determined by a third-party fire assessment study.

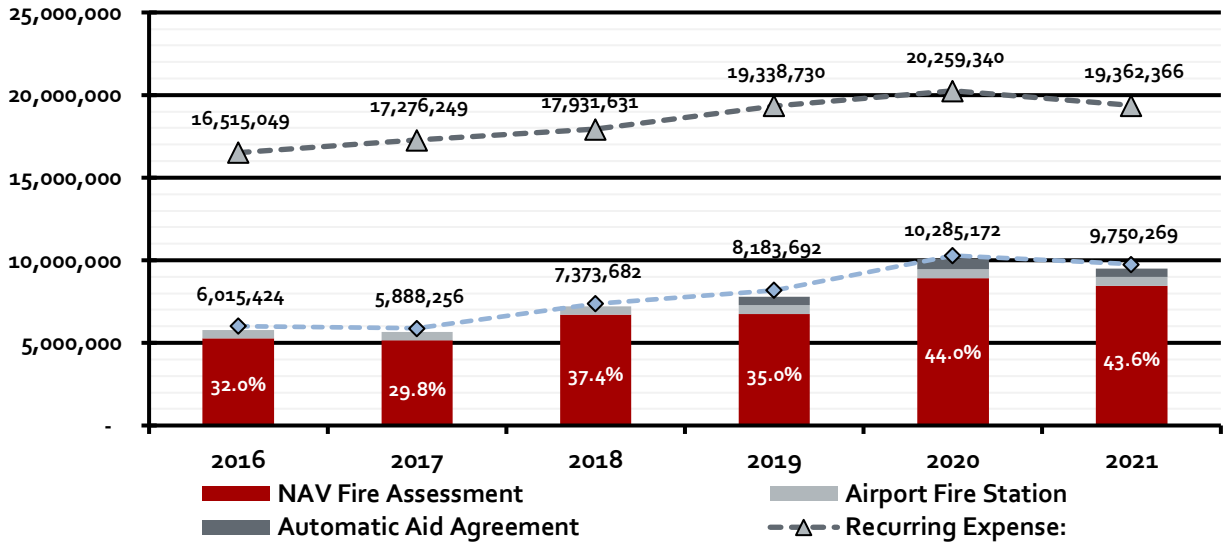
  - Fire assessment revenue (including partial year assessments on new construction) increased from $5.29 million in FY 16 to $8.91 million in FY 20. This is an average annual increase of approximately 13.3% and represents a combination of growth in improved parcels and increasing rates.
  - The city initially adopted its fire assessment by City Ordinance 070623 on June 9, 2008, and first implemented the recurring annual fire special assessment for the FY 11 fiscal year in June 2010 by adopting first the initial and then final resolutions 091050 and 100137, respectively. The original ordinance requires an annual rate resolution setting the assessment rates up to a maximum amount. Resolution 191143, adopted on June 18, 2020, set rates for FY 21.
  - From time-to-time, fire assessment methodology, the underlying response data, and the costs of providing fire service should be re-examined to ensure consistent application of the fee. The city hired consulting firm Government Services Group, Inc (GSG), the author of its original 2015 assessment methodology study, to update its fire assessment methodology and rate structure in 2018[18]. Initial assessment resolution 140028 explained and adopted the apportionment methodology used. Resolution 140028 was re-adopted for the FY 21 fiscal year.
  - The fire assessment can only fund costs that provide a direct benefit to protected property, therefore, an appropriate percentage of the overall fire department budget that can be funded with the fire assessment each year must be calculated. Specifically, several Florida Supreme Court rulings preclude the use of an assessment, except in certain cases of special districts, to fund Emergency Medical Services (EMS). The 2018 GSG memorandum details how this allocation is performed.
  - The GSG report uses the FY 18 proposed budget as a base to allocate allowable costs across the various property classifications used to determine the initial and maximum assessment rate schedule. The study forecasts assessable costs through FY 23 based upon various linear cost increase assumptions (except for major capital which is based upon City CIP). For example, the study forecasts firefighter personnel costs will increase at 3% per year. Annual operating costs are forecast to increase at 2% and indirect costs (estimated at 5% of department budget) are forecast to increase at 3%.

[18]Government Services Group, Inc.; November 2018. *City of Gainesville, Florida Fire Services Special Assessment Memorandum.* This document provides extensive detail of the how assessable costs are determined, how rates are calculated and the process for imposing a special fire assessment against Gainesville property.

- **Hazmat Gross Receipts Tax**—has increased slightly from almost $112,000 in FY 16 to almost $124,000 in FY 20, which represents an average annual increase of approximately 2.6%.
- **Fire Inspection Fees**—while falling off in FY 20 due primarily to a COVID-19 related inspection moratorium are expected to recover in FY 21 and have generally averaged approximately $65,000 annually.
- **Billable Overtime**— while fluctuating significantly, year-to-year based upon demand, has generally increased from FY 16 through FY 20 at an average annual rate of approximately 3.3%.
- **Airport Fire Station**—GFR provides airport crash rescue and firefighting (ARFF) services to the Gainesville Regional Airport Authority. GFR staffs and operates a fire station on airport property, the costs of which are reimbursed through a transfer from the Authority to the City GF by agreement. The transfer has increased linearly at an average annual rate of 3% from $494,083 in FY 16 to $553,956 in FY 20.
- **Automatic Aid Agreement**—the City and Alachua County amended a prior 2018 Automatic Aid Agreement for fire and rescue services in September of 2019. Under the terms of the revised agreement, each jurisdiction will compensate the other for responses by its respective fire departments into the others jurisdiction. Reimbursement is based upon an average cost per call determined by the prior year combined budgets divided by combined number of calls within the automatic aid territory. Payments are made monthly and began in FY 19, therefore, there is not enough data to determine a historical trajectory. FY 19 revenue was $474,763 which jumped to $613,024in FY 20. FY 21 is projected at $500,000 with FY 22 proposed at $525,000.

The following figure shows the relationship between total recurring expense and fire department-specific recurring revenue (excludes other non-designated General Fund revenues needed to offset expenditures) for the period FY 16-20 actual and FY 21 adopted. Recurring fire department-specific revenues as a percentage of recurring expenditures has increased over the historical period from an average of 35% in FY 16 and FY 17 to slightly over 50% in FY 20 actual and FY 21 as adopted. This is primarily due to the increase in the non-ad valorem fire assessment which has increased from an average of 31% of the recurring revenue stream in FY 16 and FY 17 to 44% by FY 20.

Figure 100: Relationship of Major Recurring Revenue Sources to Recurring Expenses (FY 16–FY 20 Actual; FY 21 Adopted)



Non-recurring revenues supporting the department, as expected, has varied considerably from a low of $1.27 million in FY 16 to a high of $9.78 million in FY 18. Non-recurring revenues for the purposes of this analysis include sufficient funding from the CIP, Gift and Grant Funds to exactly offset those actual expenditures shown in the expenditure section of the analysis. Actual revenues into each of these funds may vary year-to-year. The largest, most consistent component of non-recurring revenue is CIP funding. Non-recurring revenue sources are outlined as follows:

- **Miscellaneous/Fees/Penalties**—these combined revenues have grown slightly from $82,000 in FY 16 to an average of approximately $112,000 between FY 18 and FY 19 before jumping to $310,000 in FY 20. They are projected at $93,000 in the FY 21 adopted budget and near $98,000 in the FY 22 proposed budget.

- **Fire Protection**—was only present in FY 18 at just over $1 million.

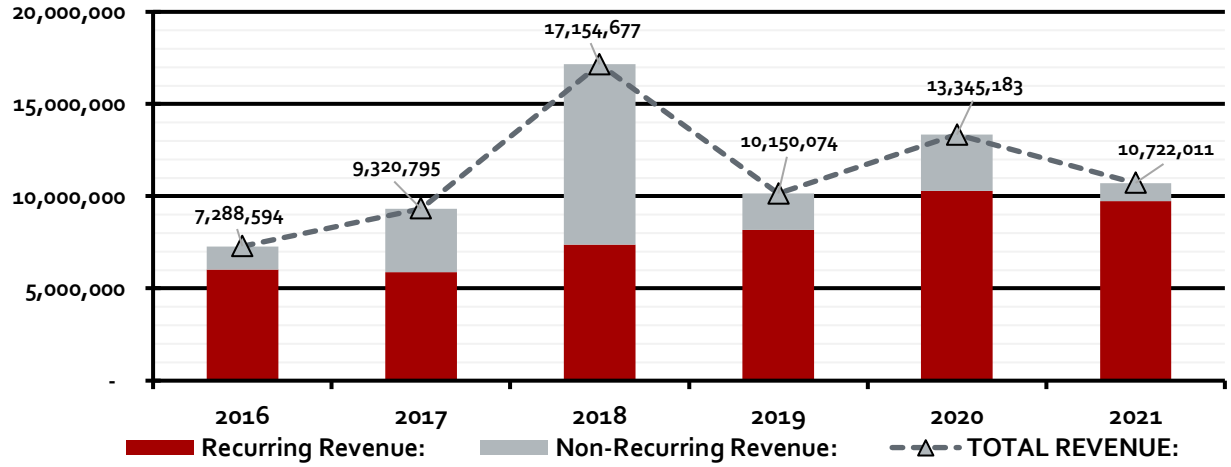
- **CIP Fund**—this is shown as a revenue source in the analysis solely to offset actual fire department related CIP expenditures in the respective fiscal years of the analysis. This revenue stream is primarily for capital construction projects such construction of fire station 1, the bulk of whose expenditures were in FY 17 ($1.87 million) and FY 18 ($8 million).

- **Gift Fund**— this is shown as a revenue source in the analysis solely to offset actual fire department related CIP expenditures in the respective fiscal years of the analysis. It is used primarily to offset certain operating expenses and is a relatively minor revenue source generally averaging $3,000 per year.

- **Grant Fund**— this is shown as a revenue source in the analysis solely to offset actual fire department related CIP expenditures in the respective fiscal years of the analysis. This funding generally comes from federal grants for personnel costs (SAFER Act) although there are some other non-personnel related expenditures covered by these funds. Funding has fluctuated significantly from a low of $17,400 in FY 18 to a high of $1.1 million in FY 20 depending upon receipt and expense of SAFER Act funds to offset personnel costs.

The following figure compares recurring to non-recurring and total revenue for the department and clearly shows the impact of the non-recurring, CIP fund use in FY 17-18. Further, the impact of the increased fire assessment on recurring revenue is quite clear.

Figure 101: Relationship of Recurring to Non-Recurring Revenues (FY 16–FY 20 Actual; FY 21 Adopted)



Expense

The following figure shows actual fire department expenditures (fire-related Gift, Grant and CIP Fund expenses have been combined for department total) for the period FY 16-20 and FY 21 as adopted which are divided into recurring and non-recurring expense. Recurring expenses are those such as employee wages and benefits, materials and services costs that are reasonably predictable and expected to continue from year-to-year.

In some cases, larger fire departments have such a large fleet that they can spend a predictable, uniform amount each year on apparatus and equipment replacement. Typically, they consider this a recurring cost and can budget such with an offsetting recurring revenue. The City operates its Fleet Management department as an internal service fund (Fleet Vehicle/Apparatus Replacement Fund 501) which charges external service departments such as the fire department for both capital replacement and ongoing maintenance costs to operate its respective fleet. These charges are budgeted in the GFR operating expenditure budgets as line item 4210 (Fleet-Variable) for maintenance costs and 4211 (Fleet-Fixed) for apparatus replacement. Since the Fleet-Fixed recurring charge covers apparatus replacement at the appropriate time, the purchases by Fleet are not shown in the following analysis since they are covered already by the recurring usage charge. Since the actual replacement amounts vary year-to-year, the following analysis shows the Fleet-Fixed charge as a non-recurring capital item.

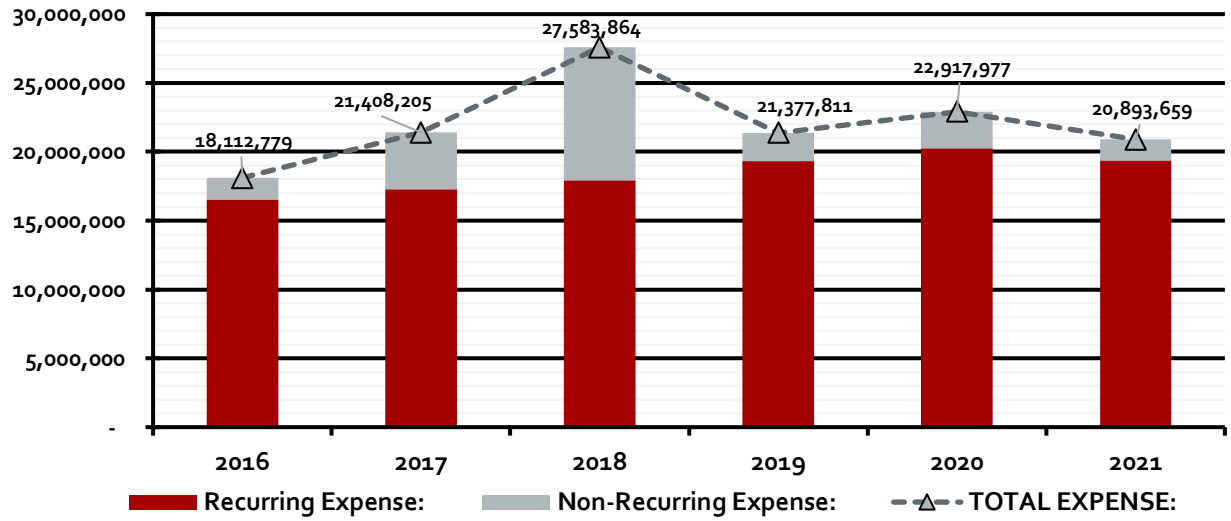
Non-recurring expenses on the other hand are more sporadic in nature and may be difficult to predict such as land acquisition, facility construction and major facility renovation and large-scale equipment or apparatus purchases. In this analysis, all capital expenditures, except replacement apparatus acquired by the Fleet Management Department, are shown as non-recurring expenses. Fire department related expenses may be found directly in the department's general fund (GF) expenditure budget or in the Gift, Grant, or City Capital Improvement Projects Funds expenditure budgets. The city maintains and utilizes a five-year Capital Improvement Plan (CIP). Each year the initial year's projects approved for the various submitting departments are funded using various sources in the City's CIP budget. Those fire department-related projects are shown in the following analysis.

Figure 102: Gainesville Fire Rescue Revenues (FY 16–FY 20 Actual; FY 21 Adopted)

Expense	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2021 Adopted
Personnel Services	**14,869,378**	**15,481,489**	**16,100,836**	**17,292,846**	**18,357,277**	**17,145,564**
Salaries & Wages	11,168,323	11,448,065	11,848,382	12,554,071	13,183,719	12,680,903
Regular	*10,619,328*	*10,963,304*	*10,924,804*	*11,755,804*	*12,513,498*	*12,078,517*
Overtime	*548,994*	*484,761*	*923,578*	*798,267*	*670,221*	*602,386*
Benefits	3,701,056	4,033,424	4,252,455	4,738,775	5,173,558	4,464,661
Operating Expense	**1,645,671**	**1,794,761**	**1,830,794**	**2,045,884**	**1,902,062**	**2,216,802**
Office of the Fire Chief	302,198	263,951	248,244	260,998	240,163	258,289
Operations	977,555	1,157,327	1,070,253	1,284,933	1,200,949	1,289,705
Risk Reduction Bureau	9,181	14,893	21,679	20,997	16,643	25,671
Fire Inspections	6,143	9,797	10,310	11,693	10,178	25,099
Fire & Life Safety Education	8,255	6,236	7,206	4,978	7,429	8,039
Fire Investigations	7,368	8,138	7,223	5,398	5,476	7,888
Emergency Management	12,267	10,220	14,598	24,039	8,038	12,795
Training Bureau	141,370	140,270	170,431	158,968	172,225	195,704
Comm Res Paramedicine	-	-	-	-	-	88,520
Information Systems	4,423	4,066	5,199	4,499	3,197	42,930
Fire Assessment	133,199	137,649	188,596	166,573	210,588	252,630
Gift Fund	18,212	18,068	78,783	5,431	5,057	9,533

Grant Fund	25,499	24,146	8,273	97,378	22,120	-
Recurring Expense:	**16,515,049**	**17,276,249**	**17,931,631**	**19,338,730**	**20,259,340**	**19,362,366**
GF Fleet Fixed	784,966	865,617	1,095,463	888,109	1,041,699	1,143,688
GF Machinery & Equipment	10,473	3,265	9,706	-	-	10,000
GF Other Grants in Aid	119,508	-	-	-	-	-
CIP Buildings	496,069	2,799,168	8,273,026	141,704	171,379	136,620
CIP Improvements O/T Buildings	1,441	58,784	38,503	36,197	36,517	17,451
CIP FF&E	19,708	333	-	72,379	2,598	2,781
CIP Apparatus	-	-	-	-	1,160,773	19,434
CIP Equipment	110,466	210,191	223,537	887,583	213,830	200,661
Gift Fund	-	-	2,879	5,093	6,842	659
Grant Fund	55,100	194,597	9,120	8,017	25,000	-
Non-Recurring Expense:	**1,597,730**	**4,131,956**	**9,652,234**	**2,039,081**	**2,658,637**	**1,531,293**
TOTAL EXPENSE:	**18,112,779**	**21,408,205**	**27,583,864**	**21,377,811**	**22,917,977**	**20,893,659**

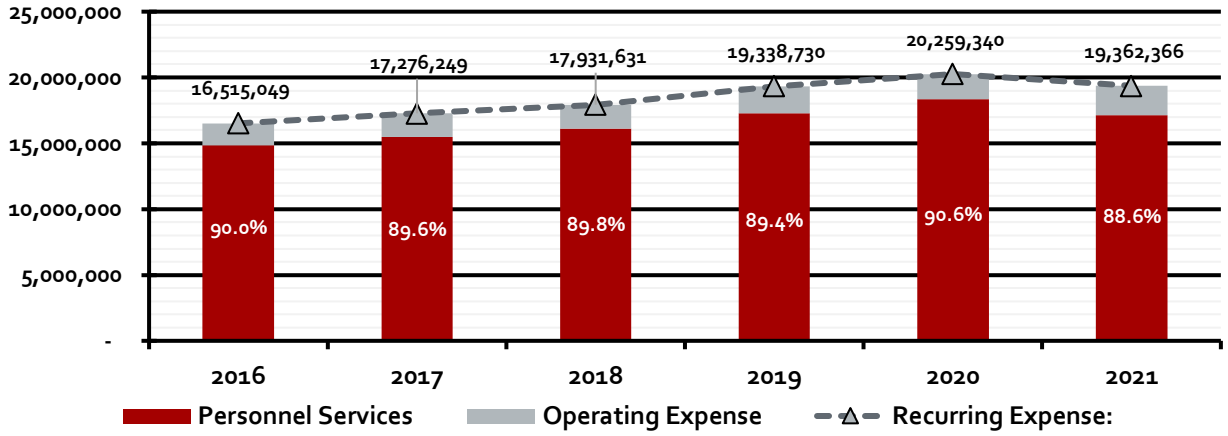
Figure 103: Relationship of Recurring to Non-Recurring Expenses (FY 16–FY 20 Actual; FY 21 Adopted)



The figure above compares recurring, non-recurring, and total department expense from FY 16 through FY 20 actual and FY 21 adopted. Non-recurring expense for the department has, as expected, varied considerably from a low of $1.6 million in FY 16 to a high of $9.65 million in FY 18 driven primarily by capital construction projects such construction of fire station 1, the bulk of whose expenditures were in FY 17 ($1.87 million) and FY 18 ($8 million).

Recurring expenses for the department have also increased over the period, rising at an average annual rate of approximately 4.8% between FY 16 and FY 20 with near linear increases in both personnel and materials and services costs.

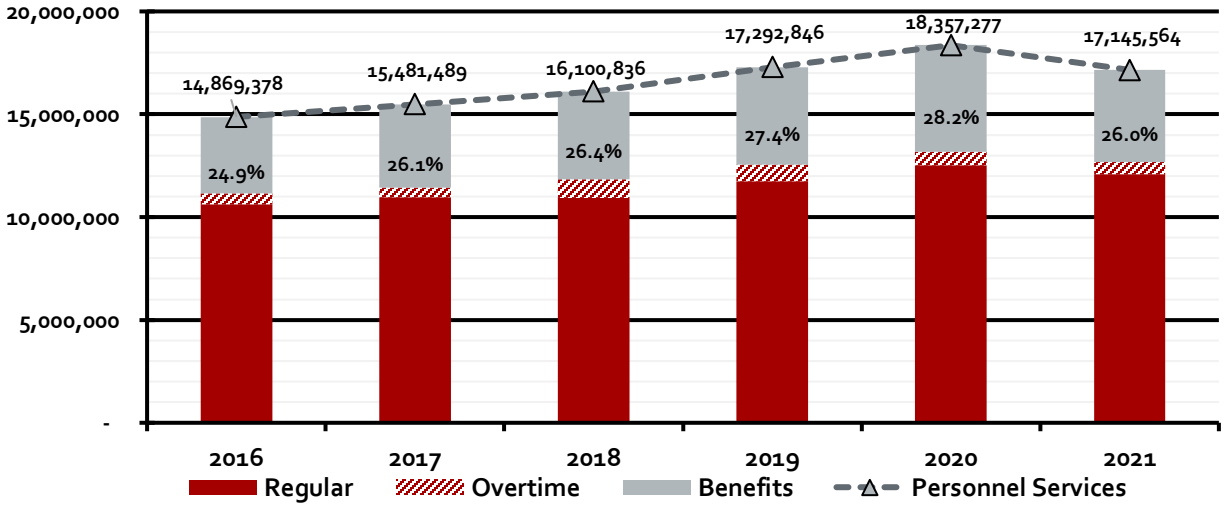
Figure 104: Relationship of Personnel to Operating Expenses (FY 16-20 Actual; FY 21 Adopted)



The major recurring expense categories are described in detail as follows:

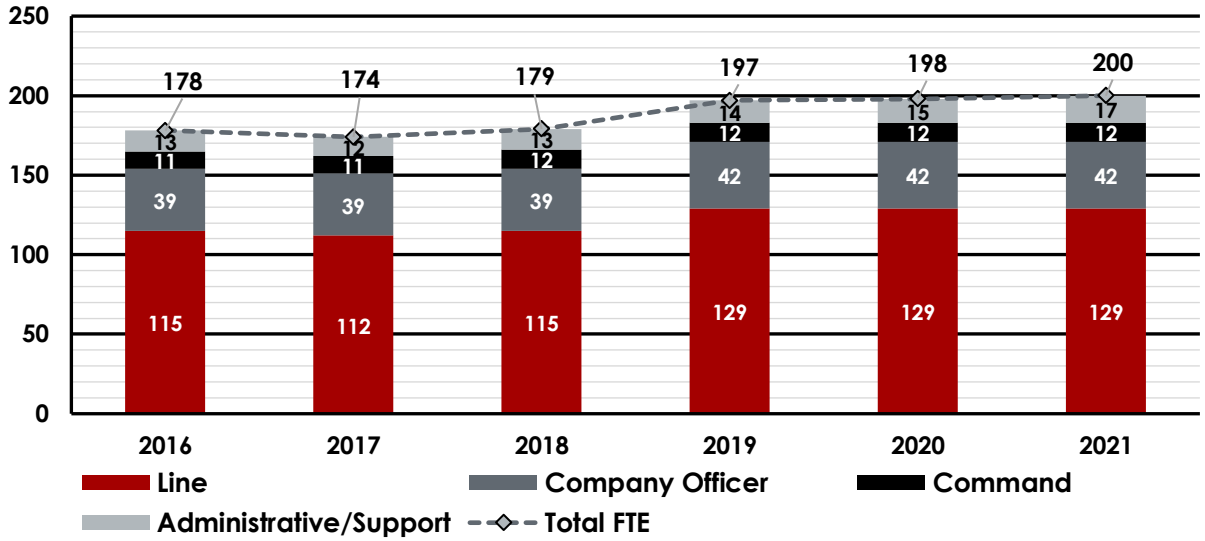
- **Personnel Services**—as shown in the figure below, total costs have increased from $14.9 million in FY 16 to $18.4 million by FY 20 for an increase of 23.5% over the period which represents an average annual increase of approximately 5.2%. This increase, except for the net addition of 20 FTE as discussed below, primarily represents increases in wages and benefits.
  - Including a high in FY 18, when overtime (sick/vacation and other operational coverage) was 8.5% of regular wages (7.8% of total wages), overtime costs as a percentage of wages averaged 6% (5.7% of total wages) while the wages line increased from $11.17 million to $13.18 million or an average of approximately 4.3% per year. Again, this rate of increase is driven in part by the addition of staff (see comments below). Benefits as a percent of total compensation have averaged 26.6% over the period ranging from a low of 24.9% in FY 16 to a high of 28.2% in FY 20.

Figure 105: Personnel Services Cost Breakdown (FY 16–FY 20 Actual; FY 21 Adopted)



- The figure below shows budgeted, full-time staff count (FTE) grouped by major job function, which has increased from 178 FTE in FY 16 to 198 FTE in FY 20, a 11.2% staffing increase over the historical period. This increase occurred primarily in one increment between FY 18 and FY 19, with the addition of 14-line positions (Driver/Operator and Firefighter), 3-company officers and 1-command officer position as well as several administrative staff position changes.
- For purposes of this discussion, all non-uniformed clerical, uniformed inspector and investigator, logistical and emergency management type positions are classified as administrative/support positions. Line positions are those providing traditional emergency fire/rescue and EMS services. Lieutenants are considered as company officers while Command staff positions are uniformed officer positions above the company officer.
- While several deletions and additions took place in other categories, the bulk of the staff changes occurred within the line and company officer classifications and had the greatest impact on increasing personnel services costs over the historical period.

Figure 106: Full-Time GFR Staff Count by Major Category (FY 16-FY 20 Actual; FY 21 Adopted)



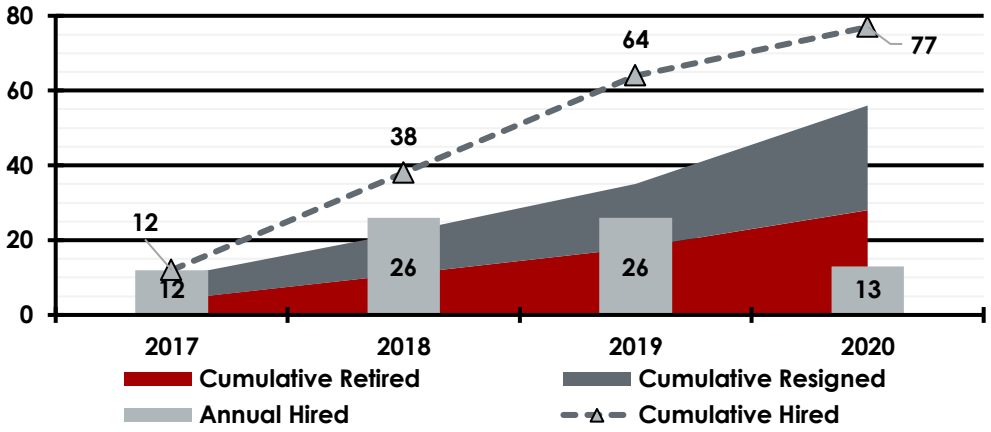
- Between FY 16 and FY 20, the increase in total personnel services costs is essentially linear. Using the current salary and benefit amounts for the various positions that have been added and/or deleted between FY 16 and FY 20, the figure below shows the approximate net total impact ("New Position Adjustment") that the addition or deletion of these positions has on the FY 20 adopted budget. The total FY 20 change in wages for these positions is approximately $1.2 million while benefits are almost $486,000. Therefore, subtracting the net cost of the added/deleted positions from the FY 20 total personnel services line leaves just under $12 million in wages and $4.7 million in benefits as adjusted totals for the purposes of estimating changes due to normal wage and benefit increases. The adjusted average annual increase in wages and benefits between FY 16 and FY 20 adopted is approximately 1.71% and 6.09%; respectively.

Figure 107: Net Impact Positions Added/Deleted on FY 20 Adjusted Personnel Services Budget

Expense	2016 Actual	2020 Actual	New Position Adjustment	2020 Revised	Average Annual Increase
Personnel Services	**14,869,378**	**18,357,277**	**1,702,695**	**16,654,582**	
Salaries & Wages	11,168,323	13,183,719	1,216,842	11,966,877	
Regular	*10,619,328*	*12,513,498*	*1,147,964*	*11,365,534*	1.71%
Overtime	*548,994*	*670,221*	*68,878*	*601,344*	
Benefits	*3,701,056*	5,173,558	485,853	4,687,705	6.09%

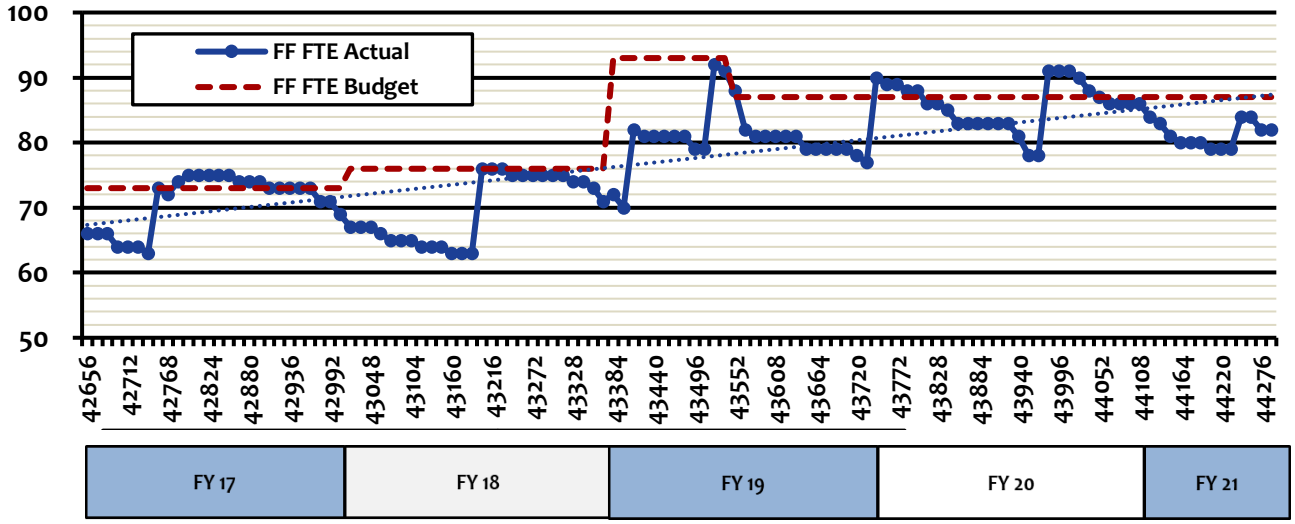
- It should be pointed out here that the above discussion does not reflect actual wage or benefit increases, either individually or as an average by position. Rather, this approach examines cumulative increases in these line items for GFR after removing the aggregate effect of adding and/or deleting various positions between FY 16 and FY 20. When examining average changes in position wages between FY 16 and FY 20, several positions show negative average annual increases. This is due to primarily to staff turnover during the period with retirements and other separations leading to hiring and promotion of staff at lower salaries. The figure below summarizes four years of GFR staff turnover from 2017-2020. During that period, 77 FTE were hired or approximately 42% of the GFR uniformed workforce.

Figure 108: Summary of GFR Staff Turnover FY 17-20



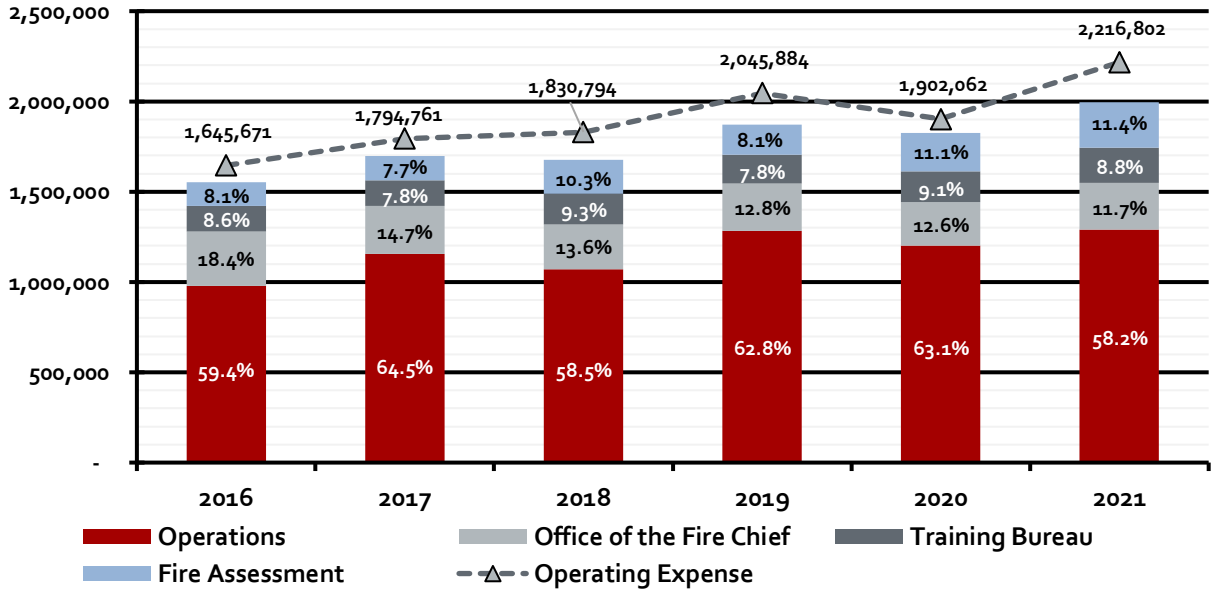
The issue of staff turnover as a potential key indicator for GFR to monitor, beyond its impact on historical financial trends and projection of personnel costs based upon those trends, is highlighted in the figure below. The figure shows budgeted firefighter positions versus actual firefighters by pay period for FY 17 through the first part of FY 21. Each year GFR experiences a staff turnover in the firefighter position of over 10%. While some turnover due to retirements and other separations is certainly natural for a mature department such as GFR, this trend seems overly high, and the loss of experience could become problematic.

Figure 109: Budgeted versus Actual GFR Firefighter Positions by Pay Period (FY 17-20 Actual, FY 21 Adopted)



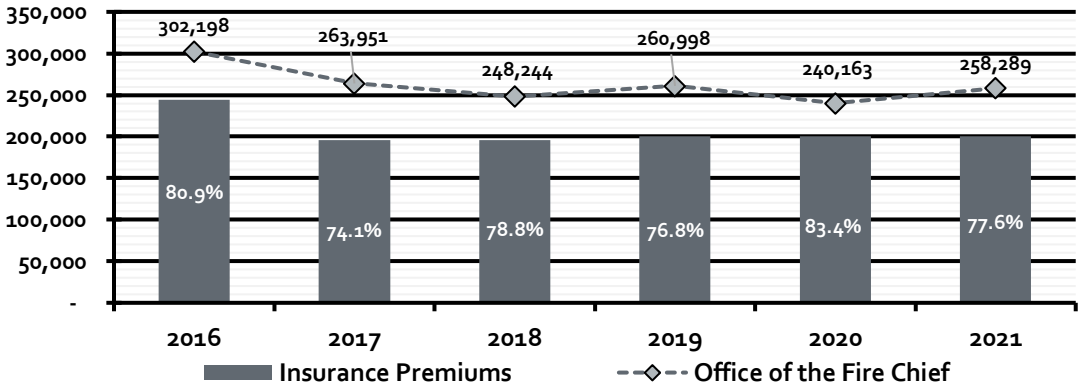
- **Operating Expenses**—cost increased from $1.6 million in FY 16 to $2 million in FY 19 before dropping back to $1.9 million in FY 20. Fire department-related operating expenses in the Gift and Grant Funds are included here while the annual Fleet-Fixed charges are shown as capital rather than operating. The FY 21 adopted amount of $2.2 million suggests that the historical average annual increase of 5.8% observed through FY 19 is more likely the trajectory that will be experienced in the future. The department captures operating expenses by function with just under 94% of annual operating costs driven by increases in 4 of the 13-line items in this category and shown in the table above: Office of the Fire Chief, Operations, Training and Fire Assessment. These items represent an average of 14.4%, 61.7%, 8.5% and 9.1%; respectively, of the annual GFR operating costs.

Figure 110: GFR Operating Expenses by Function (FY 16-20 Actual; FY 21 Adopted)



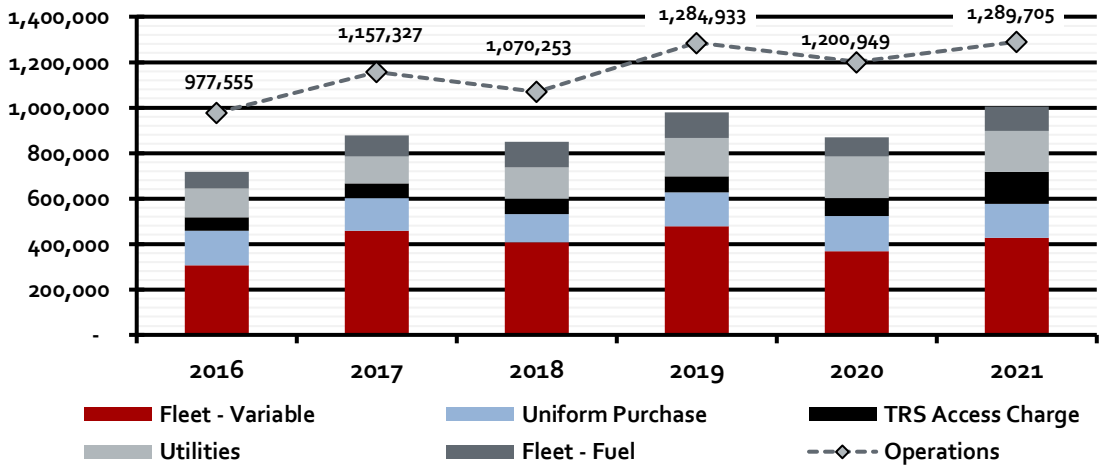
- *Office of the Fire Chief*—expenses as a percentage of total operating have decreased from 18.4% in FY 16 to 12.6% by FY 20 and are comprised mainly of department overhead costs. The bulk of these costs (generally over 75%) are represented by insurance premiums paid to the Self Insurance Fund and the total has driven this category as shown in the figure below. Since FY 18, expenses have remained relatively steady, fluctuating around an average of approximately $250,000.

Figure 111: Operating Expenses – Office of the Fire Chief (FY 16-20 Actual; FY 21 Adopted)



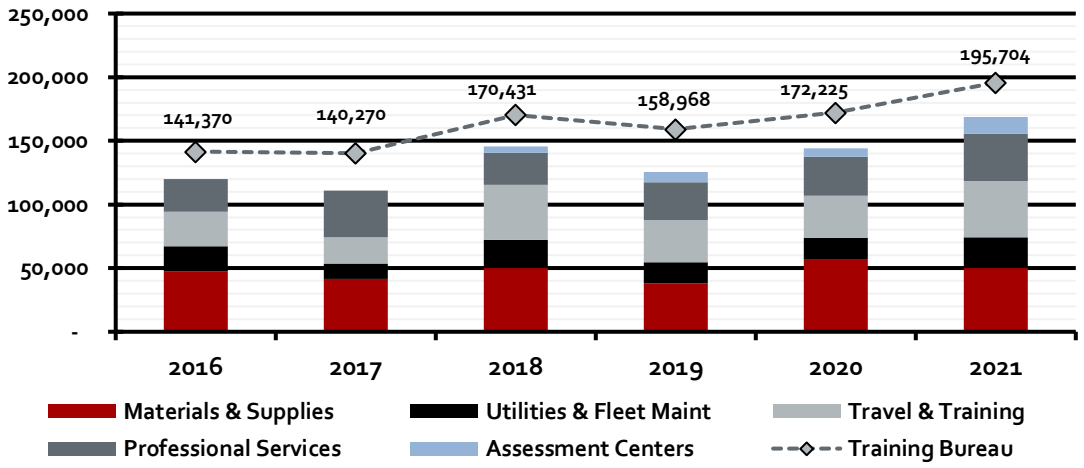
- *Operations*—expenses related to fire rescue and EMS daily operations are the largest component of GFR annual operating expenses, ranging from 58% to 65% of total operating expense, and increased from $980,000 in FY 16 to $1.28 million in FY 19 before falling back to $1.2 million in FY 20. The bulk of these costs (generally over 75%) are represented by five major line items including Fleet-Variable (apparatus maintenance) and Fleet-Fuel costs, Utilities, TRS Access Charges (radio system) and Uniforms (including Personal Protective Equipment or PPE) as shown in the figure below. Costs have historically increased at an average annual rate of approximately 5.3%.

Figure 112: Operating Expenses – Operations (FY 16-20 Actual; FY 21 Adopted)



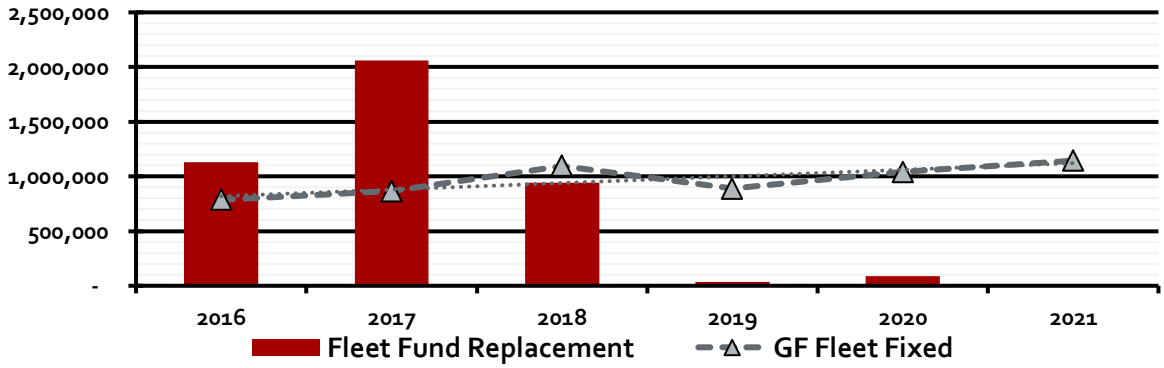
- *Training*—expenses represent approximately 8-9% of GFR annual operating expenses and increased from $141,000 in FY 16 to $172,000 million in FY 20. The bulk of these costs (generally over 75%) are represented by five major line items including Materials and Supply costs, Utilities and Fleet-Variable costs, Travel and Training costs, Professional Services and Assessment Center expenses as shown in the figure below. Costs have historically increased at an average annual rate of approximately 5.2%.

Figure 113: Operating Expenses – Training (FY 16-20 Actual; FY 21 Adopted)



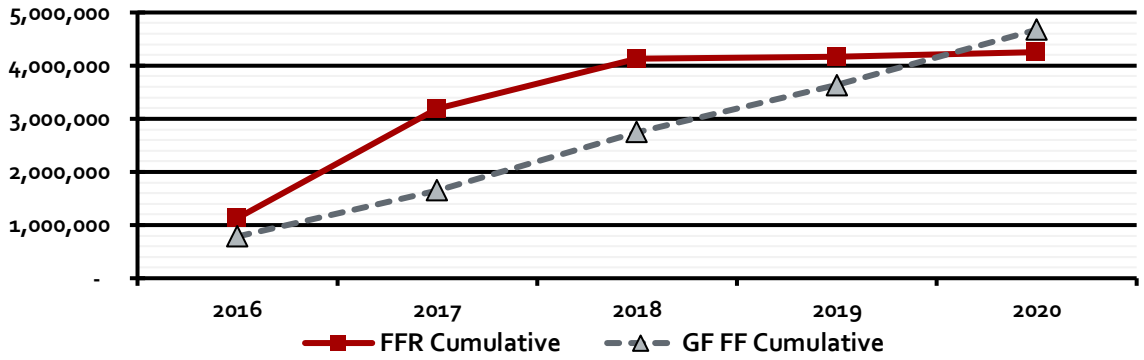
- As mentioned above, the City's Fleet Management Department budget is operated as an internal service (Proprietary) fund to which the fire department pays its allocated share of overhead costs as well as the costs to maintain and replace its fleet of apparatus through a monthly usage (Fleet-Fixed) fee. Capital replacement of existing apparatus is, therefore, funded by this fee and is an expenditure of the Vehicle Maintenance Fund (501) rather than the fire department under the City General Fund (001).
- The Fleet Management Department replaces fire department vehicles using a planned replacement cycle for each class of apparatus based upon industry standard mileage, maintenance, and operating conditions.

Figure 114: GFR Fleet-Fixed Vehicle Usage Fee Versus Vehicle Maintenance Fund Apparatus Replacement Expenditures (FY 16-20 Actual: FY 21 Adopted)



- The figure above shows the annual Fleet-Fixed Vehicle Usage fee (dashed line) and the total amount spent on replacement apparatus (solid bars) each year from the Fleet Replacement Fund. In some years, the capital cost well exceeds the annual fee while in other years, the capital cost is less. This fee has increased at an average annual rate of approximately 7.7% rising from $785,000 in FY 16 to $1.04 million in FY 20.

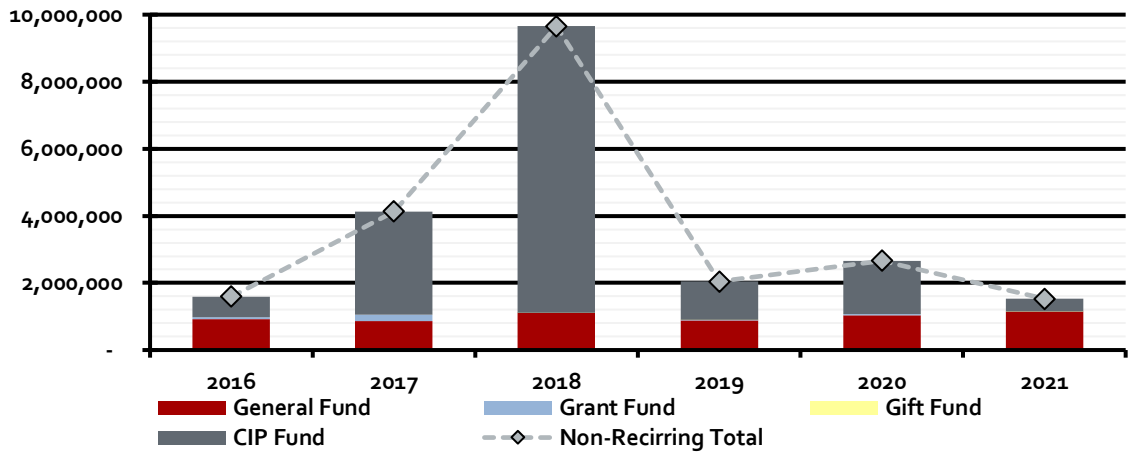
Figure 115: Cumulative GFR Fleet-Fixed Vehicle Usage Fee Versus Vehicle Maintenance Fund Apparatus Replacement (FY 16-20 Actual)



- Another way to view this annual expense is shown in the figure above using cumulative fire apparatus replacement versus the cumulative annual payment to the internal service fund. Over the five-year period FY 16 through FY 20 actual, the cumulative difference is approximately $3.39 million. Over the period, the Fleet department spent that much more than was gained through the transfer from the GF to the Fleet Fund. The Fleet department, however, has identified how much it needs each year to keep the fund whole as it periodically replaces fire apparatus. This allows GFR to budget a known amount for replacement each year.

As mentioned above, non-recurring expenses for the department have varied considerably over the period driven by various capital construction projects and apparatus/equipment acquisitions. The figure below shows from which fund the various capital expenditures have been made with CIP expenditures having the largest impact. The large facility expenditures made by the CIP Fund in FY 17-18 have largely been for the construction of new Fire Station 1. Total CIP Fund cost of this project through FY 20 is approximately $10.5 million. Also included here as a GF capital expense is the annual Fleet-Fixed expense transferred to the Fleet Vehicle/Apparatus Replacement Fund.

Figure 116: GFR Capital Expenses by Fund (FY 16–20 Actual; FY 21 Adopted)

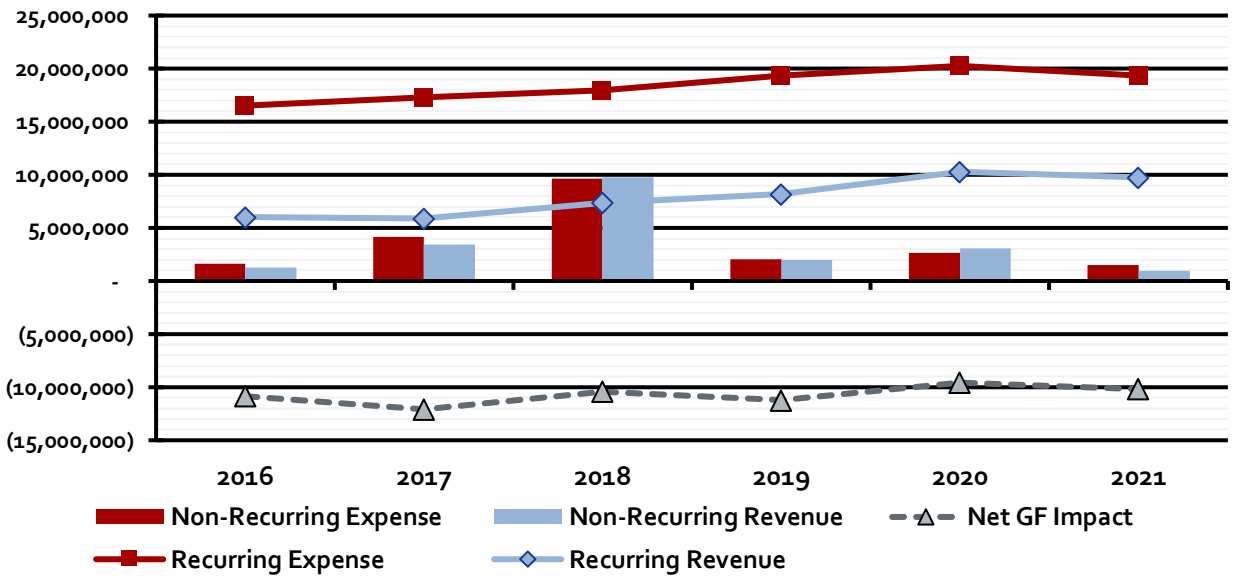


Except for approximately $1.16 million spent from the CIP Fund in FY 20 on Ladder 10 and a hazardous materials trailer included in the figure above, all other fire apparatus purchased during the historical period were made by the Fleet Management department using Fleet Vehicle/Apparatus Replacement Fund balance.

Net Impact on City General Fund

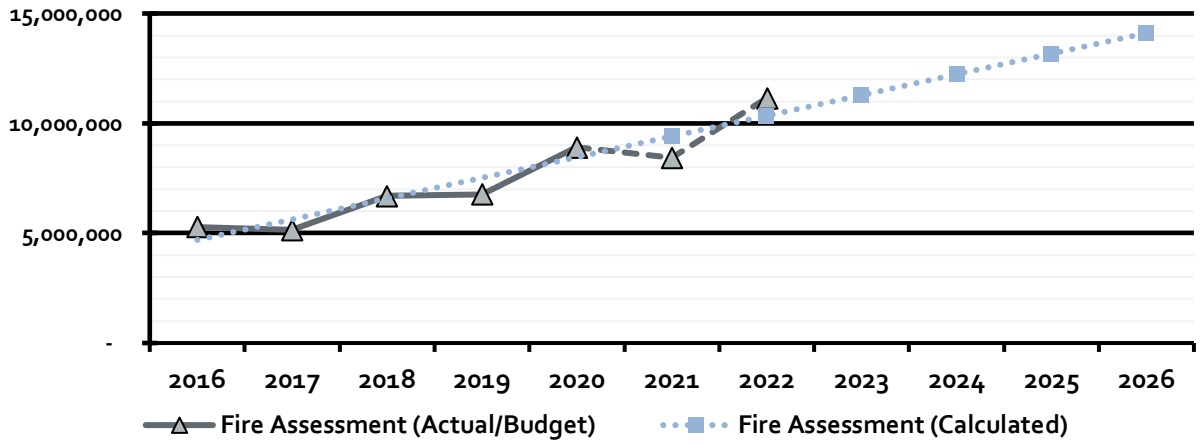
As mentioned, the fire department revenue and expenditure budget are primarily housed within the City General Fund and has a significant impact on that fund. The figure below shows total program-specific revenue and expense, both recurring and non-recurring from FY 16 through FY 20 actual and the net impact on the General Fund. Recurring expenditures have risen just under $4 million, from $16.5 million in FY 16 to $20.3 million by FY 20 while program revenue has risen $4.3 million (from $6 million to $10.3 million) over the same period.

Figure 117: Net Fire Department Impact on City General Fund (FY 16–FY 20 Actual; FY 21 Adopted)



The net demand on other GF revenue sources to fund this program has decreased slightly from $10.8 million in FY 16 to $9.6 million by FY 20 as the City has increased its non-ad valorem assessment. It should also be noted, however, that while this analysis shows CIP funding used to offset CIP expenses as a non-recurring revenue, the CIP revenue requirement may have a significant impact on the GF due to debt service needs. The figure below shows how the non-ad valorem fire assessment revenue stream has grown from FY 16-20 actual as rates have been raised and some growth has occurred. Using actual, FY 21 adopted and FY 22 proposed NAV assessment revenues, a linear projection shows how this revenue stream might increase if the current trend of periodic rate adjustment continues. This assumes both the same methodology and allocation of expenditures between EMS and fire rescue functions. The city will need to continue monitoring the elements of this GF trending and balance the demand on other GF revenues against non-ad valorem fire assessment revenues.

Figure 118: Historical and Projected Non-Ad Valorem Fire Assessment Revenue (FY 16–FY 20 Actual; FY 26 Projected)



STATUS QUO FINANCIAL PROJECTION

ESCI evaluated the historical information provided by GFR staff, as well as the adopted FY 21 budget, to prepare a status quo forecast. The forecast relies on trends previously developed through the historical review period along with forecast information available for the fire department when available, to understand potential anomalies due to changes in various pertinent funds and budgets. Certain assumptions were made about operating revenue and expenses. These assumptions are described in each section below. The projection assumes no change to service level, including any staff additions or deletions.

Revenue Assumptions

The revenue assumptions used in the Gainesville Fire Rescue department forecast are described in the next figure.

Figure 119: GFR Revenue Forecast Assumptions (FY 21–26)

Revenue Source	Assumptions
Fire Assessment	Has increased through growth and proactive increases in rates at an average annual rate of approximately 15.8% from FY 16 through FY 20. The forecast uses the adopted and proposed amounts for FY 21 and FY 22; respectively. The FY 22-26 forecast values are based upon a linear extrapolation of the historical trend (see previous figure) using both the FY 21 and proposed FY 22 amounts.
Hazmat Gross Receipts Tax	This category has increased at an average annual rate of 2.6% during the historical period. The forecast assumes this rate will continue and uses the FY 21 adopted amount as the basis for the projection.
Fire Inspection Fees	While dropping due to staffing issues in FY 20, have generally fluctuated somewhat around an annual average of $65,000. The forecast assumes an annual revenue stream of $65,000 from this source with no significant change.
Billable Overtime	While fluctuating significantly, year-to-year, has generally increased at an average annual rate of 3.3%. The forecast assumes that this source will increase at its historical rate using the FY 22 proposed amount as a basis for the projection.
Airport Fire Station	Has historically increased at an average annual rate of 3%. The forecast uses the FY 22 proposed amount as the basis for the projection and assumes an increase of 3% annually.
Automatic Aid Agreement	Limited historical collection of this source precludes an accurate assessment of prior trajectory. Using the FY 21 adopted and FY 22 proposed amounts along with FY 19-20 actuals provides an approximate annual increase of 2.8%. The forecast uses the FY 22 amount as the projection basis and increases it by 2.8% annually.
Miscellaneous/Fees/Penalties	Excluding a spike in FY 20, these combined revenues have averaged approximately $95,000 annually. The forecast utilizes the FY 21 adopted and FY 22 proposed amounts and assumes an average of $95,000 thereafter from all sources.
CIP Fund, Gift Fund, Grant Fund "Revenue"	"Revenue" shown in the historical analysis from these fund sources is just an offset of the GFR expenditures in these same funds. The forecast shows revenue in each of these funds exactly offsetting the forecast expenditures. The actual revenues in these funds may be more or less than the GFR expenditure each year and may come from a variety of sources including various debt instruments and transfers from other funds from various revenue streams.

The following figure is the Gainesville Fire Rescue department status quo revenue forecast for the period FY 21 adopted through FY 26 based upon the assumptions above.

Figure 120: GFR Revenue Forecast (FY 21 Adopted–FY 26 Forecast)

Revenue	2021 Adopted	2022 Proposed	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast

NAV Fire Assessment	8,435,982	11,148,557	11,282,752	12,224,346	13,165,940	14,107,534
Hazmat Gross Receipts Tax	129,330	123,789	127,008	130,310	133,698	137,174
Fire Inspection Fees	67,601	34,851	65,000	65,000	65,000	65,000
Billable Overtime	61,262	61,262	63,284	65,372	67,529	69,758
Airport Fire Station	556,094	572,777	589,960	607,659	625,889	644,666
Automatic Aid Agreement	500,000	525,000	539,700	554,812	570,346	586,316
Recurring Revenue:	**9,750,269**	**12,466,236**	**12,667,703**	**13,647,498**	**14,628,402**	**15,610,447**
Misc/Fees/Penalties	93,129	97,719	95,000	95,000	95,000	95,000
Fire Protection	-	-	-	-	-	-
CIP Fund[1]	376,947	496,439	511,532	527,189	543,432	560,287
Gift Fund[1]	10,056	3,000	3,048	3,097	3,146	3,197
Grant Fund[1]	491,611	60,000	60,960	61,935	62,926	63,933
Non-Recurring Revenue:	**971,742**	**657,158**	**670,540**	**687,221**	**704,505**	**722,417**
TOTAL REVENUE:	**10,722,011**	**13,123,394**	**13,338,244**	**14,334,720**	**15,332,907**	**16,332,864**

[1]Revenue shown here equal to annual actual annual GFR expenditure in this fund. Actual revenue may be more, or less in this fiscal year.

Expense Assumptions

The expense assumptions used in the Gainesville Fire Rescue department forecast are described in the following figure.

Figure 121: GFR Expense Forecast Assumptions (FY 21 Adopted–FY 26)

Expense Source	Assumptions
Personnel Services	Budgeted, full-time staff increased by 20 FTE from FY 16 to FY 20, driven primarily by the addition of 14-line positions (Driver/Operator and Firefighter), 3-company officers and 1-chief officer mainly in one increment in FY 19. This partly drove the historical increase in Personnel Services costs and adjusting for total added positions gives an average annual increase of 1.71% and 6.09% for the wages and benefits line items; respectively. The forecast uses the FY 21 adopted wages and benefits as a basis for the projection. Overtime costs as a percentage of wages averaged 6% over the period and the forecast maintains this relationship to the wages line item.
Operating Expense	Combined operating costs through FY 19 increased at an average annual rate of 5.8% before dipping in FY 20. When the FY 21 adopted total is considered, the pre-FY 20 trend appears to continue. Just under 90% of this increase was driven by increases in the Operations function with the Training and Fire Assessment functions accounting for the remainder of the increase. The forecast uses the adopted FY 21 figures as the basis for projecting each of these functional operating costs and uses the historical average annual increases of 5.3%, 5.2%, and 12.6% respectively, for the projection.

	The other functions generally remained flat or fluctuated slightly around an average figure throughout the historical period. The forecast assumes that these functional operating costs will increase at an 8-year average of the historical southern region CPI (1.6%) prior to COVID-19[19]. The forecast uses the FY 21 adopted figures for operating cost of each functional area increased annually by 1.6%.
GF Capital – Fleet Fixed	Although budgeted as an operating cost, the GF transfer to the Fleet Vehicle and Apparatus Replacement Fund is considered a capital cost here. It has grown historically at 7.7% annually. The forecast uses the FY 21 adopted figure as a basis for the projection with an annual increase of 7.7%.
GF Capital – Machinery & Equipment	Expenditures in this category have fluctuated and been relatively minor averaging $5,600 annually. The forecast uses a projected FY 22 expenditure of $5,500 and increases it at 1.6% annually, the forecast annual inflation rate.
CIP Capital – Buildings	Expenditures in this category have varied considerably due to construction of station 1. When that expenditure is removed, average annual CIP building expenditures through FY 21 adopted are $246,567. The forecast uses this amount in FY 22 as the basis for the forecast and increases it by 4.5% annually to reflect the estimated annual construction inflation factor reported by Zarenski (April 2021)[20].
CIP Capital – Improvements O/T Bldgs	With several exceptions, historical expenditures in this category have been generally stable. Using the FY 21 adopted CIP amount, the historical average annual expenditure of CIP funds has been $31,500. The forecast uses $30,000 in FY 22 as the basis for the projection and applies a 1.6% annual inflation factor.
CIP Capital – FF&E	Historical expenditures in this category have fluctuated considerably. Using the FY 21 adopted CIP amount, the historical average annual expenditure of CIP funds has been $16,000. The forecast uses this amount in FY 22 as the basis for the projection and applies a 1.6% annual inflation factor.
CIP Capital – Equipment	Except for the FY 19 expenditure of just under $900,000, CIP equipment expenditures have generally been just over $200,000. The forecast uses the FY 21 adopted CIP amount of $200,661 and increases it annually by the estimated CPI of 1.6%
Gift Capital	Expenditures in this category have fluctuated and been relatively minor averaging $3,000 annually. The forecast uses a projected FY 22 expenditure of $3,000 and increases it at 1.6% annually, the forecast annual inflation rate.
Grant Capital	Expenditures in this category have fluctuated and been relatively minor averaging $60,000 annually. The forecast uses a projected FY 22 expenditure of $60,000 and increases it at 1.6% annually, the forecast annual inflation rate.

The following figure is the Gainesville Fire Rescue department status quo expenditure forecast for the period FY 21 adopted through FY 26 based upon the assumptions above.

Figure 122: GFR Expense Forecast (FY 21 Adopted–FY 26)

Expense	2021	2022	2023	2024	2025	2026

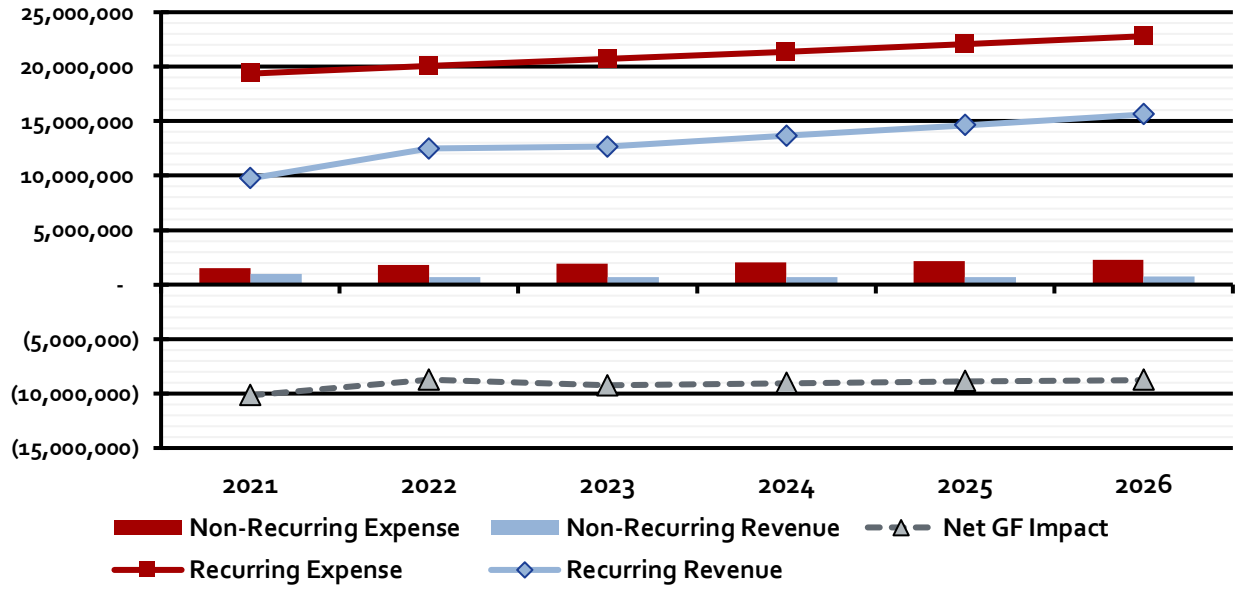
[19] https://www.bls.gov/charts/consumer-price-index/consumer-price-index-by-category.htm.
[20] 2021 Construction Inflation – updated 4-16-21 « Construction Analytics (edzarenski.com)

	Adopted	Forecast	Forecast	Forecast	Forecast	Adopted
Personnel Services	**17,145,564**	**17,758,722**	**18,269,858**	**18,802,368**	**19,357,388**	**19,936,119**
Salaries & Wages	12,680,903	13,022,163	13,244,842	13,471,329	13,701,689	13,935,988
Regular	*12,078,517*	*12,285,060*	*12,495,134*	*12,708,801*	*12,926,122*	*13,147,158*
Overtime	*602,386*	*737,104*	*749,708*	*762,528*	*775,567*	*788,829*
Benefits	4,464,661	4,736,559	5,025,015	5,331,039	5,655,699	6,000,131
Operating Expense	**2,216,802**	**2,298,523**	**2,424,098**	**2,558,673**	**2,703,051**	**2,858,117**
Office of the Fire Chief	258,289	262,422	266,620	270,886	275,220	279,624
Operations	1,289,705	1,358,060	1,430,037	1,505,829	1,585,638	1,669,677
Risk Reduction Bureau	25,671	26,082	26,499	26,923	27,354	27,791
Fire Inspections	25,099	25,500	25,908	26,323	26,744	27,172
Fire & Life Safety Education	8,039	8,168	8,298	8,431	8,566	8,703
Fire Investigations	7,888	8,014	8,142	8,273	8,405	8,539
Emergency Management	12,795	13,000	13,208	13,419	13,634	13,852
Training Bureau	195,704	205,880	216,586	227,848	239,696	252,161
Comm Res Paramedicine	88,520	89,936	91,375	92,837	94,323	95,832
Information Systems	42,930	7,500	7,620	7,742	7,866	7,992
Fire Assessment	252,630	284,461	320,304	360,662	406,105	457,274
Gift Fund	9,533	9,500	9,500	9,500	9,500	9,500
Grant Fund	-	-	-	-	-	-
Recurring Expense:	**19,362,366**	**20,057,245**	**20,693,955**	**21,361,041**	**22,060,439**	**22,794,236**
GF Fleet Fixed	1,143,688	1,231,751	1,326,596	1,428,744	1,538,758	1,657,242
GF Machinery & Equipment	10,000	5,500	5,588	5,677	5,768	5,861
GF Other Grants in Aid	-	-	-	-	-	-
CIP Buildings	136,620	246,567	257,662	269,257	281,374	294,035
CIP Improvements O/T Buildings	17,451	30,000	30,480	30,968	31,463	31,967
CIP FF&E	2,781	16,000	16,256	16,516	16,780	17,049
CIP Apparatus	19,434	-	-	-	-	-
CIP Equipment	200,661	203,872	207,134	210,448	213,815	217,236
Gift Fund	659	3,000	3,048	3,097	3,146	3,197
Grant Fund	-	60,000	60,960	61,935	62,926	63,933
Non-Recurring Expense:	**1,531,293**	**1,796,690**	**1,907,725**	**2,026,643**	**2,154,031**	**2,290,519**
TOTAL EXPENSE:	**20,893,659**	**21,853,935**	**22,601,680**	**23,387,684**	**24,214,470**	**25,084,755**

Status Quo Forecast

The following figure shows both forecast revenue (blue line for recurring and blue bar for non-recurring) and expense (red line for recurring and red bar for non-recurring) for Gainesville Fire Rescue from FY 21 adopted through FY 26 as forecast. Since GFR operating revenues and expenditures are primarily housed within the City General Fund and have a significant impact on that fund, it is important to project future expenditures and revenues and their impact on the General Fund. The forecast contemplates no addition of staff or major changes in current operations. Under this scenario and using the cost and revenue assumptions above, the department will likely see a steady recurring expenditure growth rate of approximately 3.2% annually over the next five years. Recurring revenue is expected to grow at a slightly higher rate of 5.8% which will keep the impact on other GF revenue sources nearly steady at just under $9 million annually. The recurring cost of adding career firefighters, staffed apparatus and/or new fire stations along with associated operating expenses, both direct and indirect, would add substantially to this gap and lead to an increasingly larger need for additional GF resources and/or an increase in the NAV fire assessment beyond that observed historically.

Figure 123: Net Fire Department Impact on City General Fund (FY 21 Adopted–FY 26 Forecast)



Appendix C: Current Staffing Analysis

Managing personnel to achieve maximum efficiency, professionalism, and personal satisfaction is an art as much as a science. Consistency, fairness, safety, and opportunities for personal and professional growth are key values for the healthy management of an organization. Additionally, a contemporary fire department must have enough administrative resources to adequately provide operational and logistical support, public life safety education and code enforcement services, training services, and overall administrative services in support of department operations.

Several national organizations recommend standards to address staffing issues. The Occupational Health & Safety Administration (OSHA) Respiratory Protection Standard, and the National Fire Protection Association (NFPA) Standard 1710 are frequently cited as authoritative documents[21,22]. In addition, the Center for Public Safety Excellence (CPSE) publishes benchmarks for the number of personnel recommended on an emergency scene for various levels of risk (known as "Effective Response Force").

Gainesville Fire Rescue Operations Staffing History

Before GFR's current staffing arrangement can be evaluated, the steps that the department took to arrive at this place must first be understood. The following are major staffing milestones that have occurred within GFR during the last three decades.

Figure 124: GFR Staffing History

Year	History
1990	GFR began providing ALS; added Kelly Days, and the city entered into a seven-year agreement with Alachua County and re-opened Station 7.
1992	10% Budget Cut.
1996	Designated Assistance Agreement.
2006	Fire Services Assistance Agreement.
2008	One of two Public Education positions deleted - never restored
2010	Staff Specialist position deleted from Risk Reduction Bureau - never restored
2011	Station 8 opened, and 13 Firefighters were added through a SAFER Grant.
2014	Nine positions were added from a second SAFER grant and to staff a second squad unit. Six firefighter positions were upgraded to three Driver / Operator Positions and 3 Lieutenant Positions.
2016	Three firefighter positions were converted to three Lieutenants for Squad 1.
2017	The city granted the fire department permission to over hire by 3 firefighters for the January recruit class.
2018	CRP Program Coordinator added

[21] Respiratory Protection Standard 29 CFR 1910.134; Occupational Health & Safety Administration.
[22] NFPA 1710: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, to the Public by Career Fire Departments; National Fire Protection Association.

Year	History
2018	Technical Systems Analyst II added
2018	Three firefighters were added, and permission was granted to continue the over hire of 3 firefighters. There were 14 firefighter vacancies as of March 2018.
2019	17 SAFER Grant firefighter positions were added; three were converted to Lieutenant Positions and three were converted to Driver / Operator Positions.
2019	Fourth Inspector added
2020	2 full time CRP Technicians and a Fire Inspector were added

Administrative Division

The size and structure of an organization's staffing are dependent upon the specific needs of the organization. These needs must directly correlate to the needs of the City of Gainesville as a structure that works for one agency may not necessarily work for another. This section provides an overview of GFR's staffing configuration and management practices.

Fire department staffing can be divided into two distinct groups. The first group is typically recognized by the community and is commonly known as the operations section; it can be generally classified as the emergency response personnel. The second group works behind the scenes to provide the support needed by the operation's personnel to deliver an effective emergency response and is commonly known as the administrative section or support services section. Like many fire-rescue organizations, GFR has distinct staff personnel—Chief Officers—who perform specific administrative functions but are also required to perform operationally if the need arises.

While a fire department's evaluation focuses on several factors, staffing is one of the most important. When reviewing staffing, one must define the expectations of each work unit in addition to the organization's overall performance. Once the work product (output or outcome) is defined, and performance metrics are established, senior leadership assumes responsibility in determining appropriate staffing necessary to accomplish goals and meet performance objectives.

Fire Administration

One of the primary responsibilities of the administrative team is to ensure that the operations segment of the organization has the ability and means to respond to and mitigate emergencies safely and efficiently. An effective administration and support services system is critical to the success of the Department.

Typical responsibilities of the administration and support staff include planning, organizing, directing, coordinating, and evaluating the various programs within GFR. This list of functions is not exhaustive, and other functions may be added. It is also important to understand these functions do not occur linearly and can more often occur simultaneously. This requires the Fire Chief and administrative support staff to focus on many different areas concurrently.

The following figure illustrates the administration and support structure of GFR.

Figure 125: Administrative Staffing

Position Title	Number of Full-Time Positions	Hours Worked per Week	Work Schedule
Fire Chief	1	40	M–F
Deputy Chief	1	40	M–F
Risk Reduction Assistant Chief	1	40	M–F
Emergency Manager District Chief	1	40	M–F
Administrative Assistant to the Fire Chief	1	40	M–F
Account Clerk Sr.	1	40	M–F
Staff Assistant	1	40	M–F
Technical Analysts	2	40	M–F
Total Administrative and Support Staffing	**8**		

GFR's administrative functions are led by the Fire Chief and supported by a Deputy Chief. ESCI noted that currently, the level of administrative and support staffing function within GFR is comprised of eight full-time equivalent (FTE) positions. This represents 4% of the Department's total staffing of 200 full-time positions. It is ESCI's experience that effective administrative staffing totals for municipal fire department operations typically range from 12 to 15% of agency totals. After reviewing the functions and responsibilities assigned to the workgroup, ESCI concluded that the number of full-time equivalents (FTEs) assigned resides in the extreme lower range of the normally experienced administrative levels to support the responsibilities of GFR's administration appropriately.

Risk Reduction Bureau

The focus of Risk Reduction Bureau (RRB) efforts is on decreasing all community risks, including fires. The RRB does this through a combination of public education, plans review, fire inspections, and fire investigations. The RRB is staffed by:

Figure 126: Risk Reduction Staffing

Position Title	Number of Full-Time Positions	Hours Worked per Week	Work Schedule
Assistant Chief of Risk Reduction	1	40	M–F
Fire Investigative Services Officer	1	40	M–F
Fire Inspector	4	40	M–F
Fire and Life Safety Educator	1	40	M–F
Total RRB Staffing	**7**		

Fire Investigations

Fire Investigations are conducted by the RRB to determine cause and origin for fires that occur within the City of Gainesville. GFR's Investigative Service Officer tracks trends and patterns in arson cases and seizes opportunities for public education. During Fiscal Year 2020, the RRB conducted 86 fire investigations: 67 fires were determined to be accidental/unintentional, fifteen arsons, two undetermined and two involved a juvenile fire setter. Six arson fires resulted in arrests and formal charges. Six of the arson fires were associated with homeless encampments and three arson fires involved a large construction site.

Fire Prevention

Fire Inspectors in Gainesville enforce the Florida Fire Prevention Code 7th Edition, the City of Gainesville Code of Ordinances Chapter 10, Florida Statues 633 and Florida Administrative 69A. The Florida Fire Prevention Code 7th Edition is composed of NFPA 101, 2018 Edition and NFPA 1, 2018 Edition, as well as numerous additional referenced standards.

The City of Gainesville has not adopted a fire sprinkler ordinance; however, the city does have a sprinkler credit (fire flow mitigation) policy for parcels subject to a fire services special assessment.

GFR serves as the Authority Having Jurisdiction (AHJ) over fire and life safety in new construction and occupancy changes. A Fire Protection Specialist assigned to the Building Department works very closely with the Fire Marshal and GFR Fire Inspectors. Plan reviews were on the increase until 2020; it is reasonable to anticipate that COVID-19 impacted the 2020 numbers.

Figure 127: RRB Plan Reviews: 2018-2020

Site Plan Review	2018	2019	2020
Plans reviewed	250	320	309
Plan Review Hours	206.45	287.5	245

GFR Inspectors complete all fire and safety inspections within the City of Gainesville. Inspections are prioritized based on target hazard scores. High hazard occupancy inspections are completed annually as well as those required by state regulatory agencies. Moderate and low hazard occupancies are inspected every 3-5 years. GFR's total inspections during the last three years are as follows:

Figure 128: RRB Inspections: 2018-2020

Routine Inspections	2018	2019	2020
Buildings Inspected	5431	4310	*1845
Billable Inspections	616	611	*193
Inspection Follow-ups	680	732	*320
Invoice Totals	$83,371	$81,504	*$24,447
Special Events Permits Reviewed	109	213	*83
Special Event Inspections	29	45	*19

Routine Inspections	2018	2019	2020
Square feet Inspected[23]	26,201,292	23,187,087	*17,319,276

*2020 inspection activity related numbers affected by COVID19 pandemic

Public Education

The purpose of the public education program is to educate neighbors on various fire and life safety topics. GFR has a very robust Public Education Program. Public Education initiatives include, but are not limited to, the following:

Figure 129: GFR Public Education Programs

Public Education Topic	GFR Program
Calling 9-1-1	Taught by GFR members with Dial Safe Pro as a supplemental training aid.
Exit Drills in The Home (EDITH)	Taught in the classroom and in Safety City.
Smoke Alarms	Project Get Alarmed.
Carbon Monoxide Safety	GFR educates on CO during home safety presentations and when installing smoke alarms.
Fire Safety	GFR educates on multiple levels of Fire Safety including chimney, electrical and cooking, among others.
Injury Prevention	GFR educates on slips, trips, and falls with a focus on the senior population as well as special needs groups. Personnel also teach about burn prevention during the Home Fire Safety classes and camps. All children who visit GFR's Safety City get fitted with a free bicycle helmet to take home. We also provide free car seat installation education and car seats available for purchase at a reduced price. Pre-Covid, GFR delivered an in-house produced Safe Assembly Training that was a requirement for public assemblies. Once Covid occurred, GFR allowed public assemblies to take the online version through the Florida Fire Marshals and Inspectors Association.

Public Education Topic	GFR Program
Fire Extinguisher Use	GFR provides free hands-on live fire extinguisher training for businesses, community groups, and families.
Elderly Care and Safety	GFR does safety programming with Elder Options from the caregiver standpoint and provides education for both caregivers and neighbors in some of the city's Assisted Living Facilities and Memory Care Units. GFR also presents a slip, trips, falls, and fire prevention program to neighbors of the city's senior apartment complexes, Homeowners Association Groups, and the Senior Center.
Juvenile Fire Setter Program	GFR has one of the only programs in North Central Florida. The program is called "Operation Extinguish". The program has been delivered by GFR since 2007 and has become a youth court recognized diversion program in 2013.

GFR's annual goal is to reach 17% of the City's neighbors, however in 2020 due to COVID-19, GFR was only able to reach 8% of the City's neighbors. The following table illustrates the number of events / neighbors reached by GFR's Public Education Program. ESCI notes that these numbers are commendable as GFR staffs only one Fire and Life Safety Educator.

Figure 130: GFR Public Education Program Events / Neighbors Reached

Event Type	2018 # of Events/ attendees	2019 # of Events/ attendees	2020 # of Events/ attendees
Company Visits	88/ 19,743	98/33,059	23/ 5,473
Station Tours	47/ 1,666	41/1,308	24/ 1,819
Public Presentations	17/ 1,278	36/2,329	11/ 671
Safety City Programs	32/ 1,046	7/694	5/ 308
Crowd Manager Training	3/ 77	2/34	1/38
Crowd Manager Training On- Line	N/A	N/A	NA/13
Car Seat Installations	44/ 141	35/232	37/ 63
Fire extinguisher training	1/ 5	3/132	7/ 238
Youth Fire setter Intervention	0/ 0	5/5	4/8
Other	9/ 180	20/314	3/ 1,500

Event Type	2018 # of Events/ attendees	2019 # of Events/ attendees	2020 # of Events/ attendees
Total Events	241	248	115
Neighbors Reached Through Public Education	**24,136**	**38,112**	**10,131**

TRAINING

GFR's Training Bureau is led by a District Chief who reports directly to the ACO. Training Bureau staffing includes:

Figure 131: GFR Training Bureau Staffing

Position Title	Number of Positions
District Chief	1
Captain (Fire, EMS, and Hazmat)	3
Staff Specialist	1
Community Resource Paramedic Coordinator	1

All GFR sworn personnel, including chief officers and staff assigned to administration, possess Florida Firefighter certifications, as well as EMT or Paramedic certifications, and are trained to the Hazardous Materials Operations level.

The GFR Training Bureau is the cornerstone of GFR's Professional Development Program. All promoted GFR Driver/Operators and candidates must complete Hydraulics, Pump Operation, and GFR Driver / Operator Classes. Each of these three classes is 40-hours in duration.

GFR Lieutenants and candidates must be certified in the State of Florida to the level of Fire Officer; they must also complete a GFR-specific 40-hour company officer class that covers roles and responsibilities of a GFR supervisor, company officer, and safety officer responsibilities. GFR chief officers are required to meet all subordinate level requirements in addition to Blue Card Incident Command certification and must complete a department specific 40- hour district chief class covering roles and responsibilities of a managing officer. GFR Chief Officers are encouraged to pursue advanced training from the National Fire Academy and to complete a bachelor's degree, Executive Fire Officer (EFO) certification, and Commission in Fire Accreditation International (CFAI) designation as a chief officer.

GFR provides occupational health and safety training throughout a firefighters' career, which emphasizes cancer and mental health awareness, appropriate use of all personal safety and protective equipment, such as self-contained breathing apparatus, accountability systems, personal alert safety systems, station exhaust systems, body substance isolation, decontamination, fall prevention, as well as any new technology and techniques orientation.

GFR's Training Bureau schedules annual training to meet or exceed Insurance Services Office (ISO) Requirements. GFR's annual training program includes:

Figure 132: GFR Annual Training Program

Topic	Duration
Officer Training	12 Hours
Company Training	16 Hours
Hazardous Materials Training	6 Hours
New Hire Training	240 Hours accomplished through the GFR 7-week New Hire Orientation Program

GFR conducts live fire training in connex boxes and uses the drill field for multiple company drills. Classroom sessions are held at Station 1.

Community Resource Paramedicine Program

GFR's stated purpose of the Community Resource Paramedicine Program is to "educate people about and guide them through the solutions and resources they need to address their social and medical needs, thus reducing their dependence on emergency medical system and improving their quality of life." Goals of this program include the following:

Figure 133: Goals of the GFR Community Resource Paramedicine Program

Goals of the GFR Community Resource Paramedicine Program
Prevent avoidable hospital admissions
Decrease emergency room utilization
Increase community engagement
Reduce 911 calls
Increase primary care compliance
Increase community-wide positivehealth outcomes
Increase health equity

The CRP Program is focused in four major areas including community health, mobile integrated healthcare, chronic disease management, and overdose response and recovery. The program operates using two divisions: Community Health and Individualized Care. The roles of these divisions are as follows:

Figure 134: Goals of the GFR Community Resource Paramedicine Program Divisions

Division	Role
Community Health	The CRP Team works to mitigate healthcare disparities related to access to care, chronic disease prevention, and population resiliency. This includes initiatives such as mobile flu shots, testing services and meal delivery during

	the COVID- 19 pandemic. These outfacing services improve population health and impact thousands.
Individualized Care	CRP offers a myriad of solutions that empower patients to make positive personal health choices and actively helps patients navigate the complexities of the healthcare system to encourage self-management of chronic conditions. This goal includes programming related to substance abuse and mental health.

GFR's CRP enrollment has steadily increased during the last four years from 12 patients in 2017 to 146 in 2020.

Figure 135: GFR CRP Enrollment

Program	2017	2018	2019	2020
Case Management	12	37	38	32
Wellness Checks	0	38	76	93
Recovery Patients	0	0	0	21
Total Incidents	12	75	114	146

GFR reports that utilization of Emergency Departments, hospital admissions, and Primary Care Compliance were all reduced by between 22 and 62% through the CRP program.

Figure 136: 2020 CRP Utilization Results*

2020 Utilization Results	Reduction
Emergency Department Utilization	-28%
Hospital Admissions	-62%
Primary Care Compliance	+22%

*These numbers reflect 6-month time window pre/post program enrollment, thus only patients having graduated from CRP for six months were analyzed in this dataset.

Operations Division

The Operations Division is responsible for all-hazards response including advanced life support (ALS) pre-hospital emergency medical, tactical medical, fire, technical rescue, hazardous material, and aircraft response under the direction of the Assistant Fire Chief of Operations (ACO). The ACO is third in command to the Fire Chief.

Staff Allocation of Various Functions

Safe and effective emergency operations require the rapid deployment of sufficient quantities of well-trained personnel and equipment. These resources must be strategically located to quickly respond, while also ensuring they can also back up other response units who may be out of service on another emergency. This concept will be discussed in depth in the Service Delivery analysis section of this study. The following figure lists the Department's emergency response staffing.

GFR Firefighters are assigned to six engines, two towers, two quints, two squads, two command SUV's and two Aviation Rescue and Firefighting (ARFF) apparatus. Daily minimum staffing for GFR consists of 42 firefighters. This number includes a peak load squad that is staffed by two personnel between the hours of 8am and 8pm daily. Minimum staffing between the hours of 8pm and 8am is 40 firefighters.

Minimum unit staffing is three firefighters per Engine Company, four firefighters per Truck Company (towers and quint), two firefighters per Squad, and one firefighter each on command vehicles and ARFF apparatus.

GFR staffs two District Chiefs per shift. The city is divided geographically into two response "districts" each assigned to a District Chief. District Chief 1 is responsible for Stations 1, 2, 3 and 6. District Chief 2 is responsible for Stations 4, 5, 7, 8 and 9. Additionally, each District Chief is assigned oversight of programs that support department fire suppression efforts. These programs include water supply, communications, apparatus and equipment, facilities, health, and safety/physical fitness and ARFF and special events.

Figure 137: GFR Total Emergency Response Staffing

Position Title	Number of Positions
Operational Staff (full-time & part-time)	*Individuals considered full-time employees, primarily assigned to provide emergency services at the operational level.*
Assistant Fire Chief of Operations	1
District Chief	6
Lieutenant	39
Driver / Operator	42
Firefighter	87

A baseline overview of the career staffing model, staffing levels, and relief factors provides an opportunity to review and analyze the current staffing patterns, shifts, and options to increase efficiency, effectiveness, and capabilities. The two District Chiefs provide general direction and support for operations staff as well as command level assistance when needed at incidents with additional alarms. GFR operates with an officer assigned to each company as well as promoted apparatus Driver / Operator to serve as the individual responsible for all aspects of maintaining and operating fire engines and aerial units.

Considerable ongoing local, regional, and national discussion and debate draws a strong focus and attention to the matter of firefighter staffing. Frequently, this discussion is set in the context of firefighter safety. The jurisdiction has chosen to establish response demand zones and use the criteria outlined in NFPA standards. As detailed in the Historical System Performance section of this report, NFPA 1710, 2020 edition, specifies the number of firefighters assigned to an engine company to be "minimum of four on-duty members personnel per engine company."

ESCI notes that the more critical issue is the number of firefighters assembled at the scene of an incident in conjunction with the scope and magnitude of the job tasks expected of them, regardless of the type or number of vehicles upon which they arrive. NFPA 1710 recommends that the number of on-duty fire suppression members shall be sufficient to perform the necessary firefighting operations given the expected firefighting conditions. The standard further recommends that the numbers shall be determined through task analyses that take the following factors into consideration.

Figure 138: Staffing Factors

Staffing Factors
Life hazard to the populace protected.
Provisions of safe and effective firefighting performance conditions for the firefighters.
Potential property loss.
Nature, configuration, hazards, and internal protection of the properties involved.
Types of fireground tactics and evolutions employed as standard procedure, type of apparatus used, and results expected to be obtained at the fire scene.

The total number of positions required becomes a policy decision based on the needs of the jurisdiction. The jurisdiction also establishes the number of employees needed above the minimum to allow for vacancies due to vacation, sick, and other types of leave. This staff requirement above the minimum yields a total number of full-time employees required to ensure necessary daily minimum staffing is achieved according to policy. Minimum staffing for GFR is three firefighters per engine company and four firefighters per ladder company.

Minimum Staffing Factor Determination

The starting point for the analysis was to determine the minimum number of personnel needed to fill the minimum 44 daily staffing positions for fire operations and avoid overtime for unscheduled hours.

Minimum Staffing

- 365 days per year x 24 hours per day = 8,760 hours per year per position.
- 8,760 hours per year x 42 minimum positions daily = 367,920 hours per year that must be staffed for 24/7 coverage.
- 52-hour workweek equals 2,704 scheduled hours per position annually: 367,920/2,704 = 136.00 FTE positions for minimum staffing.
- Gainesville Fire Rescue currently has 174 FTEs budgeted for operations staffing with 163 filled as of 2020.

Relief Factor

The next staffing factor to be analyzed is the "relief factor," or the amount of additional FTE positions needed to reasonably cover "off time" including, leave, training, vacancies, etc. The following is an industry-accepted methodology used to determine a relief factor to cover paid leave, training time off, and vacancies adequately for 24-hour fire and EMS department shifts. Determining the relief factor is outlined in the following:

- The average of Gainesville Fire Rescue firefighter paid leave, time off for training, unscheduled time off, Kelly days, and position vacancies is 94,134 hours annually.
- 94,134 hours divided by the scheduled 2,704 hours per position annually = 34.8 FTEs of annual coverage required for time off.
- When the total average time off or additional coverage required per FTE (541) is subtracted from the total annual hours per FTE (2,704) the result is an average of 2,163 hours per year worked.
- By dividing total annual hours scheduled (2,704) by hours worked (2,163), a relief factor of 1.25% is achieved.
- This results in a total of 178 operational FTEs or 59 FTEs per shift using the 1.25% relief factor.

In some fire and EMS departments, the need to apply the relief factor to a specific rank or classification is needed based on staffing criteria or these instances. The above exercise considers the entire operations staffing group and does not distinguish between officer and line staffing or the use of operations staff in other areas. In these cases, the relief factor may be more or less than the overall number identified here. This becomes a policy decision and is usually based on specific staffing needs or criteria of the specific rank or classification in question.

Technical Rescue Team/ Urban Search/Rescue Program

GFR provides a Light Technical Rescue Response (LTRT). The Team is designated by the State of Florida as LTRT #310. The purpose of LTRT #310 is the mitigation of all hazardous emergencies that involve: heavy industrial or vehicle extrication, confined spaces, life safety rope rescues, and trench/excavation or structural collapse at the technician level.

ESCI notes that LTRT #310 is cross staffed by GFR firefighters who are assigned to work full time on other apparatus, there no employees who are assigned exclusively to this team. Since this service is provided by firefighters with additional training/certifications beyond the normal required level for all GFR firefighters, there is an incremental and recurring personnel cost for this service. The FY 21 Personnel Services budget for the Technical Rescue Team is $19,776 or approximately 1/10 of 1% of the total GFR Personnel Services budget. Total equipment inventory for the TRT was reported to the State of Florida in 2011 as $166,570. Over half of this equipment was funded by the State of Florida as was much of the initial and recurring training. The remainder of the equipment inventory is that typically used by departments that may be required to perform specialized urban search and rescue (USAR) and other technical rescues in communities with many high-risk facilities such as those documented in the GFR Standards of Cover document. The cost of team deployments outside the city is generally reimbursed through State or Federal disaster declarations.

Specialized services provided by the LTRT Team include:

Figure 139: LTRT Services

LTRT Services
Rope Rescue
Confined Space
Structural Collapse Search and Rescue

Trench Collapse Rescue
Heavy Vehicle and Machinery Rescue

LTRT #310 gives GFR the ability to respond to local incidents requiring specialized rescue services in relation to unique situations presenting the need for: rope rescue, confined space rescue, structural collapse search and rescue, trench collapse rescue, and heavy vehicle and machinery rescue. These 29 members have completed technician level certification on the above five core disciplines found within NFPA 1670 and are, therefore, designated as Rescue Specialists. For continuing education, LTRT members engage in in-station weekly training to ensure abilities are maintained and tools and equipment remain in a state of readiness for immediate deployment.

GFR has a cadre of 29 Rescue Specialists who have completed technician level certification on these five core disciplines in accordance with NFPA 1670. LTRT members engage in weekly training at their fire stations to maintain their skill sets and tools at the ready. This training is managed by the District Chief that supervises that team.

GFR's LTRT members also serve as part of the North Central Florida Disaster Task Force 8 (TF8). TF8 is a multi-agency Urban Search and Rescue (USAR) team and is one of the Florida's nine specialized assets for heavy technical rescue extended operations. Members of TF8 include also come from Marion County Fire Rescue (the sponsoring agency for TF8) and Ocala Fire Department.

GFR has an original MOU with the State of Florida to function as Florida LTRT #310 and Florida TF8 participating agency.

There were no TF8 or LTRT 310 deployments in 2020, although both were placed on standby several times. GFR responded to 32 calls typed for Technical Rescue, not counting any Extrication calls (motor vehicle involved), or stuck elevators. Calls for service have increased in recent years. The department was requested to provide stand-by for 45 permitted confined space entries during 2020.

GFR members have deployed as members of FLTF8 to multiple natural disasters over the years and performed multiple successful high angle rescues, one low angle rescue, a successful trench rescue, and multiple confined space rescues. The team was activated for:

- Hurricane Katrina
- Hurricane Ivan
- The Villages Tornado
- North Florida Floods (Swiftwater response)
- Hurricanes Hermine
- Hurricane Matthew
- Hurricane Irma
- Hurricane Michael
- Hurricane Dorian

Hazardous Materials

GFR established a Hazardous Materials Team in 1972. The mission of the Gainesville Fire Rescue Hazardous Materials Program is to increase the safety and wellbeing of its neighbors and environment through education, training, and rapid response to Hazardous Materials incidents for identification, mitigation, and incident stabilization by technicians of the highest caliber.

ESCI notes that the Hazardous Materials Team is cross staffed by GFR firefighters who are assigned to work full time on other apparatus, there no employees who are assigned exclusively to this team. Since this service is provided by firefighters with additional training/certifications beyond the normal required level for all GFR firefighters, there is an incremental and recurring personnel cost for this service. The FY 21 Personnel Services budget for the Technical Rescue Team is $45,177 or slightly less than 3/10 of 1% of the total GFR Personnel Services budget. Total equipment inventory for the Hazardous Materials Team has a cost of approximately $750,000.

The figure below shows the original funding source for the equipment and supplies of the GFR Hazmat Team. Federal sources are multiple and include DHS and SHSGP grants. State funding is also from multiple sources including the Florida Department of Radiation and the North Florida Local Emergency Planning Council (NFLEPC). Local funding is primarily through various city General Fund revenue sources but does include $92,00 in local grant funding. It is important to note that of the original equipment/supply cost of $750,000 only $3,200 or approximately 4/10 of 1% was funded directly by the City of Gainesville. And, of the recurring/replacement costs, GFR is only required to fund $163,000. Of that amount, $106,000 is for SCBA equipment which has at least a 10-year life span and can be used for other than hazardous materials response. The remainder of the equipment inventory is that typically used by departments that may be required to respond to and mitigate hazardous materials releases in communities with many high-risk facilities such as those documented in the GFR Standards of Cover document.

Figure 140: Hazardous Materials Team Equipment/Supply Cost (FY 20 Inventory)

Initial Funding Source			Recurring/Replacement Funding Source		
Federal	State	Local[1]	Federal	State	Local[1,2]
$ 457,942	$ 279,774	$ 12,401	$ 549,448	$ 28,527	$ 172,142

[1]Includes $9,200 of locally donated equipment

[2]Includes $106,000 in non-recurring SCBA Airpack (14) and bottle (16) costs; equipment can be used for other calls

The City of Gainesville has 31 sites which contain significant, reportable quantities of hazardous materials as reportable under US Environmental Protection Agency rules. Additionally, Interstate-75 runs along the western edge of the city and poses a significant transportation risk due to the high daily volume of hazardous materials carriers. The cost of team deployments outside the City of Gainesville are generally reimbursed through State or Federal disaster declarations and the city has an ordinance in place to recover equipment, supplies, and personnel costs for incident response within the city. Recovery under this ordinance has varied but is generally low, ranging between $500 and $3,500 from FY 16 to FY 19. In FY 20, recovery was just under $100,000. The City of Gainesville also charges a hazmat gross receipts tax which provides a revenue stream funding GFR at an historical annual average of $120,000 between FY 16 and FY 20.

A timeline of the major milestones of the team is as follows.

Figure 141: GFR Hazardous Materials Team Milestones

Year	Milestone
1972	GFR started its Hazardous Materials Team
1998	The GFR team was assessed by the State of Florida to determine their deployment capability as the state moved toward the creation of funded assets for hazardous materials response
2000	The State of Florida identified the GFR Hazardous Materials Team as one of 29 Hazardous Materials Response Teams that were eligible for deployment within the State of Florida
2001	The GFR Hazardous Materials Team participated in the creation and training of five initial response hazardous material teams within the Local Emergency Planning Committee (LEPC) Region
2003	The GFRHMT received a cache of equipment through the State of Florida to enhance our capability to respond to chemical weapon agents (CWA). This equipment continues to be maintained through grant funding.

The GFR Hazardous Materials Team currently consists of 43 Hazardous Materials Technicians and a program Captain who operate under the direction of the Training Chief. All GFR first-due companies are trained to the operations level hazardous response in accordance with NFPA 472, Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents.

The GFR Hazardous Materials Team a state-funded response team. The State of Florida provides GFR with grant funds to sustain equipment. The sustainment funds are only available for equipment that has been provided to GFR as a Type I Hazardous Materials Response Team. A Type I Hazardous Materials Team, when deployed for a state emergency, is required to initially respond with eight technicians and to have another seven technicians to respond within one hour. These technicians are to be self-sufficient for up to 72 hours. GFR's primary responsibilities lay within the boundaries of the City of Gainesville but the Hazardous Materials Team has a response area of over a 10,000 square mile region as the technical core of the North Central Florida Local Emergency Planning Committee Regional Hazardous Material Response Team.

GFR's Hazardous Materials Vehicle, HZ2, is cross staffed with four Hazardous Materials Technicians that are assigned to Tower 2. If a regional event occurs, technicians may be recalled from other staffed units or called in on over time to complete the required eight-person response requirements.

The GFR Hazardous Materials Team responded to 345 Hazardous Material calls in 2020, which is a 40% increase from 2019. Changes in the GFR Computer Aided Dispatch System assignment of call types identified previously unrecognized Hazardous Materials responses which contributed to the increase. Gainesville Fire Rescue's Hazardous Materials Team has participated in regular regional exercises as a means of exhibiting continued competency as a response team.

Gainesville Fire Rescue's Hazardous Material Team trains continuously throughout the year and in 2020 has begun the second year of the State of Florida Company training cycle for Technicians as well as completed mandated radiation training for all Technicians and Operations Staff who are all trained to Hazardous Material Operations Level. The Team continues to distinguish itself through citizen protection and provide advanced air monitoring / CWA / and CBRN monitoring at local high attendance events where risk index is high.

Gainesville Fire Rescue's Hazardous Materials Team was awarded SHSGP State Grant funding to purchase new equipment that replaced unsupported technology and funding to sustain multiple monitors that are comply with SERC Type I Hazardous Material Response detection technologies Capabilities.

Aircraft Rescue and Firefighting Program

Federal Aviation Administration (FAA) 14 Code of Federal Regulations (CFR) Part 139 requires that airports must provide aircraft rescue and firefighting (ARFF) services during air carrier operations that require a Part 139 certificate. To meet this need, GFR provides trained certified personnel to meet local and FAA requirements for Airport operations at the Gainesville-Alachua County Regional Airport including fire suppression, education, inspections and BLS medical response.

The airport is managed by the Gainesville-Alachua County Regional Airport Authority (GACRAA). GFR provides certified ARFF personnel to staff Gainesville Regional Airport (Station 6) continuously through an Interlocal Agreement between the City of Gainesville and GACRAA. GFR provides one Company Officer and one Driver Operator, who work in coordination with Airport operations each day to meet FAA requirements and Airport needs. Staff assigned to the ARRF program include:

Figure 142: GFR ARFF Staffing

Position Title	Number of Positions
ARFF Certified Lieutenant	7
ARFF Certified Driver / Operator	5

ARFF Station 6 ran a combined thirty-two (32) calls in 2020. Sixteen (16) were for aircraft trouble, four (4) were fire or alarm activations, one (0) Hazmat call, and Eleven (11) EMS calls on the airport property. According to GFR, the program fully met the needs of the airport during 2020 by providing continual 24-hour service. The ARFF personnel have been integrating themselves more fully into the overall Airport services by participating in managerial meetings on safety, wildlife, and day to day services, thus improving the value of GFR to the community.

Appendix D: Capital Apparatus Inventory

Three basic resources are required to successfully carry out the mission of a fire department: trained personnel, firefighting equipment, and fire stations. No matter how competent or numerous the firefighters, if reliable capital equipment is not available, the department would be unable to execute its mission safely and effectively. The most essential capital assets for use in emergency operations are facilities and apparatus (response vehicles). Of course, the City's financing ability determines the level of capital equipment it can acquire and make available for use by emergency personnel. The following section is an assessment of GFR's capital facilities and apparatus.

Apparatus & Vehicles

This section of the report describes the frontline fleet inventories of GFR, which includes emergency response apparatus, medic units (ambulances), command/staff vehicles, and support units.

GFR keeps one engine in "ready reserve" status for immediate deployment. The department also maintains an additional two engines, two quints, and one command SUV as back-up vehicles. When staffed to maximum strength, GFR can stand-up two additional engines, one truck company, and three quick response ALS specialty vehicles such as HazMat, Technical Rescue, or Tactical EMS.

The following figure lists the inventory of the frontline fleet.

Figure 143: Gainesville Fire Rescue Frontline Apparatus Fleet Inventory

Designation	Type	Year	Manufacturer	Condition	Station
Engine/Pumpers					
Engine 1	Engine	2016	E-One	Excellent	1
Engine 2	Engine	2015	E-One	Good	2
Engine 3	Engine	2018	E-One	Excellent	3
Engine 4	Engine	2016	E-One	Good	4
Engine 5	Engine	2008	E-One	Fair	5
Engine 7	Engine	2018	E-One	Excellent	7
Aerials/Ladders					
Quint 8	Quint	2017	E-One	Excellent	8
Quint 9	Quint	2008	E-One	Fair	9
Tower 1	Aerial	2017	E-One	Excellent	1
Tower 2	Aerial	2015	E-One	Good	2
Command/Staff/Other Vehicles					
Squad 1	Heavy Rescue	2016	Freightliner	Good	1
District 1	Command Vehicle	2017	Ford Expedition	Good	1

Haz Mat 2	Hazardous Materials	2006	E-One	Fair	2
Squad 3	Squad	2017	Freightliner	Good	3
Crash 6-1	AARF	1993	E-One Titan	Fair	6
Crash 6-3	AARF	2007	Oshkosh Striker	Fair	6
District 2	Command Vehicle	2014	Ford Expedition	Good	8
4232	MRU	2017	Polaris	Excellent	
1233	MRU	2017	Polaris	Excellent	
4549	MRU	2017	Polaris	Excellent	

ESCI observed that Gainesville Fire Rescue's vehicles were well maintained and generally in good to excellent condition. ESCI was impressed with the appearance and general condition of the department's apparatus, which is indicative of the agency's culture of pride and ownership.

ESCI evaluated the age of the Gainesville Fire Rescue's fleet of apparatus, finding that the units range from a high of 28 years of age, which includes the department's reserve apparatus and utility vehicles, to a low of just three years. Ten of the department's 21 front-line apparatus are five or fewer years old. By averaging the total apparatus list, which includes reserve units, ambulances, and staff vehicles, ESCI calculates an overall combined average of 7.4 years.

Apparatus Maintenance & Replacement Planning

No piece of mechanical equipment or vehicle can be expected to last indefinitely. As apparatus age, repairs tend to become more frequent and more complex. Parts may become more difficult to obtain, and downtime for repair and maintenance increases. Given that fire protection, EMS, and other emergencies prove so critical to a community, downtime is one of the most frequently identified reasons for apparatus replacement.

Because of the expense of fire apparatus, most communities develop replacement plans. To enable such planning, fire departments often turn to the accepted practice of establishing a life cycle for apparatus that results in an anticipated replacement date for each vehicle. The reality is that it may be best to establish a life cycle for planning purposes, such as the development of replacement funding for various types of apparatus yet apply a different method (such as a maintenance and performance review) for determining the actual replacement date, thereby achieving greater cost-effectiveness when possible.

Those within the GFR responsible for managing and maintaining the fleet should be concerned about aging apparatus and vehicles and ensure that a funded replacement schedule is in place. As frontline units age, fleet costs will naturally be higher, and more downtime will be associated with necessary repairs and routine maintenance.

Fleet Maintenance

National Fire Protection Association 1901: Standard for Automotive Fire Apparatus recommends that fire apparatus 15 years of age or older be placed into reserve status, and apparatus 25 years or older should be replaced. This is a general guideline, and the standard recommends using the following objective criteria in evaluating fire apparatus lifespan:

- Vehicle road mileage.
- Engine operating hours.
- The quality of the preventative maintenance program.
- The quality of the driver-training program.
- Whether the fire apparatus was used within its design parameters.
- Whether the fire apparatus was manufactured on a custom or commercial chassis.
- The quality of workmanship by the original manufacturer.
- The quality of the components used in the manufacturing process.
- The availability of replacement parts.

The following figure is one example of criteria that can be utilized for determining apparatus replacement based on a points system. The method examines age, apparatus mileage or hours, service, condition, and general reliability.

Figure 144: Criteria & Method for Determining Apparatus Replacement

Evaluation Components	Points Assignment Criteria
Age:	One point for every year of chronological age, based on in-service date.
Miles/Hours:	One point for each 10,000 miles or 1,000 hours
Service:	1, 3, or 5 points are assigned based on service-type received (e.g., a pumper would be given a 5 since it is classified as severe duty service).
Condition:	This category takes into consideration body condition, rust interior condition, accident history, anticipated repairs, etc. The better the condition, the lower the assignment of points.
Reliability:	Points are assigned as 1, 3, or 5, depending on the frequency a vehicle is in for repair (e.g., a 5 would be assigned to a vehicle in the shop two or more times per month on average, while a 1 would be assigned to a vehicle in the shop an average of once every three months or less.

Point Ranges	Condition Rating	Condition Description
Under 18 points	Condition I	Excellent
18–22 points	Condition II	Good
23–27 points	Condition III	Consider Replacement

28 points or higher	Condition IV	Immediate Replacement

Economic Theory of Apparatus Replacement

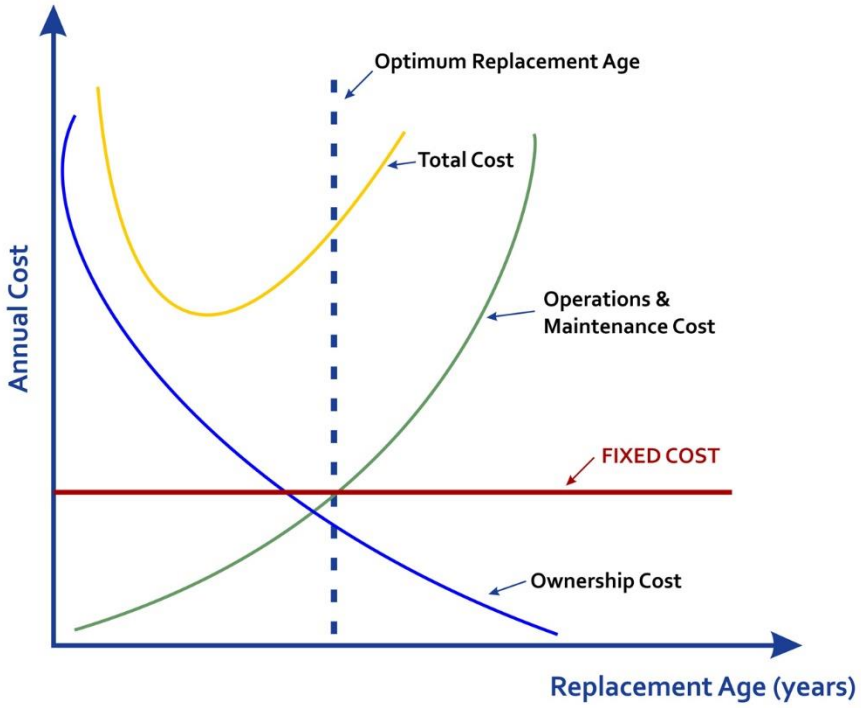
A conceptual model utilized by some fire departments is the Economic Theory of Vehicle Replacement. The theory states that, as a vehicle ages, the cost of capital diminishes and its operating cost increases. The combination of these two costs produces a total cost curve. The model suggests the optimal time to replace any piece of apparatus is when the operating cost begins to exceed the capital costs. This optimal time may not be a fixed point, but rather a range of time.

Shortening the replacement cycle to this window allows an apparatus to be replaced at optimal savings to the fire department. If an agency does not routinely replace equipment in a timely manner, the overall reduction in replacement spending can result in a quick increase in maintenance and repair expenditures. Fire officials, who assume that deferring replacement purchases is a good tactic for balancing the budget, need to understand two possible outcomes that may occur because of that decision:

- Costs are transferred from the capital budget to the operating budget.
- Such deferral may increase overall fleet costs.

The following figure is a graphic representation of the Economic Theory of Vehicle Replacement.

Figure 145: Economic Theory of Vehicle Replacement



Regardless of its net effect on current apparatus costs, the deferral of replacement purchases unquestionably increases future replacement spending needs and may impact operational capabilities and safe and efficient use of the apparatus.

Appendix E: Capital Facility Inventory

All GFR facilities were surveyed to determine the current conditions; interior and exterior. Additionally, existing facility design (interior layout and exterior siting) were also reviewed and assessed. GFR crews and staff were interviewed to secure operational deficiencies that might not be clear from surveying. Lastly, GFR was requested to provide the architecture and engineering team with a listing of all "chronic" facility maintenance issues for further review and documentation.

To document and chronical all assessments, a facility survey form was developed to provide a resource to GFR with the results of the Design Team's assessment. The following forms were customized (adapted to fit the critical parameters of GFR facilities). Each of the facilities surveyed is represented by its own form. The survey conditions were assessed as to a standardized conditions assessment as follows:

- Exceptional – Excellent condition, no repair needed
- Good – Some repair is needed
- Fair – Some repair or renovation is needed
- Poor – Replacement is needed; service life is at an end

In total, 16 GFR facilities were evaluated which includes Station 6, the airport station, which is operated by GFR but not maintained by GFR. Nine of the 16 facilities are stations, the other 7 facilities are facilities owned, occupied, or operated by GFR. These 7 facilities are integral to the daily GFR services delivery requirements.

The following forms are presented in station numbering sequence (Station 1, Station 2, etc.) for GFR reference:

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
June 2021
REV September 2021

EXISTING FACILITY ASSESSMENT SURVEY

STATION NAME/NO.:	**Fire Station #1**
STATION ADDRESS/LOCATON:	525 S. Main Street

(Brief Description of station)

The station is the Department's newest station. This station provides some administrative services in addition to being a normal fire station. The station project encompasses the station and support services. As a 2-story station, daytime functions are housed on the 1st floor and bunkroom functions are housed on the 2nd floor.

STRUCTURE							
Date of Construction	2018						
Date(s) of Renovation/Expansion	N/A						
Building Age	3						
Construction Type	II-B						
Building Construction	CMU Masonry, Steel Bar Joists						
Building Area *(SF)*:	~22,260						
Number of Stories:	Two - Living Quarters/Gym upstairs						
Site Area *(SF & Acres)*:	SF:	~66,924		Acres:	~1.54		
Maximum Station Staffing Capability	18 Fire Personnel, 3 Administrative Personnel						
Seismic Protection *(if required)*	Compliant						
Category IV Conformance *(if required)*	Compliant						
ICC 500 Conformance *(if applicable)*	Compliant						
Hardened Space / Storm Shelter		Yes	X	No			
Generator	X	Yes		No			
Auxiliary Power	X	Full Facility		Partial Fac.			Fuel Source
General Condition	Exceptional						
Generator Enclosure *(storm rated?)*	X	Yes		No	Hurricane Shutters		
Special Considerations	Impact resistant glazing assumed						

HEALTH / WELLNESS & SAFETY / SECURITY						
Sprinklers / Smoke Detection	X	Sprinklers	X	Smoke Detection		
Decontamination / Biohazard Disposal	X	Yes		No		N/A
Haz. Bldg Materials *(lead/asbestos/etc.*	N/A					
Entry Flooring/Trip Hazards	N					
Night Lights to Apparatus Bays	X	Yes		No		N/A

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
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Decon Type	Sink Compartment					
Gear Wash	X	Yes		No		N/A
Extractor	X	Yes		No		N/A
Gear Dry & Type		Yes	X	No		N/A
Ice Maker Location	Apparatus Bays					
Gear Storage		Yes		No		N/A
Gear Storage Location	Y, Off Apparatus Bays					
Gear Lockers No.	48					
SCBA	X	Yes		No		N/A
Apparatus Exhaust System	X	Yes		No		N/A
HVLS Ceiling Fans		Yes	X	No		N/A
Apparatus Exhaust System Type	Filtration					
Mechanical System Type/Age	Split Systems					
Natural Light in Spaces	Y					
Security	X	Access Cntrl	X	Fencing	X	Video Surveillance
Other Security Measures	None					
Fire Extinguishers	Y					

ASSIGNED APPARATUS / VEHICLES

Apparatus Call Sign	Min. Staffing*	Comments
Ambulance #		
Truck #: E-1, T-1, SQ-1	7	
Other Vehicles: DC-1, Polaris (2)	1	(Several GFR Trailers stored on-site)

**If an apparatus is cross-staffed, enter "CS" after the minimum staffing number.*

BUILDING ASSESSMENT

Building Envelope / Exterior Finishes	Brick Masonry, Cast Stone Masonry					
Window Material	Alum. Storefront					
Roof Construction	Flat & Standing Seam Pre-Finished Metal; Numerous Roof Leaks					
Exterior Doors	Alum., Hollow Metal					
Emergency Operations Center (EOC)		Yes	X	No		N/A
Elevator(s) *(quantity/type)*	Y					
Rated Bunk Walls		Yes	X	No		N/A
Bunk Space	X	Individual		Dormitory		
Number of Beds	18					
Bunk Lockers/Storage *(location/type/number)*	Y, Outer Bunk Entry					
Bunk Accessories *(desk, tv, etc.)*	Desk, Locker					
Personal Laundry (Washer/Dryer)	X	Yes		No		
Shower Facilities	X	Individual Rooms				Dormitory Style
No. of Showers		Men's		Women's	10	Unisex

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
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No. of Toilets		Men's		Women's	10	Unisex
Lavatory Style *(for personnel)*	X	Wall Hung		Vanity		
Exercise/Fitness Facilities	1,380 SF					
Kitchen/Dining	750 SF					
Kitchen Appliances	Range, Oven, Hood, Refrigerators, Ice Maker					
Kitchen Refrigerators/Pantries	4 Refrig./3 Pantries					
Access to Outdoor Patio	Y					
Private vs. Public Space Separation		Yes		No		
Office Space						
Personal Study Space	X	Yes		No		N/A
Training/Meeting Rooms	Training-750 SF/Briefing-910 SF					
Adequate Waiting Area	X	Yes		No		N/A
Adequate Office Storage	X	Yes		No		N/A
Adequate Living Storage	X	Yes		No		N/A
Adequate Apparatus Storage	X	Yes		No		N/A
Apparatus Bays *(include #)*	5	Drive-through Bays				Back-in Bays
Apparatus Bay - Overhead Door Size(s)	14x14					
Sill Condition at Apparatus Bay Doors	Flat					
Overhead Door Operator		Trolley		Jack-Shaft	X	Bi-Fold
Overhead Door Safety Features	Sensor Edge					
Apparatus Bay Drains	Short Trench Drains					
Apparatus Clearance *(front/back)*	80'					
Apparatus Bay Width	18', 20'					
Apparatus Bay Floor *(condition/slope)*	Concrete, sloped					
Work Shop	X	Yes		No		N/A
Hose Storage	X	Yes		No		N/A
Hose Wash		Yes	X	No		N/A
Site Risks/Other Observations	Fire-ratings would not appear to be correctly applied.					
MEP ASSESSMENT						
Plumbing Assessment	No emergency eye wash, flush valve fixtures; chronic issues					
HVAC Assessment	VRF, 100% FA, bldg. controls, Type I hood; exceptional condition					
Electrical Assessment	300 kW NG Generator, EV Chargers (2); generally exceptional condition					
Special Systems Assessment	Full Fire Alarm System w/CO detection at bunks; No intercom					
Site Assessment	6" Fire; 3" Domestic, exceptional condition					
Building Risks/Site Risks	None					

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
June 2021
REV September 2021

SITE ASSESSMENT								
Topography	Generally slopes high to low from northeast to southwest							
Landscaping Quality	Generally good							
Site Lighting	Generally limited to interior of site; perimeter not well-lit							
Storm Water Drainage	Well-drained, small area of erosion at north side of building							
Downspouts Below Grade		Yes	X	No		N/A		
Sustainability	Limited area for landscaping							
Paving & Concrete	Apron: Concrete aprons, front & rear							
	Curbs: Concrete curbs throughout							
	Joints: Good condition							
	Other:							
Parking Counts	31	Staff	17	Visitor	3	ADA		
Other Parking *(count/type)*	GFR Trailer parking on site							
Sidewalk *(ROW connect, condition, accessibility)*	Sidewalk from building to public way							
Front Door Visible	X	Yes		No				
Private vs. Public Space Separation	X	Yes		No				
Street Access Vertical Elevation	Slight grade change between street and front door							
Line of Sight	Generally good with some limitations of view to south							
Front Apron Length	Generally adequate for most vehicles; ladder truck fit is marginal							
Rear Apron Length *(if applicable)*	Generally adequate							
Apparatus Maneuvering Clearance	X	Yes		No				
Access & Egress To/From Site - Apparatus	Generally good							
Access & Egress To/From Site - Staff	Generally good, rear of site access							
Access & Egress To/From Site - Visitors	Visitor parking is unmarked but available							
Bollards *(OH Doors, Other)*	Yes							
Flagpole	X	Yes		No	1	How Many?		
Fill Hydrant	X	Yes		No				
Hydrant Locations	Located at street							
Other Site Structures *(type/function)*	Refer to Logistics & GFR Supply Warehouse							
Training Tower / Other	No-burn tower at NE corner of building							
Outdoor Patio	Yes							
Outdoor Fitness	Yes							
Site Risks/Other Observations	With nearby mass transit, site is open to pedestrian access							

INTERIOR ACCESSIBILITY / ADA				
Int/Ext. Doors *(access clearance / threshold)*	X	Yes		No
Doors *(handles/opening pressure)*	X	Yes		No
Water Fountain *(height/accessibility)*	X	Yes		No

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
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Signage *(height / braille)*	X	Yes		No	
Floor Transitions *(interior/exterior)*	X	Yes		No	
Floor Slopes *(interior ramps, etc.)*	X	Yes		No	
PUBLIC ACCESSIBLE AREAS					
Sinks *(height, pipe wrap)*	X	Yes		No	
Dispensers/Accessory *(mounting height)*	X	Yes		No	
Countertops *(heights)*	X	Yes		No	
Grab Bars	X	Yes		No	
Protruding Objects-Accessible Route(s)	X	Yes		No	
Public Access Rooms *(toilets/training/etc.)*	X	Yes		No	
EXTERIOR ACCESSIBILITY / ADA					
ADA Parking Striping/Signage	X	Yes		No	
Access between ADA Parking & Building	X	Yes		No	
Other Access to Building	X	Yes		No	Facility has additional assessible entry off rear apron/parking.
Slopes of Accessible Access Pathways	X	Yes		No	

WSKF CONDITION RATINGS & DEFINITIONS	
Exceptional	New or well-maintained condition, little to no visual evidence of wear and tear, damage, or other deficiencies.
Good	Some wear and tear, damage, or other deficiencies are visible but still in a functioning and acceptable condition.
Fair	Subjected to some hard and/or long-term wear and term or damage, nearing the end of its useful life and should be monitored for additional deterioration
Poor	At the end of its useful or serviceable life due to age and condition, replacement should be considered imminent

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
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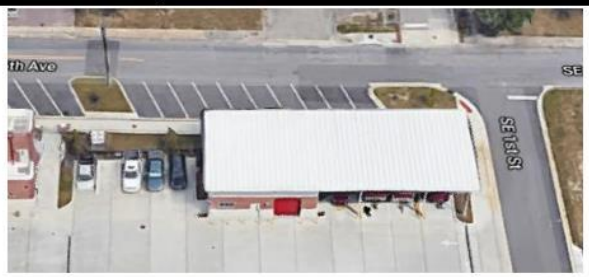
REV September 2021

EXISTING FACILITY ASSESSMENT SURVEY

STATION NAME/NO.:	**Logistics & Supply Warehouse (at Station #1)**
STATION ADDRESS/LOCATON:	525 S. Main Street



(Brief Description of station)

The facility is a support facility for GFR providing warehousing for Department-wide supply needs. Additionally, this facility has a open-air structure at the east end providing 4 bays of covered, outdoor storage for GFR trailers and similar equipment.

STRUCTURE								
Date of Construction	2018							
Date(s) of Renovation/Expansion	N/A							
Building Age	3							
Construction Type	II-B							
Building Construction	PEMB w/Masonry & Stucco Veneer							
Building Area *(SF)*:	~1,390 SF							
Number of Stories:	1							
Site Area *(SF & Acres)*:	SF:	N/A		Acres:	N/A			
Maximum Station Staffing Capability	5							
Seismic Protection *(if required)*	Unknown							
Category IV Conformance *(if required)*	Unknown							
ICC 500 Conformance *(if applicable)*	Unknown							
Hardened Space / Storm Shelter		Yes	X	No				
Generator		Yes	X	No				
Auxiliary Power		Full Facility		Partial Fac.		Fuel Source		
General Condition	Exceptional							
Generator Enclosure *(storm rated?)*		Yes		No	X	N/A		
Special Considerations	Category IV not assumed to be required							
HEALTH / WELLNESS & SAFETY / SECURITY								
Sprinklers / Smoke Detection	X	Sprinklers		Smoke Detection				
Decontamination / Biohazard Disposal		Yes		No	X	N/A		
Haz. Bldg Materials *(lead/asbestos/etc.*	NA							
Entry Flooring/Trip Hazards	NA							
Night Lights to Apparatus Bays		Yes		No	X	N/A		

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
June 2021
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Decon Type	NA					
Gear Wash		Yes		No	X	N/A
Extractor		Yes		No	X	N/A
Gear Dry & Type		Yes		No	X	N/A
Ice Maker Location	NA					
Gear Storage	X	Yes		No		N/A
Gear Storage Location	Extra gear storage; not in service					
Gear Lockers No.	NA					
SCBA		Yes		No	X	N/A
Apparatus Exhaust System		Yes		No	X	N/A
HVLS Ceiling Fans		Yes		No	X	N/A
Apparatus Exhaust System Type	NA					
Mechanical System Type/Age	Split systems					
Natural Light in Spaces	Windows					
Security	X	Access Cntrl		Fencing		Video Surveillance
Other Security Measures	Building is located within fenced area					
Fire Extinguishers	Yes					

ASSIGNED APPARATUS / VEHICLES

Apparatus Call Sign	Min. Staffing*	Comments
Ambulance #	-	
Truck #	-	
Other Vehicles		

**If an apparatus is cross-staffed, enter "CS" after the minimum staffing number.*

BUILDING ASSESSMENT

Building Envelope / Exterior Finishes	Brick, cast stone & stucco					
Window Material	Alum.					
Roof Construction	Standing seam, prefinished metal					
Exterior Doors	Hollow Metal					
Emergency Operations Center (EOC)		Yes		No	X	N/A
Elevator(s) *(quantity/type)*	NA					
Rated Bunk Walls		Yes		No	X	N/A
Bunk Space		Individual		Dormitory	X	N/A
Number of Beds	NA					
Bunk Lockers/Storage *(location/type/number)*	NA					
Bunk Accessories *(desk, tv, etc.)*	NA					
Personal Laundry (Washer/Dryer)		Yes		No	X	N/A
Shower Facilities		Individual Rooms			X	N/A
No. of Showers		Men's		Women's	X	N/A

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
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No. of Toilets		Men's		Women's	1	Unisex
Lavatory Style *(for personnel)*	X	Wall Hung		Vanity		
Exercise/Fitness Facilities	NA					
Kitchen/Dining	NA					
Kitchen Appliances	NA					
Kitchen Refrigerators/Pantries	NA					
Access to Outdoor Patio	NA					
Private vs. Public Space Separation		Yes		No	X	N/A
Office Space	Yes					
Personal Study Space		Yes		No	X	N/A
Training/Meeting Rooms	NA					
Adequate Waiting Area		Yes		No	X	N/A
Adequate Office Storage		Yes	X	No		N/A
Adequate Living Storage		Yes		No	X	N/A
Adequate Apparatus Storage		Yes		No	X	N/A
Apparatus Bays *(include #)*		Drive-through Bays			X	N/A
Apparatus Bay - Overhead Door Size(s)	NA					
Sill Condition at Apparatus Bay Doors	NA					
Overhead Door Operator		Trolley		Jack-Shaft	X	N/A
Overhead Door Safety Features	NA					
Apparatus Bay Drains	NA					
Apparatus Clearance *(front/back)*	NA					
Apparatus Bay Width	NA					
Apparatus Bay Floor *(condition/slope)*	NA					
Work Shop		Yes		No	X	N/A
Hose Storage		Yes		No	X	N/A
Hose Wash		Yes		No	X	N/A
Site Risks/Other Observations	Insufficient storage space; interior & covered					
MEP ASSESSMENT						
Plumbing Assessment	Flush valve, fire protection; exceptional condition					
HVAC Assessment	Split systems, exhaust air system; exceptional condition					
Electrical Assessment	Electrical service in good condition; exceptional condition					
Special Systems Assessment	Full fire alarm; exceptional condition					
Site Assessment	Covered storage, fire protection; exceptional condition					
Building Risks/Site Risks	None					

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
June 2021
REV September 2021

SITE ASSESSMENT (Refer to Station 1 Site Assessment)						
Topography	Generally flat					
Landscaping Quality	Surrounding area is concrete					
Site Lighting	Generally well-lit					
Storm Water Drainage	Properly drains					
Downspouts Below Grade		Yes	X	No		N/A
Sustainability	Most site area is paved					
Paving & Concrete	Apron: NA					
	Curbs: NA					
	Joints: NA					
	Other: None					
Parking Counts		Staff		Visitor		ADA
Other Parking *(count/type)*	Covered parking/storage for GFR trailers & similar equipment					
Sidewalk *(ROW connect, condition, accessibility)*	NA					
Front Door Visible	X	Yes		No		
Private vs. Public Space Separation		Yes		No	X	N/A
Street Access Vertical Elevation	Finish floor elevation is higher than street elevation					
Line of Sight	NA					
Front Apron Length	NA					
Rear Apron Length *(if applicable)*	NA					
Apparatus Maneuvering Clearance		Yes		No	X	N/A
Access & Egress To/From Site - Apparatus	NA					
Access & Egress To/From Site - Staff	NA					
Access & Egress To/From Site - Visitors	NA					
Bollards *(OH Doors, Other)*	NA					
Flagpole		Yes		No	X	N/A
Fill Hydrant		Yes		No	X	N/A
Hydrant Locations	NA					
Other Site Structures *(type/function)*	NA					
Training Tower / Other	NA					
Outdoor Patio	NA					
Outdoor Fitness	NA					
Site Risks/Other Observations	None					

INTERIOR ACCESSIBILITY / ADA				
Int/Ext. Doors *(access clearance / threshold)*	X	Yes		No
Doors *(handles/opening pressure)*	X	Yes		No
Water Fountain *(height/accessibility)*	X	Yes		No

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
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Signage *(height / braille)*	X	Yes		No
Floor Transitions *(interior/exterior)*	X	Yes		No
Floor Slopes *(interior ramps, etc.)*	X	Yes		No
PUBLIC ACCESSIBLE AREAS				
Sinks *(height, pipe wrap)*	X	Yes		No
Dispensers/Accessory *(mounting height)*	X	Yes		No
Countertops *(heights)*	X	Yes		No
Grab Bars	X	Yes		No
Protruding Objects-Accessible Route(s)	X	Yes		No
Public Access Rooms *(toilets/training/etc.)*	X	Yes		No
EXTERIOR ACCESSIBILITY / ADA				
ADA Parking Striping/Signage	X	Yes		No
Access between ADA Parking & Building	X	Yes		No
Other Access to Building	X	Yes		No
Slopes of Accessible Access Pathways	X	Yes		No

WSKF CONDITION RATINGS & DEFINITIONS	
Exceptional	New or well-maintained condition, little to no visual evidence of wear and tear, damage, or other deficiencies.
Good	Some wear and tear, damage, or other deficiencies are visible but still in a functioning and acceptable condition.
Fair	Subjected to some hard and/or long-term wear and term or damage, nearing the end of its useful life and should be monitored for additional deterioration
Poor	At the end of its useful or serviceable life due to age and condition, replacement should be considered imminent

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
June 2021
REV September 2021

EXISTING FACILITY ASSESSMENT SURVEY

STATION NAME/NO.:	**Fire Station #2**
STATION ADDRESS/LOCATON:	2210 SW Archer Road, Gainesville, FL

(Brief Description of Station)

Three-bay, drive-thru, single level design with a small storage/hose drying ramp at the north side of the apparatus bays. This station houses the GFR Hazmat Team and a Truck company. This station is the primary responder to the UF Campus.

STRUCTURE							
Date of Construction	1975						
Date(s) of Renovation/Expansion	N/A						
Building Age	46						
Construction Type	II-B						
Building Construction	CMU and brick masonry framed structure w/precast and cast-in-place concrete roof decks and a concrete slab on grade.						
Building Area *(SF)*:	~8,791 SF						
Number of Stories:	One						
Site Area *(SF & Acres)*:	SF:	~50,400		Acres:	~1.15		
Maximum Station Staffing Capability	12						
Seismic Protection *(if required)*	N/A						
Category IV Conformance *(if required)*	Non-conforming						
ICC 500 Conformance *(if applicable)*	Non-conforming						
Hardened Space / Storm Shelter		Yes	X	No			
Generator	X	Yes		No			
Auxiliary Power		Full Facility	X	Partial Fac.			Fuel Source
General Condition							
Generator Enclosure *(storm rated?)*	X	Yes		No	Hurricane Shutters No		
Special Considerations	No impact resistant glazing						
HEALTH / WELLNESS & SAFETY / SECURITY							
Sprinklers / Smoke Detection		Sprinklers	X	Smoke Detection			
Decontamination / Biohazard Disposal		Yes	X	No		N/A	
Haz. Bldg. Materials *(lead/asbestos/etc.*							
Entry Flooring/Trip Hazards	4" Step to Apparatus Bays						

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
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Night Lights to Apparatus Bays		Yes	X	No		N/A
Decon Type	None					
Gear Wash		Yes	X	No		N/A
Extractor		Yes	X	No		N/A
Gear Dry & Type		Yes	X	No		N/A
Ice Maker Location	IT Closet					
Gear Storage	X	Yes		No		N/A
Gear Storage Location	Off Apparatus Bays (North Area)					
Gear Lockers No.	12					
SCBA	X	Yes		No		N/A
Apparatus Exhaust System	X	Yes		No		N/A
HVLS Ceiling Fans		Yes	X	No		N/A
Apparatus Exhaust System Type	Direct Capture					
Mechanical System Type/Age	Split Systems					
Natural Light in Spaces	Partial					
Security	N	Access Cntrl	N	Fencing	N	Video Surveillance
Other Security Measures	None					
Fire Extinguishers	Yes					

ASSIGNED APPARATUS / VEHICLES

Apparatus Call Sign	Min. Staffing*	Comments
Ambulance - NA	-	
Truck - T-2/CS, E2	4	
Other Vehicles; Hazard Response H-2/CS	4	

**If an apparatus is cross-staffed, enter "CS" after the minimum staffing number.*

BUILDING ASSESSMENT

Building Envelope / Exterior Finishes	Brick veneer					
Window Material	Aluminum					
Roof Construction	Flat roof with a heat-applied modified bitumen roofing					
Exterior Doors	Alum. & Hollow Metal					
Emergency Operations Center (EOC)		Yes	X	No		N/A
Elevator(s) *(quantity/type)*	N/A					
Rated Bunk Walls		Yes	X	No		N/A
Bunk Space		Individual	X	Dormitory		
Number of Beds	13					
Bunk Lockers/Storage *(location/type/number)*	Locker Room/Metal/33(FF)+9(DC)					
Bunk Access. *(desk, tv, reading light, fan, shades)*	Shades					
Personal Laundry (Washer/Dryer)		Yes	X	No		
Shower Facilities		Individual Rooms			X	Dormitory Style

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
June 2021
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No. of Showers	2	Men's	1	Women's		Unisex
No. of Toilets	2	Men's	1	Women's	2	Urinals
Lavatory Style *(for personnel)*		Wall Hung	6	Vanity		
Exercise/Fitness Facilities	Yes					
Kitchen/Dining	Kitchen-100 SF; Dining-400 SF					
Kitchen Appliances	Sink, Stove					
Kitchen Refrigerators/Pantries	Refrig.-1, Pantry-24 SF					
Access to Outdoor Patio	Yes					
Private vs. Public Space Separation	X	Yes		No		
Office Space	Offices-2, Watch Office-1					
Personal Study Space		Yes	X	No		N/A
Training/Meeting Rooms	None					
Adequate Waiting Area		Yes	X	No		N/A
Adequate Office Storage		Yes	X	No		N/A
Adequate Living Storage		Yes	X	No		N/A
Adequate Apparatus Storage		Yes	X	No		N/A
Apparatus Bays *(include #)*	3	Drive-through Bays				Back-in Bays
Apparatus Bay - Overhead Door Size(s)	12x14					
Sill Condition at Apparatus Bay Doors	None Draining					
Overhead Door Operator	X	Trolley		Jack-Shaft		
Overhead Door Safety Features	Photo Eyes Only					
Apparatus Bay Drains	Trench Drain Retro-Fit, Cross Bays					
Apparatus Clearance *(front/back)*	OH Clearance-2"					
Apparatus Bay Width	15'					
Apparatus Bay Floor *(condition/slope)*	Conc./No Slope					
Work Shop		Yes	X	No		N/A
Hose Storage		Yes	X	No		N/A
Hose Wash		Yes	X	No		N/A
Site Risks/Other Observations						
MEP ASSESSMENT						
Plumbing Assessment	No fire protection, flush valves, chronic plumbing issues; poor condition					
HVAC Assessment	VRF system, no fresh air, chronic kitchen mech. issues, Type I hood; poor					
Electrical Assessment	75 kW NG Generator, fluorescent lighting; poor condition					
Special Systems Assessment	Minimal fire alarm/security; poor condition					
Site Assessment	1 1/4" Domestic, sanitary sewer issues, inadequate site lighting; poor					
Building Risks/Site Risks	No fire protection, inadequate life safety systems					

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
June 2021
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SITE ASSESSMENT								
Topography	Low slope but appears to drain (no visible ponding areas)							
Landscaping Quality	Mature trees at front of property; overgrown landscaping at rear							
Site Lighting	Not well-lit; areas of minimal lighting							
Storm Water Drainage	Low slope but appears to drain (no visible ponding areas)							
Downspouts Below Grade		Yes	X	No		N/A		
Sustainability	Landscaping is not well-maintained							
Paving & Concrete	Apron: Concrete apron, asphalt drives							
	Curbs: Curbs at parking only							
	Joints: None							
	Other: Concrete aprons w/asphalt parking/drives; asphalt in poor condition							
Parking Counts	12	Staff	8	Visitor	1	ADA		
Other Parking *(count/type)*	Apparatus apron parking; 6 spaces							
Sidewalk *(ROW connect, condition, accessibility)*	Generally good condition							
Front Door Visible	X	Yes		No				
Private vs. Public Space Separation	X	Yes		No				
Street Access Vertical Elevation	Access to front door includes step							
Line of Sight	Generally good; near converging intersection concern							
Front Apron Length	~40'							
Rear Apron Length *(if applicable)*	~40'							
Apparatus Maneuvering Clearance		Yes	X	No				
Access & Egress To/From Site - Apparatus	Drive thru bays provide; angled egress maneuvering							
Access & Egress To/From Site - Staff	Drive thru provided							
Access & Egress To/From Site - Visitors	Drive thru provided							
Bollards *(OH Doors, Other)*	Base wall guards; limited capability							
Flagpole	X	Yes		No	1	How Many?		
Fill Hydrant		Yes	X	No				
Hydrant Locations	None							
Other Site Structures *(type/function)*	Outdoor storage unit							
Training Tower / Other	Stair tower							
Outdoor Patio	Yes							
Outdoor Fitness	Yes							
Risks/Other Observations *(not otherwise noted)*	Limited wayfinding signage; angled ROW access							

INTERIOR ACCESSIBILITY / ADA					
Int/Ext. Doors *(access clearance / threshold)*		Yes	X	No	Non compliant door clearance at door pull side. Screen door.
Doors *(handles/opening pressure)*		Yes	X	No	
Water Fountain *(height/accessibility)*		Yes	X	No	Single height.

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Signage *(height / braille)*		Yes	X	No	Non compliant - no pictograph & mtd. Height. Some rooms w/o req. signage.
Floor Transitions *(interior/exterior)*	X	Yes		No	One step at apparatus bays.
Floor Slopes *(interior ramps, etc.)*	X	Yes		No	No interior ramps.
PUBLIC ACCESSIBLE AREAS					
Sinks *(height, pipe wrap)*		Yes	X	No	No separate public toilet. No pipe wrap, sink knee clearance.
Dispensers/Accessory *(mounting height)*		Yes	X	No	
Countertops *(heights)*	X	Yes		No	
Grab Bars		Yes	X	No	Non provided.
Protruding Objects-Accessible Route(s)		Yes	X	No	Corridors have encumbrances.
Public Access Rooms *(toilets/training/etc.)*		Yes	X	No	No public toilets.
EXTERIOR ACCESSIBILITY / ADA					
ADA Parking Striping/Signage		Yes	X	No	Not provided.
Access between ADA Parking & Building		Yes	X	No	Non compliant sidewalk ramp, slope and irregular surface along walk to main entry.
Other Access to Building		Yes	X	No	Public walk is accessible but no accessible route to building.
Slopes of Accessible Access Pathways		Yes	X	No	Step at front walk, non accessible public route.

WSKF CONDITION RATINGS & DEFINITIONS	
Exceptional	New or well-maintained condition, little to no visual evidence of wear and tear, damage, or other deficiencies.
Good	Some wear and tear, damage, or other deficiencies are visible but still in a functioning and acceptable condition.
Fair	Subjected to some hard and/or long-term wear and term or damage, nearing the end of its useful life and should be monitored for additional deterioration
Poor	At the end of its useful or serviceable life due to age and condition, replacement should be considered imminent

GAINESVILLE FIRE RESCUE (GFR)
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EXISTING FACILITY ASSESSMENT SURVEY

STATION NAME/NO.:	**Fire Station #3**
STATION ADDRESS/LOCATON:	900 NE Waldo Road

(Brief Description of station)

This station houses one of the busiest engine companies. This Station is a one-story design with flat roof structure. It is co-located on the campus with the Fire Headquarters, Fire Training, CRP and Safety City. The Fire Training facilities are located in close proximity to the Station.

STRUCTURE							
Date of Construction	1960						
Date(s) of Renovation/Expansion	1994						
Building Age	61						
Construction Type	II-B						
Building Construction	Masonry load bearing walls supporting precast concrete T-beams						
Building Area *(SF)*:	~5,300 SF						
Number of Stories:	1						
Site Area *(SF & Acres)*:	SF:	~42,800		Acres:	~0.9		
Maximum Station Staffing Capability	7						
Seismic Protection *(if required)*	N/A						
Category IV Conformance *(if required)*	Non-conforming						
ICC 500 Conformance *(if applicable)*	Non-conforming						
Hardened Space / Storm Shelter		Yes	X	No			
Generator	Yes	Yes		No			
Auxiliary Power		Full Facility	X	Partial Fac.			Fuel Source
General Condition	Poor						
Generator Enclosure *(storm rated?)*		Yes	X	No	Hurricane Shutters		
Special Considerations	Impact resistant screening provided						

HEALTH / WELLNESS & SAFETY / SECURITY						
Sprinklers / Smoke Detection	N	Sprinklers	Y	Smoke Detection		
Decontamination / Biohazard Disposal		Yes	X	No		N/A
Haz. Bldg. Materials *(lead/asbestos/etc.*						
Entry Flooring/Trip Hazards	N/A					
Night Lights to Apparatus Bays		Yes		No		N/A

GAINESVILLE FIRE RESCUE (GFR)
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WSKF ARCHITECTS
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Decon Type	None					
Gear Wash		Yes	X	No		N/A
Extractor		Yes	X	No		N/A
Gear Dry & Type		Yes	X	No		N/A
Ice Maker Location						
Gear Storage	X	Yes		No		N/A
Gear Storage Location	Off Bays					
Gear Lockers No.	21					
SCBA		Yes	X	No		N/A
Apparatus Exhaust System	X	Yes		No		N/A
HVLS Ceiling Fans		Yes	X	No		N/A
Apparatus Exhaust System Type	Direct Capture					
Mechanical System Type/Age	Split Systems					
Natural Light in Spaces	Partial					
Security	N	Access Cntrl	N	Fencing	N	Video Surveillance
Other Security Measures	Security Window Screens					
Fire Extinguishers	Yes					

ASSIGNED APPARATUS / VEHICLES

Apparatus Call Sign	Min. Staffing*	Comments
Ambulance #SQ3	3	
Truck # E3	3	
Other Vehicles		

**If an apparatus is cross-staffed, enter "CS" after the minimum staffing number.*

BUILDING ASSESSMENT

Building Envelope / Exterior Finishes	Brick Veneer					
Window Material	Alum. Frame w/Security Screens					
Roof Construction	Flat roofs with built-up system and stone					
Exterior Doors	Hollow Metal/Aluminum					
Emergency Operations Center (EOC)		Yes	X	No		N/A
Elevator(s) *(quantity/type)*	N/A					
Rated Bunk Walls		Yes	X	No		N/A
Bunk Space	X	Individual		Dormitory		
Number of Beds						
Bunk Lockers/Storage *(location/type/number)*						
Bunk Accessories *(desk, tv, etc.)*						
Personal Laundry (Washer/Dryer)	X	Yes		No		
Shower Facilities	X	Individual Rooms				Dormitory Style
No. of Showers		Men's		Women's		Unisex

GAINESVILLE FIRE RESCUE (GFR)
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No. of Toilets		Men's		Women's		Unisex
Lavatory Style *(for personnel)*	X	Wall Hung		Vanity		
Exercise/Fitness Facilities	900 SF					
Kitchen/Dining	250 SF					
Kitchen Appliances	Refrig, Hood, Stove, Oven					
Kitchen Refrigerators/Pantries	Refrig-2, Panties-2					
Access to Outdoor Patio	N					
Private vs. Public Space Separation		Yes	X	No		
Office Space						
Personal Study Space		Yes	X	No		N/A
Training/Meeting Rooms						
Adequate Waiting Area		Yes	X	No		N/A
Adequate Office Storage		Yes	X	No		N/A
Adequate Living Storage		Yes	X	No		N/A
Adequate Apparatus Storage		Yes	X	No		N/A
Apparatus Bays *(include #)*	X	Drive-through Bays				Back-in Bays
Apparatus Bay - Overhead Door Size(s)	12x14					
Sill Condition at Apparatus Bay Doors	Flat					
Overhead Door Operator	X	Trolley		Jack-Shaft		
Overhead Door Safety Features	Infrared Eyes Only, Chronic Door Repair					
Apparatus Bay Drains	Area Drains-2					
Apparatus Clearance *(front/back)*	44'					
Apparatus Bay Width	14'					
Apparatus Bay Floor *(condition/slope)*	Low Slope, Cracking					
Work Shop		Yes	X	No		N/A
Hose Storage		Yes	X	No		N/A
Hose Wash		Yes	X	No		N/A
Site Risks/Other Observations	Visitor parking not well-marked					
MEP ASSESSMENT						
Plumbing Assessment	No fire protection, plumbing issues, flush valves, aged water heaters; poor					
HVAC Assessment	AHU system, no fresh air, no bldg. controls, Type I hood; poor condition					
Electrical Assessment	75 kW NG Generator, fluorescent lighting; poor condition					
Special Systems Assessment	Minimal fire alarm/security; poor condition					
Site Assessment	1" Domestic, inadequate site lighting; poor					
Building Risks/Site Risks	No fire protection, inadequate life safety systems					

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
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SITE ASSESSMENT								
Topography	Generally flat, slopes high to low, northwest to southeast							
Landscaping Quality	Generally good, some trees too close building							
Site Lighting	Most lighting is building-mounted, areas of site unlit							
Storm Water Drainage	Generally good							
Downspouts Below Grade		Yes	X	No		N/A		
Sustainability	Generally good stormwater management and landscaping conditions							
Paving & Concrete	Apron: Partially concrete; balance asphalt							
	Curbs: None							
	Joints: None							
	Other: New concrete paving partially completed							
Parking Counts	10	Staff	1	Visitor	1	ADA		
Other Parking *(count/type)*	NA							
Sidewalk *(ROW connect, condition, accessibility)*	No walk connection between station and street							
Front Door Visible		Yes	X	No				
Private vs. Public Space Separation		Yes	X	No				
Street Access Vertical Elevation	Not steps							
Line of Sight	Good							
Front Apron Length	Adequate							
Rear Apron Length *(if applicable)*	Adequate							
Apparatus Maneuvering Clearance		Yes	X	No				
Access & Egress To/From Site - Apparatus	Egress in close proximity to intersection; vehicle congestion							
Access & Egress To/From Site - Staff	Generally good via interior drive							
Access & Egress To/From Site - Visitors	Not readily visible and lacks sufficient parking							
Bollards *(OH Doors, Other)*	None							
Flagpole	X	Yes		No	1	How Many?		
Fill Hydrant		Yes	X	No				
Hydrant Locations	None							
Other Site Structures *(type/function)*	Training tower & training containers							
Training Tower / Other	Yes, multi-story w/Class A burn containers							
Outdoor Patio	None							
Outdoor Fitness	Yes							
Risks/Other Observations *(not otherwise noted)*	Class A burn in close proximity to landscaping, egress hinderance							

INTERIOR ACCESSIBILITY / ADA					
Int/Ext. Doors *(access clearance / threshold)*		Yes	X	No	Screen door.
Doors *(handles/opening pressure)*		Yes	X	No	Some doors have knob type handles.
Water Fountain *(height/accessibility)*		Yes	X	No	Single height.

GAINESVILLE FIRE RESCUE (GFR)
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Signage *(height / braille)*		Yes	X	No	Non compliant - no pictograph & mtd. Height. Some rooms w/o req. signage.
Floor Transitions *(interior/exterior)*	X	Yes		No	One step at apparatus bays.
Floor Slopes *(interior ramps, etc.)*	X	Yes		No	No interior ramps.
PUBLIC ACCESSIBLE AREAS					
Sinks *(height, pipe wrap)*		Yes	X	No	No separate public toilet. Women's toilet has some accommodations. No pipe wrap, sink knee clearance.
Dispensers/Accessory *(mounting height)*		Yes	X	No	Mounting height to high.
Countertops *(heights)*	X	Yes		No	No counters in public accessible areas.
Grab Bars	X	Yes		No	Women's toilet & shower have toilet grab bars. Women's has shower door which is barrier for accessibility
Protruding Objects-Accessible Route(s)		Yes	X	No	Corridors & rooms have encumbrances.
Public Access Rooms *(toilets/training/etc.)*		Yes	X	No	No public toilets.
EXTERIOR ACCESSIBILITY / ADA					
ADA Parking Striping/Signage	X	Yes		No	
Access between ADA Parking & Building	X	Yes		No	
Other Access to Building		Yes	X	No	No accessible route from public route.
Slopes of Accessible Access Pathways	X	Yes		No	

WSKF CONDITION RATINGS & DEFINITIONS	
Exceptional	New or well-maintained condition, little to no visual evidence of wear and tear, damage, or other deficiencies.
Good	Some wear and tear, damage, or other deficiencies are visible but still in a functioning and acceptable condition.
Fair	Subjected to some hard and/or long-term wear and term or damage, nearing the end of its useful life and should be monitored for additional deterioration
Poor	At the end of its useful or serviceable life due to age and condition, replacement should be considered imminent

GAINESVILLE FIRE RESCUE (GFR)
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EXISTING FACILITY ASSESSMENT SURVEY

STATION NAME/NO.:	**Training Tower & Burn Buildings (at Station #3)**
STATION ADDRESS/LOCATON:	900 NE Waldo Road

(Brief Description of station)

The Training Facilities consist of; 1) 4-story drill tower w/laddering, repelling, hose advancement, standpipe training and hose drying elements, 2) 4-metal containers (2-stacked) for live Class A burn training, and 3) horizontal confined space training.

STRUCTURE							
Date of Construction	Unknown						
Date(s) of Renovation/Expansion	N/A						
Building Age	Unknown						
Construction Type	II-B						
Building Construction	CIP Concrete Structure w/Masonry Infill						
Building Area *(SF)*:	~720/Tower; ~1,280/Containers						
Number of Stories:	4-story tower, 2-story containers						
Site Area *(SF & Acres)*:	SF:	~5,000		Acres:	~0.11		
Maximum Station Staffing Capability	N/A						
Seismic Protection *(if required)*	N/A						
Category IV Conformance *(if required)*	N/A						
ICC 500 Conformance *(if applicable)*	N/A						
Hardened Space / Storm Shelter	N/A	Yes	N/A	No			
Generator	N/A	Yes	N/A	No			
Auxiliary Power	N/A	Full Facility	N/A	Partial Fac.	N/A		Fuel Source
General Condition							
Generator Enclosure *(storm rated?)*	N/A	Yes	N/A	No			
Special Considerations	None						

HEALTH / WELLNESS & SAFETY / SECURITY						
Sprinklers / Smoke Detection	N/A	Sprinklers	N/A	Smoke Detection		
Decontamination / Biohazard Disposal	N/A	Yes	N/A	No	N/A	N/A
Haz. Bldg Materials *(lead/asbestos/etc.*	N/A					
Entry Flooring/Trip Hazards	N/A					
Night Lights to Apparatus Bays	N/A	Yes	N/A	No	N/A	N/A

GAINESVILLE FIRE RESCUE (GFR)
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WSKF ARCHITECTS
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Decon Type	N/A					
Gear Wash		Yes		No	X	N/A
Extractor		Yes		No	X	N/A
Gear Dry & Type		Yes		No	X	N/A
Ice Maker Location	N/A					
Gear Storage		Yes		No	X	N/A
Gear Storage Location	N/A					
Gear Lockers No.	N/A					
SCBA		Yes		No	X	N/A
Apparatus Exhaust System		Yes		No	X	N/A
HVLS Ceiling Fans		Yes		No	X	N/A
Apparatus Exhaust System Type	N/A					
Mechanical System Type/Age	N/A					
Natural Light in Spaces	N/A					
Security	N/A	Access Cntrl	N	Fencing		Video Surveillance
Other Security Measures	N/A					
Fire Extinguishers	N/A					

ASSIGNED APPARATUS / VEHICLES

Apparatus Call Sign	Min. Staffing*	Comments
Ambulance #		
Truck #		
Other Vehicles		

**If an apparatus is cross-staffed, enter "CS" after the minimum staffing number.*

BUILDING ASSESSMENT

Building Envelope / Exterior Finishes	Brick Veneer					
Window Material	N/A					
Roof Construction	Built-Up					
Exterior Doors	Hollow Metal					
Emergency Operations Center (EOC)		Yes		No	X	N/A
Elevator(s) *(quantity/type)*	N/A					
Rated Bunk Walls		Yes		No	X	N/A
Bunk Space		Individual		Dormitory		
Number of Beds	N/A					
Bunk Lockers/Storage *(location/type/number)*	N/A					
Bunk Accessories *(desk, tv, etc.)*	N/A					
Personal Laundry (Washer/Dryer)	N/A	Yes	N/A	No		
Shower Facilities	N/A	Individual Rooms			N/A	Dormitory Style
No. of Showers	N/A	Men's	N/A	Women's	N/A	Unisex

GAINESVILLE FIRE RESCUE (GFR)
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No. of Toilets	N/A	Men's	N/A	Women's	N/A	Unisex
Lavatory Style *(for personnel)*	N/A	Wall Hung	N/A	Vanity		
Exercise/Fitness Facilities	N/A					
Kitchen/Dining	N/A					
Kitchen Appliances	N/A					
Kitchen Refrigerators/Pantries	N/A					
Access to Outdoor Patio	N/A					
Private vs. Public Space Separation	N/A	Yes	N/A	No		
Office Space						
Personal Study Space		Yes		No	X	N/A
Training/Meeting Rooms						
Adequate Waiting Area		Yes		No	X	N/A
Adequate Office Storage		Yes		No	X	N/A
Adequate Living Storage		Yes		No	X	N/A
Adequate Apparatus Storage		Yes		No	X	N/A
Apparatus Bays *(include #)*	N/A	Drive-through Bays			N/A	Back-in Bays
Apparatus Bay - Overhead Door Size(s)	N/A					
Sill Condition at Apparatus Bay Doors	N/A					
Overhead Door Operator	N/A	Trolley	N/A	Jack-Shaft		
Overhead Door Safety Features	N/A					
Apparatus Bay Drains	N/A					
Apparatus Clearance *(front/back)*	N/A					
Apparatus Bay Width	N/A					
Apparatus Bay Floor *(condition/slope)*	N/A					
Work Shop		Yes		No	X	N/A
Hose Storage		Yes		No	X	N/A
Hose Wash		Yes		No	X	N/A
Site Risks/Other Observations	Located in close proximity to Station 3; Does Not Meet ISO Stds.					
SITE ASSESSMENT						
Topography	Flat					
Landscaping Quality	Grass					
Site Lighting	None					
Storm Water Drainage	Existing Station 3 system					
Downspouts Below Grade		Yes		No	X	N/A
Sustainability	None					
Paving & Concrete	Apron: NA					
	Curbs: NA					
	Joints: NA					

GAINESVILLE FIRE RESCUE (GFR)
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	Other: None					
Parking Counts	/	Staff	/	Visitor	/	ADA
Other Parking *(count/type)*	Nearby open fields provide parking for facility use					
Sidewalk *(ROW connect, condition, accessibility)*	NA					
Front Door Visible		Yes		No	X	N/A
Private vs. Public Space Separation		Yes		No	X	N/A
Street Access Vertical Elevation	NA					
Line of Sight	NA					
Front Apron Length	NA					
Rear Apron Length *(if applicable)*	NA					
Apparatus Maneuvering Clearance		Yes		No	X	N/A
Access & Egress To/From Site - Apparatus	Adequate based on open field use					
Access & Egress To/From Site - Staff	Adequate based on open field use					
Access & Egress To/From Site - Visitors	NA					
Bollards *(OH Doors, Other)*	NA					
Flagpole		Yes	X	No		How Many?
Fill Hydrant	X	Yes		No		
Hydrant Locations	Near street					
Other Site Structures *(type/function)*	No structures other than training components					
Training Tower / Other	Four-story tower with interior stairway & openings to the east and south					
Outdoor Patio	NA					
Outdoor Fitness	NA					
Risks/Other Observations *(not otherwise noted)*	Adjacent container Class A burn structures; adjacent tree/landscape					

INTERIOR ACCESSIBILITY / ADA	
Int/Ext. Doors *(access clearance / threshold)*	N/A
Doors *(handles/opening pressure)*	N/A
Water Fountain *(height/accessibility)*	N/A
Signage *(height / braille)*	N/A
Floor Transitions *(interior/exterior)*	N/A
Floor Slopes *(interior ramps, etc.)*	N/A
PUBLIC ACCESSIBLE AREAS	
Sinks *(height, pipe wrap)*	N/A
Dispensers/Accessory *(mounting height)*	N/A
Countertops *(heights)*	N/A
Grab Bars	N/A
Protruding Objects-Accessible Route(s)	N/A
Public Access Rooms *(toilets/training/etc.)*	N/A

GAINESVILLE FIRE RESCUE (GFR)
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EXTERIOR ACCESSIBILITY / ADA	
ADA Parking Striping/Signage	N/A
Access between ADA Parking & Building	N/A
Other Access to Building	N/A
Slopes of Accessible Access Pathways	N/A

WSKF CONDITION RATINGS & DEFINITIONS	
Exceptional	New or well-maintained condition, little to no visual evidence of wear and tear, damage, or other deficiencies.
Good	Some wear and tear, damage, or other deficiencies are visible but still in a functioning and acceptable condition.
Fair	Subjected to some hard and/or long-term wear and term or damage, nearing the end of its useful life and should be monitored for additional deterioration
Poor	At the end of its useful or serviceable life due to age and condition, replacement should be considered imminent

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
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EXISTING FACILITY ASSESSMENT SURVEY

STATION NAME/NO.:	**Fire Station #4**
STATION ADDRESS/LOCATON:	10 SW 36th Street

(Brief Description of station)

Located between two busy roads this station is near the UF campus providing secondary coverage to the campus. Built during the 'Cold War Era' this Station was designed to withstand a nuclear event and presents a rather unique, if not unorthodox design. While this facility is likely the most durable station, it is likely the most in hospitable.

STRUCTURE						
Date of Construction	1964					
Date(s) of Renovation/Expansion	N/A					
Building Age	57					
Construction Type	I-B					
Building Construction	CIP concrete structure with masonry infill and a concrete roof deck					
Building Area *(SF)*:	~3,640 SF					
Number of Stories:	One					
Site Area *(SF & Acres)*:	SF:	~53,290		Acres:	~1.22	
Maximum Station Staffing Capability	Single Company					
Seismic Protection *(if required)*	Compliant					
Category IV Conformance *(if required)*	Compliant					
ICC 500 Conformance *(if applicable)*	Non-compliant					
Hardened Space / Storm Shelter	X	Yes		No		
Generator	X	Yes		No		
Auxiliary Power		Full Facility	X	Partial Fac.		Fuel Source
General Condition	Good					
Generator Enclosure *(storm rated?)*		Yes	X	No	Hurricane Shutters	
Special Considerations	Impact resistant screens provided					

HEALTH / WELLNESS & SAFETY / SECURITY						
Sprinklers / Smoke Detection	N	Sprinklers	Y	Smoke Detection		
Decontamination / Biohazard Disposal		Yes	N	No		N/A
Haz. Bldg Materials *(lead/asbestos/etc.*	Unknown					
Entry Flooring/Trip Hazards	None					
Night Lights to Apparatus Bays		Yes		No		N/A

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
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Decon Type	None					
Gear Wash		Yes	X	No		N/A
Extractor		Yes	X	No		N/A
Gear Dry & Type		Yes	X	No		N/A
Ice Maker Location	Laundry/Gear Storage					
Gear Storage	X	Yes		No		N/A
Gear Storage Location	Laundry					
Gear Lockers No.	8					
SCBA		Yes	X	No		N/A
Apparatus Exhaust System	X	Yes		No		N/A
HVLS Ceiling Fans		Yes	X	No		N/A
Apparatus Exhaust System Type	Direct capture					
Mechanical System Type/Age	Split-System					
Natural Light in Spaces	Minimal					
Security	Y	Access Cntrl	N	Fencing	N	Video Surveillance
Other Security Measures	Base of wall planters					
Fire Extinguishers	Y					

ASSIGNED APPARATUS / VEHICLES

Apparatus Call Sign	Min. Staffing*	Comments
Ambulance #		
Truck #E-4	4	
Other Vehicles		

**If an apparatus is cross-staffed, enter "CS" after the minimum staffing number.*

BUILDING ASSESSMENT

Building Envelope / Exterior Finishes	Stone Veneer over CMU w/ Painted Concrete					
Window Material	Alum.					
Roof Construction	Low-slope concrete roof with a flexible coating					
Exterior Doors	Hollow Metal					
Emergency Operations Center (EOC)		Yes	X	No		N/A
Elevator(s) *(quantity/type)*	N/A					
Rated Bunk Walls		Yes	X	No		N/A
Bunk Space		Individual	X	Dormitory		
Number of Beds	4					
Bunk Lockers/Storage *(location/type/number)*	Built-in lockers/closets; 1 per bunk					
Bunk Accessories *(desk, tv, etc.)*	Night stands					
Personal Laundry (Washer/Dryer)	X	Yes		No		Located off apparatus bays
Shower Facilities		Individual Rooms			X	Dormitory Style
No. of Showers	0	Men's	0	Women's	2	Unisex

GAINESVILLE FIRE RESCUE (GFR)
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No. of Toilets	0	Men's	0	Women's	2	Unisex
Lavatory Style *(for personnel)*	2	Wall Hung		Vanity		
Exercise/Fitness Facilities	Yes					
Kitchen/Dining	Yes					
Kitchen Appliances	Refrig., Stove/Oven					
Kitchen Refrigerators/Pantries	Refrig.-1, Pantry-1					
Access to Outdoor Patio	N					
Private vs. Public Space Separation		Yes	N	No		
Office Space	Inadequate					
Personal Study Space		Yes	N	No		N/A
Training/Meeting Rooms	N					
Adequate Waiting Area		Yes	X	No		N/A
Adequate Office Storage		Yes	X	No		N/A
Adequate Living Storage		Yes	X	No		N/A
Adequate Apparatus Storage		Yes	X	No		N/A
Apparatus Bays *(include #)*	X/2	Drive-through Bays				Back-in Bays
Apparatus Bay - Overhead Door Size(s)	20x11					
Sill Condition at Apparatus Bay Doors	Flat					
Overhead Door Operator	X	Trolley		Jack-Shaft		
Overhead Door Safety Features	Infrared Eyes Only					
Apparatus Bay Drains	Area Drains					
Apparatus Clearance *(front/back)*	~36'					
Apparatus Bay Width	~30'					
Apparatus Bay Floor *(condition/slope)*	In-laid Tile/Low Slope					
Work Shop		Yes	X	No		N/A
Hose Storage		Yes	X	No		N/A
Hose Wash		Yes	X	No		N/A
Site Risks/Other Observations	No front door is apparent/readily visible					
MEP ASSESSMENT						
Plumbing Assessment	No fire protection, flush valves, aged water heaters; fair condition					
HVAC Assessment	RTU system (ground mt.), no bldg. controls, Type I hood; fair condition					
Electrical Assessment	75 kW NG Gen., fluorescent lights, aged elec. panels, need circuits; poor					
Special Systems Assessment	Minimal fire alarm/security; poor condition					
Site Assessment	Historical issues with plumbing, inadequate site lighting; fair condition					
Building Risks/Site Risks	No fire protection, inadequate life safety systems					

GAINESVILLE FIRE RESCUE (GFR)
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SITE ASSESSMENT								
Topography	Generally flat, slopes high to low, northwest to southeast							
Landscaping Quality	Generally good, some areas of over-growth							
Site Lighting	Poorly lit							
Storm Water Drainage	Generally good, appears to drain well							
Downspouts Below Grade		Yes	X	No		N/A		
Sustainability	Generally good stormwater management; landscape trimming needed							
Paving & Concrete	Apron: Partial concrete, balance is asphalt; moderate condition							
	Curbs: Parking only							
	Joints: None							
	Other:							
Parking Counts	6	Staff	0	Visitor	0	ADA		
Other Parking *(count/type)*	None							
Sidewalk *(ROW connect, condition, accessibility)*	No walk from public way to station entry							
Front Door Visible		Yes	X	No				
Private vs. Public Space Separation		Yes	X	No				
Street Access Vertical Elevation	No steps							
Line of Sight	Generally good							
Front Apron Length	Approximately 30'							
Rear Apron Length *(if applicable)*	Approximately 30'							
Apparatus Maneuvering Clearance	X	Yes		No				
Access & Egress To/From Site - Apparatus	Divided median access required for egress							
Access & Egress To/From Site - Staff	Distinct staff parking provided							
Access & Egress To/From Site - Visitors	Staff and public required to use same parking							
Bollards *(OH Doors, Other)*	None provided							
Flagpole		Yes	X	No		How Many?		
Fill Hydrant	X	Yes		No				
Hydrant Locations	At ingress to site							
Other Site Structures *(type/function)*	Transformer, telephone pedestals							
Training Tower / Other	NA							
Outdoor Patio	Yes							
Outdoor Fitness	Apron use							
Risks/Other Observations *(not otherwise noted)*	Egress is near street intersection; limited reaction time							

INTERIOR ACCESSIBILITY / ADA					
Int/Ext. Doors *(access clearance / threshold)*	X	Yes		No	
Doors *(handles/opening pressure)*		Yes	X	No	Some doors have knob type handles.
Water Fountain *(height/accessibility)*		Yes		No	No fountain observed.

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Signage *(height / braille)*		Yes	X	No	Accessible toilet sign compliant. Some are non-compliant. Some rooms w/o req. signage.
Floor Transitions *(interior/exterior)*	X	Yes		No	
Floor Slopes *(interior ramps, etc.)*	X	Yes		No	No interior ramps.
PUBLIC ACCESSIBLE AREAS					
Sinks *(height, pipe wrap)*	X	Yes		No	One unisex toilet provided.
Dispensers/Accessory *(mounting height)*		Yes	X	No	Mounting height to high.
Countertops *(heights)*	X	Yes		No	No counters in public accessible areas.
Grab Bars	X	Yes		No	One toilet has grab bars.
Protruding Objects-Accessible Route(s)	X	Yes		No	
Public Access Rooms *(toilets/training/etc.)*	X	Yes		No	Accessible toilet located off bunk/exercise area.
EXTERIOR ACCESSIBILITY / ADA					
ADA Parking Striping/Signage		Yes	X	No	No accessible stalls.
Access between ADA Parking & Building	X	Yes		No	
Other Access to Building		Yes	X	No	No accessible route from public route.
Slopes of Accessible Access Pathways	X	Yes		No	

WSKF CONDITION RATINGS & DEFINITIONS	
Exceptional	New or well-maintained condition, little to no visual evidence of wear and tear, damage, or other deficiencies.
Good	Some wear and tear, damage, or other deficiencies are visible but still in a functioning and acceptable condition.
Fair	Subjected to some hard and/or long-term wear and term or damage, nearing the end of its useful life and should be monitored for additional deterioration
Poor	At the end of its useful or serviceable life due to age and condition, replacement should be considered imminent

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EXISTING FACILITY ASSESSMENT SURVEY

STATION NAME/NO.:	**Fire Station #5**
STATION ADDRESS/LOCATON:	1244 NW 30th Ave

(Brief Description of station)

This Stations is located on a residential side street. The apparatus bay was lowered after the Station was constructed requiring the addition of storm water drains at the rear and front aprons. However, the drain inlets are outside of the bays.

STRUCTURE							
Date of Construction	1965						
Date(s) of Renovation/Expansion	N/A						
Building Age	56						
Construction Type	II-B						
Building Construction	Masonry bearing walls and steel trusses						
Building Area *(SF)*:	~3,900 SF						
Number of Stories:	1						
Site Area *(SF & Acres)*:	SF:	~21,650		Acres:	~0.75		
Maximum Station Staffing Capability	4						
Seismic Protection *(if required)*	Non-conforming						
Category IV Conformance *(if required)*	Non-conforming						
ICC 500 Conformance *(if applicable)*	Non-conforming						
Hardened Space / Storm Shelter		Yes	X	No			
Generator	X	Yes		No			
Auxiliary Power		Full Facility	X	Partial Fac.		Fuel Source	
General Condition	Poor						
Generator Enclosure *(storm rated?)*	X	Yes		No	Hurricane Shutters		
Special Considerations	No impact resistant window protection						

HEALTH / WELLNESS & SAFETY / SECURITY						
Sprinklers / Smoke Detection	N	Sprinklers	Y	Smoke Detection	(Partial)	
Decontamination / Biohazard Disposal		Yes	X	No		N/A
Haz. Bldg Materials *(lead/asbestos/etc.*						
Entry Flooring/Trip Hazards	Apparatus bay has been lowered (below finish floor)					
Night Lights to Apparatus Bays		Yes		No		N/A

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Decon Type	None					
Gear Wash		Yes	X	No		N/A
Extractor		Yes	X	No		N/A
Gear Dry & Type		Yes	X	No		N/A
Ice Maker Location	Located in apparatus bay					
Gear Storage	X	Yes		No		N/A
Gear Storage Location	Room off apparatus bay					
Gear Lockers No.	9					
SCBA		Yes	X	No		N/A
Apparatus Exhaust System	X	Yes		No		N/A
HVLS Ceiling Fans		Yes	X	No		N/A
Apparatus Exhaust System Type	Direct capture					
Mechanical System Type/Age	Split system					
Natural Light in Spaces	Partial					
Security	Y	Access Cntrl	N	Fencing	N	Video Surveillance
Other Security Measures	None					
Fire Extinguishers	Yes					

ASSIGNED APPARATUS / VEHICLES

Apparatus Call Sign	Min. Staffing*	Comments
Ambulance #		
Truck #E-5	3	
Other Vehicles		

**If an apparatus is cross-staffed, enter "CS" after the minimum staffing number.*

BUILDING ASSESSMENT

Building Envelope / Exterior Finishes	CMU w/Brick Veneer, Stucco, Steel Bar Joist					
Window Material	Alum. w/security screens					
Roof Construction	Flat roof with stone covered built-up system					
Exterior Doors	Hollow Metal					
Emergency Operations Center (EOC)		Yes	X	No		N/A
Elevator(s) *(quantity/type)*	N/A					
Rated Bunk Walls		Yes	X	No		N/A
Bunk Space		Individual	X	Dormitory		
Number of Beds	3					
Bunk Lockers/Storage *(location/type/number)*	9/closets/locker room					
Bunk Accessories *(desk, tv, etc.)*	night stand/shelf					
Personal Laundry (Washer/Dryer)	X	Yes		No		
Shower Facilities	X	Individual Rooms				Dormitory Style
No. of Showers	1	Men's		Women's	1	Unisex

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No. of Toilets	2	Men's		Women's	1	Unisex
Lavatory Style *(for personnel)*	X	Wall Hung		Vanity		
Exercise/Fitness Facilities	Y/200 SF					
Kitchen/Dining	Y/200 SF					
Kitchen Appliances	Refrig./Stove					
Kitchen Refrigerators/Pantries	1					
Access to Outdoor Patio	N					
Private vs. Public Space Separation		Yes	X	No		
Office Space	N					
Personal Study Space		Yes	X	No		N/A
Training/Meeting Rooms	N					
Adequate Waiting Area		Yes	X	No		N/A
Adequate Office Storage		Yes	X	No		N/A
Adequate Living Storage		Yes	X	No		N/A
Adequate Apparatus Storage		Yes	X	No		N/A
Apparatus Bays *(include #)*	1	Drive-through Bays				Back-in Bays
Apparatus Bay - Overhead Door Size(s)	20x12					
Sill Condition at Apparatus Bay Doors	Flat					
Overhead Door Operator	X	Trolley		Jack-Shaft		
Overhead Door Safety Features	Infrared Only					
Apparatus Bay Drains	1 - area					
Apparatus Clearance *(front/back)*	30'					
Apparatus Bay Width	20'					
Apparatus Bay Floor *(condition/slope)*	Low slope, 1 area drain					
Work Shop		Yes	X	No		N/A
Hose Storage	Y	Yes		No		N/A
Hose Wash		Yes	N	No		N/A
Site Risks/Other Observations	Apparatus bay has been lowered (below finish floor)					
MEP ASSESSMENT						
Plumbing Assessment	No FP, aged water heaters (elec.); no oil/sand separator; poor condition					
HVAC Assessment	Aged air handler system, Type I hood; return air failure; poor					
Electrical Assessment	55 kW NG generator, service panels upgraded, fluorescent lighting; fair					
Special Systems Assessment	Minimal fire alarm/security; fair/poor condition					
Site Assessment	Sanitary service issue, inadequate site lighting; poor condition					
Building Risks/Site Risks	No fire protection, inadequate life safety systems					

GAINESVILLE FIRE RESCUE (GFR)
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SITE ASSESSMENT								
Topography	Generally flat, slopes high to low, northeast to southwest							
Landscaping Quality	Overgrown							
Site Lighting	Limited and poor coverage							
Storm Water Drainage	Surface drainage to public storm sewer							
Downspouts Below Grade		Yes	X	No		N/A		
Sustainability	Limited slope for good storm water management, overgrown							
Paving & Concrete	Apron: Concrete front, concrete/asphalt rear							
	Curbs: Rear parking only							
	Joints: NA							
	Other: Area wells at front and rear aprons							
Parking Counts	6	Staff	0	Visitor	0	ADA		
Other Parking *(count/type)*	Additional unsurfaced parking at rear of station							
Sidewalk *(ROW connect, condition, accessibility)*	Walk connects to public way							
Front Door Visible	X	Yes		No				
Private vs. Public Space Separation		Yes	X	No				
Street Access Vertical Elevation	No steps at front entry							
Line of Sight	Poor line of site based on proximity of bay to street							
Front Apron Length	40'							
Rear Apron Length *(if applicable)*	150'							
Apparatus Maneuvering Clearance	X	Yes		No				
Access & Egress To/From Site - Apparatus	Good ingress, poor egress							
Access & Egress To/From Site - Staff	Good ingress & egress							
Access & Egress To/From Site - Visitors	Street parking only							
Bollards *(OH Doors, Other)*	None							
Flagpole	X	Yes		No	1	How Many?		
Fill Hydrant		Yes	X	No				
Hydrant Locations	Near by streets							
Other Site Structures *(type/function)*	None							
Training Tower / Other	NA							
Outdoor Patio	Yes							
Outdoor Fitness	Limited							
Risks/Other Observations *(not otherwise noted)*	Egress limited sightlines							

INTERIOR ACCESSIBILITY / ADA					
Int/Ext. Doors *(access clearance / threshold)*		Yes	X	No	Door knob handle at front door.
Doors *(handles/opening pressure)*		Yes	X	No	Some doors have knob type handles.
Water Fountain *(height/accessibility)*		Yes	X	No	

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Signage *(height / braille)*		Yes	X	No	
Floor Transitions *(interior/exterior)*		Yes	X	No	Various non compliant steps and thresholds.
Floor Slopes *(interior ramps, etc.)*	X	Yes		No	
PUBLIC ACCESSIBLE AREAS					
Sinks *(height, pipe wrap)*		Yes	X	No	
Dispensers/Accessory *(mounting height)*		Yes	X	No	
Countertops *(heights)*		Yes	X	No	
Grab Bars		Yes	X	No	
Protruding Objects-Accessible Route(s)		Yes	X	No	Corridors & rooms have encumbrances.
Public Access Rooms *(toilets/training/etc.)*		Yes	X	No	No public toilets.
EXTERIOR ACCESSIBILITY / ADA					
ADA Parking Striping/Signage		Yes	X	No	No parking along public entry.
Access between ADA Parking & Building		Yes		No	N/A
Other Access to Building		Yes	X	No	No accessible route from public route. No public walks along street.
Slopes of Accessible Access Pathways		Yes		No	N/A

WSKF CONDITION RATINGS & DEFINITIONS	
Exceptional	New or well-maintained condition, little to no visual evidence of wear and tear, damage, or other deficiencies.
Good	Some wear and tear, damage, or other deficiencies are visible but still in a functioning and acceptable condition.
Fair	Subjected to some hard and/or long-term wear and term or damage, nearing the end of its useful life and should be monitored for additional deterioration
Poor	At the end of its useful or serviceable life due to age and condition, replacement should be considered imminent

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EXISTING FACILITY ASSESSMENT SURVEY

STATION NAME/NO.:	**Fire Station #6**
STATION ADDRESS/LOCATON:	3638 NE 39th Ave

(Brief Description of station)

A relatively modern station built by and located at the Gainesville Regional Airport. This Station houses the GFR ARFF unit. While this Station is not owned by GFR, staff wanted to assess the Station for conformance against current design standards for like facilities.

STRUCTURE							
Date of Construction	2018						
Date(s) of Renovation/Expansion	-						
Building Age	3						
Construction Type	IV-B						
Building Construction	CMU apparatus bays, framed living quarters (assume)						
Building Area *(SF)*:	~8,800 GSF						
Number of Stories:	1						
Site Area *(SF & Acres)*:	SF:	NA		Acres:	NA		
Maximum Station Staffing Capability	3						
Seismic Protection *(if required)*	Compliant						
Category IV Conformance *(if required)*	Unknown						
ICC 500 Conformance *(if applicable)*	Unknown						
Hardened Space / Storm Shelter		Yes	X	No			
Generator	X	Yes		No			
Auxiliary Power	X	Full Facility		Partial Fac.		Fuel Source	
General Condition	Exceptional						
Generator Enclosure *(storm rated?)*	X	Yes		No	Hurricane Shutters		
Special Considerations	Impact resistant glazing assumed						

HEALTH / WELLNESS & SAFETY / SECURITY						
Sprinklers / Smoke Detection	Y	Sprinklers	Y	Smoke Detection		
Decontamination / Biohazard Disposal	Y	Yes		No		N/A
Haz. Bldg Materials *(lead/asbestos/etc.*	N					
Entry Flooring/Trip Hazards	N					
Night Lights to Apparatus Bays	X	Yes		No		N/A

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Decon Type	Shower/Eye Wash					
Gear Wash		Yes	X	No		N/A
Extractor		Yes	X	No		N/A
Gear Dry & Type		Yes	X	No		N/A
Ice Maker Location						
Gear Storage	Y	Yes		No		N/A
Gear Storage Location	Off apparatus bays					
Gear Lockers No.						
SCBA	Y	Yes		No		N/A
Apparatus Exhaust System	Y	Yes		No		N/A
HVLS Ceiling Fans	N	Yes		No		N/A
Apparatus Exhaust System Type	Filtration/whole bay					
Mechanical System Type/Age	Split system/3 years					
Natural Light in Spaces	Y					
Security	Y	Access Cntrl	Y	Fencing	Y	Video Surveillance
Other Security Measures	Apparatus access to both FFA and non-FAA controlled areas					
Fire Extinguishers	Y					

ASSIGNED APPARATUS / VEHICLES

Apparatus Call Sign	Min. Staffing*	Comments
Ambulance #		
Truck #		
Other Vehicles; ARFF #61/#63	2	

**If an apparatus is cross-staffed, enter "CS" after the minimum staffing number.*

BUILDING ASSESSMENT

Building Envelope / Exterior Finishes	Split-face CMU veneer wainscot/stucco					
Window Material	Alum.					
Roof Construction	Standing Seam					
Exterior Doors	Alum./Hollow Metal					
Emergency Operations Center (EOC)		Yes	X	No		N/A
Elevator(s) *(quantity/type)*	N/A					
Rated Bunk Walls		Yes	X	No		N/A
Bunk Space		Individual		Dormitory		
Number of Beds	3					
Bunk Lockers/Storage *(location/type/number)*	Bunkroom/casework/3					
Bunk Accessories *(desk, tv, etc.)*	Desk, night-stand, storage cabinet					
Personal Laundry (Washer/Dryer)	Y	Yes		No		
Shower Facilities	Y	Individual Rooms				Dormitory Style
No. of Showers		Men's		Women's	2	Unisex

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No. of Toilets		Men's		Women's	2	Unisex	
Lavatory Style *(for personnel)*		Wall Hung	Y	Vanity			
Exercise/Fitness Facilities	Y						
Kitchen/Dining	Y/200 SF						
Kitchen Appliances							
Kitchen Refrigerators/Pantries	1 + 3						
Access to Outdoor Patio	N						
Private vs. Public Space Separation	X	Yes		No			
Office Space	Yes						
Personal Study Space	X	Yes		No		N/A	
Training/Meeting Rooms	Y						
Adequate Waiting Area	X	Yes		No		N/A	
Adequate Office Storage	X	Yes		No		N/A	
Adequate Living Storage	X	Yes		No		N/A	
Adequate Apparatus Storage	X	Yes		No		N/A	
Apparatus Bays *(include #)*	3	Drive-through Bays				Back-in Bays	
Apparatus Bay - Overhead Door Size(s)	14 X 16						
Sill Condition at Apparatus Bay Doors	Flat						
Overhead Door Operator		Trolley	X	Jack-Shaft			
Overhead Door Safety Features	Infrared eyes, door edge sensors						
Apparatus Bay Drains	Area drains						
Apparatus Clearance *(front/back)*	50'						
Apparatus Bay Width	22'						
Apparatus Bay Floor *(condition/slope)*	Ground & polished, low slope, good condition						
Work Shop	X	Yes		No		N/A	
Hose Storage		Yes	X	No		N/A	
Hose Wash		Yes	X	No		N/A	
Site Risks/Other Observations	Airport based station w/Land Site & Air Side access						
MEP ASSESSMENT							
Plumbing Assessment	Hydrant fill, flush valve fixtures, hot water recirc; exceptional condition						
HVAC Assessment	VRF system, 100% OA, local controls, whole-bay exhaust; exceptional						
Electrical Assessment	150 kW diesel generator, LED lighting, 3 P service; exceptional condition						
Special Systems Assessment	Full Fire Alarm, Access Control/Video Surveillance; exceptional						
Site Assessment	Sanitary lift station, good lighting, good access; exceptional condition						
Building Risks/Site Risks	None						

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SITE ASSESSMENT								
Topography	Generally flat							
Landscaping Quality	Only grass							
Site Lighting	Good							
Storm Water Drainage	Adequate							
Downspouts Below Grade		Yes	X	No		N/A		
Sustainability	Adequate							
Paving & Concrete	Apron: Concrete, good condition							
	Curbs: Parking area							
	Joints: Good condition							
	Other:							
Parking Counts	7	Staff	3	Visitor	1	ADA		
Other Parking *(count/type)*	None							
Sidewalk *(ROW connect, condition, accessibility)*	NA							
Front Door Visible	X	Yes		No				
Private vs. Public Space Separation		Yes	X	No				
Street Access Vertical Elevation	No steps							
Line of Sight	Good							
Front Apron Length	Adequate							
Rear Apron Length *(if applicable)*	Adequate							
Apparatus Maneuvering Clearance	X	Yes		No				
Access & Egress To/From Site - Apparatus	Land side behind the fence; requires controlled access egress							
Access & Egress To/From Site - Staff	Adequate							
Access & Egress To/From Site - Visitors	Adequate							
Bollards *(OH Doors, Other)*	Yes							
Flagpole	X	Yes		No	1	How Many?		
Fill Hydrant	X	Yes		No				
Hydrant Locations	Inside security fence							
Other Site Structures *(type/function)*	None							
Training Tower / Other	NA							
Outdoor Patio	Yes, air side							
Outdoor Fitness	None							
Risks/Other Observations *(not otherwise noted)*	Land side access encumbered with security fence							

INTERIOR ACCESSIBILITY / ADA					
Int/Ext. Doors *(access clearance / threshold)*	X	Yes		No	Non compliant clearance (18") at door pull side at exterior front entry.
Doors *(handles/opening pressure)*	X	Yes		No	
Water Fountain *(height/accessibility)*	X	Yes		No	

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Signage *(height / braille)*	X	Yes		No
Floor Transitions *(interior/exterior)*	X	Yes		No
Floor Slopes *(interior ramps, etc.)*	X	Yes		No
PUBLIC ACCESSIBLE AREAS				
Sinks *(height, pipe wrap)*	X	Yes		No
Dispensers/Accessory *(mounting height)*	X	Yes		No
Countertops *(heights)*	X	Yes		No
Grab Bars	X	Yes		No
Protruding Objects-Accessible Route(s)	X	Yes		No
Public Access Rooms *(toilets/training/etc.)*	X	Yes		No
EXTERIOR ACCESSIBILITY / ADA				
ADA Parking Striping/Signage	X	Yes		No
Access between ADA Parking & Building	X	Yes		No
Other Access to Building	X	Yes		No
Slopes of Accessible Access Pathways	X	Yes		No

WSKF CONDITION RATINGS & DEFINITIONS	
Exceptional	New or well-maintained condition, little to no visual evidence of wear and tear, damage, or other deficiencies.
Good	Some wear and tear, damage, or other deficiencies are visible but still in a functioning and acceptable condition.
Fair	Subjected to some hard and/or long-term wear and term or damage, nearing the end of its useful life and should be monitored for additional deterioration
Poor	At the end of its useful or serviceable life due to age and condition, replacement should be considered imminent

GAINESVILLE FIRE RESCUE (GFR)
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EXISTING FACILITY ASSESSMENT SURVEY

STATION NAME/NO.:	**Fire Station #7**
STATION ADDRESS/LOCATON:	5601 NW 43rd Street

(Brief Description of station)

Located in the northwest area of the City, Station 7 appears to be in very poor condition and is very undersized for efficient and effective daily fire service operations. This Station was "inherited" with the City's city limits expansion. The Station has very limited space for personnel and equipment.

STRUCTURE								
Date of Construction	1981							
Date(s) of Renovation/Expansion	N/A							
Building Age	40							
Construction Type	V-B							
Building Construction	Load-bearing CMU w/steel bar joists; wood non-load-bearing							
Building Area *(SF)*:	~2,036 SF							
Number of Stories:	1							
Site Area *(SF & Acres)*:	SF:	Unknown		Acres:	Unknown			
Maximum Station Staffing Capability	3							
Seismic Protection *(if required)*	Non-conforming							
Category IV Conformance *(if required)*	Non-conforming							
ICC 500 Conformance *(if applicable)*	Non-conforming							
Hardened Space / Storm Shelter		Yes	X	No				
Generator	Y	Yes		No				
Auxiliary Power		Full Facility	X	Partial Fac.		Fuel Source		
General Condition	Poor							
Generator Enclosure *(storm rated?)*	X	Yes		No	Hurricane Shutters			
Special Considerations	Impact resistant window covering provided							

HEALTH / WELLNESS & SAFETY / SECURITY						
Sprinklers / Smoke Detection	N	Sprinklers	Y	Smoke Detection		
Decontamination / Biohazard Disposal		Yes	X	No		N/A
Haz. Bldg. Materials *(lead/asbestos/etc.*	Unknown					
Entry Flooring/Trip Hazards	None observed					
Night Lights to Apparatus Bays		Yes		No		N/A

GAINESVILLE FIRE RESCUE (GFR)
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Decon Type	Not provided					
Gear Wash		Yes	X	No		N/A
Extractor		Yes	X	No		N/A
Gear Dry & Type		Yes	X	No		N/A
Ice Maker Location	Laundry Room					
Gear Storage	X	Yes		No		N/A
Gear Storage Location	Outdoor storage room					
Gear Lockers No.	None					
SCBA		Yes	X	No		N/A
Apparatus Exhaust System	X	Yes		No		N/A
HVLS Ceiling Fans		Yes	X	No		N/A
Apparatus Exhaust System Type	Direct capture					
Mechanical System Type/Age	Split system					
Natural Light in Spaces						
Security	X	Access Cntrl	N	Fencing	N	Video Surveillance
Other Security Measures	None					
Fire Extinguishers	Yes					

ASSIGNED APPARATUS / VEHICLES

Apparatus Call Sign	Min. Staffing*	Comments
Ambulance #		
Truck #E7	3	
Other Vehicles		

**If an apparatus is cross-staffed, enter "CS" after the minimum staffing number.*

BUILDING ASSESSMENT

Building Envelope / Exterior Finishes	Stucco					
Window Material	Alum.					
Roof Construction	Flat roofs with built-up roof with ballasts					
Exterior Doors	Hollow Metal					
Emergency Operations Center (EOC)		Yes	X	No		N/A
Elevator(s) *(quantity/type)*	N/A					
Rated Bunk Walls		Yes	X	No		N/A
Bunk Space		Individual	X	Dormitory		
Number of Beds	3					
Bunk Lockers/Storage *(location/type/number)*	9/Casework					
Bunk Accessories *(desk, tv, etc.)*	Night stand					
Personal Laundry (Washer/Dryer)	X	Yes		No		
Shower Facilities	X	Individual Rooms				Dormitory Style
No. of Showers		Men's		Women's	2	Unisex

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No. of Toilets	1	Men's	1	Women's	1	Unisex
Lavatory Style *(for personnel)*	1	Wall Hung	1	Vanity		
Exercise/Fitness Facilities	Yes/100 SF					
Kitchen/Dining	Yes/350 SF					
Kitchen Appliances						
Kitchen Refrigerators/Pantries						
Access to Outdoor Patio	N					
Private vs. Public Space Separation		Yes	X	No		
Office Space	100 SF					
Personal Study Space		Yes	X	No		N/A
Training/Meeting Rooms	N					
Adequate Waiting Area		Yes	N	No		N/A
Adequate Office Storage		Yes	N	No		N/A
Adequate Living Storage		Yes	N	No		N/A
Adequate Apparatus Storage		Yes	N	No		N/A
Apparatus Bays *(include #)*	1	Drive-through Bays				Back-in Bays
Apparatus Bay - Overhead Door Size(s)	12 x 12					
Sill Condition at Apparatus Bay Doors	Flat					
Overhead Door Operator	X	Trolley		Jack-Shaft		
Overhead Door Safety Features	Infrared sensor only					
Apparatus Bay Drains	Area drain					
Apparatus Clearance *(front/back)*	40'					
Apparatus Bay Width	15'					
Apparatus Bay Floor *(condition/slope)*	Heavily pitted					
Work Shop		Yes	X	No		N/A
Hose Storage		Yes	X	No		N/A
Hose Wash		Yes	X	No		N/A
Site Risks/Other Observations	Insufficient space for effective operations					
MEP ASSESSMENT						
Plumbing Assessment	Flush tanks, chronic plumbing issues, 19 year old water heaters; poor					
HVAC Assessment	AHU's, local t-stat, Type I hood; poor condition					
Electrical Assessment	55 kW NG generator, fluorescents, limited emerg./exit lighting; poor					
Special Systems Assessment	Fire alarm system, limited access control/video surveillance; poor					
Site Assessment	Minimal lighting, no fire protection service; poor condition					
Building Risks/Site Risks	Water heater/system old, AHU's old, security systems limited					

GAINESVILLE FIRE RESCUE (GFR)
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SITE ASSESSMENT								
Topography	Generally flat with low area on east side of station							
Landscaping Quality	Minimal landscaping but trees that do existing need trimming							
Site Lighting	Limited lighting and inadequate							
Storm Water Drainage	Poor drainage							
Downspouts Below Grade		Yes		No	X	N/A		
Sustainability	Minimum site area, minimum ability to provide							
Paving & Concrete	Apron: Concrete front and rear							
	Curbs: None							
	Joints: NA							
	Other: Asphalt drives and parking are in poor condition							
Parking Counts	6	Staff	1	Visitor	0	ADA		
Other Parking *(count/type)*	NA							
Sidewalk *(ROW connect, condition, accessibility)*	No walk between station and ROW							
Front Door Visible		Yes	X	No				
Private vs. Public Space Separation		Yes	X	No				
Street Access Vertical Elevation	Level, no steps							
Line of Sight	Good view lines							
Front Apron Length	~40'							
Rear Apron Length *(if applicable)*	~40'							
Apparatus Maneuvering Clearance	X	Yes		No				
Access & Egress To/From Site - Apparatus	Shared single point of ingress and egress							
Access & Egress To/From Site - Staff	Shared single point of ingress and egress							
Access & Egress To/From Site - Visitors	Shared single point of ingress and egress							
Bollards *(OH Doors, Other)*	No							
Flagpole	X	Yes		No	1	How Many?		
Fill Hydrant	X	Yes		No				
Hydrant Locations	Hydrant located near street							
Other Site Structures *(type/function)*	Portable storage chests							
Training Tower / Other	NA							
Outdoor Patio	Yes							
Outdoor Fitness	Yes							
Risks/Other Observations *(not otherwise noted)*	Station placed some distance off street which requires extended time.							

INTERIOR ACCESSIBILITY / ADA					
Int/Ext. Doors *(access clearance / threshold)*	X	Yes		No	
Doors *(handles/opening pressure)*		Yes	X	No	Some doors have knob type handles.
Water Fountain *(height/accessibility)*		Yes	X	No	No fountain observed.

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Signage *(height / braille)*		Yes	X	No	Accessible toilet sign compliant. Some rooms w/o req. signage.
Floor Transitions *(interior/exterior)*	X	Yes		No	
Floor Slopes *(interior ramps, etc.)*	X	Yes		No	No interior ramps.
PUBLIC ACCESSIBLE AREAS					
Sinks *(height, pipe wrap)*	X	Yes		No	
Dispensers/Accessory *(mounting height)*		Yes	X	No	Mounting height to high.
Countertops *(heights)*	X	Yes		No	No counters in public accessible areas.
Grab Bars	X	Yes		No	One toilet has grab bars.
Protruding Objects-Accessible Route(s)		Yes	X	No	Misc. equip. along corridors.
Public Access Rooms *(toilets/training/etc.)*	X	Yes		No	Accessible women's toilet. Door has knob handles. Issues w/ door clearances at men's.
EXTERIOR ACCESSIBILITY / ADA					
ADA Parking Striping/Signage		Yes	X	No	No accessible stalls.
Access between ADA Parking & Building	X	Yes		No	
Other Access to Building		Yes	X	No	No accessible route from public route.
Slopes of Accessible Access Pathways	X	Yes		No	

WSKF CONDITION RATINGS & DEFINITIONS	
Exceptional	New or well-maintained condition, little to no visual evidence of wear and tear, damage, or other deficiencies.
Good	Some wear and tear, damage, or other deficiencies are visible but still in a functioning and acceptable condition.
Fair	Subjected to some hard and/or long-term wear and term or damage, nearing the end of its useful life and should be monitored for additional deterioration
Poor	At the end of its useful or serviceable life due to age and condition, replacement should be considered imminent

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EXISTING FACILITY ASSESSMENT SURVEY

STATION NAME/NO.:	**Fire Station #8**
STATION ADDRESS/LOCATON:	3223 NW 42nd Ave

(Brief Description of station)

This station is built in a residential community at the very end of a cul-de-sac. This location inherently requires extended response time to all calls. It was noted that when the Station was built, GFR had difficulty finding adequate land for the Station.

STRUCTURE								
Date of Construction	2011							
Date(s) of Renovation/Expansion	N/A							
Building Age	10							
Construction Type	II-B							
Building Construction	Load-bearing CMU, w/cold-formed metal trusses							
Building Area *(SF)*:	~10,400 SF							
Number of Stories:	One							
Site Area *(SF & Acres)*:	SF:	~59670		Acres:	~1.37			
Maximum Station Staffing Capability	5							
Seismic Protection *(if required)*	Y							
Category IV Conformance *(if required)*	N							
ICC 500 Conformance *(if applicable)*	N							
Hardened Space / Storm Shelter		Yes	X	No				
Generator	X	Yes		No				
Auxiliary Power	X	Full Facility		Partial Fac.		Fuel Source		
General Condition	Good							
Generator Enclosure *(storm rated?)*	X	Yes		No	Hurricane Shutters			
Special Considerations	Impact resistant glazing assumed							

HEALTH / WELLNESS & SAFETY / SECURITY						
Sprinklers / Smoke Detection	X	Sprinklers	X	Smoke Detection		
Decontamination / Biohazard Disposal		Yes	X	No		N/A
Haz. Bldg Materials *(lead/asbestos/etc.*	Unknown					
Entry Flooring/Trip Hazards	None					
Night Lights to Apparatus Bays		Yes		No		N/A

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Decon Type						
Gear Wash	X	Yes		No		N/A
Extractor	X	Yes		No		N/A
Gear Dry & Type	X	Yes		No		N/A
Ice Maker Location	Laundry					
Gear Storage	X	Yes		No		N/A
Gear Storage Location	Off apparatus bays					
Gear Lockers No.	16					
SCBA	X	Yes		No		N/A
Apparatus Exhaust System	X	Yes		No		N/A
HVLS Ceiling Fans		Yes	X	No		N/A
Apparatus Exhaust System Type	Source capture					
Mechanical System Type/Age	Split systems					
Natural Light in Spaces						
Security	X	Access Cntrl	N	Fencing	N	Video Surveillance
Other Security Measures						
Fire Extinguishers	Y					

ASSIGNED APPARATUS / VEHICLES

Apparatus Call Sign	Min. Staffing*	Comments
Ambulance #		
Truck # - Q-8	4	
Other Vehicles -		

**If an apparatus is cross-staffed, enter "CS" after the minimum staffing number.*

BUILDING ASSESSMENT

Building Envelope / Exterior Finishes	Brick Veneer					
Window Material	Aluminum w/storm screens					
Roof Construction	Gabled roofs with coated metal & prefinished metal soffits					
Exterior Doors	Alum., Hollow Metal					
Emergency Operations Center (EOC)		Yes	X	No		N/A
Elevator(s) *(quantity/type)*	N/A					
Rated Bunk Walls		Yes	X	No		N/A
Bunk Space	X	Individual		Dormitory		
Number of Beds	5					
Bunk Lockers/Storage *(location/type/number)*	3/Bunk, Casework					
Bunk Accessories *(desk, tv, etc.)*	Night stand, dresser					
Personal Laundry (Washer/Dryer)	X	Yes		No		
Shower Facilities	X	Individual Rooms				Dormitory Style
No. of Showers		Men's		Women's	3	Unisex

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No. of Toilets		Men's		Women's	3	Unisex
Lavatory Style *(for personnel)*		Wall Hung	3	Vanity		
Exercise/Fitness Facilities	Y/300 SF					
Kitchen/Dining	635 SF					
Kitchen Appliances	Refrig./Freezer/Stove-Over/Dishwasher					
Kitchen Refrigerators/Pantries	1+3					
Access to Outdoor Patio	Y					
Private vs. Public Space Separation	X	Yes		No		
Office Space						
Personnel Study Space		Yes	X	No		N/A
Training/Meeting Rooms	Y/290 SF					
Adequate Waiting Area	X	Yes		No		N/A
Adequate Office Storage	X	Yes		No		N/A
Adequate Living Storage	X	Yes		No		N/A
Adequate Apparatus Storage	X	Yes		No		N/A
Apparatus Bays *(include #)*	3	Drive-through Bays				Back-in Bays
Apparatus Bay - Overhead Door Size(s)	Folding Style Doors; 14x14					
Sill Condition at Apparatus Bay Doors	Drop sill, sloped					
Overhead Door Operator		Trolley		Jack-Shaft	X	Folding
Overhead Door Safety Features	Sensor edge					
Apparatus Bay Drains	Trench; 2 per bay					
Apparatus Clearance *(front/back)*	75'-8"					
Apparatus Bay Width	16'-8"/bay					
Apparatus Bay Floor *(condition/slope)*	Sloped, good					
Work Shop	X	Yes		No		N/A
Hose Storage		Yes	X	No		N/A
Hose Wash		Yes	X	No		N/A
Risks/Other Observations *(not otherwise noted)*	No fire protection in apparatus bays; no fire rated walls at bunks					
MEP ASSESSMENT						
Plumbing Assessment	Flush valves, truck fill in bay, gas water heaters w/recirc.; good condition					
HVAC Assessment	100% OA, Air handlers w/UV lights, Type I hood, whole bay exhaust; goo					
Electrical Assessment	150 kW NG generator, T8 fluorescent; good condition					
Special Systems Assessment	Fire alarm system, limited access control/video surveillance; good					
Site Assessment	Undersized water meter, 2" domestic, good site lighting; good condition					
Building Risks/Site Risks	Water meter size restricted service, limited security systems					

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SITE ASSESSMENT								
Topography	Gentle slope from north to south							
Landscaping Quality	Good quality, needs to be trimmed							
Site Lighting	Well-lit, good light levels							
Storm Water Drainage	Good stormwater management							
Downspouts Below Grade	X	Yes		No		N/A		
Sustainability	Good practices in place							
Paving & Concrete	Apron: Concrete, good condition							
	Curbs: Concrete, good condition throughout site							
	Joints: Good condition, well-placed							
	Other: Detention basin wraps east and south sides of perimeter site.							
Parking Counts	7	Staff	7	Visitor	1	ADA		
Other Parking *(count/type)*	Curbside parking for visitors (nearest to front door)							
Sidewalk *(ROW connect, condition, accessibility)*	Yes, perimeter walk at street and walk from street to front door							
Front Door Visible	X	Yes		No				
Private vs. Public Space Separation	X	Yes		No				
Street Access Vertical Elevation	No grade change required							
Line of Sight	Dead-end street, only left view for line of sight required							
Front Apron Length	Depth varies from 30 to 40 feet							
Rear Apron Length *(if applicable)*	Rear apron depth is 40 feet							
Apparatus Maneuvering Clearance	X	Yes		No				
Access & Egress To/From Site - Apparatus	Good ingress and egress							
Access & Egress To/From Site - Staff	Good ingress and egress							
Access & Egress To/From Site - Visitors	Good ingress; egress requires maneuvering through apparatus return							
Bollards *(OH Doors, Other)*	Yes							
Flagpole	X	Yes		No	1	How Many?		
Fill Hydrant	X	Yes		No				
Hydrant Locations	Located at ingress (return path) to station							
Other Site Structures *(type/function)*	Wood structure cover at BBQ grille							
Training Tower / Other	NA							
Outdoor Patio	Yes; screen porch							
Outdoor Fitness	No							
Risks/Other Observations *(not otherwise noted)*	Egress path requires 0.01 mile travel; response time reduction							

INTERIOR ACCESSIBILITY / ADA				
Int/Ext. Doors *(access clearance / threshold)*	X	Yes		No
Doors *(handles/opening pressure)*	X	Yes		No
Water Fountain *(height/accessibility)*	X	Yes		No

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Signage *(height / braille)*	X	Yes		No	
Floor Transitions *(interior/exterior)*	X	Yes		No	
Floor Slopes *(interior ramps, etc.)*	X	Yes		No	
PUBLIC ACCESSIBLE AREAS					
Sinks *(height, pipe wrap)*	X	Yes		No	
Dispensers/Accessory *(mounting height)*	X	Yes		No	
Countertops *(heights)*		Yes	X	No	Front reception counter at 40" aff.
Grab Bars	X	Yes		No	
Protruding Objects-Accessible Route(s)	X	Yes		No	
Public Access Rooms *(toilets/training/etc.)*	X	Yes		No	
EXTERIOR ACCESSIBILITY / ADA					
ADA Parking Striping/Signage	X	Yes		No	
Access between ADA Parking & Building	X	Yes		No	
Other Access to Building	X	Yes		No	Facility has good access from public route.
Slopes of Accessible Access Pathways	X	Yes		No	

WSKF CONDITION RATINGS & DEFINITIONS	
Exceptional	New or well-maintained condition, little to no visual evidence of wear and tear, damage, or other deficiencies.
Good	Some wear and tear, damage, or other deficiencies are visible but still in a functioning and acceptable condition.
Fair	Subjected to some hard and/or long-term wear and term or damage, nearing the end of its useful life and should be monitored for additional deterioration
Poor	At the end of its useful or serviceable life due to age and condition, replacement should be considered imminent

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EXISTING FACILITY ASSESSMENT SURVEY

STATION NAME/NO.:	**Fire Station #9 - Temporary Facility**
STATION ADDRESS/LOCATON:	4213 SW 30th Ave

(Brief Description of station)

The existing double-wide station is a temporary facility. The City has earmarked $4.5 million for construction of new station. The proposed site for the new station may also include Fire Administrative and Department facilities. It is not known exactly where the new station should be built. Alachua County has an existing station in the general vicinity of the temporary station which they will abandon in the near future as the City grows.

STRUCTURE								
Date of Construction	2017							
Date(s) of Renovation/Expansion	-							
Building Age	4							
Construction Type	V-B							
Building Construction	Modular Prefabricated Units (2)							
Building Area *(SF)*:	~2,480 GSF							
Number of Stories:	1							
Site Area *(SF & Acres)*:	SF:	~32,040 GSF		Acres:	~0.74			
Maximum Station Staffing Capability	4							
Seismic Protection *(if required)*	Non-confirming							
Category IV Conformance *(if required)*	Non-confirming							
ICC 500 Conformance *(if applicable)*	Non-confirming							
Hardened Space / Storm Shelter		Yes	X	No				
Generator		Yes	X	No				
Auxiliary Power		Full Facility		Partial Fac.		Fuel Source		
General Condition	Poor							
Generator Enclosure *(storm rated?)*		Yes		No	Hurricane Shutters			
Special Considerations	No impact resistant glazing assumed							
HEALTH / WELLNESS & SAFETY / SECURITY								
Sprinklers / Smoke Detection	X	Sprinklers	X	Smoke Detection				
Decontamination / Biohazard Disposal		Yes	X	No		N/A		
Haz. Bldg Materials *(lead/asbestos/etc.*	N/A							
Entry Flooring/Trip Hazards	Raised Floor							

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Night Lights to Apparatus Bays		Yes		No	X	N/A
Decon Type	None					
Gear Wash		Yes	X	No		N/A
Extractor		Yes	X	No		N/A
Gear Dry & Type		Yes	X	No		N/A
Ice Maker Location	Laundry Room					
Gear Storage	X	Yes		No		N/A
Gear Storage Location	Exterior access storage room					
Gear Lockers No.	N/A					
SCBA		Yes	X	No		N/A
Apparatus Exhaust System		Yes		No	X	N/A
HVLS Ceiling Fans		Yes		No	X	N/A
Apparatus Exhaust System Type	N/A					
Mechanical System Type/Age	Split systems					
Natural Light in Spaces	Y					
Security	Y	Access Cntrl	N	Fencing	N	Video Surveillance
Other Security Measures	None					
Fire Extinguishers	Yes					

ASSIGNED APPARATUS / VEHICLES

Apparatus Call Sign	Min. Staffing*	Comments
Ambulance #		
Truck # Q-9, E-9	4	
Other Vehicles		

**If an apparatus is cross-staffed, enter "CS" after the minimum staffing number.*

BUILDING ASSESSMENT

Building Envelope / Exterior Finishes	Metal Panel					
Window Material	Alum.					
Roof Construction	Metal Panel					
Exterior Doors	Alum.					
Emergency Operations Center (EOC)		Yes	X	No		N/A
Elevator(s) *(quantity/type)*	N/A					
Rated Bunk Walls		Yes	N	No		N/A
Bunk Space	X	Individual		Dormitory		
Number of Beds	4					
Bunk Lockers/Storage *(location/type/number)*	Casework, 3/bunk					
Bunk Accessories *(desk, tv, etc.)*	Night stand, study desk					
Personal Laundry (Washer/Dryer)	X	Yes		No		
Shower Facilities	X	Individual Rooms				Dormitory Style

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No. of Showers		Men's		Women's	2	Unisex
No. of Toilets		Men's		Women's	2	Unisex
Lavatory Style *(for personnel)*	2	Wall Hung		Vanity		
Exercise/Fitness Facilities	None					
Kitchen/Dining	90/SF - 120/SF					
Kitchen Appliances	Refrig./Stove-Oven					
Kitchen Refrigerators/Pantries						
Access to Outdoor Patio	No					
Private vs. Public Space Separation		Yes	X	No		
Office Space	Yes, 120/SF, 120/SF, 250/SF					
Personal Study Space	X	Yes		No		N/A
Training/Meeting Rooms	None					
Adequate Waiting Area		Yes	X	No		N/A
Adequate Office Storage		Yes	X	No		N/A
Adequate Living Storage		Yes	X	No		N/A
Adequate Apparatus Storage		Yes	X	No		N/A
Apparatus Bays *(include #)*		Drive-through Bays				Back-in Bays
Apparatus Bay - Overhead Door Size(s)	N/A					
Sill Condition at Apparatus Bay Doors	N/A					
Overhead Door Operator		Trolley		Jack-Shaft		
Overhead Door Safety Features	N/A					
Apparatus Bay Drains	N/A					
Apparatus Clearance *(front/back)*	N/A					
Apparatus Bay Width	18'					
Apparatus Bay Floor *(condition/slope)*	Conc.					
Work Shop		Yes	X	No		N/A
Hose Storage		Yes	X	No		N/A
Hose Wash		Yes	X	No		N/A
Site Risks/Other Observations	Apparatus unprotected					
MEP ASSESSMENT						
Plumbing Assessment	Flush tanks, no gas service, FP service; good condition					
HVAC Assessment	Local t-stat, thru-wall units, chronic AC issues, no Type 1 hood; poor					
Electrical Assessment	200A Service, no generator, fluorescent; good condition					
Special Systems Assessment	Fire alarm, no access control/video surveillance; fair condition					
Site Assessment	Minimal lighting; fair condition					
Building Risks/Site Risks	No generator, HVAC unit limited OA, no security systems					

GAINESVILLE FIRE RESCUE (GFR)
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SITE ASSESSMENT								
Topography	Very flat							
Landscaping Quality	Limited landscape; station located in a parking lot							
Site Lighting	Generally good							
Storm Water Drainage	As site is very flat, this is a concern							
Downspouts Below Grade		Yes		No	X	N/A		
Sustainability	As this is a parking lot site, limited practices in place							
Paving & Concrete	Apron: Asphalt, new condition							
	Curbs: Concrete, good condition							
	Joints: NA							
	Other: Apparatus bay is a "car port" like structure							
Parking Counts	7	Staff	4	Visitor	1	ADA		
Other Parking *(count/type)*	Parking lot site							
Sidewalk *(ROW connect, condition, accessibility)*	Walk from station to public way							
Front Door Visible	X	Yes		No				
Private vs. Public Space Separation		Yes	X	No				
Street Access Vertical Elevation	Station is built of portable units, elevated access required							
Line of Sight	Poor; egress requires crossing Regional Transit Authority vehicles							
Front Apron Length	~40'							
Rear Apron Length *(if applicable)*	~35'							
Apparatus Maneuvering Clearance		Yes	X	No				
Access & Egress To/From Site - Apparatus	Poor, refer to "Line of Sight" notes above; access through parking lot							
Access & Egress To/From Site - Staff	Marginal; access through public parking lot							
Access & Egress To/From Site - Visitors	Poor; requires access through public parking lot							
Bollards *(OH Doors, Other)*	None							
Flagpole		Yes	X	No		How Many?		
Fill Hydrant		Yes	X	No				
Hydrant Locations	None							
Other Site Structures *(type/function)*	This location is RTA station; vehicle conflicts prevalent							
Training Tower / Other	NA							
Outdoor Patio	None							
Outdoor Fitness	None							
Risks/Other Observations *(not otherwise noted)*	Many potential conflicts w/ public transportation & private vehicles							

INTERIOR ACCESSIBILITY / ADA				
Int/Ext. Doors *(access clearance / threshold)*	X	Yes		No
Doors *(handles/opening pressure)*	X	Yes		No
Water Fountain *(height/accessibility)*	X	Yes		No

GAINESVILLE FIRE RESCUE (GFR)
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Signage *(height / braille)*		Yes	X	No	Not provided.
Floor Transitions *(interior/exterior)*	X	Yes		No	
Floor Slopes *(interior ramps, etc.)*	X	Yes		No	
PUBLIC ACCESSIBLE AREAS					
Sinks *(height, pipe wrap)*	X	Yes		No	
Dispensers/Accessory *(mounting height)*	X	Yes		No	
Countertops *(heights)*		Yes		No	N/A
Grab Bars	X	Yes		No	
Protruding Objects-Accessible Route(s)	X	Yes		No	
Public Access Rooms *(toilets/training/etc.)*	X	Yes		No	
EXTERIOR ACCESSIBILITY / ADA					
ADA Parking Striping/Signage	X	Yes		No	
Access between ADA Parking & Building	X	Yes		No	
Other Access to Building		Yes	X	No	
Slopes of Accessible Access Pathways	X	Yes		No	

WSKF CONDITION RATINGS & DEFINITIONS	
Exceptional	New or well-maintained condition, little to no visual evidence of wear and tear, damage, or other deficiencies.
Good	Some wear and tear, damage, or other deficiencies are visible but still in a functioning and acceptable condition.
Fair	Subjected to some hard and/or long-term wear and term or damage, nearing the end of its useful life and should be monitored for additional deterioration
Poor	At the end of its useful or serviceable life due to age and condition, replacement should be considered imminent

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
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EXISTING FACILITY ASSESSMENT SURVEY

STATION NAME/NO.:	**GFR Training (Building A)**
STATION ADDRESS/LOCATON:	1024 NE 14th Street

(Brief Description of Facility)

This facility is used by Gainesville FR for Community Resource Paramedic purposes. This facility is a re-purposed clinic. This facility provides community outreach services to Gainesville. As this building design is very introverted and oriented away from the public, it is not welcoming.

STRUCTURE						
Date of Construction	1976					
Date(s) of Renovation/Expansion	1993					
Building Age	45					
Construction Type	II-B					
Building Construction	Conc. covered masonry bearing walls w/ conc-topped metal decks					
Building Area *(SF)*:	~3,000					
Number of Stories:	One					
Site Area *(SF & Acres)*:	SF:	N/A		Acres:	3	
Maximum Station Staffing Capability	N/A					
Seismic Protection *(if required)*	Unknown					
Category IV Conformance *(if required)*	N/A					
ICC 500 Conformance *(if applicable)*	N/A					
Hardened Space / Storm Shelter		Yes		No	X	N/A
Generator		Yes		No	X	N/A
Auxiliary Power		Full Facility		Partial Fac.	X	N/A
General Condition	Poor					
Generator Enclosure *(storm rated?)*		Yes		No	X	N/A
Special Considerations	None					

HEALTH / WELLNESS & SAFETY / SECURITY						
Sprinklers / Smoke Detection	N	Sprinklers	N	Smoke Detection		
Decontamination / Biohazard Disposal		Yes		No	X	N/A
Haz. Bldg Materials *(lead/asbestos/etc.*	N/A					
Entry Flooring/Trip Hazards	None					
Night Lights to Apparatus Bays		Yes		No	X	N/A

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
June 2021
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Decon Type	N/A					
Gear Wash		Yes		No	X	N/A
Extractor		Yes		No	X	N/A
Gear Dry & Type		Yes		No	X	N/A
Ice Maker Location	N/A					
Gear Storage		Yes		No	X	N/A
Gear Storage Location	N/A					
Gear Lockers No.	N/A					
SCBA		Yes		No	X	N/A
Apparatus Exhaust System		Yes		No	X	N/A
HVLS Ceiling Fans		Yes		No	X	N/A
Apparatus Exhaust System Type	N/A					
Mechanical System Type/Age	N/A					
Natural Light in Spaces	N/A					
Security	Y	Access Cntrl	N	Fencing	N	Video Surveillance
Other Security Measures	None					
Fire Extinguishers	Y					

ASSIGNED APPARATUS / VEHICLES

Apparatus Call Sign	Min. Staffing*	Comments
Ambulance #	N/A	
Truck #	N/A	
Other Vehicles	N/A	

**If an apparatus is cross-staffed, enter "CS" after the minimum staffing number.*

BUILDING ASSESSMENT

Building Envelope / Exterior Finishes	Painted Concrete					
Window Material	Alum.					
Roof Construction	Flat roofs with built-up membrane and stone ballast					
Exterior Doors	Alum. Storefront					
Emergency Operations Center (EOC)		Yes		No	X	N/A
Elevator(s) *(quantity/type)*	N/A					
Rated Bunk Walls		Yes		No	X	N/A
Bunk Space		Individual		Dormitory	X	N/A
Number of Beds	N/A					
Bunk Lockers/Storage *(location/type/number)*	N/A					
Bunk Accessories *(desk, tv, etc.)*	N/A					
Personal Laundry (Washer/Dryer)		Yes		No	X	N/A
Shower Facilities		Individual Rooms				Dormitory Style
No. of Showers		Men's		Women's	X	N/A

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
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No. of Toilets		Men's		Women's		Unisex
Lavatory Style *(for personnel)*		Wall Hung		Vanity		
Exercise/Fitness Facilities	None					
Kitchen/Dining	Y					
Kitchen Appliances	Y					
Kitchen Refrigerators/Pantries	Y					
Access to Outdoor Patio	N/A					
Private vs. Public Space Separation		Yes	X	No		
Office Space	Y					
Personal Study Space		Yes		No		N/A
Training/Meeting Rooms	N					
Adequate Waiting Area		Yes	X	No		N/A
Adequate Office Storage		Yes	X	No		N/A
Adequate Living Storage		Yes		No	X	N/A
Adequate Apparatus Storage		Yes		No	X	N/A
Apparatus Bays *(include #)*		Drive-through Bays			X	N/A
Apparatus Bay - Overhead Door Size(s)	N/A					
Sill Condition at Apparatus Bay Doors	N/A					
Overhead Door Operator		Trolley		Jack-Shaft	X	N/A
Overhead Door Safety Features	N/A					
Apparatus Bay Drains	N/A					
Apparatus Clearance *(front/back)*	N/A					
Apparatus Bay Width	N/A					
Apparatus Bay Floor *(condition/slope)*	N/A					
Work Shop		Yes		No	X	N/A
Hose Storage		Yes		No	X	N/A
Hose Wash		Yes		No	X	N/A
Risks/Other Observations *(not otherwise noted)*						
MEP ASSESSMENT						
Plumbing Assessment	No FP, flush valve, no water bottle fill; fair condition					
HVAC Assessment	Water source heat pump, no OA, local controls; poor condition					
Electrical Assessment	2-200A service, old devices, T8 fluorescent, min. emerg./exit light'g; poor					
Special Systems Assessment	Smoke detectors, old system, no security systems; poor					
Site Assessment	Report sanitary sewer issues, marginal lighting, no FP service; fair					
Building Risks/Site Risks	No OA, aged electrical, limited security					

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
June 2021
REV September 2021

SITE ASSESSMENT						
Topography	Moderate grade change, high to low west to east approx. 4'					
Landscaping Quality	Mature trees					
Site Lighting	Parking lot frontage is generally good; interior lot is poor					
Storm Water Drainage	Well graded					
Downspouts Below Grade		Yes		No	X	N/A
Sustainability	Opportunities for improvement					
Paving & Concrete	Apron: NA					
	Curbs: NA					
	Joints: NA					
	Other:					
Parking Counts	8	Staff	2	Visitor	1	ADA
Other Parking *(count/type)*	None					
Sidewalk *(ROW connect, condition, accessibility)*	Sidewalk from building to public way					
Front Door Visible		Yes	X	No		
Private vs. Public Space Separation		Yes	X	No		
Street Access Vertical Elevation	Ramp provided to access elevated entry; approx. 4' grade change					
Line of Sight	NA					
Front Apron Length	NA					
Rear Apron Length *(if applicable)*	NA					
Apparatus Maneuvering Clearance		Yes		No		
Access & Egress To/From Site - Apparatus	NA					
Access & Egress To/From Site - Staff	NA					
Access & Egress To/From Site - Visitors	NA					
Bollards *(OH Doors, Other)*	NA					
Flagpole		Yes	X	No		How Many?
Fill Hydrant		Yes		No		
Hydrant Locations	NA					
Other Site Structures *(type/function)*	None					
Training Tower / Other	NA					
Outdoor Patio	NA					
Outdoor Fitness	NA					
Risks/Other Observations *(not otherwise noted)*	None					

INTERIOR ACCESSIBILITY / ADA					
Int/Ext. Doors *(access clearance / threshold)*		Yes	X	No	Entries have non-compliant thresholds.
Doors *(handles/opening pressure)*	X	Yes		No	
Water Fountain *(height/accessibility)*		Yes	X	No	

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
June 2021
REV September 2021

Signage *(height / braille)*		Yes	X	No	
Floor Transitions *(interior/exterior)*	X	Yes		No	
Floor Slopes *(interior ramps, etc.)*	X	Yes		No	
PUBLIC ACCESSIBLE AREAS					
Sinks *(height, pipe wrap)*		Yes	X	No	
Dispensers/Accessory *(mounting height)*		Yes	X	No	
Countertops *(heights)*		Yes	X	No	
Grab Bars		Yes	X	No	
Protruding Objects-Accessible Route(s)	X	Yes		No	
Public Access Rooms *(toilets/training/etc.)*		Yes	X	No	
EXTERIOR ACCESSIBILITY / ADA					
ADA Parking Striping/Signage	X	Yes		No	
Access between ADA Parking & Building		Yes	X	No	Ramp from parking to steep (7%).
Other Access to Building		Yes	X	No	Some entries have non-compliant thresholds.
Slopes of Accessible Access Pathways		Yes	X	No	Ramp from parking to steep (7%).

WSKF CONDITION RATINGS & DEFINITIONS	
Exceptional	New or well-maintained condition, little to no visual evidence of wear and tear, damage, or other deficiencies.
Good	Some wear and tear, damage, or other deficiencies are visible but still in a functioning and acceptable condition.
Fair	Subjected to some hard and/or long-term wear and term or damage, nearing the end of its useful life and should be monitored for additional deterioration
Poor	At the end of its useful or serviceable life due to age and condition, replacement should be considered imminent

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
June 2021
REV September 2021

EXISTING FACILITY ASSESSMENT SURVEY

STATION NAME/NO.:	**GFR Administration Annex (Building B)**
STATION ADDRESS/LOCATON:	1026 NE 14th Street

(Brief Description of Facility)

This facility is used by Gainesville FR for staff training purposes. This facility is a re-purposed senior center. The facility recently experienced a partial roof collapse making the facility partially unsafe and unusable. As GFR has no other options for housing training staff, the facility remains in use.

STRUCTURE								
Date of Construction	1976							
Date(s) of Renovation/Expansion	1993							
Building Age	45							
Construction Type	II-B							
Building Construction	Conc. covered masonry bearing walls w/ conc-topped metal decks							
Building Area *(SF)*:	~4,800 GSF							
Number of Stories:	One							
Site Area *(SF & Acres)*:	SF:	N/A		Acres:	3			
Maximum Station Staffing Capability	N/A							
Seismic Protection *(if required)*	Unknown							
Category IV Conformance *(if required)*	N/A							
ICC 500 Conformance *(if applicable)*	N/A							
Hardened Space / Storm Shelter		Yes		No	X	N/A		
Generator		Yes		No	X	N/A		
Auxiliary Power		Full Facility		Partial Fac.	X	N/A		
General Condition	Poor							
Generator Enclosure *(storm rated?)*		Yes		No	X	N/A		
Special Considerations	Partial roof structure failure							

HEALTH / WELLNESS & SAFETY / SECURITY						
Sprinklers / Smoke Detection	N	Sprinklers	N	Smoke Detection		
Decontamination / Biohazard Disposal		Yes		No	X	N/A
Haz. Bldg Materials *(lead/asbestos/etc.*	N/A					
Entry Flooring/Trip Hazards	None					
Night Lights to Apparatus Bays		Yes		No	X	N/A

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
June 2021
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Decon Type	N/A					
Gear Wash		Yes		No	X	N/A
Extractor		Yes		No	X	N/A
Gear Dry & Type		Yes		No	X	N/A
Ice Maker Location	N/A					
Gear Storage		Yes		No	X	N/A
Gear Storage Location	N/A					
Gear Lockers No.	N/A					
SCBA		Yes		No	X	N/A
Apparatus Exhaust System		Yes		No	X	N/A
HVLS Ceiling Fans		Yes		No	X	N/A
Apparatus Exhaust System Type	N/A					
Mechanical System Type/Age	N/A					
Natural Light in Spaces	N/A					
Security	Y	Access Cntrl	N	Fencing	N	Video Surveillance
Other Security Measures	None					
Fire Extinguishers	Yes					

ASSIGNED APPARATUS / VEHICLES

Apparatus Call Sign	Min. Staffing*	Comments
Ambulance #	N/A	
Truck #	N/A	
Other Vehicles	N/A	

**If an apparatus is cross-staffed, enter "CS" after the minimum staffing number.*

BUILDING ASSESSMENT

Building Envelope / Exterior Finishes	Painted Concrete					
Window Material	Alum.					
Roof Construction	Flat roofs with built-up membrane and stone ballast					
Exterior Doors	Alum. Storefront					
Emergency Operations Center (EOC)		Yes		No	X	N/A
Elevator(s) *(quantity/type)*	N/A					
Rated Bunk Walls		Yes		No	X	N/A
Bunk Space		Individual		Dormitory	X	N/A
Number of Beds	N/A					
Bunk Lockers/Storage *(location/type/number)*	N/A					
Bunk Accessories *(desk, tv, etc.)*	N/A					
Personal Laundry (Washer/Dryer)		Yes		No	X	N/A
Shower Facilities		Individual Rooms				Dormitory Style
No. of Showers		Men's		Women's	X	N/A

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
June 2021
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No. of Toilets		Men's		Women's		Unisex
Lavatory Style *(for personnel)*		Wall Hung		Vanity		
Exercise/Fitness Facilities	None					
Kitchen/Dining	Y					
Kitchen Appliances	Y					
Kitchen Refrigerators/Pantries	Y					
Access to Outdoor Patio	N					
Private vs. Public Space Separation		Yes	X	No		
Office Space	Y					
Personal Study Space	X	Yes		No		N/A
Training/Meeting Rooms	Y					
Adequate Waiting Area		Yes	X	No		N/A
Adequate Office Storage		Yes	X	No		N/A
Adequate Living Storage		Yes		No	X	N/A
Adequate Apparatus Storage		Yes		No	X	N/A
Apparatus Bays *(include #)*		Drive-through Bays			X	N/A
Apparatus Bay - Overhead Door Size(s)	N/A					
Sill Condition at Apparatus Bay Doors	N/A					
Overhead Door Operator		Trolley		Jack-Shaft	X	N/A
Overhead Door Safety Features	N/A					
Apparatus Bay Drains	N/A					
Apparatus Clearance *(front/back)*	N/A					
Apparatus Bay Width	N/A					
Apparatus Bay Floor *(condition/slope)*	N/A					
Work Shop		Yes		No	X	N/A
Hose Storage		Yes		No	X	N/A
Hose Wash		Yes		No	X	N/A
Risks/Other Observations *(not otherwise noted)*	Partially collapsed roof (training room/meeting room)					
MEP ASSESSMENT						
Plumbing Assessment	No FP, flush valve, no water bottle fill; fair condition					
HVAC Assessment	Water source heat pump, no OA, local controls; poor condition					
Electrical Assessment	200A service, old devices, T8 fluorescent, min. emerg./exit light'g; poor					
Special Systems Assessment	Smoke detectors, old system, min. security systems; poor					
Site Assessment	Report sanitary sewer issues, marginal lighting, no FP service; fair					
Building Risks/Site Risks	No OA, aged electrical, limited security					

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
June 2021
REV September 2021

SITE ASSESSMENT						
Topography	Moderate grade change, high to low west to east approx. 4'					
Landscaping Quality	Mature trees					
Site Lighting	Parking lot frontage is generally good; interior lot is poor					
Storm Water Drainage	Well graded					
Downspouts Below Grade		Yes		No	X	N/A
Sustainability	Opportunities for improvement					
Paving & Concrete	Apron: NA					
	Curbs: NA					
	Joints: NA					
	Other:					
Parking Counts	8	Staff	3	Visitor	1	ADA
Other Parking *(count/type)*	Service drive available					
Sidewalk *(ROW connect, condition, accessibility)*	Sidewalk from building to public way					
Front Door Visible	X	Yes		No		
Private vs. Public Space Separation		Yes	X	No		
Street Access Vertical Elevation	Ramp provided to access elevated entry; approx. 4' grade change					
Line of Sight	NA					
Front Apron Length	NA					
Rear Apron Length *(if applicable)*	NA					
Apparatus Maneuvering Clearance		Yes		No		
Access & Egress To/From Site - Apparatus	NA					
Access & Egress To/From Site - Staff	NA					
Access & Egress To/From Site - Visitors	NA					
Bollards *(OH Doors, Other)*	NA					
Flagpole		Yes	X	No		How Many?
Fill Hydrant		Yes		No		
Hydrant Locations	NA					
Other Site Structures *(type/function)*	None					
Training Tower / Other	NA					
Outdoor Patio	NA					
Outdoor Fitness	NA					
Risks/Other Observations *(not otherwise noted)*	None					

INTERIOR ACCESSIBILITY / ADA					
Int/Ext. Doors *(access clearance / threshold)*	X	Yes		No	Some entries have non-compliant thresholds.
Doors *(handles/opening pressure)*		Yes	X	No	Some door handles are knob type.
Water Fountain *(height/accessibility)*		Yes	X	No	Single low height provided.

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
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Signage *(height / braille)*		Yes	X	No	
Floor Transitions *(interior/exterior)*	X	Yes		No	
Floor Slopes *(interior ramps, etc.)*	X	Yes		No	
PUBLIC ACCESSIBLE AREAS					
Sinks *(height, pipe wrap)*		Yes	X	No	
Dispensers/Accessory *(mounting height)*		Yes	X	No	
Countertops *(heights)*		Yes	X	No	
Grab Bars		Yes	X	No	
Protruding Objects-Accessible Route(s)	X	Yes		No	
Public Access Rooms *(toilets/training/etc.)*		Yes	X	No	Provided but non-compliant.
EXTERIOR ACCESSIBILITY / ADA					
ADA Parking Striping/Signage	X	Yes		No	
Access between ADA Parking & Building		Yes	X	No	Ramp from parking to steep (7%).
Other Access to Building		Yes	X	No	Some entries have non-compliant thresholds.
Slopes of Accessible Access Pathways		Yes	X	No	Ramp from parking to steep (7%).

WSKF CONDITION RATINGS & DEFINITIONS	
Exceptional	New or well-maintained condition, little to no visual evidence of wear and tear, damage, or other deficiencies.
Good	Some wear and tear, damage, or other deficiencies are visible but still in a functioning and acceptable condition.
Fair	Subjected to some hard and/or long-term wear and term or damage, nearing the end of its useful life and should be monitored for additional deterioration
Poor	At the end of its useful or serviceable life due to age and condition, replacement should be considered imminent

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
June 2021
REV September 2021

EXISTING FACILITY ASSESSMENT SURVEY

STATION NAME/NO.:	**GFR Administration (Building C)**
STATION ADDRESS/LOCATON:	1025 NE 13th Street

(Brief Description of station)

This facility houses the Gainesville Fire Rescue Administrative and Operations Offices for the Department. This facility is commonly referred to as Bldg. 'C' of the Northeast Neighborhood Facilities Complex. This building is a re-purposed Day Care facility.

STRUCTURE						
Date of Construction	1976					
Date(s) of Renovation/Expansion	1993					
Building Age	45					
Construction Type	II-B					
Building Construction	Conc. covered masonry bearing walls w/ conc-topped metal decks					
Building Area *(SF)*:	~6,884 SF					
Number of Stories:	One					
Site Area *(SF & Acres)*:	SF:	N/A		Acres:	3/Complex Area	
Maximum Facility Staffing Capability	18					
Seismic Protection *(if required)*	Non-conforming					
Category IV Conformance *(if required)*	Non-conforming					
ICC 500 Conformance *(if applicable)*	Non-conforming					
Hardened Space / Storm Shelter		Yes	X	No		
Generator		Yes	X	No		
Auxiliary Power		Full Facility		Partial Fac.		Fuel Source
General Condition	Poor					
Generator Enclosure *(storm rated?)*		Yes	X	No		
Special Considerations	None					

HEALTH / WELLNESS & SAFETY / SECURITY						
Sprinklers / Smoke Detection	N	Sprinklers	Y	Smoke Detection		
Decontamination / Biohazard Disposal		Yes		No	X	N/A
Haz. Bldg Materials *(lead/asbestos/etc.*	Unknown					
Entry Flooring/Trip Hazards	None					
Night Lights to Apparatus Bays		Yes		No	X	N/A

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
June 2021
REV September 2021

Decon Type						
Gear Wash		Yes		No	X	N/A
Extractor		Yes		No	X	N/A
Gear Dry & Type		Yes		No	X	N/A
Ice Maker Location						
Gear Storage		Yes		No	X	N/A
Gear Storage Location	N/A					
Gear Lockers No.	N/A					
SCBA		Yes		No	X	N/A
Apparatus Exhaust System		Yes		No	X	N/A
HVLS Ceiling Fans		Yes		No	X	N/A
Apparatus Exhaust System Type	N/A					
Mechanical System Type/Age	Chilled Water/Boiler					
Natural Light in Spaces	Partial					
Security	Y	Access Cntrl	N	Fencing	N	Video Surveillance
Other Security Measures	None					
Fire Extinguishers	Y					

ASSIGNED APPARATUS / VEHICLES

Apparatus Call Sign	Min. Staffing*	Comments
Ambulance #	N/A	
Truck #	N/A	
Other Vehicles	N/A	

**If an apparatus is cross-staffed, enter "CS" after the minimum staffing number.*

BUILDING ASSESSMENT

Building Envelope / Exterior Finishes	Painted Concrete					
Window Material	Alum. Storefront					
Roof Construction	Flat roofs with built-up membrane and stone ballast, roof leaks					
Exterior Doors	Alum. Storefront					
Emergency Operations Center (EOC)		Yes	X	No		N/A
Elevator(s) *(quantity/type)*	N/A					
Rated Bunk Walls		Yes		No	X	N/A
Bunk Space		Individual		Dormitory		
Number of Beds	N/A					
Bunk Lockers/Storage *(location/type/number)*	N/A					
Bunk Accessories *(desk, tv, etc.)*	N/A					
Personal Laundry (Washer/Dryer)		Yes	X	No		
Shower Facilities	N	Individual Rooms				Dormitory Style
No. of Showers	N	Men's	N	Women's	N	Unisex

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
June 2021
REV September 2021

No. of Toilets	4	Men's	4	Women's		Unisex
Lavatory Style *(for personnel)*	8	Wall Hung		Vanity		
Exercise/Fitness Facilities	N/A					
Kitchen/Dining	1/192 SF					
Kitchen Appliances	Refrig/Sink/Microwave					
Kitchen Refrigerators/Pantries	N/A					
Access to Outdoor Patio	Y					
Private vs. Public Space Separation	X	Yes		No		
Office Space						
Personal Study Space		Yes		No	X	N/A
Training/Meeting Rooms	Y/290 SF					
Adequate Waiting Area		Yes	X	No		N/A
Adequate Office Storage		Yes	X	No		N/A
Adequate Living Storage		Yes		No	X	N/A
Adequate Apparatus Storage		Yes		No	X	N/A
Apparatus Bays *(include #)*	N/A	Drive-through Bays				Back-in Bays
Apparatus Bay - Overhead Door Size(s)	N/A					
Sill Condition at Apparatus Bay Doors	N/A					
Overhead Door Operator	N/A	Trolley		Jack-Shaft		
Overhead Door Safety Features	N/A					
Apparatus Bay Drains	N/A					
Apparatus Clearance *(front/back)*	N/A					
Apparatus Bay Width	N/A					
Apparatus Bay Floor *(condition/slope)*	N/A					
Work Shop		Yes		No	X	N/A
Hose Storage		Yes		No	X	N/A
Hose Wash		Yes		No	X	N/A
Risks/Other Observations *(not otherwise noted)*	Facility does not provide adequate operational efficiency.					
MEP ASSESSMENT						
Plumbing Assessment	No FP, flush valve, no water bottle fill; fair condition					
HVAC Assessment	Water source heat pump, no OA, local controls; poor condition					
Electrical Assessment	200A service, old devices, T8 fluorescent, min. emerg./exit light'g; poor					
Special Systems Assessment	Smoke detectors, old system, min. security systems; poor					
Site Assessment	Report sanitary sewer issues, marginal lighting, no FP service; fair					
Building Risks/Site Risks	No OA, aged electrical, limited security					

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
June 2021
REV September 2021

SITE ASSESSMENT						
Topography	Generally slopes from high to low, north to south					
Landscaping Quality	Mature landscaping and general good condition					
Site Lighting	Perimeter lighting is good, interior (courtyard/campus) is poor					
Storm Water Drainage	Generally good; some areas could be prone to flooding					
Downspouts Below Grade		Yes		No	X	N/A
Sustainability	Mature site, opportunities for stainability					
Paving & Concrete	Apron: NA					
	Curbs: NA					
	Joints: NA					
	Other: Building is surrounded by engaged planters and abutments					
Parking Counts		Staff		Visitor		ADA
Other Parking *(count/type)*	Parking is on street as well as lots north and south of facility					
Sidewalk *(ROW connect, condition, accessibility)*	Sidewalk access from street to front door					
Front Door Visible	X	Yes		No		
Private vs. Public Space Separation		Yes	X	No		
Street Access Vertical Elevation	At-grade access; no elevation change					
Line of Sight	NA					
Front Apron Length	NA					
Rear Apron Length *(if applicable)*	NA					
Apparatus Maneuvering Clearance	NA	Yes		No		
Access & Egress To/From Site - Apparatus	NA					
Access & Egress To/From Site - Staff	NA					
Access & Egress To/From Site - Visitors	NA					
Bollards *(OH Doors, Other)*	NA					
Flagpole		Yes	X	No		How Many?
Fill Hydrant	NA	Yes		No		
Hydrant Locations	NA					
Other Site Structures *(type/function)*	NA					
Training Tower / Other	NA					
Outdoor Patio	NA					
Outdoor Fitness	NA					
Risks/Other Observations *(not otherwise noted)*	None					

INTERIOR ACCESSIBILITY / ADA					
Int/Ext. Doors *(access clearance / threshold)*	X	Yes		No	
Doors *(handles/opening pressure)*	X	Yes		No	
Water Fountain *(height/accessibility)*		Yes	X	No	Single height provided.

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
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Signage *(height / braille)*		Yes	X	No	
Floor Transitions *(interior/exterior)*	X	Yes		No	
Floor Slopes *(interior ramps, etc.)*	X	Yes		No	
PUBLIC ACCESSIBLE AREAS					
Sinks *(height, pipe wrap)*		Yes	X	No	
Dispensers/Accessory *(mounting height)*		Yes	X	No	
Countertops *(heights)*		Yes	X	No	
Grab Bars		Yes	X	No	Some provided but non-compliant.
Protruding Objects-Accessible Route(s)	X	Yes		No	
Public Access Rooms *(toilets/training/etc.)*		Yes	X	No	Toilets available - non-compliant.
EXTERIOR ACCESSIBILITY / ADA					
ADA Parking Striping/Signage	X	Yes		No	
Access between ADA Parking & Building		Yes	X	No	No curb ramp provided.
Other Access to Building		Yes	X	No	
Slopes of Accessible Access Pathways	X	Yes		No	

WSKF CONDITION RATINGS & DEFINITIONS	
Exceptional	New or well-maintained condition, little to no visual evidence of wear and tear, damage, or other deficiencies.
Good	Some wear and tear, damage, or other deficiencies are visible but still in a functioning and acceptable condition.
Fair	Subjected to some hard and/or long-term wear and term or damage, nearing the end of its useful life and should be monitored for additional deterioration
Poor	At the end of its useful or serviceable life due to age and condition, replacement should be considered imminent

GAINESVILLE FIRE RESCUE (GFR)
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WSKF ARCHITECTS
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EXISTING FACILITY ASSESSMENT SURVEY

STATION NAME/NO.:	**GFR Modular Training Classroom**
STATION ADDRESS/LOCATON:	1022 NE 14th Street

(Brief Description of station)

This facility is a dedicated, modular, classroom that was provided facilitate GFR fire training as a result of the partially collapsed roof over the classroom in Bldg. B. This facility is a self-contained classroom unit.

STRUCTURE						
Date of Construction	N/A					
Date(s) of Renovation/Expansion	N/A					
Building Age	N/A					
Construction Type	V-B (assumed)					
Building Construction	Prefabricated/modular units					
Building Area *(SF)*:	~600 SF (estimated)					
Number of Stories:	1					
Site Area *(SF & Acres)*:	SF:	N/A		Acres:	~3	
Maximum Station Staffing Capability	N/A					
Seismic Protection *(if required)*	Unknown					
Category IV Conformance *(if required)*	N/A					
ICC 500 Conformance *(if applicable)*	N/A					
Hardened Space / Storm Shelter		Yes		No	X	N/A
Generator		Yes		No	X	N/A
Auxiliary Power		Full Facility		Partial Fac.	X	N/A
General Condition	Fair					
Generator Enclosure *(storm rated?)*		Yes		No	X	N/A
Special Considerations	Structure anchorage unknown					

HEALTH / WELLNESS & SAFETY / SECURITY						
Sprinklers / Smoke Detection	N	Sprinklers	N	Smoke Detection		
Decontamination / Biohazard Disposal		Yes		No	X	N/A
Haz. Bldg Materials *(lead/asbestos/etc.*	N/A					
Entry Flooring/Trip Hazards	None					
Night Lights to Apparatus Bays		Yes		No	X	N/A

GAINESVILLE FIRE RESCUE (GFR)
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Decon Type	N/A					
Gear Wash		Yes		No	X	N/A
Extractor		Yes		No	X	N/A
Gear Dry & Type		Yes		No	X	N/A
Ice Maker Location	N/A					
Gear Storage		Yes		No	X	N/A
Gear Storage Location	N/A					
Gear Lockers No.	N/A					
SCBA		Yes		No	X	N/A
Apparatus Exhaust System		Yes		No	X	N/A
HVLS Ceiling Fans		Yes		No	X	N/A
Apparatus Exhaust System Type	N/A					
Mechanical System Type/Age	N/A					
Natural Light in Spaces	N/A					
Security	Y	Access Cntrl	N	Fencing	N	Video Surveillance
Other Security Measures	None					
Fire Extinguishers	Y					

ASSIGNED APPARATUS / VEHICLES

Apparatus Call Sign	Min. Staffing*	Comments
Ambulance #	N/A	
Truck #	N/A	
Other Vehicles	N/A	

**If an apparatus is cross-staffed, enter "CS" after the minimum staffing number.*

BUILDING ASSESSMENT

Building Envelope / Exterior Finishes	Pre-Finished Metal					
Window Material	Alum.					
Roof Construction	Pre-Finished Metal					
Exterior Doors	Pre-Manufactured, Composite					
Emergency Operations Center (EOC)		Yes		No	X	N/A
Elevator(s) *(quantity/type)*	N/A					
Rated Bunk Walls		Yes		No	X	N/A
Bunk Space		Individual		Dormitory	X	N/A
Number of Beds	N/A					
Bunk Lockers/Storage *(location/type/number)*	N/A					
k Accessories *(desk, tv, reading light, fan, shades)*	N/A					
Personal Laundry (Washer/Dryer)		Yes		No	X	N/A
Shower Facilities		Individual Rooms				Dormitory Style
No. of Showers		Men's		Women's	X	N/A

GAINESVILLE FIRE RESCUE (GFR)
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No. of Toilets		Men's		Women's		Unisex
Lavatory Style *(for personnel)*		Wall Hung		Vanity		
Exercise/Fitness Facilities	None					
Kitchen/Dining	N/A					
Kitchen Appliances	N/A					
Kitchen Refrigerators/Pantries	N/A					
Access to Outdoor Patio	N/A					
Private vs. Public Space Separation		Yes	X	No		
Office Space	N/A					
Personal Study Space		Yes		No	X	N/A
Training/Meeting Rooms	Y					
Adequate Waiting Area		Yes	X	No		N/A
Adequate Office Storage		Yes	X	No		N/A
Adequate Living Storage		Yes		No	X	N/A
Adequate Apparatus Storage		Yes		No	X	N/A
Apparatus Bays *(include #)*		Drive-through Bays			X	Back-in Bays
Apparatus Bay - Overhead Door Size(s)	N/A					
Sill Condition at Apparatus Bay Doors	N/A					
Overhead Door Operator		Trolley		Jack-Shaft	X	N/A
Overhead Door Safety Features	N/A					
Apparatus Bay Drains	N/A					
Apparatus Clearance *(front/back)*	N/A					
Apparatus Bay Width	N/A					
Apparatus Bay Floor *(condition/slope)*	N/A					
Work Shop		Yes		No	X	N/A
Hose Storage		Yes		No	X	N/A
Hose Wash		Yes		No	X	N/A
Risks/Other Observations *(not otherwise noted)*						
MEP ASSESSMENT						
Plumbing Assessment	Flush tanks, no gas service, FP service; good condition					
HVAC Assessment	Air Condition does not function					
Electrical Assessment	200A Service, no generator, fluorescent; good condition					
Special Systems Assessment	Fire alarm system, limited access control/video surveillance; fair condition					
Site Assessment	Minimal lighting; fair condition					
Building Risks/Site Risks	No generator, HVAC unit limited OA					

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
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SITE ASSESSMENT						
Topography	Slight slope, high to low, west to east					
Landscaping Quality	Mature growth trees					
Site Lighting	Minimal lighting					
Storm Water Drainage	Generally acceptable					
Downspouts Below Grade		Yes		No	X	N/A
Sustainability	Opportunities for improvement					
Paving & Concrete	Apron: NA					
	Curbs: NA					
	Joints: NA					
	Other: NA					
Parking Counts		Staff		Visitor		ADA
Other Parking *(count/type)*	Gravel parking lot available for use; stall count unknown					
Sidewalk *(ROW connect, condition, accessibility)*	Sidewalk from parking to building					
Front Door Visible	X	Yes		No		
Private vs. Public Space Separation		Yes	X	No		
Street Access Vertical Elevation	Building is portable structure; approximately 30" above grade					
Line of Sight	NA					
Front Apron Length	NA					
Rear Apron Length *(if applicable)*	NA					
Apparatus Maneuvering Clearance		Yes		No		
Access & Egress To/From Site - Apparatus	NA					
Access & Egress To/From Site - Staff	NA					
Access & Egress To/From Site - Visitors	NA					
Bollards *(OH Doors, Other)*	NA					
Flagpole		Yes	X	No		How Many?
Fill Hydrant		Yes		No		
Hydrant Locations	NA					
Other Site Structures *(type/function)*	NA					
Training Tower / Other	NA					
Outdoor Patio	NA					
Outdoor Fitness	NA					
Risks/Other Observations *(not otherwise noted)*	None					

INTERIOR ACCESSIBILITY / ADA					
Int/Ext. Doors *(access clearance / threshold)*	X	Yes		No	
Doors *(handles/opening pressure)*	X	Yes		No	
Water Fountain *(height/accessibility)*		Yes	X	No	None provided.

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
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Signage *(height / braille)*		Yes	X	No	None provided.
Floor Transitions *(interior/exterior)*	X	Yes		No	
Floor Slopes *(interior ramps, etc.)*	X	Yes		No	
PUBLIC ACCESSIBLE AREAS					
Sinks *(height, pipe wrap)*	X	Yes		No	
Dispensers/Accessory *(mounting height)*	X	Yes		No	
Countertops *(heights)*		Yes	X	No	Child height counter.
Grab Bars	X	Yes		No	
Protruding Objects-Accessible Route(s)	X	Yes		No	
Public Access Rooms *(toilets/training/etc.)*	X	Yes		No	
EXTERIOR ACCESSIBILITY / ADA					
ADA Parking Striping/Signage	X	Yes		No	
Access between ADA Parking & Building		Yes	X	No	Ramp from parking to steep (7%).
Other Access to Building		Yes	X	No	Some entries have non-compliant thresholds.
Slopes of Accessible Access Pathways		Yes	X	No	Ramp from parking to steep (7%).

WSKF CONDITION RATINGS & DEFINITIONS	
Exceptional	New or well-maintained condition, little to no visual evidence of wear and tear, damage, or other deficiencies.
Good	Some wear and tear, damage, or other deficiencies are visible but still in a functioning and acceptable condition.
Fair	Subjected to some hard and/or long-term wear and term or damage, nearing the end of its useful life and should be monitored for additional deterioration
Poor	At the end of its useful or serviceable life due to age and condition, replacement should be considered imminent

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
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EXISTING FACILITY ASSESSMENT SURVEY

STATION NAME/NO.:	**GFR Kiwanis Safety City**
STATION ADDRESS/LOCATON:	1025 NE 13th Street

(Brief Description of station)

Safety City is a campus of structures that was provided to the City to provide both recreational as well as educational opportunities for school-age children. This fenced campus, provides demonstrational and situational education encompassing Fire Safety to Police Safety in a secure, outdoor setting.

STRUCTURE						
Date of Construction	Unknown					
Date(s) of Renovation/Expansion	N/A					
Building Age	N/A					
Construction Type	V-B					
Building Construction	Wood Frame Structures					
Building Area *(SF)*:	Varies					
Number of Stories:	1					
Site Area *(SF & Acres)*:	SF:	~400,000		Acres:	~3.7A	
Maximum Station Staffing Capability	N/A					
Seismic Protection *(if required)*	N/A					
Category IV Conformance *(if required)*	N/A					
ICC 500 Conformance *(if applicable)*	N/A					
Hardened Space / Storm Shelter		Yes	X	No		N/A
Generator		Yes		No	X	N/A
Auxiliary Power		Full Facility		Partial Fac.	X	N/A
General Condition	Good					
Generator Enclosure *(storm rated?)*		Yes		No	X	N/A
Special Considerations	Fenced site					
HEALTH / WELLNESS & SAFETY / SECURITY						
Sprinklers / Smoke Detection		Sprinklers		Smoke	X	N/A
Decontamination / Biohazard Disposal		Yes		No	X	N/A
Haz. Bldg Materials *(lead/asbestos/etc.*	N/A					
Entry Flooring/Trip Hazards	N/A					
Night Lights to Apparatus Bays		Yes		No	X	N/A

GAINESVILLE FIRE RESCUE (GFR)
Gainesville, FL

WSKF ARCHITECTS
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Decon Type	N/A					
Gear Wash		Yes		No	X	N/A
Extractor		Yes		No	X	N/A
Gear Dry & Type		Yes		No	X	N/A
Ice Maker Location	N/A					
Gear Storage		Yes		No	X	N/A
Gear Storage Location	N/A					
Gear Lockers No.	N/A					
SCBA		Yes		No	X	N/A
Apparatus Exhaust System		Yes		No	X	N/A
HVLS Ceiling Fans		Yes		No	X	N/A
Apparatus Exhaust System Type	N/A					
Mechanical System Type/Age	N/A					
Natural Light in Spaces	N/A					
Security		Access Cntrl	X	Fencing		Video Surveillance
Other Security Measures	Night Lighting					
Fire Extinguishers	N/A					

ASSIGNED APPARATUS / VEHICLES

Apparatus Call Sign	Min. Staffing*	Comments
Ambulance #	N/A	
Truck #	N/A	
Other Vehicles	N/A	

**If an apparatus is cross-staffed, enter "CS" after the minimum staffing number.*

BUILDING ASSESSMENT

Building Envelope / Exterior Finishes	All facilities are open structures with residential exterior finishes					
Window Material	Varies					
Roof Construction	Varies					
Exterior Doors	Varies					
Emergency Operations Center (EOC)		Yes		No	X	N/A
Elevator(s) *(quantity/type)*	N/A					
Rated Bunk Walls		Yes		No	X	N/A
Bunk Space		Individual		Dormitory	X	N/A
Number of Beds	N/A					
Bunk Lockers/Storage *(location/type/number)*	N/A					
Bunk Accessories *(desk, tv, etc.)*	N/A					
Personal Laundry (Washer/Dryer)		Yes		No	X	N/A
Shower Facilities		Individual Rooms			X	N/A
No. of Showers		Men's		Women's	X	N/A

GAINESVILLE FIRE RESCUE (GFR)
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WSKF ARCHITECTS
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No. of Toilets	X	Men's	X	Women's		Unisex
Lavatory Style *(for personnel)*	X	Wall Hung		Vanity		
Exercise/Fitness Facilities	N/A					
Kitchen/Dining	N/A					
Kitchen Appliances	N/A					
Kitchen Refrigerators/Pantries	N/A					
Access to Outdoor Patio	N/A					
Private vs. Public Space Separation		Yes		No	X	N/A
Office Space	N/A					
Personal Study Space		Yes		No	X	N/A
Training/Meeting Rooms	Y					
Adequate Waiting Area		Yes		No	X	N/A
Adequate Office Storage		Yes		No	X	N/A
Adequate Living Storage		Yes		No	X	N/A
Adequate Apparatus Storage		Yes		No	X	N/A
Apparatus Bays *(include #)*		Drive-through Bays			X	N/A
Apparatus Bay - Overhead Door Size(s)	N/A					
Sill Condition at Apparatus Bay Doors	N/A					
Overhead Door Operator		Trolley		Jack-Shaft	X	N/A
Overhead Door Safety Features	N/A					
Apparatus Bay Drains	N/A					
Apparatus Clearance *(front/back)*	N/A					
Apparatus Bay Width	N/A					
Apparatus Bay Floor *(condition/slope)*	N/A					
Work Shop		Yes		No	X	N/A
Hose Storage		Yes		No	X	N/A
Hose Wash		Yes		No	X	N/A
Risks/Other Observations *(not otherwise noted)*						
MEP ASSESSMENT						
Plumbing Assessment	Flush tanks, no bottle fill; fair condition					
HVAC Assessment	Split-systems, min. OA; fair condition					
Electrical Assessment	Not surveyed					
Special Systems Assessment	Some smoke detection; fair condition					
Site Assessment	Min. lighting; fair condition					
Building Risks/Site Risks						

GAINESVILLE FIRE RESCUE (GFR)
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WSKF ARCHITECTS
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REV September 2021

SITE ASSESSMENT						
Topography	Generally low slope, high to low, north to south					
Landscaping Quality	Mature tree growth					
Site Lighting	Minimal lighting					
Storm Water Drainage	Generally acceptable					
Downspouts Below Grade		Yes		No	X	N/A
Sustainability	Mature tree growth and generally acceptable stormwater management					
Paving & Concrete	Apron: NA					
	Curbs: NA					
	Joints: NA					
	Other: None					
Parking Counts		Staff		Visitor		ADA
Other Parking *(count/type)*	Adjacent parking lot provides bus parking & parallel parking					
Sidewalk *(ROW connect, condition, accessibility)*	Sidewalk from street to site					
Front Door Visible	X	Yes		No		
Private vs. Public Space Separation		Yes		No	X	N/A
Street Access Vertical Elevation	Level access					
Line of Sight	NA					
Front Apron Length	NA					
Rear Apron Length *(if applicable)*	NA					
Apparatus Maneuvering Clearance		Yes		No		
Access & Egress To/From Site - Apparatus	NA					
Access & Egress To/From Site - Staff	NA					
Access & Egress To/From Site - Visitors	NA					
Bollards *(OH Doors, Other)*	NA					
Flagpole		Yes	X	No		How Many?
Fill Hydrant	X	Yes		No		
Hydrant Locations	Near street					
Other Site Structures *(type/function)*	Several structures on site that serve as outdoor classrooms					
Training Tower / Other	NA					
Outdoor Patio	Yes					
Outdoor Fitness	NA					
Risks/Other Observations *(not otherwise noted)*	None					

INTERIOR ACCESSIBILITY / ADA					
Int/Ext. Doors *(access clearance / threshold)*	X	Yes		No	
Doors *(handles/opening pressure)*	X	Yes		No	
Water Fountain *(height/accessibility)*		Yes	X	No	Low height single unit.

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Signage *(height / braille)*		Yes	X	No	
Floor Transitions *(interior/exterior)*	X	Yes		No	
Floor Slopes *(interior ramps, etc.)*	X	Yes		No	
PUBLIC ACCESSIBLE AREAS					
Sinks *(height, pipe wrap)*	X	Yes		No	
Dispensers/Accessory *(mounting height)*	X	Yes		No	
Countertops *(heights)*		Yes		No	N/A
Grab Bars	X	Yes		No	
Protruding Objects-Accessible Route(s)	X	Yes		No	
Public Access Rooms *(toilets/training/etc.)*	X	Yes		No	
EXTERIOR ACCESSIBILITY / ADA					
ADA Parking Striping/Signage		Yes	X	No	No accessible parking adjacent to bldg.
Access between ADA Parking & Building		Yes	X	No	
Other Access to Building		Yes	X	No	
Slopes of Accessible Access Pathways	X	Yes		No	

WSKF CONDITION RATINGS & DEFINITIONS	
Exceptional	New or well-maintained condition, little to no visual evidence of wear and tear, damage, or other deficiencies.
Good	Some wear and tear, damage, or other deficiencies are visible but still in a functioning and acceptable condition.
Fair	Subjected to some hard and/or long-term wear and term or damage, nearing the end of its useful life and should be monitored for additional deterioration
Poor	At the end of its useful or serviceable life due to age and condition, replacement should be considered imminent

Appendix F: List of Figures