Operational Performance Audit

Fire Rescue Department

Prepared for:

Alachua County

November 2023

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1. Overview and Background

Located in North Central Florida, Alachua County ("County") has a population of approximately 285,000. The Alachua County Fire Rescue Department ("ACFR" or "Department"), part of the Alachua County Government, is dedicated to protecting life and property from fires, medical situations, natural disasters, industrial accidents, civil disturbances, and other emergencies within the County. ACFR's fire protection, fire prevention, emergency medical service ("EMS"), enhanced 911 ("E911"), and emergency management components serve Alachua County's approximately 285,000 residents as well as those who visit or travel through Alachua County. ACFR's approximately 300 employees, deployed to 16 stations across unincorporated Alachua County, respond to over 50,000 calls for service per year. The $40+ million ACFR annual budget supports 11 fire suppression units, 15 24-hour EMS units, and five peak load EMS units, enabling ACFR to provide 24/7, 365-day protection to County residents. The Department owns a 16th 24-hour EMS unit, Rescue 37, but as of the assessment period, had not yet put Rescue 37 into service. In addition to responding to emergencies, ACFR's fire and EMS crews support over 200 special events per year, such as University of Florida athletic events, "Touch-A-Truck" outreach events, and school visits. ACFR is managed by a Fire Rescue Chief who reports directly to the County Manager.

> "The secret of change is to focus all your energy, not on fighting the old, but on building the new." – Socrates

As part of an ongoing effort to improve the efficiency and effectiveness of County services, the Alachua County Board of County Commissioners and the Alachua County Manager sought to conduct an Operational Performance Audit ("Audit") of the Alachua County Fire Rescue Department. The County engaged Mauldin & Jenkins ("M&J"), whose resources were supplemented by Emergency Services Consulting International ("ESCI"), to conduct the Operational Performance Audit of ACFR.

We commend the Board of County Commissioners and County Manager for their proactive approach to oversight and management as it demonstrates to residents and stakeholders that Alachua County's leadership is committed to prudent oversight of operations with a commitment to transparency and accountability. We would also like to recognize and thank the numerous ACFR and Office of Management and Budget employees who gave their time coordinating logistics, conducting interviews, providing requested information, and leading tours of County facilities. Their cooperation was invaluable to the creation of this report.

This Audit report identifies both strengths and opportunities for improvement. This report also provides numerous recommendations and lays out a roadmap that ACFR can use for enhancement of operations and to best position the County for projected future needs. Implementing positive change is never easy, but by leveraging ACFR's greatest asset – its employees – and by clearly articulating and communicating the rationale and benefits of the desired change, we are confident that ACFR can further enhance its operations and continue to provide quality, efficient, and effective services to the people and organizations that call Alachua County home.

2. Scope and Approach

This section details the scope and approach performed by Mauldin & Jenkins to conduct Alachua County Fire Rescue's Operational Performance Audit.

Scope

The scope of the Operational Performance Audit included assessing the following services within ACFR:

- Emergency Medical Services ("EMS")
- Fire Protection
- Fire Prevention
- Training Bureau and Health & Safety
- Diversity and Recruitment
- Equipment/Vehicles
- Facilities
- Administration
- Information and Technology Office
- Central Supply and Inventory Management Warehouse
- Emergency Management
- Enhanced 911 ("E911")/Communications

Objectives and Goals

The Operational Performance Audit objectives included:

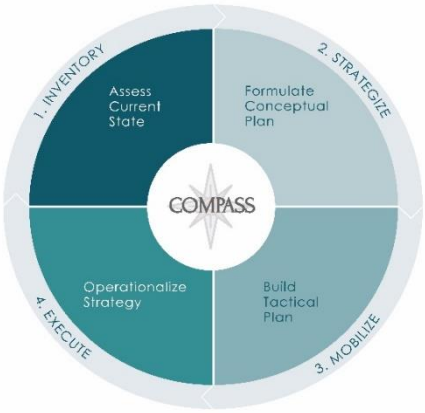
- Gaining a comprehensive understanding of the Department, including its background, goals, and expectations
- Comparing Department manuals, standard operating procedures, and protocols against applicable laws and standards
- Reviewing current staffing and personnel management procedures to ensure satisfactory organizational structure and succession plans are in place
- Reviewing the Department's current goals and strategic priorities to make sure these directly support and link to the County's enterprise-wide vision, mission, and goals
- Reviewing Department operational data and compare to relevant benchmarks in order to compare ACFR to other leading organizations around the country
- Making recommendations to the County on how to best balance risk and liability reduction with operational efficiency and effectiveness

The Operational Performance Audit goals included:

- Enhancing departmental operations and service delivery models to optimize efficiency and effectiveness
- Providing observations and recommendations that serve to reduce risk and liability
- Providing specific actionable plans to improve areas with noted deficiencies
- Providing a roadmap to ensure best practices are enacted and enable the County to meet projected future needs

Approach

Our approach for the Operational Performance Audit was based on Mauldin & Jenkins' proprietary transformation methodology – COMPASS. The COMPASS methodology was developed based on leading practices, client input, and proven project and change management activities; and served as our framework for the Operational Performance Audit.



We developed a workplan for the Operational Performance Audit which consisted of the following four phases:

1. Initiation and Planning
2. Information Gathering
3. Fieldwork and Data Analysis
4. Validation and Reporting

As part of the Operational Performance Audit, we performed the following key tasks to aid us in formulating our observations and recommendations:

- Requested and reviewed significant amounts of data and information, such as:
  - Strategic plans, initiatives, and special project information
  - Organization charts
  - Staffing information for past five years
  - Job descriptions including roles, responsibilities, and competencies
  - Current staffing and hiring plan
  - Staffing schedules
  - Professional development and training opportunities
  - Governing requirements (laws, standards, policies and procedures, etc.)
  - Disciplinary processes and events
  - KPI, operational metrics, or other performance data
  - Financial and budgetary information for past five years
  - Technology/systems/GIS inventory
  - Workflow diagrams or mapping
  - Prior relevant audit findings and audited financial statements
  - Prior relevant performance/operational reviews
  - Other relevant information
- Conducted more than 60 interviews with members of ACFR's upper-level management, ACFR employees, members of other County departments, and representatives from Fire and EMS-related unions within the County

- Conducted “walk-throughs” of multiple facilities and properties
- Performed “job shadowing” observations of various functions and tasks
- Delivered bi-weekly status updates throughout the engagement

This report represents the culmination of our work and presents numerous recommendations and a Roadmap for implementation. This report details our analysis and fieldwork completed between January 11, 2023, to June 1, 2023.

3. Summary of Results

ACFR's history began as an Emergency Medical Services Department and has evolved into a full-service Fire Rescue Department. As ACFR's roots began with EMS services, it is natural that EMS service provision is an area where the Department excels. As the Department has not maintained staffing levels consistent with its approved positions, notable areas for improvement largely relate to fire protection services and the ability to strategically and formally plan for the future. The numerous vacant positions are a contributing factor to excessive overtime and not meeting certain industry standards. The fire rescue industry, nationwide, has experienced staffing shortages. ACFR has felt the effect of staffing shortages, but have begun to move towards filling their allocated position amounts.

ACFR has much to be proud of and has demonstrated several positive accomplishments. The following programs and initiatives are positive areas in which ACFR operates:

- Innovative EMS Technology Initiatives including, but not limited to, utilization of Tele911, installation of Stryker Power-PRO ambulance cots, and CAAS accreditation
- ACFR leadership regularly participate in Statewide boards and industry associations
- ACFR's strong relationship with the local chapter of the International Association of Fire Fighters (the local firefighter union)
- ACFR's emphasis on technical rescue training for field personnel
- ACFR's strong relationship with other County departments
- ACFR's use of the Telestaff scheduling program within their staff scheduling methodology
- ACFR and Alachua County's mental and physical health resources that are provided to employees of Alachua County
- ACFR's recent implementation of Kelly Days, which allows one designated day off every three weeks for each line personnel

ACFR currently lacks complete Department policies and procedures in regard to topics such as succession planning, or policies or procedures that include a reflection of industry standards for content, organization, and detail. The focus of the Department, going forward, should be to fill vacant positions and standardize Department governance and strategies. The M&J Team have provided more than 90 Observations and Recommendations that are designed to assist the Department in improving operations and meeting relevant standards. Once the Department has better aligned staffing with currently approved positions and implemented the recommendations contained in this report, it is recommended that ACFR update its Master Plan to better formalize its operational strategies for the near future.

4. Department Assessment

Department Overview

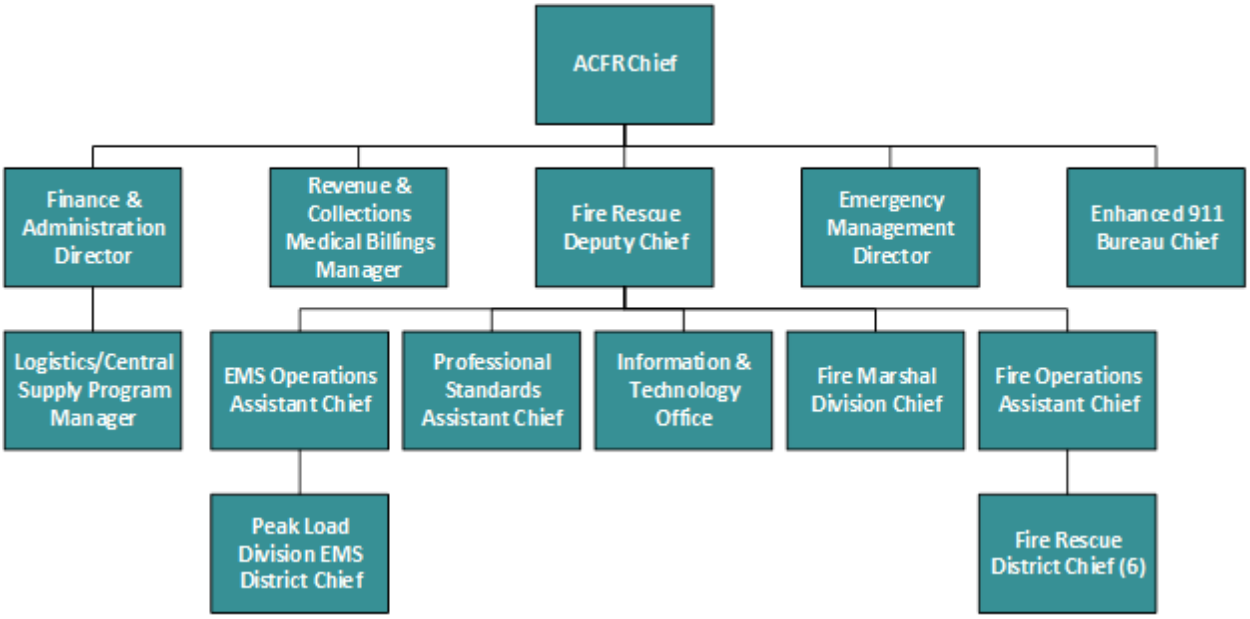
ACFR is responsible for providing fire protection and prevention services to unincorporated Alachua County and the cities of Alachua, Archer, Hawthorne, and Waldo. Emergency medical services ("EMS") and emergency management services are provided Countywide by the Department. E911 services are provided to the entire County, except the Town of Micanopy. ACFR consists of over 300 active employees and currently maintains interlocal agreements ("ILA") for fire suppression and first response EMS services with the Town of LaCrosse, the Town of Micanopy, the City of Newberry, the City of High Springs, and the City of Gainesville. ACFR also has ILAs with three rural fire departments that are located in unincorporated areas of the County – Cross Creek Fire Department, Melrose Fire Department, and Windsor Fire Department. The Department will take over responsibility for fire protection and prevention services in the Town of Micanopy on October 1, 2023.

The M&J Audit was conducted between January 11, 2023, and June 1, 2023. Though the M&J Team recognizes changes have been made to the organizational structure and service delivery since the culmination of the Audit period, the report reflects the current state through June 2023.

Department Organization

Figure 1: ACFR Organization Chart illustrates the current organizational structure of ACFR:

Figure 1: ACFR Organization Chart



The executive team within ACFR is defined as positions which stand at the top of a section or branch. Executive positions include the ACFR Chief, Finance and Administration Director, Revenue and Collections Medical Billings Manager, Fire Rescue Deputy Chief, Emergency Management Director, Enhanced 911 Bureau Chief, EMS Operations Assistant Chief, Professional Standards Assistant Chief, Fire Marshal Division Chief, and Fire Operations Assistant Chief.

The ACFR Fire Chief is responsible for overseeing all activities within ACFR including all other executive positions. The Finance and Administration Director oversees the annual budget development and management, grants and contract management, purchasing and expenditure management, accounts payable, payroll, and personnel coordination. The Revenue and Medical Billings Manager oversees the management and organization of the EMS billing and collection services for ACFR, Medicaid/Medicare compliance, and Medicaid/Medicare audit data, as well as billing and collection services for ambulance transfers of varying distance. The Emergency Management Director oversees all Emergency Management activities within the County including updating the County's disaster plan, and acting as the Coordinating Officer in the event of a County wide emergency. The Enhanced 911 Bureau Chief is responsible for overseeing all addressing services to Alachua County, and all communications support to the County's emergency dispatching service. The Fire Rescue Deputy Chief oversees the daily operations of Fire Rescue, as well as building/maintenance projects and uniformed personnel. The EMS Operations Assistant Chief is responsible for all EMS operations within ACFR. The Professional Standards Assistant Chief is responsible for overseeing activities of the Professional Standards Branch including training, onboarding, recruitment, and new-hire orientations. The Fire Marshal Division Chief is responsible for overseeing all operations within the Life Safety/Internal Affairs Division including internal investigations, inspections, and fire incident investigations. The Fire Operations Assistant Chief is responsible for overseeing all of the Fire Protection Operations within ACFR.

Figure 2: ACFR - Executive Management Direct Report Data shows the current direct report allocation for executive level management within ACFR. Executive level management is defined as those positions which stand at the top of a section or branch.

Figure 2: ACFR - Executive Management Direct Report Data

Executive Management Position	Direct Reports
ACFR Chief	6.5
Finance and Administration Director	2
Revenue and Collections Medical Billings Manager	3
Fire Rescue Deputy Chief	6.5
Emergency Management Director	3
E911 Bureau Chief	3
EMS Ops Assistant Chief	2.5
Professional Standards Assistant Chief	4.5
Fire Marshal Division Chief	3.5
Fire Ops Assistant Chief	6.5

Figure 3: SHRM Human Capital Report - Span of Control Data comes from the Society of Human Resource Management ("SHRM") Human Capital Report. Figure 3 shows span of control data that was collected from a various sample of SHRM member organizations from April to November of 2021.

Figure 3: SHRM Human Capital Report - Span of Control Data

	25th Percentile	Median	75th Percentile	Average
Executive Level	3 Direct Reports	5 Direct Reports	8 Direct Reports	7 Direct Reports

Executive management within ACFR has an average of 4.1 direct reports. An average of 4.1 direct reports is 2.9 direct reports below the average amount of direct reports as reported by the SHRM Human Capital Report. Also, each executive management position has an amount of direct reports that is lower than the average amount of direct reports as reported by the SHRM Human Capital Report. Five out of 10 executive management positions are in the 25th percentile of direct reports as reported by SHRM. As shown by Figure 2 and Figure 3, executive management positions within ACFR are beating the benchmarks set by the SHRM Human Capital Report as it relates to span of control.

Organizational Structure

ACFR is led by the Chief of Fire Rescue, who reports directly to the County Manager and is responsible for Department activities, operations, and functions. One Senior Staff Assistant reports directly to the Chief of Fire Rescue.

The Chief of Fire Rescue oversees the following five sections within the Department:

- Finance and Administration Section
- Revenue and Collections Section
- Fire Rescue Operations Section
- Emergency Management Section
- Enhanced 911 Section

In addition to the five sections, reporting to the Chief of Fire Rescue is the Medical Director and one half-time Staff Assistant. The Medical Director serves as a liaison to the local medical community, including hospitals, emergency management departments, mental health agencies, physicians, providers, ambulance services, and other agencies. The Medical Director position is contracted through the University of Florida Department of Emergency Medicine. A team of other physicians representing the various hospitals in the community serve as Associate Medical Directors. The Medical Director must be available, by phone, 24 hours a day, 365 days a year. The Medical Director is responsible for developing, revising, implementing, and maintaining medical protocols and standing orders within ACFR to ensure compliance with relevant laws. The Medical Director is also responsible for active participation, curriculum development, and presentation of EMS continuing education programs for employees within ACFR.

Finance and Administration Section

Overseen by the Finance and Administration Assistant Director, the Finance and Administration Section is responsible for annual budget development and management, grants and contract management, purchasing and expenditure management, accounts payable, payroll, and personnel coordination. Additionally, the Finance and Administration Section oversees the ACFR Central Supply Warehouse ("CSW"). The CSW is managed by a Program Manager who oversees one Warehouse Manager, two Stock Clerks and is responsible for activities within the CSW including inventory. Inventory management includes filling orders from the current stock, performing periodic stock inventory checks, ordering, and issuing new uniforms when necessary, and requisitioning order forms to fill incoming orders.

The Finance and Administration Assistant Director oversees a Senior Administrative Assistant, a Senior Staff Assistant, and the CSW Program Manager. The Senior Administrative Assistant oversees two Fiscal Assistants and is responsible for assisting in annual budget creation, payroll preparation, coordinating state and federal grant requests, and coordinating components of the contract process including ensuring that contract bids are properly advertised and in compliance with applicable regulations. The Fiscal Assistants' main responsibilities include preparing fiscal statements, preparing payrolls, managing accounts payable, processing monthly Visa credit card statements, and processing purchase orders.

Revenue and Collections Section

The Revenue and Collections Section is led by the Medical Billings Manager who oversees two Medical Billings Supervisors and one Medical Transfer Coordinator. An evaluation of the Revenue and Collections Section was not included in the project scope, but general information is provided for overall context. The Revenue and Collections Section is responsible for the management and organization of the EMS billing and collection services for ACFR. The Revenue and Collections Section is also responsible for coordinating ambulance transfers of varying distance to areas inside and outside of Alachua County. Currently, the Revenue and Collections Section does medical billings for Bradford County, Florida EMS services.

The Medical Billings Supervisors are responsible for overseeing four Medical Billings Specialists and three Medical Billings Technicians. Medical Billings Supervisors are responsible for ensuring that patient accounts with billing errors are corrected and reconciled, and supervising and managing subordinate personnel, and reviewing the work completed by subordinate personnel for accuracy and compliance with County and Departmental procedures. The Medical Billings Specialists, who report directly to a Medical Billings Supervisor, are responsible for processing, analyzing, and correcting medical billing records. The Medical Billings Technicians, who also report to a Medical Billings Supervisor, are responsible for recording and managing remittance notices to record payments into the billing database, verifying insurance coverage, and compiling patient medical records and account history in accordance with Health Insurance Portability and Accountability Act of 1996 ("HIPAA") guidelines.

The Medical Transfer Coordinator is responsible for the management of the Department's non-emergency medical transfers including scheduling, securing payment for services, generating insurance claims, ensuring all documentation is correct for proper claim submission, and serving as the customer service representative to patients who are using the non-emergency medical transfer service.

Fire Rescue Operations Section

The Fire Rescue Operations Section is led by the Deputy Chief of Fire Rescue ("Deputy Chief") and consists of the following:

- Information and Technology Office
- Life Safety/Internal Affairs Division
- EMS Operations Branch
- Professional Standards Branch
- Fire Operations Branch

Seven positions report directly to the Deputy Chief, including the Assistant Chief of EMS Ops, the Assistant Chief of Professional Standards, the Assistant Chief of Fire Ops, the Fire Marshal, two Network Specialists, and one half-time Staff Assistant.

Information and Technology Office

The Information and Technology Office consists of two Network Specialists who are responsible for installing, supporting, and testing network systems, hardware, and software within ACFR. The Information and Technology Office acts as a liaison with Alachua County IT. The Information and Technology Office is also responsible for operations in the County Unmanned Aircraft System Program.

Life Safety/Internal Affairs Division

The Life Safety/Internal Affairs Division is overseen by the Division Chief/Fire Marshal ("Fire Marshal"). The Fire Marshal supervises three Fire Prevention Officers. The Fire Marshal is responsible for investigating fires within the County that are deemed suspicious in origin, supervising Fire Inspectors, supervising the inspection of new construction plans, and performing internal affairs investigations when necessary.

The Fire Prevention Officers are responsible for conducting building plans review to ensure building and fire codes are properly followed, reviewing site development plans for water utility access and firefighting capability, inspecting building construction and repairs to ensure fire safety standards are followed, and investigating complaints received from the community regarding hazardous building conditions or practices.

EMS Operations Branch

The EMS Operations Branch is led by the Assistant Chief of EMS Operations who directly oversees the EMS District Chief, the Health and Safety Officer, and one half-time Staff Assistant. The Assistant Chief is responsible for managing and reviewing EMS operations, reviewing and recommending EMS policy changes, initiating command procedures in compliance with the Department's Incident Command System ("ICS"), and formulating short and long-range training plans and operational development for each assigned branch.

The Health and Safety Officer reports directly to the Assistant Chief. The Health and Safety Officer is responsible for inspecting departmental worksites to detect unsafe or unhealthy working conditions, maintaining a log of accidents involving an ACFR vehicle and the details regarding which ACFR vehicle was involved in the accident, and inspecting ACFR stations for various safety and health compliance requirements such as building structural integrity and cleanliness. The Health and Safety Officer also provides assistance in the training of employees including formulating teaching outlines and determining instructional methods, logging and reporting to the County Risk Department ACFR related on the job injuries, and overseeing Department light-duty employees. At the time of the M&J Team's fieldwork, the Health and Safety Officer position was vacant, but ACFR has subsequently made an offer to a candidate. At the time of this report, the candidate's acceptance of the position is unknown.

Within the EMS Operations Branch, the Peak Load Division is organized into five separate critical care rescue units ("RCC"). The Peak Load Division performs critical care services for critically ill or injured patients, most commonly during inter-hospital transfers. The Peak Load Division District Chief oversees the Peak Load Division. The Peak Load Division includes nine Emergency Medical Technician ("EMT") Drivers, 10 EMS Attendants, the on-call EMT Drivers, and the on-call EMS Attendants. *Pro re nata* employees ("PRNs") are part-time staff that can pick up vacant shifts within the Peak Load Division. PRNs are required to work a minimum of one shift every two months to stay active as a part-time employee. The Peak Load Division District Chief is responsible for supervising and coordinating all activities within the Peak Load Division, conducting Peak Load Division employee performance reviews, scheduling and assigning subordinate employees to shift assignments, assuring that all RCCs are staffed properly, and that operations and medical care are in accordance with relevant laws and regulations.

Professional Standards Branch

The Professional Standards Branch is overseen by the Assistant Chief of Professional Standards who supervises three Training Lieutenants, one Captain of Recruitment and Public Education, and one half-time Staff Assistant.

The Assistant Chief of Professional Standards' main responsibilities include supervising and coordinating operations within the Branch including training, onboarding, recruitment, and new-hire orientation. The three Training Lieutenants are responsible for planning and designing the training schedule for each month, keeping track of certification, as well as updating the Department's records of expired certifications and licenses when the employee has completed the certification course requirement.

The Captain of Recruitment and Public Education is responsible for helping ensure that ACFR move toward a more diverse employee and applicant base, and educating the public on the services that ACFR provides for County residents. The Captain works with various community groups to provide safety education and recruit applicants for ACFR, collaborates with the County's Equal Opportunity Office and the Human Resources ("HR") Department to advertise employment opportunities, and visits schools and other civic centers to provide public-safety education.

Fire Operations Branch

Overseen by the Assistant Chief of Fire Operations, the Fire Operations Branch is responsible for Fire Rescue incident responses within unincorporated Alachua County and municipalities where ACFR currently has an active ILA for EMS and fire suppression services. Reporting to the Assistant Chief is one half-time Staff Assistant and six District Chiefs. The six District Chiefs rotate between three shifts and two districts. The two District Chiefs working at the time oversee fire rescue station operations in the two Fire Rescue Districts in the County, Districts 5 and 6.

Fire rescue companies at each station report to the District Chief for the shift and include a combination of Lieutenant, Rescue Lieutenants, Driver/Operators, and Firefighters. The Lieutenant serves as the company officer for the on-duty personnel. In total, the Department has allocated positions for 36 Lieutenants, 36 Rescue Lieutenants, 36 Driver/Operators, and 160 Firefighters spread across the three operations shifts.

The District Chiefs' main responsibilities include managing and supervising all subordinate positions on their respective shift, scheduling shifts for line personnel, assuring all vehicles are adequately staffed and assigning overtime as needed, deciding the best course of action for Fire Rescue related incidents and responses, and conducting regular employee reviews.

Lieutenants within the Fire Operations Branch are responsible for supervising the Rescue Lieutenants, Driver/Operators, and Firefighters that are assigned to their specific station. Main responsibilities include responding to fire rescue incidents, coordinating work procedures and directing subordinate employees, conducting regular performance reviews, directing and performing pre-hospital care, and inspecting equipment to ensure it is in proper working condition. Reporting to the Lieutenants, Rescue Lieutenants' main responsibilities include responding to medical, fire, emergency and non-emergency calls, providing emergency medical assistance on fire rescue incident calls including, but not limited to, airway control, intravenous therapy, control of hemorrhaging, and spinal immobilization. Rescue Lieutenants are also responsible for supervising the delivery of critical patient care upon arrival at the incident scene to ensure proper care is administered. Rescue Lieutenants are required to have State of Florida Paramedic certification and designation as an Advanced Cardiac Life Support provider.

Driver/Operators report to the Lieutenants within the fire stations and are responsible for driving the firefighting vehicles and assisting in operating the various equipment on the firefighting vehicles. The Driver/Operator position's main responsibilities include transporting a fire crew to and from the fire incident scene. Driver/Operators are required to have a current State of Florida Paramedic Certificate, State of Florida Certificate of Competency for Pump Operator, and a State of Florida Firefighter Certificate of Compliance.

The Firefighter position within ACFR includes two classification levels: Firefighter Trainee (Level 0) and Firefighter (Levels 1-5). The Firefighter Trainee (Level 0) level classifies firefighters within ACFR that do not possess a current State of Florida Firefighter Certificate of Compliance or a State of Florida Emergency Medical Technician certification. Employees at this level are expected to complete both of these certifications before receiving Firefighter (Level 1) classification. After promoting to Level 1, a Firefighter is able to promote up to four more levels, one level per year, after completing required coursework. The Firefighter position's main responsibilities include responding to fire rescue incidents and providing firefighting, emergency medical aid, hazardous material management, and fire prevention services.

Emergency Management Section

The Emergency Management Director oversees and is responsible for managing and updating the County's emergency management plans, participating in local, state, and federal disaster drills and exercises, acting as the Coordinating Officer in the event of County wide emergencies, and developing and implementing tests and exercises of the County's emergency management plans. The Emergency Management Director is responsible for overseeing one Assistant Director and two Program Coordinators, as well as coordinating activities within Emergency Management. The Emergency Management Director is also responsible for reviewing reports and records of program activity to ensure program and Department objectives are being met, and serving as the County's "County Coordinating Officer" during officially declared County emergencies wherein the Emergency Management Director oversees the Emergency Operations Center from which key officials direct and control emergency operations.

The Assistant Director reports to the Director and is responsible for assisting the Director with planning and budget preparation for the Emergency Management Section, serving as the main planner for program areas such as the Local Mitigation Strategy and the Comprehensive Emergency Management Plan, completing Health Care Facility Plan reviews, and preparing grant applications for local program funding, state funding, and federal funding, as assigned. The Assistant Director also conducts the annual hazards analysis of known chemicals within the County and the annual county-wide Critical Facilities Inventory check. The annual hazard analysis and the Critical Facilities Inventory check are both done in accordance with the State Division of Emergency Management Requirements.

The two Program Coordinators report directly to the Emergency Management Director and are responsible for facilitating emergency preparedness trainings for functions supporting the Emergency Operations Center, developing and presenting emergency preparedness information and trainings to the public, developing after-action reports and establishing improvement plans, and maintaining the Special Needs Registration Program by updating resident health information, documentation, and relevant forms.

Enhanced 911 Section

The Enhanced 911 Section ("E911 Section") provides addressing services to Alachua County, provides communications support to the County's emergency dispatching service, and provides radio communications to ACFR field units. The E911 Section is managed by the E911 Bureau Chief ("Bureau Chief"). One 911 Specialist, one 911 Geographic Information Systems ("GIS") Coordinator, and one Staff Assistant report directly to the Bureau Chief.

The Bureau Chief's main responsibilities include supervising and coordinating all staff activities within the E911 Section, including addressing, maintenance of the addressing database, managing relationships with E911 service providers, and serving as the County's representative on the State E911 Board. The 911 Specialist is primarily responsible for supporting the County's emergency dispatching service, which is managed by the Alachua County Sheriff's Office ("ASO"). The 911 Specialist investigates misroutes or disruptions to telecommunications services reported by ASO dispatchers. The Bureau Chief and 911 Specialist work together to support the Department's use of the GRUCOM trunked radio communications system, including maintaining radio equipment used by Department personnel in the field and managing the Department's relationships with third-party radio infrastructure providers.

The 911 GIS Coordinator oversees the E911 Section's GIS team, which includes two GIS Specialists and one GIS Analyst. The E911 Section's GIS team creates and maintains address and road centerline ("RCL") entries in the County GIS database, which is used by ASO dispatchers to route first responders to the correct location. The E911 Section's GIS team responds to all addressing requests from the County government or from municipal governments within the County. The GIS team works with the 911 Specialist to resolve any address or road centerline errors within the County GIS database reported by ASO dispatchers. As Alachua County has a decentralized County-level GIS system, the 911 GIS Coordinator works collaboratively with the GIS functions within other County departments to manage the County's GIS systems.

Staffing and Personnel Management

Staffing Levels

To assess the Department's staffing levels and evaluate relative administrative, support, and operational staffing levels, the M&J Team analyzed data on Alachua County Fire Rescue's budgeted and actual staffing levels as of December 31, 2022.

Budgeted Staffing Levels

In total, ACFR is budgeted for 344 full-time equivalent ("FTE") positions. The Department's 344 FTEs are allocated to the Sections as shown in Figure 4: ACFR Budgeted Staff and Line Personnel by Section. There are two types of personnel working within ACFR – staff personnel and line personnel. Line personnel consist of positions within ACFR that perform the fire prevention, EMS, and fire protection services. Staff personnel consist of positions that serve in roles that support ACFR operations, or perform functions not always performed by fire rescue departments (such as emergency management). Figure 4 shows the distribution of staff to line personnel for each section within ACFR. Figure 4 does not include personnel added with the addition of fire prevention and protection services in the Town of Micanopy.

Figure 4: ACFR Budgeted Staff and Line Personnel by Section

Section	Staff FTE Personnel	Line FTE Personnel	Total FTE Personnel
Fire Rescue Chief	1.5	0.0	**1.5**
Finance & Administration Section	9.0	0.0	**9.0**
Revenue & Collections Section	11.0	0.0	**11.0**
E911 Section	7.0	0.0	**7.0**
Emergency Management Section	4.0	0.0	**4.0**
Fire Rescue Operations Section	13.5	298.0	**311.5**
Total	**46.0**	**298.0**	**344.0**

As many fire rescue departments are not responsible for overseeing E911 or Emergency Management functions within their jurisdictions, the M&J Team excluded the 11 FTE positions in the E911 and Emergency Management sections from analyses of departmentwide staffing numbers. Excluding staff that perform non-standard functions allows for more accurate staffing comparisons between ACFR and the fire rescue industry as a whole. Separate analyses of budgeted E911 Section and Emergency Management Section staff are included later in this report chapter.

298 of ACFR's 333 budgeted non-911 and non-Emergency Management FTE positions, or 89.5% of the budgeted FTE positions, are classified as line positions, or positions that are directly involved in providing fire and rescue services in Alachua County.[1] The 298 line positions are housed within the Fire-Rescue Operations Section. The remaining 35 FTE positions in the Department, or 10.5% of positions, perform work to manage, organize, and support ACFR's line personnel as they protect lives and property throughout the County and are referred to as staff positions. Industry standard practices indicate that staff personnel should comprise 12%-15% of a typical fire-rescue department's total employees. At 10.5% staff personnel, ACFR's current staffing allocation has a lower share of staff personnel than the industry standard.

Budgeted Fire and EMS Operations Staffing Levels

Prior to the Department's introduction of the Kelly Day on May 22, 2023, ACFR's budgeted fire protection and EMS position levels enable the Department to provide fire and rescue services without relying on extensive overtime usage, provided that all vacancies are filled and the Department is fully staffed. The introduction of the Kelly Day places additional strain on the Department's staffing model, however. Kelly Days are paid days off added into the schedules of firefighters that work 24-hour shifts and are used by fire rescue departments to ease the burden of working 24-on/48-off schedules. ACFR's firefighters will receive one Kelly Day every three weeks. ACFR currently staffs fire units with three personnel and EMS units with two personnel. National Fire Protection Association ("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) recommends minimum staffing levels of four personnel for fire units and of two personnel for EMS units. Florida law requires that EMS units are staffed by at least two personnel.

ACFR maintains 11 frontline fire suppression units (including engines, quints, and a heavy rescue) and 15 24-hour EMS units. The following analysis does not include Rescue 37, ACFR's 16th 24-hour EMS unit, as the unit had not been put into service during the M&J Team's fieldwork. ACFR also maintains tankers and brush trucks which are cross-staffed by the frontline fire suppression crews. ACFR's current staffing practice is for three personnel to staff each frontline fire suppression unit, which requires 33 on-duty personnel per shift. ACFR would need to staff each shift's frontline fire suppression units with 44 personnel (11 personnel more than the current staffing level) in order to meet the minimum staffing levels for fire suppression unit recommended by NFPA 1710. As each EMS unit must be staffed by a driver and at least one certified EMT/Paramedic, ACFR must have at least 30 personnel on duty to staff the 15 24-hour EMS units. ACFR's current staffing practice for EMS units both complies with relevant Florida law and meet's NFPA 1710's minimum staffing levels. ACFR additionally staffs two District Chief positions for each shift. In total, ACFR's current unit staffing level requires ACFR to have 65 personnel on duty each shift to staff all 11 frontline fire suppression units, all 15 24-hour EMS units, and both District Chief positions. If ACFR were to adopt per-shift unit staffing levels that meet NFPA 1710's minimum recommendations, ACFR would need to have 76 personnel on duty each shift to staff all 11 frontline fire suppression units, all 15 24-hour EMS units, and both District Chief positions.

[1] The M&J Team classified the following positions as line positions: Firefighter, Driver/Operator, Rescue Lieutenant, Lieutenant, EMS Attendant, EMT Driver, District Chief, Fire Prevention Officer, and Fire Marshal. For the purpose of the Assessment report, the M&J Team defined a line position as any uniformed personnel responsible for delivery of external services (fire protection, EMS, and fire prevention).

Fire rescue departments determine their required total line personnel by applying a multiplier to the department's per-shift staffing requirements. A department's target staffing multiplier is determined by the department's staffing model and the department's willingness to rely on overtime to fill positions. Departments that use a standard 24-on/48-off staffing model with a 56-hour work week, as ACFR used prior to the introduction of the Kelly Day, must at a minimum use a multiplier of 3.0 to ensure all shifts are to be filled. The minimum staffing multiplier assumes that employees are always available to work and does not account for employee leave or absences. In order to accommodate employee leave and absences, most departments that use a 24-on/48-off staffing model use a multiplier larger than 3.0. Per Dr. Steven Knight's 2019 *FireRescue1* article, "Full time, part time, overtime: How to fill fire department vacancies,"[2] most fire rescue departments that implemented a 24-on/48-off schedule and 56-hour work week have a staffing multiplier between 3.4 and 3.6. Departments that implemented a 24-on/48 off schedule with a 48-hour work week, as ACFR has introduced with the implementation of the Kelly Day, typically require a staffing multiplier closer to 4.2 to ensure full staffing without a heavy reliance on overtime work.

ACFR has 274 budgeted 24-hour line personnel, which gives a multiplier of 4.22when compared to ACFR's current per-shift unit staffing levels. A multiplier of 4.22 is slightly higher than the 4.2 multiplier suggested by Dr. Knight's article for departments like ACFR that use a 24-on/48-off schedule with a 48-hour work week. ACFR's current staffing budget allows for a fully staffed ACFR to fill all 24-hour shifts at the Department's current unit staffing levels without relying on overtime scheduling. If ACFR were to adopt per-shift unit staffing levels that meet NFPA 1710's minimums, ACFR would need to add 47 new 24-hour line positions in order to maintain the Department's current multiplier.

Budgeted Emergency Management Section Staffing Levels

Four FTE employees are budgeted for the Emergency Management Section. The M&J Team compared the Emergency Management Section's staffing levels to staffing levels of the emergency management agencies of other similarly sized counties throughout Florida and the Southeast, as shown in Figure 5: Emergency Management Staffing Comparison.

Figure 5: Emergency Management Staffing Comparison

County	State	Approximate Population	Budgeted FTE Personnel
Alachua	Florida	285,000	4.0
St. Lucie	Florida	345,000	5.3
Leon	Florida	290,000	7.0
St. Johns	Florida	290,000	5.0
Forsyth	Georgia	260,000	3.0
Cherokee	Georgia	275,000	3.0
Lexington	South Carolina	300,000	2.0

[2] "Full time, part time, overtime: How to fill fire department vacancies." firerescue1.com

On average, comparable emergency management agencies have roughly 4.2 budgeted staff, in line with ACFR's staff budget. Within the comparison set, Florida counties tend to have larger emergency management agencies than counties located elsewhere. The Alachua County Emergency Management Section is smaller than the Emergency Management section of the other three Florida counties in the comparison set.

Budgeted E911 Section Staffing Levels

ACFR's E911 section is budgeted for seven FTE employees. ACFR's E911 Section has a wide assortment of responsibilities that are not directly comparable to the duties of a single department, division, or section within other comparable counties. The M&J Team compared the E911 Section's staffing levels to the staff used to perform similar functions in other similarly sized counties throughout Florida and the Southeast, as shown in Figure 6: E911 Staffing Comparison.

Figure 6: E911 Staffing Comparison

County	State	Approximate Population	Budgeted FTE Personnel
Alachua	Florida	285,000	7.0
St. Lucie	Florida	345,000	8.0
Leon	Florida	290,000	5.0
Cherokee	Georgia	275,000	4.0

On average, the comparison set of counties budget approximately 5.7 personnel to perform the functions carried out by ACFR's E911 Section. The E911 Section is budgeted for more employees than the average in the comparison set but is well within the range of observed employee counts.

Actual Staffing Levels

As of December 31, 2022, ACFR employed 287 FTE employees and had 57 vacant FTE positions, a vacancy rate of approximately 16.6%. 54 of ACFR's vacancies are in line positions, with only three vacancies in staff positions. Excluding E911 Section and Emergency Management Section employees, 244 of ACFR's 277 FTE employees, or approximately 88.1% of employees, are line personnel while the remaining 33 employees, or approximately 11.9%, are staff personnel. ACFR's actual line/staff personnel balance as of December 31, 2022, was notably more staff-personnel heavy than the Department's budgeted line/staff personnel balance, but still included a slightly lower share of staff personnel than the industry standard of 12%-15%.

Actual Fire and EMS Operations Staffing Levels

Fire Rescue Operations is the section within ACFR that was most significantly impacted by vacancies. Of ACFR's 57 vacant positions, 55 are for positions within the Fire Rescue Operations Section, including 45 Firefighter vacancies. In addition, 30 Firefighters were still at trainee status, indicating that they have not yet completed all required certifications and are not eligible to work overtime. As of December 31, 2022, nearly half of ACFR's 160 budgeted Firefighter positions were either empty or occupied by trainee-status Firefighters. As previously discussed, ACFR's current unit staffing levels require at least 65 employees to work per shift to fully staff the 11 frontline fire suppression units and the 15 24-hour EMS units at the Department's current per-shift unit staffing levels. As of December 31, 2022, ACFR had 227 24-hour personnel, or a multiplier of 3.49. A staffing multiplier of 3.49 is within the 3.4 to 3.6 range recommend by Dr. Knight for departments using a 24-on/48-off schedule with a 56-hour work week, as ACFR used prior to the introduction of the Kelly Day, but is significantly lower than the 4.2 multiplier recommended for departments using a 24-on/48-off schedule with a 48-hour work week, as ACFR introduced with the implementation of the Kelly Day. ACFR has had some success addressing these staffing shortages in the early part of 2023, including hiring a class of nearly 45 Firefighters in late February.

Staff Scheduling Methodology

ACFR's sections have different staffing and scheduling needs based upon each section's functions. Scheduling for personnel within ACFR is done using a system called Telestaff. The Telestaff system allows personnel to be scheduled on an hour-to-hour timeline every day and for each shift within the Fire Rescue Operations Section.

The areas of ACFR that make up a majority of the staff personnel include the Finance and Administration Section, the Revenue and Collections Section, the Emergency Management Section, and the E911 Section. The Finance and Administration Section, the Revenue and Collections Section, and the Emergency Management Section work varying schedules, with most working between 7:30 a.m. and 5:30 p.m., Monday through Thursday. The E911 Section works 7:30 a.m. to 5:00 p.m., Monday through Thursday, and the Information and Technology Office is scheduled to work 9:00 a.m. to 5:00 p.m., Sunday to Sunday, and provide 24/7 on-call support during hours not on shift. Staff personnel are not allowed to take overtime.

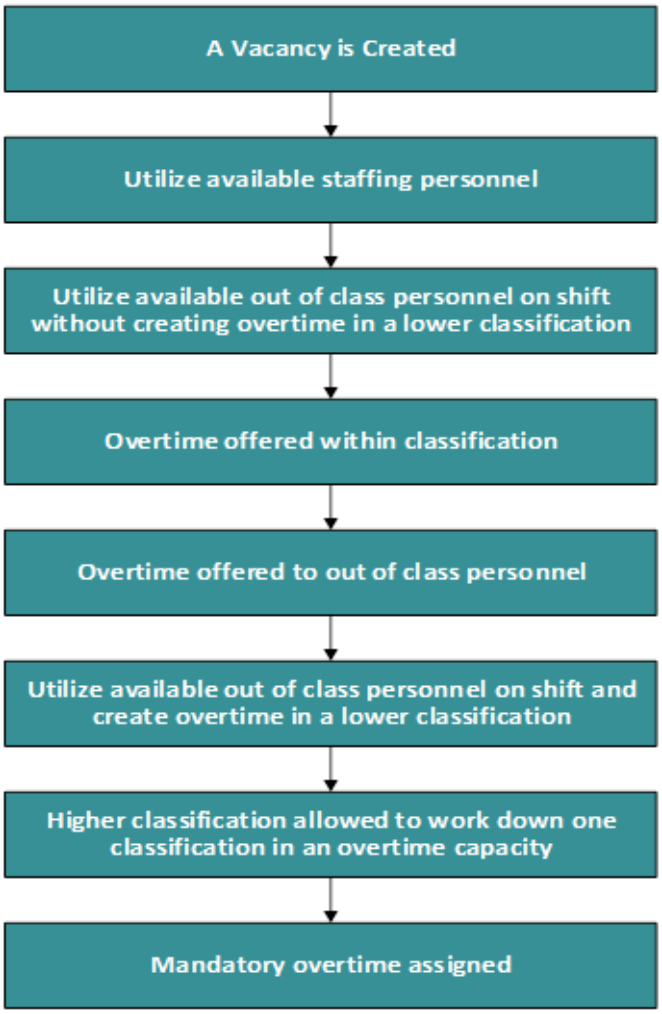
The following scheduling process does not account for future additions of Kelly Days because of the current discussion of Kelly Day implementation within the Department. For each day of the week, there are three shifts within the Fire Operations Section; A Shift, B Shift, and C Shift. Each shift is staffed with two District Chiefs who are assigned to either District 5 or District 6. The District Chiefs are responsible for overseeing the Fire Rescue stations within their assigned district. Direct personnel within ACFR include employees within the EMS Operations Branch, the Fire Operations Branch, the Professional Standards Branch, and the Life Safety/Internal Affairs Division. The District Chiefs are solely responsible for scheduling within the EMS and Fire Operations Branches. Within the Fire Operations Section, the District Chief that is assigned to District 5 on each shift is responsible for filling vacancies on the current shift and ensuring that the following day's schedule is complete. The District 5 District Chief will also use the Telestaff scheduling system to outbound all vacancies for the next 28 days on a daily basis which notifies personnel automatically of scheduled shifts. It is the employee's responsibility to check Telestaff regularly for shift assignment and overtime offers. District Chiefs for each shift are responsible for inputting all Trade Time Forms, Holdover codes, and approve Field Training officer codes for the personnel assigned to their district. Each District Chief is responsible for finalizing their roster by the end of each shift.

The EMS Operations Branch within the Fire Rescue Section is overseen by the Assistant Chief of EMS Operations who directly supervises a District Chief who is assigned a 40-hour work week. The District Chief assigned to EMS is responsible for overseeing the Peak Load Division and the five RCCs within the Peak Load Division. Staff within the Peak Load Division are divided into two shifts that alternate on-duty-days. One shift works Monday, Tuesday, and Friday one week and then the next week works Wednesday, Thursday, and either Saturday or Sunday. Monday through Thursday shifts last 13 hours and Friday through Sunday shifts last 14 hours. RCC2, RCC3, and RCC5 operate on Saturdays while RCC1 and RCC4 operate on Sundays. RCCs are housed at Station 33.

Within the Peak Load Division, PRNs work part-time and pick up shifts on the RCCs when a vacancy is available. There are currently 20 PRNs working part-time in the Peak Load Division. PRNs are required to work a minimum of one shift every two months to stay active with the Peak Load Division. Once Telestaff outbounds shifts for the next 28 days by filling open shifts with available personnel, PRNs are able to pick up the shifts that are still vacant. This scheduling process within the Peak Load Division resembles a Modified Peak Staffing Model. Using a Modified Peak Staffing Model means that the Department staffs direct personnel based upon the minimum required positions within each Critical Care Unit, and staffs part-time PRNs that are able to pick up open shifts.

The District Chiefs responsible with scheduling adhere to the scheduling flow chart shown in Figure 7: Overtime Process Flowchart when filling vacant positions. Figure 7 demonstrates the steps that are used to explore possible staffing options in order to avoid assigning mandatory overtime to fill a vacant position.

Figure 7: Overtime Process Flowchart



If there is a vacant position on a shift, the District Chief responsible for scheduling attempts to fill the vacant shift position with personnel who are currently available on the schedule and have not been assigned a shift. If there are no personnel available to fill the shift, the District Chief then looks to fill the shift with out of class personnel on the shift, without creating a need for overtime within the shift that the out of class individual is coming from. Out of class personnel are employees who meet the necessary requirements to fill the shift they are filling, but have not yet been promoted to the vacant position. If the vacancy is unable to be filled by the out of class personnel without creating overtime, overtime is offered within the vacancy's classification. The Telestaff system automatically notifies eligible personnel within the vacancy classification of the available overtime by emailing each eligible personnel in order of the personnel's seniority and current amount of overtime hours worked. For example, if person A and person B have the same amount of overtime hours accepted through the year, but person A has been with the Department for longer than person B, the overtime is offered to person A before it is offered to person B. This process is carried out for each eligible personnel that can fill the vacant shift. Telestaff automatically compiles a list of eligible personnel for the vacant shift that the overtime shift can be offered to. If the overtime shift is not taken by an individual within the classification of the vacant position, the overtime is then offered to the out of class personnel.

If no out-of-class personnel accept the offered overtime shift, on shift available out of class personnel are utilized to fill the vacant shift with overtime created in the lower classification. If there is not available out of class personnel to fill the vacant shift, the shift is offered up to any personnel in the classification above the classification of the vacant shift as an overtime shift. If there are no personnel in the classification above the vacant shift that is able to take the shift, the overtime becomes mandatory and is assigned to an individual within the classification of the vacant shift. Mandatory overtime is assigned based upon how many times an individual has been mandated to work an overtime shift. This means that the person within the classification of the vacant shift that has served the least amount of mandatory overtime for the year will be mandated to serve the overtime.

Overtime shifts pay time-and-a-half as required by the Fair Labor Standards Act. Staff personnel and District Chiefs within the Fire Rescue Operations Section are not eligible for overtime hours. Any time worked over the allotted hours per week the District Chiefs is classified as "additional hours." District Chiefs earn the same amount of pay for Additional hours as they do for normal hours. The following positions are the only positions eligible to take overtime shifts within ACFR:

- EMT Driver
- EMS Attendant
- Lieutenant
- Rescue Lieutenant
- Driver/Operator
- Firefighter

Overtime Trends

Given the Department's staffing concerns, overtime is a necessary component of ACFR's scheduling model. ACFR asks line personnel to work overtime and take on additional shifts to fill in for coworkers that are unable to work their regular shifts, to fill in any gaps in the work schedule caused by vacant positions, to staff community events such as concerts and sporting events, or to attend training. Additionally, fire and EMS employees might have to extend their shifts and work overtime if an employee in the next shift is running late or if an employee's shift ends while the employee is in the middle of responding to a call or working on required paperwork.

The Fair Labor Standards Act ("FLSA") is the federal law that governs overtime pay in the United States. ACFR's overtime policies are laid out in two collective bargaining agreements ("CBAs") with the International Association of Fire Fighters ("IAFF") that supersede the FLSA's overtime pay regulations for covered employees. The management unit CBA covers fire and EMS operations managers, including all Captains and District Chiefs. The general unit CBA covers all "rank and file" fire and EMS operations employees, including Firefighters, Driver/Operators, EMT Drivers, EMS Attendants, Rescue Lieutenants, EMS Lieutenants, Lieutenants, and Fire Prevention Officers. Employees that are not covered by one of the two IAFF CBAs rarely work overtime hours.

The IAFF CBAs establish a number of different overtime rules. Members covered by the general unit CBA are eligible for time-and-a-half overtime pay. General unit employees that do not work 24-hour workdays are entitled to time-and-a-half overtime pay for all working hours over 40 in a standard, seven-day workweek. Prior to the introduction of the Kelly Day, general unit employees that work 24-hour workdays were entitled to time-and-a-half overtime pay for all working hours over 106 in a 14-day work period. After the introduction of the Kelly Day, general unit employees that work 24-hour workdays are entitled to time-and-a-half overtime pay for all working hours over 144 in a 21-day work period.

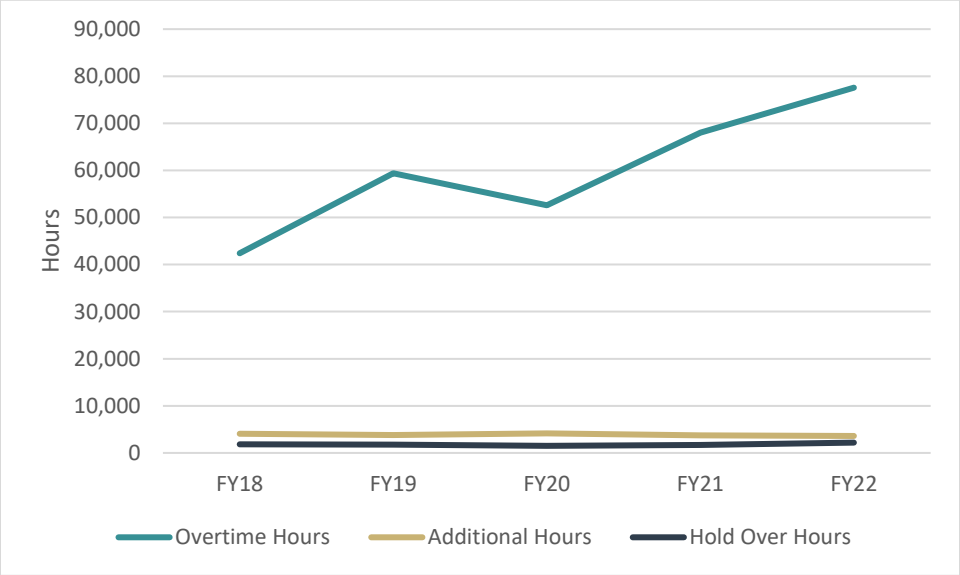
Management unit employees are exempt from the FLSA's overtime pay requirements. Additionally, the management unit CBA does not provide for overtime pay. The management unit CBA does entitle management unit employees to compensation for working time over their standard workweek, or "additional hours." For each additional hour worked, management unit employees can choose to either be paid at their current hourly pay rate or accrue compensatory hours on an hour-for-hour basis. Management unit employees can use compensatory time to take additional time off. Management unit employees that work 24-hour workdays have a seven-day workweek of 56 hours, while other management unit employees have a standard seven-day, 40-hour workweek. The management unit CBA does not address the Kelly Day's impact on the scheduling process and compensation of covered employees.

Telestaff divides overtime records into several broad classifications. Overtime or additional hours that come from voluntarily picking up additional shifts are classified as "overtime" or "additional hours." Overtime or additional hours that come from being assigned additional shifts are classified as "mandatory overtime" or "mandatory additional hours." Overtime or additional hours that come from voluntarily working on "special assignments or projects" are classified as "incidental overtime" or "incidental additional hours." Overtime hours that are the result of a shift being extended due to an ongoing call, paperwork, late relief, or some other factors are designated as "hold over."

ACFR personnel reported in interviews that staffing shortages among fire and EMS line personnel, particularly in the Firefighter position, have resulted in ACFR having to increase the use of overtime to ensure adequate staffing and mitigate shortages. ACFR leadership indicated that they were concerned that the frequent use of overtime, particularly mandatory overtime, would have a negative impact on employee morale and make it more difficult to retain employees. While ACFR does have detailed information on current vacancies, ACFR does not retain sufficiently detailed historical position vacancy data to conduct a meaningful analysis of the impact of vacancy rate on overtime usage. An analysis of ACFR's overtime records shows trends that are consistent with the narrative that the recent increase in overtime usage is driven by high vacancy rates in "rank-and-file" fire and EMS operations positions.

The M&J Team reviewed overtime records from FY18 through FY22 that show aggregate overtime data broken down by category (the Alachua County fiscal year runs from October 1 through September 30 – FY22, for example, ran from October 1, 2021, through September 30, 2022). Figure 8: Overtime, Additional Hours, and Hold Over by Fiscal Year shows total overtime hours, additional hours, and hold over hours per year over this timespan.

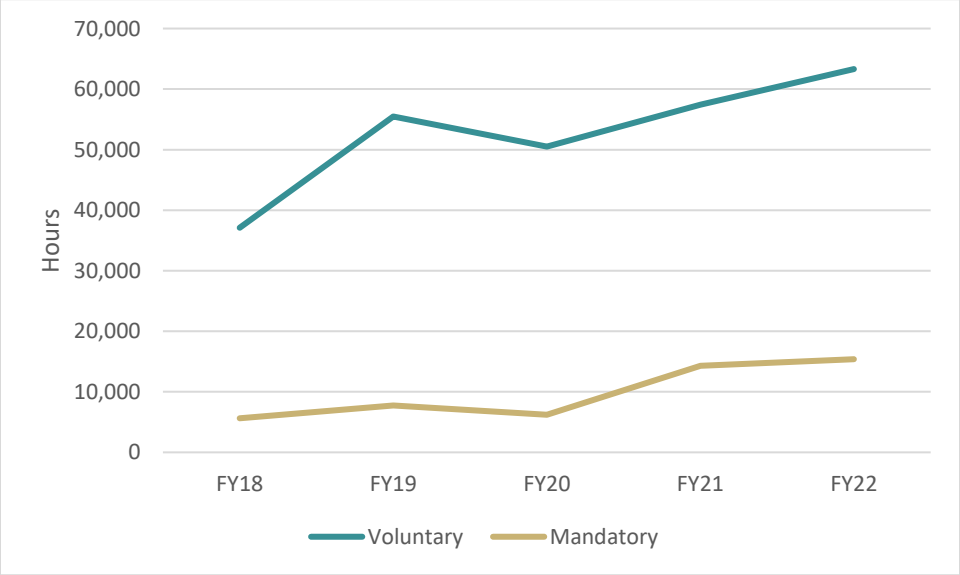
Figure 8: Overtime, Additional Hours, and Hold Over by Fiscal Year



As illustrated in Figure 8, the number of hours of overtime has increased significantly over the past five fiscal years, from approximately 42,000 hours in FY18 to approximately 78,000 hours in FY22. At the same time, however, the total number of additional hours and hold over hours worked per fiscal year have remained relatively stable. The fact that overtime hours have increased significantly while additional hours and hold over hours have remained consistent suggests that the increase in overtime hours is not the result of a Department-wide phenomenon but is instead driven by a factor that is specific to overtime-eligible personnel, such as the relatively high Firefighter vacancy rate.

Figure 9: Voluntary vs. Mandatory Overtime and Additional Hours by Fiscal Year compares voluntary and mandatory overtime hours and additional hours by fiscal year.

Figure 9: Voluntary vs. Mandatory Overtime and Additional Hours by Fiscal Year



As Figure 9 indicates, the annual number of both voluntary and mandatory overtime hours and additional hours increased over the reviewed timespan. Mandatory hours increased by over 170% from FY18 to FY22, as compared to a roughly 70% increase in voluntary hours over the same period of time. As a result, mandatory hours went from making up roughly 13% of all overtime hours and additional hours in FY18 to making up roughly 20% of all overtime hours and additional hours in FY22. Mandatory overtime and additional hours making up a greater share of the total amount of overtime and additional hours worked suggests that ACFR's overtime and additional hours demands are increasingly exceeding line personnel's willingness to work overtime and additional hours.

Firefighter and EMS Workload

It takes an adequate and properly trained staff of emergency responders to put the appropriate emergency apparatus and equipment to its best use in mitigating incidents. Insufficient staffing at an emergency scene decreases the effectiveness of the response and increases the risk of injury to all individuals involved.

Workload is a measure of how busy each unit within the Department is and can be analyzed from a simplistic view as to the number of incidents to which it responds. However, incident responses vary in length of time so while two units may respond to the same number of incidents, the actual work involved may vary greatly. A better measure of workload is referred to as unit hour utilization ("UHU"). With the UHU method, the amount of time assigned to incidents is compared to the total amount of time the unit is in-service and is expressed as a percentage of the whole. For instance, a UHU value of 25% means that the unit is operating on incidents 25% of the time it is in service, thus only being available for other emergencies 75%. When units from neighboring fire stations all have high UHU values, it means that new emergencies will have increased response times because it is more likely that the closest, second closest, and even third closest units are not available due to being on other incidents.

In the past, UHU was calculated by dividing the number of transports by the number of unit hours. For instance, if a unit did three transports in a 12-hour shift, the UHU would be .25 or 25%. The issues with this calculation include that the variations in time different transports require and that the calculation does not capture time spent on incidents not requiring a transport. The UHU calculation used in the M&J report analyzes the time all units – both suppression and rescue – spend on incidents. The calculation used in the M&J report evaluations the time from when a unit responds to an incident to the time the until clears the incident to be available for another incident.

UHU only considers the time the unit is dispatched to the time the unit returns to service. It does not include the time it takes for a unit to drive back to the fire station, the time it takes for a unit to complete any necessary paperwork such as required patient care reports, or the time that a unit must spend on non-emergency activities such as training. Figure 10: How a Firefighter Spends a 24-hour Shift Besides Emergency Responses displays typical time commitments of a firefighter in a 24-hour shift besides emergency responses. Figure 10 is based on typical career firefighters in fire rescue departments across the United States and not specific to ACFR. ACFR specific nonemergency duties vary depending on the station, but include the activities listed in Figure 10.

Figure 10: How a Firefighter Spends a 24-hour Shift Besides Emergency Responses

Activity	Hours	Percent of Shift
Physical Fitness	2	8.3%
Training	2	8.3%
Meals[1]	2	8.3%
Housework and Apparatus Inspections	2	8.3%
Non-Emergency Activities[2]	2	8.3%
Administrative Duties[3]	2	8.3%
Rest	6	25%
Total	**18**	**75%**

[1] Includes three meals per shift with prep and clean up time
[2] Includes community outreach, building inspections, hydrant inspections, and fueling apparatus
[3] Includes reports, performance evaluations, and payroll

While there are limited formal performance measures to use as a target measure, in May 2016, Henrico County (VA) Division of Fire published an article after studying their department's EMS workload.[3] As a result of the study, Henrico County Division of Fire developed a general commitment factor scale for their department. Figure 11: Commitment Factors as Developed by Henrico County (VA) Division of Fire, 2016 is a summary of the findings as it relates to commitment factors.

Figure 11: Commitment Factors as Developed by Henrico County (VA) Division of Fire, 2016

Factor	Indication	Description
16%-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.
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.
26%-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 exceed goals.
30%	"Line in the Sand"	Not Sustainable: Commitment Threshold—community has less than a 70% chance of timely emergency service and immediate relief is vital. Personnel assigned to units at or exceeding 30% 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.

Figure 12: ACFR Units UHU shows the UHU for ACFR units based on the fiscal year, October 1 to September 30. The calculations assume that all units except for peak units were in-service 24 hours each day. Calculations for peak units were used for the hours these units are in service daily.

[3] "How Busy Is Busy?" fireengineering.com

Figure 12: ACFR Units UHU

Apparatus	FY18	FY19	FY20	FY21	FY22
Engine 21	7.36%	6.90%	5.67%	6.35%	7.03%
Engine 24	3.20%	2.21%	3.21%	3.80%	4.29%
Engine 25	1.58%	3.06%	2.45%	2.85%	2.67%
Engine 40	3.32%	3.89%	4.26%	4.42%	3.98%
Engine 60	4.72%	4.59%	5.37%	5.69%	4.93%
Engine 62	2.86%	3.47%	3.21%	3.14%	3.55%
Engine 80	8.61%	6.95%	7.41%	7.49%	9.19%
Engine 81	5.86%	5.47%	5.84%	5.99%	6.10%
Engine 82	3.14%	2.62%	2.94%	3.57%	3.06%
Heavy Rescue 23[1]	10.89%	10.09%	10.20%	10.36%	10.59%
Quint 23	5.72%	4.27%	5.05%	6.02%	5.48%
RCC1	52.23%	49.76%	43.54%	46.47%	43.69%
RCC2	52.73%	52.64%	43.39%	38.05%	40.19%
RCC3	52.17%	49.52%	46.52%	44.50%	46.08%
RCC4	52.15%	49.78%	45.97%	43.40%	31.97%
RCC5	38.42%	45.74%	34.75%	37.47%	36.18%
Rescue 20	16.19%	13.08%	11.91%	14.46%	13.84%
Rescue 21	17.24%	16.54%	13.79%	16.65%	17.81%
Rescue 23	37.71%	35.94%	30.35%	35.01%	33.79%
Rescue 24	23.32%	20.85%	13.19%	18.19%	13.22%
Rescue 28	N/A	4.91%	9.22%	11.91%	12.21%
Rescue 30	27.14%	29.81%	26.91%	29.58%	29.55%
Rescue 31	27.76%	28.54%	25.88%	29.40%	29.96%
Rescue 33	31.82%	31.10%	23.52%	28.39%	29.71%
Rescue 34	N/A	N/A	17.53%	30.77%	32.21%
Rescue 35[2]	36.61%	37.0%	30.61%	29.53%	30.91%
Rescue 36	N/A	N/A	N/A	N/A	24.27%
Rescue 41	10.17%	10.11%	10.01%	11.69%	10.43%
Rescue 62	8.85%	9.33%	8.27%	9.53%	9.43%
Rescue 80	36.66%	36.18%	33.45%	37.83%	34.33%
Rescue 81	21.58%	20.01%	18.16%	22.36%	20.28%
District Chief 5	0.92%	1.03%	1.24%	1.32%	1.66%
District Chief 6	1.75%	1.34%	1.84%	2.09%	1.65%
District Chief 8[3]	N/A	0.08%	0.82%	0.96%	1.13%

[1] Squad 23 became Heavy Rescue 23 in FY22.
[2] Rescue 3 became Rescue 35 in FY20.
[3] District Chief 8 refers to the 40-hour District Chief assigned to EMS who oversees the Peak Load Division.

All suppression units (engines, heavy rescue, and quint) have a UHU value below the ideal commitment range. Therefore, the workload of these units and personnel assigned to them is acceptable at current call loads. Suppression units have multiple non-emergency tasks to complete in a 24-hour shift, as seen in Figure 10. District Chiefs deal primarily with administrative issues and tasks and only respond to major incidents, therefore their UHU is lower.

The call load for EMS units (rescues) are above desired for many units. Rescues 23, 30, 31, 33, 34, 35, and 80 had UHU values of above 25% from October 1, 2021, to September 20, 2022. Rescues 23, 34, 35, and 80 were above the 30% level. These high UHU values will mean greater fatigue on personnel and will take away from time for training and other non-emergency duties. Also, with all of these units with high UHU values in the Gainesville area, this could lead to increased response times in this area due to rescue units responding from other stations to cover incidents. The increase in UHU values for EMS units is partly due to the amount of time that the EMS units are spending at hospitals within the County waiting for a bed assignment for the patient they are currently providing care to. EMS units are not allowed to leave the patient until the patient receives a bed assignment from the hospital.

Peak load units (RCC1, RCC2, RCC3, RCC4, and RCC5) do not fall within the same measurement as mentioned in Figure 11 because they do not work a 24-hour shift. The desired UHU level for peak load units is 50%, which leaves time within the shift for breaks, physical fitness, training, and report writing. The five years analyzed have shown a decrease in UHU values for the peak load units.

Job Descriptions

ACFR has 38 job descriptions. Figure 13: ACFR Job Descriptions shows ACFR's positions, the date that each position's job description was established, and the date of the most recent revision of each position's job description. Many of the job descriptions did not have an established date listed.

Figure 13: ACFR Job Descriptions

Position	Established	Revision Date
911 GIS Coordinator	September 1, 2021	September 21, 2022
911 Specialist	N/A	March 11, 2022
Assistant Chief	N/A	September 21, 2022
Assistant Director, Emergency Management	N/A	October 5, 2022
Assistant Director, Administrative and Support Services	N/A	February 21, 2021
Bureau Chief, Communications	N/A	March 17, 2022
Captain, Health & Safety	August 10, 2020	October 25, 2022
Captain, Recruitment & Public Education	August 10, 2020	October 25, 2022
Chief of Fire Rescue	N/A	October 27, 2022
Deputy Chief of Fire Rescue	November 30, 2011	October 6, 2022
Director of Emergency Management	October 6, 2010	October 6, 2022
District Chief, 40 hour	N/A	March 9, 2022
District Chief, 56 hour	N/A	March 9, 2022
Division Chief, Fire Marshal	N/A	October 6, 2022
Driver/Operator	N/A	October 3, 2022
Emergency Management Coordinator	June 16, 2019	October 6, 2022
Emergency Medical Services Lieutenant to Emergency Medical Services Attendant	September 25, 2014	October 3, 2022
EMT/Driver	N/A	September 21, 2022
Fire Prevention Officer (reclassified from Fire Inspector)	N/A	September 21, 2022

Position	Established	Revision Date
Fire Prevention Officer (reclassified from Plans Reviewer Inspector)	N/A	September 21, 2022
Firefighter	N/A	October 10, 2022
Fiscal Assistant	N/A	October 6, 2022
GIS Analyst	N/A	October 6, 2022
GIS Specialist	N/A	October 6, 2022
Lieutenant	N/A	October 3, 2022
Medical Billing Manager	September 30, 2019	March 11, 2022
Medical Billing Specialist	March 25, 2013	April 20, 2021
Medical Billing Supervisor	N/A	April 12, 2021
Medical Billing Technician	June 20, 2021	March 11, 2022
Medical Transfer Coordinator	September 14, 2021	March 11, 2022
Network Specialist	N/A	June 6, 2019
Program Manager	N/A	October 6, 2022
Rescue Lieutenant	N/A	October 3, 2022
Senior Administrative Assistant	N/A	July 16, 2019
Senior Staff Assistant	N/A	October 6, 2022
Staff Assistant	N/A	June 7, 2019
Stock Clerk	N/A	November 15, 2022
Warehouse Manager	N/A	March 25, 2021

Job descriptions should be viewed as living documents and should be regularly reviewed to ensure that they fully capture all aspects of the described position. The job descriptions for the Network Specialist, Staff Assistant, and Senior Administrative Assistant positions are the least current of ACFR's job descriptions and were last revised in June and July of 2019. Four other job descriptions were last revised in spring 2021, while the remaining 31 job descriptions were last revised during 2022.

The Plans Reviewer Inspector and Fire Inspector positions were merged and reclassified into the Fire Prevention Officer position at the start of FY23. The reclassification of the two positions into the Fire Prevention Officer position was intended to make a more general position that allows for employees to perform a wider range of duties. ACFR has not yet drafted a job description for the new Fire Prevention Officer position, however. Instead, ACFR has retained the preexisting Plans Reviewer Inspector and Fire Inspector job descriptions and added a note indicating that the positions were reclassified to Fire Prevention Officer. The continued used of the Plans Reviewer Inspector and Fire Inspector job description means that ACFR effectively maintains two different Fire Prevention Officer job descriptions.

The Department is in the process of reclassifying the EMS Lieutenant position to the EMS Attendant position.

Staff Retention and Succession Planning

Currently, ACFR has 344 budgeted positions within the Department. Figure 14: Line Personnel Retention – FY18 to FY23 shows the current staff retention rate for line personnel from FY18 to FY23. The current staff retention rate was compiled by subtracting the position hire date from the position term date.

Figure 14: Line Personnel Retention – FY18 to FY23

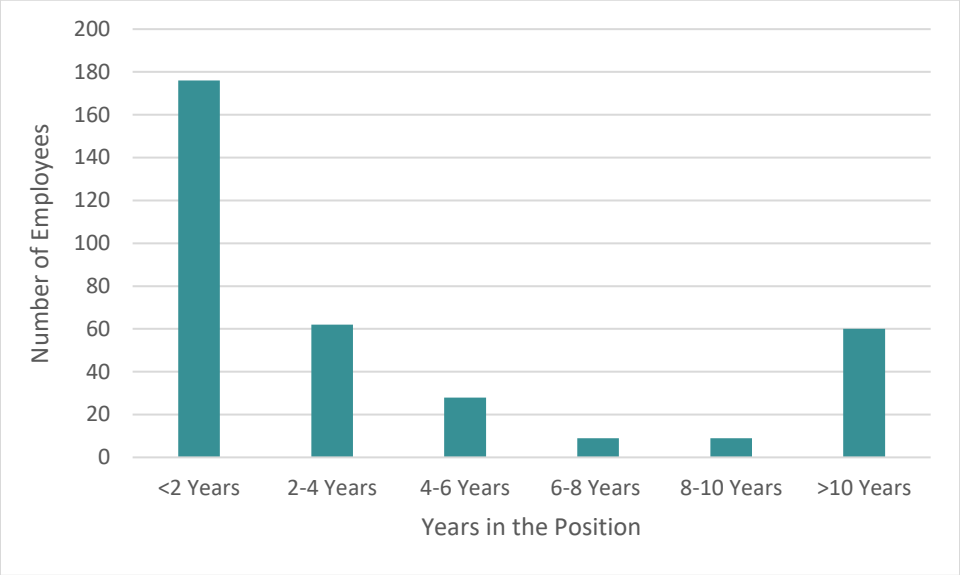
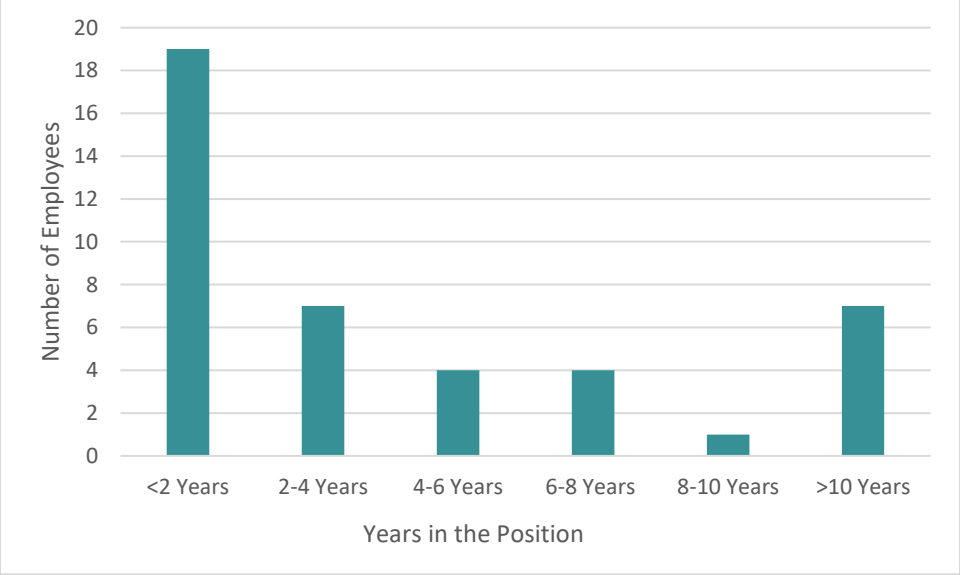


Figure 14 indicates how long a position was held before the individual left the position. Reasons for leaving the position could include promotions, demotions, resignation, retirement, and termination. As shown in Figure 14, a majority of line personnel positions are retained between two and three years. Figure 15: Staff Personnel Retention – FY18 to FY23 shows the retention rate for staff personnel from FY18 to FY23.

Figure 15: Staff Personnel Retention – FY18 to FY23



Staff retention for staff personnel within ACFR is very similar to the line personnel staff retention. It is important to note that Figures 13 and 14 do not include positions that are currently filled. As shown in Figures 13 and 14, a majority of individuals who held these positions and left the position leave within two years of taking the position.

The Finance and Administration Section was not outlined as a scope item within this report. Since the Finance and Administration Section is a key component of the Department, retention data is included here. Figure 16: Finance and Administration Section Employee Retention – FY18 to FY23 shows the staffing retention for personnel within the Finance and Administration Section from FY18 to FY23.

Figure 16: Finance and Administration Section Employee Retention – FY18 to FY23

Succession Planning

Within the Fire Rescue Operations Section, line personnel within the EMS Operations Branch and the Fire Operations Branch are promoted based upon a promotional testing system that is facilitated by the Training Division.

Currently, ACFR does not have formal succession planning processes put into place for personnel above the Lieutenant rank. In lieu of a formal succession plan for upper-level management, the Department encourages and offers to pay for individuals to attend various conferences and symposiums to further their education. The Department also holds meetings related to growth and development. The M&J Team discussed in interviews that a number of upper-level management positions were hired externally. Hiring internal personnel into upper-level management positions allows for an easier transition into the position because the individual already knows people within the Department and understands Department processes and procedures. The lack of formalized succession planning within the Department hinders the current Department personnel from promoting into upper-level management positions by not providing them with position specific information or training to be able to step into the role if it becomes available. Not having formal succession planning also creates the risk that there would be no one able to fill a position if the individual leaves said position unexpectedly.

Disciplinary Process

According to Chapter 7.20 of ACFR's policies, the internal disciplinary process begins with a complaint being given to the District Chief that oversees the complainant. The District Chief will then log the complaint in the daily shift report and station logbook, and contact the complainant directly to gain information about the details of the complaint. If a formal investigation is necessary, crew members that were involved in the incident will also be asked to provide a written synopsis of the events that occurred. Once this information has been compiled, the District Chief submits all gathered information to the Chief and the Deputy Chief. The M&J Team learned through interviews that in the past it was the sole responsibility of the Deputy Chief to administer this disciplinary process. More serious offenses are transferred by the Deputy Chief to either the Assistant Chief of EMS Operations or to the Assistant Chief of Fire Operations for a formal investigation. The Assistant Chief will then request a formal investigation from the Fire Marshal.

The Deputy Chief of Fire Rescue will issue a written reprimand to the employee under investigation that is signed by the Deputy Chief and the District Chief if the Deputy Chief believes the incident is not serious enough for a formal investigation. If the Deputy Chief deems that it is necessary that the complaint receives further investigation, the complaint is handed over to either the Assistant Chief of EMS Operations or the Assistant Chief of Fire Operations, and the Fire Marshal is forwarded the information gathered by the District Chief to perform a formal investigation. Once the Fire Marshal receives an email from the Deputy Chief requesting a formal investigation, the Fire Marshal creates a file, that is accessible by the Chief and Deputy Chief, that contains all gathered information about the complaint and will serve as a working file while the Fire Marshal gathers more information. The next step of the process involves formally notifying the necessary individuals of the investigation. These individuals include the Chief, the Deputy Chief, the employee under investigation, and the Union Executive Board. The Union Executive Board includes, among others, the President, the three Vice Presidents, the Secretary, and the Sergeant at Arms from the union which the complainant is a member of. The formal notice includes the complaint and an attached copy of the employee bill of rights.

Once the formal notice is received by the necessary individuals, the Fire Marshal begins performing interviews of all parties involved in the complaint. Witness interviews are conducted over the phone and the interview of the complainant is done in person. Once the interviews are complete and the Fire Marshal finishes the investigation, the Fire Marshal creates a summary of the investigation. This summary includes the facts of the case, but no disciplinary recommendations are made by the Fire Marshal.

For internal investigations involving financial loss for the County or disciplinary recommendations seeking changes in a staff member's employment status with the County, ACFR notifies relevant Alachua County departments as part of the County's weekly Human Resources Consult meeting. The weekly HR Consult meetings include representatives from the following Alachua County offices:

- County Attorney's Office
- Equal Opportunity Office
- Human Resources Department
- Risk Management Division of the Budget and Fiscal Services Department

ACFR internal investigations discussed in HR Consult meetings include traffic incidents that could result in County liability, drug-related violations, and ACFR-employee traffic citations that could hinder the employee's ability to drive emergency vehicles. Additionally, ACFR internal investigations that result in recommendations of suspension or termination are addressed in the HR Consult meeting, especially if discipline might result in a union grievance or lawsuit. The departments involved in the HR Consult meeting ensure disciplinary actions follow County policies and ordinances.

Disciplinary reprimands are decided and issued by the Deputy Chief and the Assistant Chiefs through written communication to the complainant. If the complainant wishes to have a disciplinary hearing, they are entitled to ask for one. Disciplinary hearing boards consist of a District Chief and an internal group of peers to ensure fairness in the hearing. The officer presiding over the hearing is the particular Assistant Chief that is responsible over the case.

Once a decision is made and all parties are notified, the Senior Staff Assistant takes the physical copies of the information surrounding the case and the discipline decision and scans them to create electronic copies of the information. Each copy is then exported to a Word document before being transferred into Microsoft Access and sent to the Alachua County HR Department. The Senior Staff Assistant creates an electronic file for the information to be placed in that corresponds with the complainant. If a file already exists for the individual, the information is put into that file. The Chief, Deputy Chief, the Assistant Chiefs, and the District Chiefs have read-only access to the files and information within the files. The process for putting the files into Access is currently duplicative and inefficient for the Senior Staff Assistant to complete. In addition, the discipline Access database is very large and does not have the ability to query or export files. Therefore, if the one of the individuals above who has access to the files wants to refer back to past cases to find precedent for a current case, they currently have to go through each individual's file. This is an inefficient way to refer back to past cases.

Alachua County Profile and Demographics

Alachua County is a county in the north-central portion of the State of Florida. The estimated 2023 population for the County is 287,807. The county seat is Gainesville, the home of the University of Florida. Alachua County is part of the Gainesville Metropolitan Statistical Area, which includes Alachua, Levy and Gilchrist Counties. According to the U.S. Census Bureau, the County has a total area of 969 square miles, of which 875 square miles are land and 94 square miles are water.

The physiography of Alachua County can be divided into three general areas:

1. A plateau-like region located north of Gainesville that includes most of northeastern Alachua County. This upland plateau is nearly level, sloping gently to the west, north, and east. Elevations range from approximately 150 to 200 feet above sea level.
2. A western plains region of low relief that includes elevation ranges between 50 and 80 feet above sea level.
3. A south-central and southeastern transitional area of flat-bottom lakes, prairies, disappearing streams, and erosional remnants of the plateau. Many of the lakes in this area are at or below sea level.

Alachua County is comprised of the following municipalities:

- City of Alachua
- City of Archer
- City of Gainesville
- City of Hawthorne
- City of High Springs
- Town of LaCrosse
- Town of Micanopy
- City of Newberry
- City of Waldo

The primary urban area within Alachua County is the City of Gainesville, which accounts for approximately half of the County's population and 9% of the County's total land area. The land use patterns within Gainesville range from higher density and intensity urban land uses within and around its core in the downtown and University of Florida area to a more suburban land use pattern at the periphery of the city. The unincorporated areas that are surrounding and adjacent to the city limits of Gainesville are designated as the "Urban Cluster." The land uses within the unincorporated Urban Cluster are primarily a continuation of the urban or suburban land use patterns that are found within the city limits of Gainesville. The unincorporated Urban Cluster area accounts for approximately 40% of the County's population and 6% of the County's total land area.

The areas of the County located outside the urban center of the City of Gainesville and unincorporated Urban Cluster are primarily a combination of eight smaller rural municipalities, rural residential areas, agricultural or silviculture lands, and large tracts of preservation or conservation lands. The eight smaller rural municipalities within Alachua County combine to account for about 10% of the County's population and 19% of the County's total land area.

Alachua County is known for its diverse culture, local music, and artisans. Much of the County's economy revolves around the university, which has an enrollment of over 60,000 students. The County's estimated 2023 population is 287,807 with a growth rate of 1.09% in the past year according to the most recent United States census data. Alachua County is the 24th most populous county in Florida. The 2010 population was 247,336 and has seen a growth of 16.36% since that time. As of 2023, Alachua County's homeownership rate is estimated to be 54.6%. The average family size is 3.33 and the average household size is 2.48.

Per the U.S. Census Bureau, the racial and ethnic makeup of the County is 59.3% White (non-Hispanic or Latino), 19.3% Black or African American (non-Hispanic or Latino), 11.0% Hispanic or Latino (of any race), 5.9% Asian (non-Hispanic or Latino), 3.5% two or more races (non-Hispanic or Latino), 0.9% some other race (non-Hispanic or Latino), and <0.0% Native Hawaiian and Other Pacific Islander (non-Hispanic or Latino).

The County is the home to 219,921 adults, 37,968 of whom are seniors. The age dependency ratio is 47.3 with 20.9 as the old age dependency and 26.5 as the child dependency ratio. Per the U.S. Census Bureau, 48.4% of the County's residents are male and 51.6% of the County's residents are female. The overall poverty rate for Alachua County is 23.14%. These demographics represent the external customers that ACFR responds to.

Diversity and Recruitment

Public Education and Community Outreach

Within the Professional Standards Branch, the Captain of Recruitment and Public Education reports directly to the Assistant Chief of Professional Standards and is responsible for developing processes and strategies to recruit personnel to work at ACFR, coordinating and delivering public education programs that are specific to the Department, and promoting holistic diversity with recruitment and hiring. The Captain of Recruitment and Public Education position has been recently filled and does not have any direct reports.

The public education goal at the Department is defined as the following: "to empower our community with the tools and knowledge they need to know in case of a fire or EMS related emergency." ACFR offers classes and free programs to the community that serve the goal of providing knowledge and tools in the case of a fire or medical emergency. Classes include subjects such as Advanced Cardiovascular Life Support ("ACLS") training and Stop the Bleed classes, which is a class that teaches individuals how to stop or slow bleeding in the case of a medical emergency. Stop the Bleed classes provide instruction on how to use the Stop the Bleed kits. The Stop the Bleed kits include a tourniquet, QuikClot, gloves, elastic and modular bandages, gauze, sponges, scissors, and an instructional guide. The ACLS training class is offered and available to healthcare providers within the County who wish to receive first-time ACLS certification or be recertified.

ACFR also provides free programs for any County agency and community organization, including cardiopulmonary resuscitation ("CPR") demonstrations, fire extinguisher classes, and scheduled ACFR station tours. When requested, ACFR will give presentations to businesses, local schools, neighborhood meetings, and retirement communities throughout the County. ACFR's community presentations include information regarding fire prevention and various ways to provide support in the event of a medical emergency. The free programs offered are a part of the Department's community outreach efforts. Community outreach events also include recruitment opportunities such as attending career days, job fairs, and recruitment visits. Programs that the Department hosts include the Touch-A-Truck Event and the Trunk-Or-Treat Event. The Department also participates in various community holiday events throughout the year. The provided list of events that the Department has attended does not provide a complete list of names of local schools visited for community outreach and recruitment purposes, but during interviews, the M&J Team learned that COVID-19 halted the ability to give presentations in schools and various community organizations, and that currently and in the past a lot of community outreach programs are targeted at the fire schools and various colleges/universities within and around Alachua County including Tallahassee Community College, Santa Fe College, Florida State Fire College, Daytona State College, First Coast Technical College, Gateway Community College, and Valencia Community College. The lack of a list including information of school visits and planned school visits has the potential to cause internal confusion when strategizing school visits. In 2021, the Department slowly restarted giving presentations and attending career days at various schools around the County.

According to the provided Separation Report for March of 2018 to March of 2023, more than 50 of the separated employees between 2018 to 2023 left the Department to work at another fire rescue department in a different county. The data did not indicate whether the employee had any ties, familial or otherwise, to the county. This has negatively affected the retention rate of personnel within the Department and increased costs for ACFR. In addition to job posting, recruitment, and equipment costs, the Department spends several thousand dollars to train single-certificate and non-certified recruits. Based upon training data provided by ACFR, a trainee with only firefighting certification costs the Department an average of $2,017.17 to undergo EMT certification (including course registration and materials). A trainee with only EMS certification (EMT or Paramedic) costs the Department an average of $3,288.78 to attend Fire School and receive a Firefighter certification (including course registration and materials). A non-certified recruit costs the Department an average of $5,598.76 to receive both Firefighter and EMT certifications.

In response to separation trends, the Department has set a goal of focusing public education and recruitment efforts on local high schools within the County. The Department seeks to provide public education and community outreach to local students who have ties to the community and to recruit from local candidates as a means of improving retention.

Recruitment

In 2015, ACFR created initiatives aimed at increasing diversity within the applicant pool and ultimately, the Department. Initiatives included raising community education and awareness about opportunities within the Department, beginning to hire individuals with single certification, and expanding the diversity of the applicant pool. There were no specific Department or County goals related to diverse recruiting provided to evaluate these efforts, but various programs were created to target the diverse recruitment initiative. Programs and initiatives included the Cadet Youth Program ("CYP"), the Recruitment and Mentoring Program ("RAMP"), and the change in policy allowing for individuals with single certification to be hired into the Department while they receive their second certification.

The CYP is one of the ways ACFR has targeted recruitment in the local community. The CYP allows individuals between the ages of 14 and 20 to gain knowledge and training that they will be able to use in their potential career as a firefighter. Participants in the program have the opportunity to participate in firefighter specific activities such as ride-alongs to emergency calls and in-station training sessions. Participant progression is monitored on a monthly basis to ensure that participants are succeeding and meeting the minimum internal and external program requirements to continue in the program. The requirements to stay in the program include the following:

- Maintain above a 2.5 school grade point average
- Consistently attend weekly meetings (at least two per month)
- Consistently participate in physical fitness activities
- Complete a three-month probationary period and medical training consisting of medical classes (CPR/First Aid), blood borne pathogens and HIPAA (must complete to participate in ride-along)
- Attend at least one community service event per month if events are available
- Attend at least one ride-along per month (after completion of three-month probationary period)
- Maintain personal hygiene, clean and presentable uniform, and respectful behavior

The overall goal for this program is to equip local teens and young adults with skills that will assist them in their firefighter career. The CYP program is also a great opportunity for the Department to recruit individuals to work at the Department who are from the local area and have ties to the community.

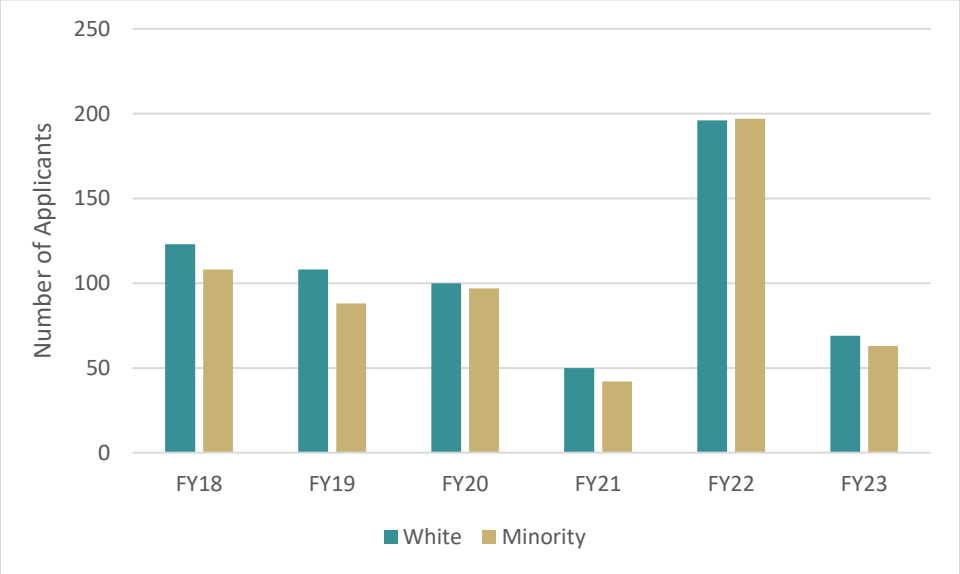
RAMP is another way that the Department has targeted recruitment in the local community. RAMP consists of a mentoring team from within the Department whose goal is to provide prospective applicants with relevant knowledge about the career and answer any questions that prospective candidates may have. The RAMP Mentoring Team is a fully volunteer team and can be reached by email from the ACFR website. RAMP also works to identify ways in which the Department can improve recruitment issues in relation to retention and diverse recruitment. The "Holistic Diversity & Inclusion Initiatives" presentation outlines initiatives in regards to diversity within the department, and progress trackers for these initiatives.

The following information comes from the "Holistic Diversity & Inclusion Initiatives" presentation and details applicant demographics prior to FY15 and after the implementation of RAMP in FY16:

- Pre-RAMP Applicant Demographics (Prior to FY15)
  - 75-80% White
  - 20-25% Minority
- Post-RAMP Applicant Demographics (After FY16)
  - 55-60% White
  - 40-45% Minority

Per the information above, RAMP improved the diversity of applicants applying to work at ACFR. This trend has continued through 2022 as shown in Figure 17: Firefighter Applicant Data

Figure 17: Firefighter Applicant Data



At the beginning of the RAMP program, the Department began hiring individuals who only have single certifications. Having a single certification means that the individual either only has Florida State EMT/Paramedic Certification or a Florida State Firefighter Certification. In the past, ACFR would only hire individuals to the Department if the applicant held both the EMT/Paramedic and Firefighter Certifications. ACFR now also hires individuals who have no certifications and allows applicants to complete their certifications while working at the Department. Single-certificate and non-certified applicants are hired as level 0 (trainee) Firefighters.

Advancement

ACFR currently focuses their diversity efforts towards increasing minority representation in their applicant pool and hiring more diverse employee classes. ACFR has not yet implemented any programs that are specifically intended to develop and advance current employees that are members of underrepresented groups for promotional opportunities. Additionally, ACFR does not monitor the relationship between employee demographics and the promotion process. ACFR does not track the demographics of employees that apply for promotion, that qualify for promotion, and that are promoted. ACFR does not evaluate the association between employee demographics and promotion test results or promotion list placement.

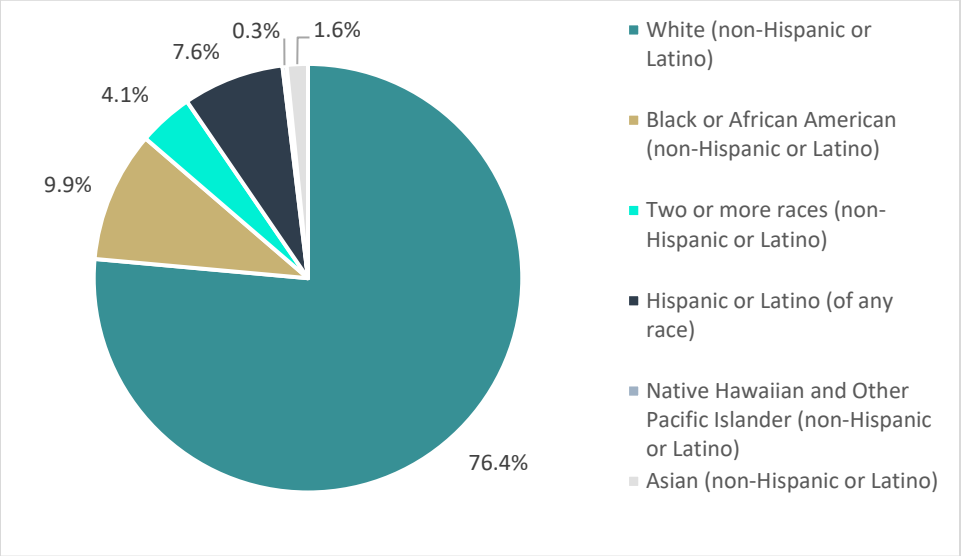
ACFR awards promotions to line personnel based on a strict testing and qualification process. The Department periodically accepts applications for promotion. In order to apply for a promotion, employees must complete position-specific prerequisites, which typically include certifications and service time with ACFR. Employees that apply for promotion complete tests to determine if they qualify for promotion. Qualifying applicants are placed on a promotion list, ordered from highest scoring applicant to lowest scoring qualifying applicant. When a vacancy opens in the relevant position, the employee on the top of the promotion list is promoted to fill the vacancy.

Benchmarks

The data utilized by the M&J Team for benchmarking ACFR's race, ethnicity, and gender breakdowns in Figure 18, Figure 20, Figure 22, Figure 23, Figure 24, and Figure 25 was provided by ACFR and current as of April 2023. The data utilized for determining the race, ethnicity, and gender breakdowns for Alachua County in Figure 19 and Figure 21 was sourced from the 2021 American Community Survey.

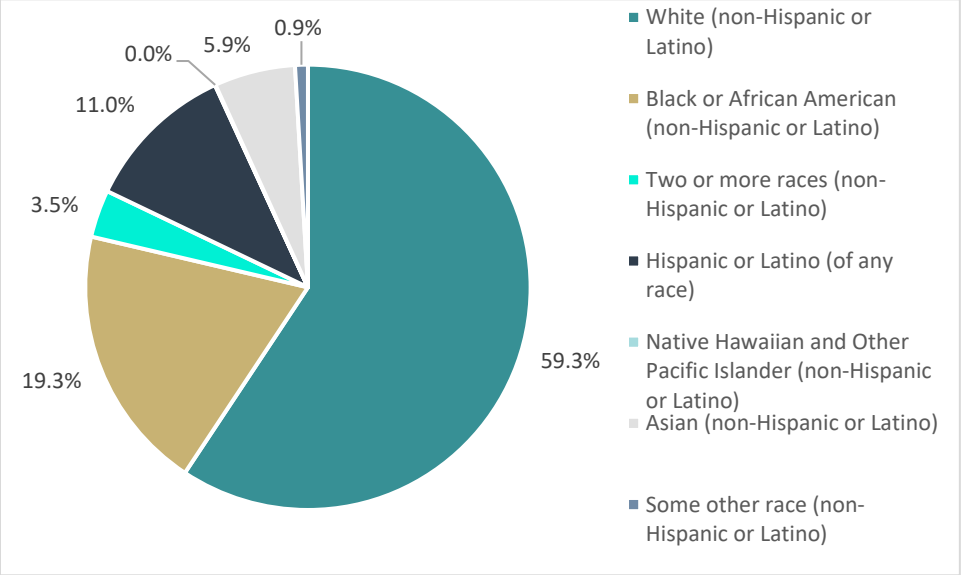
The racial makeup of ACFR does not fully reflect the makeup of the County that the Department serves. The ethnic and racial makeup of ACFR's current employees is shown in Figure 18: ACFR Race and Ethnicity Breakdown.

Figure 18: ACFR Race and Ethnicity Breakdown



As shown in Figure 19: Alachua County – Race and Ethnicity Demographics, the County's makeup is 59.3% White (non-Hispanic or Latino), 19.3 % Black or African American (non-Hispanic or Latino), 11.0% Hispanic or Latino (of any race), 5.9% Asian (non-Hispanic or Latino), 3.5% two or more races (non-Hispanic or Latino), 0.9% some other race (non-Hispanic or Latino), and <0.0% Native Hawaiian and Other Pacific Islander (non-Hispanic or Latino).

Figure 19: Alachua County – Race and Ethnicity Demographics



The gender makeup of ACFR does not fully reflect the makeup of the County that the Department serves. Figure 20: ACFR Gender Breakdown shows the gender composition of ACFR's current employees.

Figure 20: ACFR Gender Breakdown

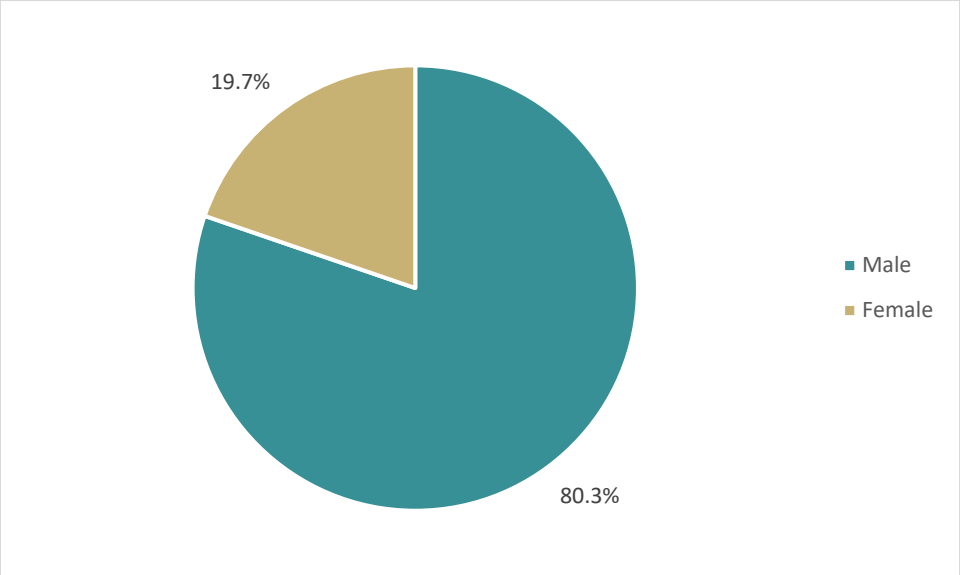
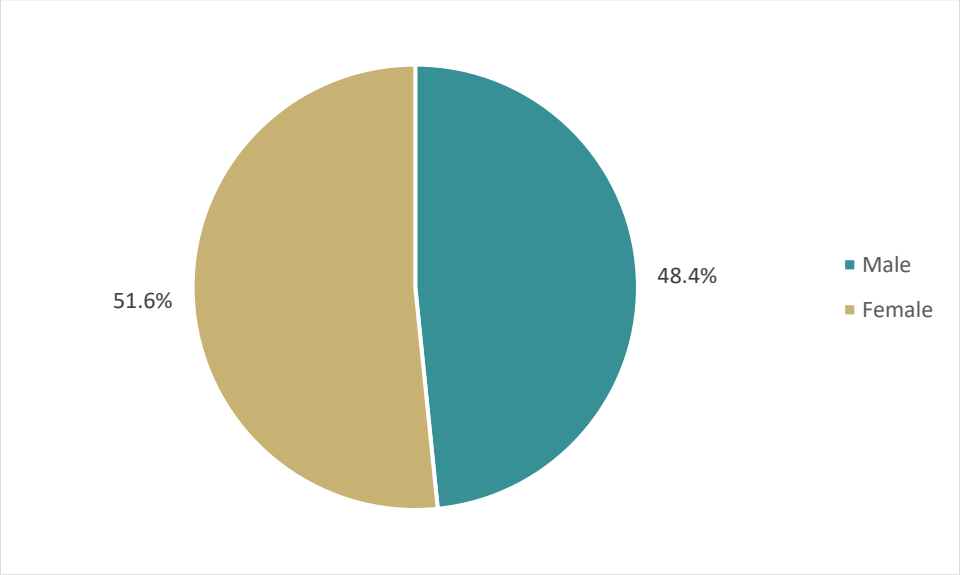


Figure 21: Alachua County – Gender Demographics shows the gender demographics of Alachua County itself. Per the U.S. Census Bureau, 48.4% of the County's population is male and 51.6% of the County's population is female.

Figure 21: Alachua County – Gender Demographics



The fire service has historically been and continues to be a predominantly white, male organization, with the national data showing 95% of firefighters are male and 83% identify as white. A myriad of structural barriers has contributed to the stark contrast between the demographics of the fire service and the greater population. The accessibility of the hiring process is hindered by an overreliance on word-of-mouth advertising, the intergenerational nature of the fire service, and the lack of diversity in departments that makes it hard for people from underrepresented groups to see themselves in the role or to feel welcome.

The process of getting hired creates several obstacles, including the potentially prohibitive costs of taking the required tests and applying to departments, the written and physical tests themselves which have proved to have disparate results for women and people of color, the number of requirements needed to get hired, and implicit bias in the selection process. The culture of the fire service can be unsupportive, isolating, or even hostile for individuals who do not "fit in" and there is a long history of harassment and discrimination toward individuals from underrepresented groups.

While fire rescue departments struggle with these issues, the need for diversity in the fire service is clear. Increasing diversity leads to a more effective and responsive workforce that is better able to serve their community due to greater understanding, respect, and trust, and begins to address the history of exclusion and discrimination by creating access to opportunities and power.

ACFR does not fully reflect the demographics of the communities that it serves, but the Department's hiring classes appear to becoming more representative over time, particularly within the last five to 10 years. Figure 22: Race and Ethnicity of Current ACFR Employees by Employee Hire Date shows the race and ethnicity of ACFR's current employees, grouped by employee hire date. Figure 22 also includes Alachua County's race and ethnicity demographics, for ease of comparison. Figure 22 shows that ACFR employees that have been hired more recently are more racially and ethnically diverse than ACFR employees that were hired less recently. The group of ACFR employees that were hired within the last five years are not far off from being representative of the County's racial and ethnic makeup.

Figure 22: Race and Ethnicity of Current ACFR Employees by Employee Hire Date

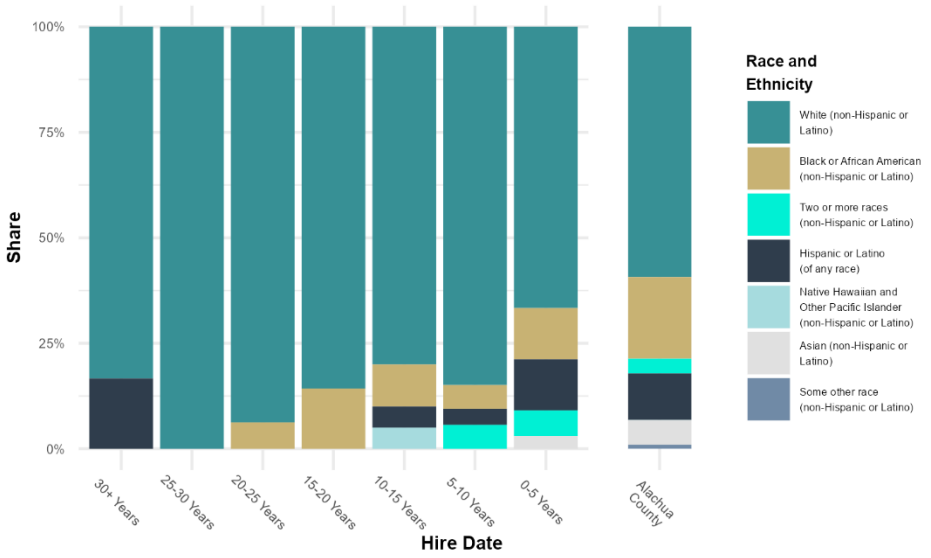
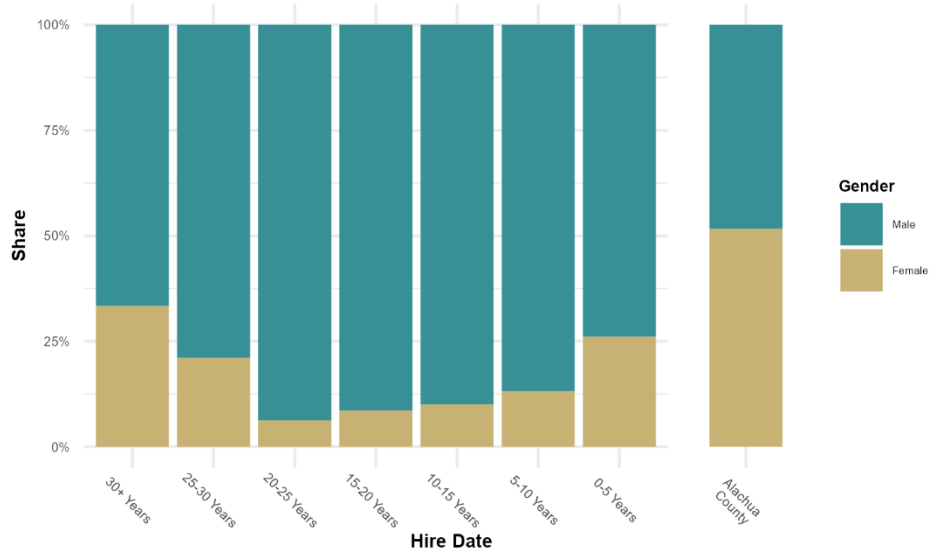


Figure 23: Gender of ACFR Current Employees by Employee Hire Date shows the gender of ACFR's current employees, grouped by employee hire date. Figure 23 also includes Alachua County's gender demographics, for ease of comparison. Figure 23 shows that ACFR's gender diversity is greatest among the Department's longest tenured staff, but that the Department's more recent hires tend to be more gender diverse than the Department's mid-tenured staff. While ACFR's recent hires are not representative of the gender makeup of the County, the Department is making progress in closing that gap.

Figure 23: Gender of ACFR Current Employees by Employee Hire Date



Leadership and Planning

Commitment from top leadership within fire rescue departments should be one of the most critical components in changing the culture of an organization and attracting and supporting individuals from underrepresented groups. Having diverse representation at the leadership level and allowing leaders to be authentic selves within the workplace, promotes equity as decisions will more likely consider the needs of all groups.

Figure 24: ACFR Leadership – Current Race and Ethnicity Makeup and Figure 25: ACFR Leadership – Current Gender Makeup represent the current race, ethnicity, and gender demographics of leadership within the Department. Current ACFR leadership consists of a predominantly white male demographic. The diversity of command staff and leadership within ACFR is not comparable to the County. The following active ACFR positions were included in the analyses for Figure 24 and Figure 25:

- Chief of Fire Rescue
- Deputy Chief of Fire Rescue
- Director of Emergency Management
- Assistant Director of Emergency Management
- Medical Billings Manager
- Assistant Director of Administration and Support Services
- Assistant Chief (3)
- Program Manager
- Fire Marshal
- District Chief (7)

Figure 24: ACFR Leadership – Current Race and Ethnicity Makeup

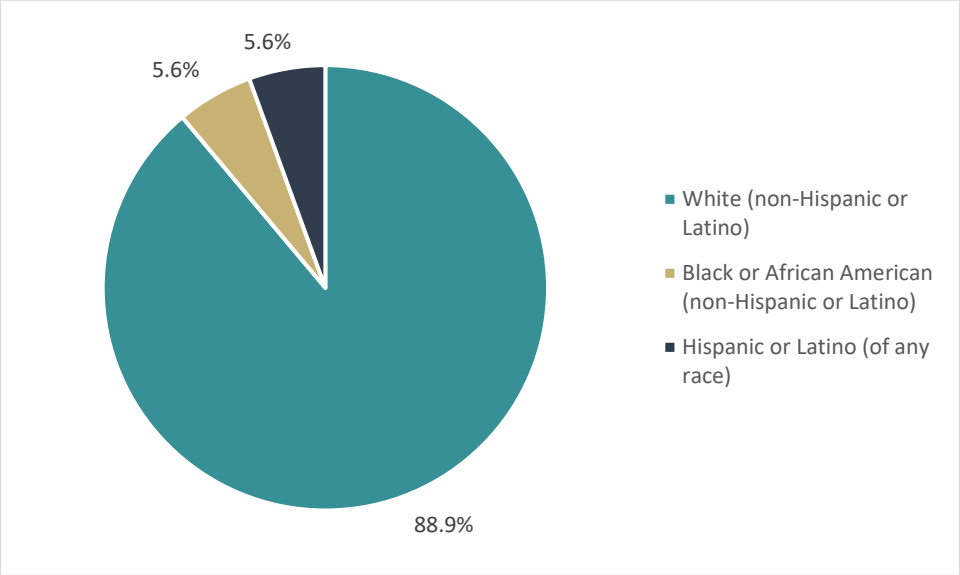
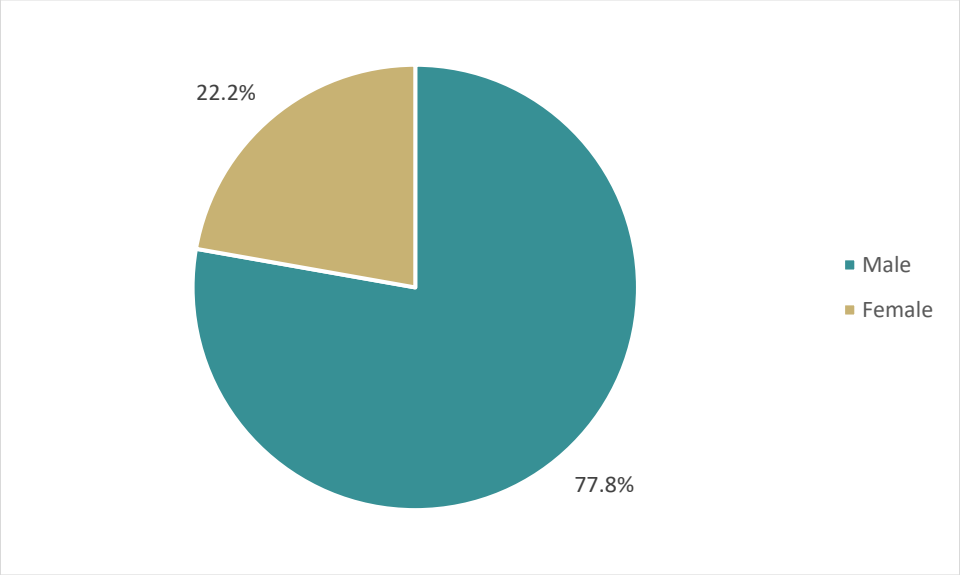


Figure 25: ACFR Leadership – Current Gender Makeup



Leaders can demonstrate their commitment by identifying and addressing their own internal biases, communicating their values through both internal and external messaging, and dedicating the resources needed to make these changes. Fire rescue departments should enlist a diverse group of individuals including employees of different ranks who have an interest in making the department more equitable to create a plan.

A department's mission, vision, values, and strategic plan should also reflect their commitment and include specific diversity, equity, and inclusion ("DEI") goals that are measured over time. Leaders will need to hold themselves and their employees accountable for these goals. Finally, department leadership should be upfront with their staff that this change will be difficult and uncomfortable, but they can confront the challenges and remain steadfast, their efforts will lead to a more equitable workplace.

Outreach and Recruiting

It is important that fire rescue departments design recruiting plans that are developed by individuals with a strong interest in diversity. Studies in the private sector suggest the most effective recruiting efforts use a variety of methods. Advertising should specifically target individuals from underrepresented groups both in message and in placement (possibly translated into their language). The universality of social media, especially for younger generations, makes it an effective tool for reaching multiple communities and communicating the department's values. The ACFR Social Media Committee is currently responsible for all ACFR related posts on the social media accounts associated with the Department. The Social Media Committee is led by the Captain of Recruitment and Public Education.

Job descriptions should not only have Equal Employment Opportunity Commission ("EEOC") language, but a message about the value of inclusion within the department and should have clear salary and benefit information as well as job requirements. By incorporating all aspects of the job and the traits needed in the job description, more individuals from underrepresented groups may see themselves in the role. ACFR currently includes a summary of responsibilities, clear salary packages, and job requirements for each position within the Department.

Fire rescue departments should be visible in the community by attending community events and developing trusted, mutually beneficial relationships with community groups. Establishing partnerships with elementary schools, middle schools, high schools, colleges/universities, and career exploration programs can help to educate children and young adults about careers in the fire service and develop an early interest. Fire rescue departments should enlist personnel to recruit in their respective communities, especially in the communities that are poorly represented in the fire service or the communities that have the highest poverty levels, to help increase the visibility of the fire service and attract community members who may not have otherwise considered joining. Recruitment may need to extend to developing programs that assist underrepresented community members with educational costs, training for entrance exams, and other items.

During the time of this audit, ACFR had just promoted a new Captain of Recruitment and Public Education. Interviews with the Captain of Recruitment and Public Education showed that there are plans to recruit in high schools, especially with athletes.

Hiring

When creating a hiring process, it is essential that all efforts are made to ensure a fair, unbiased, objective process. Fire rescue departments should review their physical tests to ensure that they only include job-related skills and look at how the test is administered and weighted. Written tests are known to have an adverse impact on equity in departments and fire leaders should weigh the value of the written test to the hiring process. Written tests should be written at the educational level necessary and should focus on the basic skills for the job, as well as personal characteristics and values to determine who the applicant is as a person. Contacting candidates during the recruitment process can be very helpful.

For the oral boards, fire rescue departments should have a diverse group of interviewers who have been trained in implicit bias. Questions that ask more about the candidate's character and values, rather than knowing the specifics of the job, can be beneficial in advancing members of underrepresented groups.

Once a candidate makes it through the hiring process, they typically go through several mentally and physically challenging weeks of the fire academy. It is very important that each recruit is held to the same standard and those standards are necessary to perform the job. Fire rescue departments may need to adapt their training practices as they recruit a more diverse workforce who may be coming in with different skillsets. Fire rescue departments should take an equitable approach to the academy, ensuring each person is getting the help they need to meet the standards and be successful.

Retention and Inclusion

Solely focusing on recruitment to make changes to the diversity of a fire rescue department is short-sighted and ineffective. If a fire rescue department does not do the difficult work of changing the culture of their department to be supportive and inclusive of all individuals, they will not see real change.

Promoting the physical and mental health of all employees within the department can help reduce the stress and trauma of a career in fire and emergency services. This includes inclusive health practices, such as pregnancy and parental leave and addressing mental health needs through comprehensive programs and resources and reducing the stigma around asking for help.

Anti-harassment and anti-discrimination policies, procedures, and training are imperative in creating a safe workplace. Policies should define harassment and harassing behavior and make it clear that such behavior will not be tolerated. Fire rescue departments should provide a clear and confidential step-by-step process that allows multiple avenues for reporting. When incidents are reported, they need to be taken seriously and proactively addressed and the department must ensure that the person reporting does not face retaliation. The EEOC recommends holding regular training courses that are tailored to the specific workplace and use realistic examples. Training should outline the department's policies and procedures but also focus on prevention through creating a respectful culture and encouraging employees to step in when they observe harassing behavior. The County provides annual anti-harassment and anti-discrimination training for staff, including ACFR personnel, through Percipio software.

Fire rescue departments must be proactive in reducing equalities in the promotional process and be open to different ways of thinking and leadership styles. Fire rescue departments should mitigate bias in who is selected for opportunities that could help advance an employee's career, such as training, station assignments, and specialty teams. Mentoring programs can contribute to a more inclusive workplace and improve advancement opportunities for individuals from underrepresented groups. Individual development plans provide a roadmap for all firefighters to achieve their long-term goals and employee's performance reviews are an opportunity for individuals to discuss these goals, make plans for professional development, and receive valuable feedback. As discussed above, ACFR has the RAMP program. The RAMP program allows prospective and current ACFR applicants the opportunity to ask questions about the job and gain relevant career knowledge. Like entry-level hiring practices, the promotional process should be carefully reviewed to eliminate bias.

Fire rescue departments can advance inclusion in the workplace by having a clear code of conduct and workplace norms that promote respect for all employees. Fire rescue departments should ensure that they are using inclusive language, have properly fitting equipment for all firefighters, and individual bathrooms and separate sleeping facilities in their stations. Affinity groups, which provide a space for employees with shared backgrounds to build relationships, can reduce feelings of isolation and employee engagement surveys can give employees a voice and help leadership understand and address issues within the workplace. Finally, an ongoing DEI training program and conflict resolution training can build the understanding and skills to strengthen employee relations.

Previously, ACFR employed a Captain of Diversity and Recruitment who was responsible for diversity and recruitment strategies for the Department. This individual has been promoted to Assistant Chief of Professional Standards. The duties of the Diversity and Recruitment Captain position were moved to this Assistant Chief role. Although the current Captain of Recruitment and Public Education is responsible for recruitment efforts, it is recommended that a workload analysis be completed for the Assistant Chief of Professional Standards position to ensure that time can still be devoted to the role of Diversity Officer.

There are currently no benchmarks for DEI in the fire service. DEI is just now taking off in the private sector and there are now consulting firms that focus only on DEI.

Health and Wellness Programs

ACFR offers programs to its employees that aim to support staff personnel and line personnel both mentally and physically.

Mental Health and Wellness Programs

NFPA Standard 1500 (Standard on Fire Department Occupational Safety, Health, and Wellness Program) states that "The fire department shall provide access to a behavioral health program for its members." The following programs within ACFR provide mental health support to ACFR personnel:

- Peer Support Program
- Support Canine Program
- County Health and Wellness Programs

Peer Support Program

The Peer Support Program is a program within ACFR that provides support to staff that have experienced a critical incident. A critical incident is defined as a stressful event that challenges one's ability to cope and adapt. Incidents of this nature often include situations that threaten to induce trauma upon the personnel involved. Incident Commanders present at critical incidents are responsible for immediately reporting any critical event to the Department Chaplain or command staff in order for personnel involved to receive the proper care as outlined in ACFR Policy Chapter 18.2.

ACFR Policy Chapter 18.2 states that when a unit(s) is exposed to a critical incident that requires support from the peer support program, the Incident Commander or Company Officer will notify the Department Chaplain and the on-duty District Chief(s) of the incident. The involved employee also has the ability to directly notify the Peer Support Team of the incident. The Incident Commander then will remove the unit(s) from service and advise the crew to return to their station to wait for the arrival of the Department Chaplain or a designated Peer Support Group member. The purpose of this initial meeting is to gain information from the unit about the critical incident and begin discussions regarding the details of the incident as well as provide any emotional support regarding the critical incident. The Peer Support Program member or the Department Chaplain can decide based on the need of the unit if a "more intense" peer support meeting needs to be organized for the unit. The peer support meeting must be conducted within 24 to 48 hours of the initial critical incident and includes a "confidential non-evaluative discussion" of the critical incident and the potential stress-related symptoms that personnel might develop due to the critical incident. A follow-up debriefing is scheduled and conducted "weeks or months" after the incident with the purpose of discussing the prolonged stress symptoms. If a crew member feels that they need a one-on-one counseling session, the Department will refer the individual to a certified counselor, or the individual can receive help from a counselor of their choosing. As outlined in NFPA 1500, "Behavioral health programs that include a peer support component shall ensure that peers are provided with the knowledge and skills to provide support, and educate members about behavioral health." ACFR fulfills this training requirement for all involved in the Peer Support Program by partnering with the University of Florida, where members of the Peer Support Program take training classes designed to equip them with the knowledge and skills required to appropriately assist in post-critical incident scenarios.

Support Canine Program

As a part of the effort to provide more resources for personnel within ACFR to receive support in regard to mental health, the Department has added certified station and therapy animals to the stations within ACFR. Currently, the Department has one certified dog that has been certified through K9s for Warriors, a non-profit charitable organization that serves to provide service animals to individuals that have gone through critical incidents.

The current plan of the Department is to use the current support canine that has been provided by K9s for Warriors and pilot the support program in a limited number of stations. If the pilot program is successful, the Department will research expanding the Support Canine Program into more stations.

County Provided Health and Wellness Programs

Alachua County provides numerous health and wellness programs to County employees which includes ACFR personnel. The following programs provide Alachua County employees with opportunities to focus on their own mental and physical health. These programs are free to County employees.

- Peer Fit
- Headspace
- Employee Assistance Program
- Annual Health Fair

Peer Fit is an external fitness and wellness online system. Alachua County employees have access to credits for the Peer Fit platform which includes the streamed and local fitness classes provided such as boxing, dance, cycling, strength training, etc. County employees can access Peer Fit studios locally to attend classes.

Headspace is an app that provides programs and sessions that assist in sleep management and meditation. Headspace also offers programs that assist in stress management and mindfulness.

Employees who are registered for the group health plan coverage have access to the Employee Assistance Program ("EAP"). The EAP is a confidential counseling service offered through University of Florida ("UF") Health which can be used to deal with any problem an employee might be facing including stress, grief, loss, depression, etc. The plan allows for four free visits per plan year.

Physical Health and Wellness Programs

NFPA 1582 (Standard on Comprehensive Occupational Medical Program for Fire Departments) states that "the fire department shall establish and maintain a confidential occupational and medical evaluation program for its members." To fulfill this NFPA requirement, ACFR has contracted an extension of Life Extension Clinics, Inc., called Life Scan Wellness Center, to provide evaluation services for all personnel within the Department.

Annual Life Scan

The current contract between ACFR and Life Scan Wellness Center outlines, among other things, the fees associated with the partnership and the scope of services that Life Scan Wellness Center will provide to ACFR.

The Life Scan Wellness Center offers a wide scope of services to ACFR and includes the components that NFPA 1582 requires to be included as part of a firefighter's annual health evaluation. The Life Scan Wellness Center services are an example of a leading practice that not all fire rescue departments offer to employees. The following list includes the overarching types of services provided and the testing done for ACFR personnel on an annual basis:

- Cardiac Assessment
- Cancer and Disease Assessment
- Pulmonary Function Assessment
- Urinalysis

- Diabetes Glucose Test and A1C Test
- Visual Acuity Test
- Hearing Exam
- Mental Health Assessment and Recommendations
- Fitness Testing and Recommendations

The Life Scan Wellness Center also offers mobile medical services. The mobile medical service allows the Life Scan Wellness Center to come to ACFR to provide a range of services. The accessibility that is provided with the mobile medical service allows for annual exams to be taken on a flexible schedule that conforms to the schedule of the Department. The Life Scan Wellness Center service requires very little of ACFR. The only service level agreements on the part of ACFR include scheduling the exams when necessary, ensuring personnel arrive to the scheduled exams on time, and providing the necessary space to conduct the mobile medical exams. Results of all Life Scan Wellness Center Exams are only received by the employee participating in the exams, not by the Department or Alachua County.

Departmental Management and Administration

This section covers both the responsibilities of the Finance and Administration Section of ACFR, as well as provides high-level review and departmental management and administration functions, such as management tools, strategic planning, and the use of policies and procedures.

Management Tools

The Department has a number of management tools that can assist in performing key departmental functions.

Computer-Aided Dispatch Incident Records

Computer-aided dispatch ("CAD") incident records are essential for fire departments, as they streamline resource allocation by providing real-time information on incident details and locations, minimizing response times. These records offer a comprehensive overview of emergencies, aiding responders in understanding the situation they are entering. The historical data stored in CAD systems enables analysis for strategic planning, budget requests, training, and continuous improvement. The M&J Team reviewed the Department's CAD incident records and concluded that the CAD system is operating well with a minor exception that some incidents showed incorrect clear and enroute times. There are many different types of software available to assist with both tracking response data and quality assurance ("QA") of the data. ACFR does not currently utilize software to assist in data tracking and QA review.

Local Geographic Information Data

The Department maintains its own GIS Coordinator. However, field work revealed that not all GIS layers and files are managed within the Department. For example, the GIS Analyst for the Sheriff's Office maintains the layers documenting the hydrants and fire stations.

monday.com

The Department also utilizes monday.com, a cloud-based project management platform, for a number of functions. monday.com currently serves as the virtual Emergency Operations Center ("EOC"), and is used for Healthcare Facility plan review tracking, and by the Finance and Administration Section for certain grants management functions. Additionally, the GIS team within the E911 Section uses monday.com as one of their tools for tracking the status of addressing requests. There was not a consistent evaluation of the platform or its potential uses within the Department, so adoption and utilization has been inconsistent throughout the Department.

Administrative Functions

The Finance and Administration Section is composed of a small staff primarily responsible for the functions described in this section. In addition to staff within the Finance and Administration Section, key administrative functions are performed, either in part or in whole, by the Senior Staff Assistant who reports to the Chief of Fire Rescue, or other staff within the Department who have responsibility for administrative functions. This section represents the primary administrative functions throughout the Department, and not just those performed within the Finance and Administration Section.

- Human Resources and Payroll Support
- Agenda Item Submission
- Accounts Payable
- Contract Management
- State and Federal Reporting Requirements

In addition to the following functions, staff in the Department take on a number of other responsibilities for the Department, including booking travel, entering performance data into AchieveIT – (the County's reporting system for performance measures), maintaining records related to disciplinary action, reviewing and coordinating departmental responses to subpoenas, running data and preparing reports for payments owed to municipalities under inter-local agreements, and coordinating other departmental deadlines and paperwork, such as the biannual ALS certification with the State of Florida and the Certificate of Public Convenience and Necessity that the County must hold in combination with the ALS certification.

Human Resources and Payroll Support

The Finance and Administration Section works with the County's HR Department for hiring of all Department staff. The County uses NeoGov for HR recruitment and hiring process management. All new hires require Employee Action Forms ("EAF"), which must go through multiple levels of approval (workflow through the Department, to HR, to the County's Equal Opportunity Office, through potentially three approvals in the County's Office of Management and Budget within Budget and Fiscal Services) before a candidate can be drug tested and have a background check performed.

The Finance and Administration Section also serves as a liaison with County HR to ensure that ACFR employee time is appropriately captured for payroll purposes and employee payroll codes are and pay rates are calculated in compliance with the applicable CBA. HR liaison responsibilities also include quarterly meetings with HR to ensure the Department is up to date on County HR-related policy changes or additions.

Fire Operations staff are responsible for entering their own time in Telestaff, which is then reviewed by the District Chief they report to in order to ensure accuracy and completeness.

Finance and Administration staff are responsible for reviewing the information for general completeness and ensuring that data is accurately and timely exported from Telestaff into the Sequel program that allows for import into New World. Once the information is exported from Telestaff into the Sequel program, it must be manually uploaded into New World, the County's enterprise resource planning ("ERP") system, so that Finance and Accounting can perform payroll processing functions. The Finance and Administration staff try to review all entries each pay period for common issues or discrepancies, particularly around premiums for overtime, shift codes, or changes in status during a pay period. Given the number of employees within ACFR, this may not always be achieved, so the Department has developed secondary review procedures during other times they are accessing and reviewing employee pay rate data.

For changes in pay status or eligible pay codes, the Finance and Administration Section completes EAFs. EAFS must go through multiple levels of approval before they can be entered and applied to payroll. EAFs typically go through, on average, six to seven approvals before they can be entered into New World. EAFs are needed for stipends or other pay increases related to certifications, hiring and promotional decisions, as well as contractual HR changes, such as Level Ups. Currently there is not a single point-of-contact or process for submitting the documentation associated with certain EAFs, such as copies of certifications or credentials which may trigger incentives, stipends, or pay rate adjustments. Finance and Administration staff may receive documentation to support an EAF from training lieutenants, chiefs, or the eligible employee directly, which can create confusion in verifying timeline, completeness of documentation, and eligibility of the proposed change. Additionally, documentation may be brought in person, emailed, or sent through someone else to reach Administration and Finance.

Finance and Accounting, within the Clerk's Office, is responsible for entering the system data entry. Currently, there is no formal process for secondary review or quality control process where ACFR reviews for completeness and accuracy of rates for compliance with the applicable Collective Bargaining Agreements or other contractual requirements for each pay period, or comprehensively once a new set of contractual requirements may be triggered. Given the technical nature of the premiums, shift codes, and other employee pay rates contemplated in the applicable Collective Bargaining Agreements, there may be issues or errors, which Finance and Administration often catch and have to calculate the corrective actions needed to resolve and make the employee whole. Finance and Administration have developed internal review points, and often review data for accuracy when accessing it for other purposes.

Agenda Item Submission

Finance and Administration collaborates with the Senior Staff Assistant to submit all agenda items for review and decision by the Board of Commissioners. The process requires all items to be submitted for agenda inclusion four weeks in advance of the scheduled meeting.

For purchases and procurement, this process may include multiple submissions before the budget, potentially including approval to bid, then a presentation of the bid rankings to move forward with negotiation and contract award, and then once that has been completed the Purchase Order may be required to go before the Board for approval as well. Given current challenges with supply chain and distribution, this can create challenges for maintaining inventory, or timely completion of services. There may also be challenges when vendors can only guarantee bid pricing for 30 or 60 days, and the process from bidding to award may take longer than the price guarantee is offered.

Accounts Payable

Finance and Administration is also responsible for processing the majority of the payables for the Department. This includes normal operational payments such as contract payments and office supply orders as well as reviewing and processing invoices for medical bid items and contractual items. Payables processes often include reviewing the bid pricing, and corresponding with the vendor to resolve any discrepancies between invoiced price and bid prices.

For items ordered and maintained by CSW, Finance and Administration can leverage both Operative IQ as well as a Google Document maintained by CSW to record all orders against the supply purchase orders ("POs") established at the beginning of each fiscal year. Due to the timing and supply chain challenges in ordering and receiving supplies, Finance and Administration established a Google Document to create more detailed and timely tracking for the number and timing of orders that may be delayed, partially shipped, or modified by vendors. To process these invoices, Finance and Administration often has to review both Operative IQ for receipts and packing slips, as well as the PO Tracking Google Document, to ensure the Google Document is up to date and that the invoice matches the recorded order amount, or that the Google Document has been modified to reflect what has been received versus what is still outstanding from an order.

Payment processing also includes reviewing POs and processing them in order to have the order placed with the vendor. This includes verifying the available budget for the purchase order request or modification request, as well as coordinating vendor relationships.

The Department also has a number of purchasing cards, or p-cards, that can be used for regular purchases of less than $3,500. The Department follows the County's policies for purchasing card management. Department cardholders make a number of purchases using p-cards each month, and while cardholders are responsible for uploading their receipts and documentation to reconcile their purchases with the monthly statement, Finance and Administration staff are typically not involved until the cardholder is notified of the second request for reconciliation, when Finance and Administration staff often have to assist and support cardholders in timely completion of their responsibilities.

Contract Management

The County has a hybrid contracts management model, with a centralized contracts function managing the document management system ("DMS") and the contract management system ("CMS"), but with most end-user departments responsible for processing and managing their own contracts, including expiration dates, renewals, and administration oversight.

Contracts are uploaded into KnowledgeLake (the County's DMS), New World (the County's ERP) and Cobblestone, (the County's CMS). Each system has a separate workflow and process for contract upload, and may require different approvals as part of that workflow. End-user departments have a level of authority in how they use each of these systems for contract management beyond the requirements to maintain copies in each system. Finance and Administration staff have developed a monday.com board that assigns each contract an internal contract manager, and tracks termination dates, renewal deadlines, and other general contract administration content to assist with ensuring timely renewals or termination notices.

State and Federal Reporting Requirements

Reporting is somewhat decentralized within the Department, with individual divisions, units, or teams responsible for non-financial compliance reporting, and the Finance and Administration Section is responsible for any required or supplemental financial reporting that must be included.

Line personnel complete incident response reports and patient care records in ESO, which integrates with the CAD system to import incident information. ESO automatically exports EMS incident reports to Federal and State databases, however integration with the Federal fire reporting database is not seamless. Further discussion on compliance with fire and EMS incident reporting requirements can be found in Chapters 5.A (Emergency Medical Services) and 5.B (Fire Protection) of the M&J report.

The Health and Safety Officer position is responsible for a number of items that are required to be reported to the State related to workplace injuries, deaths, or accidents. The limited written job responsibility information and lack of succession planning for the Health and Safety Officer position resulted in the position's responsibilities not being assumed by anyone during the three-month vacancy in the position earlier this year. Several people in the Department are aware of the reporting requirement, and that it had historically been the responsibility of the Health and Safety Officer, but could not speak to who was currently performing these duties.

The Finance and Administration Section is also responsible for ensuring all of the documentation is retained, prepared, and submitted for Federal Emergency Management Agency ("FEMA") Cost Recovery, in collaboration with the County's Senior Support Manager. The Finance and Administration Section also coordinates data collection and submission for the majority of the County's efforts for FEMA cost recovery, predominantly for Category B incidents. Administration works with Emergency Management to ensure that all responding employees and departments are completing a 214 to capture their time, and reviewing those employee's payroll documents to confirm completeness, accuracy, and alignment between the two documents. This responsibility requires the Section to coordinate with many other County Departments to collect information regarding time worked and expenses incurred, and ensure that adequate backup documentation is available to support all requests for cost recovery. The Department recently contracted with two vendors for assistance in preparing and submitting these reimbursement requests to FEMA.

More discussion about the Department's grants management and reporting is found in the Grants Compliance section later in this report chapter.

Policies and Procedures vs. Industry Standards

Alachua County Fire Rescue has adopted and used the NIMS system to manage their incidents. The ICS, a component of NIMS, is a standard onsite command and control system used to manage emergency incidents and planned events. ICS defines the lines of authority, roles, and responsibilities. Furthermore, ICS designates a single Incident Commander as well as recognizes the "Unified Command" concept. Passing of command to senior officials is recognized and the safety officer is identified.

ACFR utilizes the Blue Card Incident Command Certification Program. Blue Card is a system and training program designed to enhance incident management and coordination in the fire service, particularly for incidents involving multiple agencies or jurisdictions. The primary benefit of fire departments using Blue Card is the improvement of the safety, effectiveness, and efficiency of emergency response operations.

Advantages to using Blue Card include:

- Standardized Incident Command – Blue Card provides a standardized system for incident command and management. The consistency provided by Blue Card ensures that all responders are on the same page and follow a common set of procedures, which is crucial for the safe and efficient handling of complex incidents.
- Enhanced Communication – Blue Card emphasizes clear and concise communication among all responders and incident command personnel. The enhanced communication improves situational awareness, reduces the risk of misunderstandings, and allows for better decision-making during emergencies.
- Scalability – The Blue Card system is scalable and can be used for incidents of various sizes and complexities, from small incidents to large-scale disasters. Fire departments can adapt the Blue Card framework to match the specific needs of each incident.
- Improved Resource Management – Blue Card helps fire departments better manage resources, including personnel and equipment. Improved resource management ensures that resources are deployed where they are most needed and prevents overcommitment or underutilization of assets.
- Enhanced Safety – Safety is a top priority in the fire service, and Blue Card's emphasis on incident management helps reduce risks and prevent accidents during firefighting operations. The system promotes a culture of safety by encouraging risk assessment and mitigation.
- Interoperability – Blue Card is designed to facilitate interoperability between different agencies and jurisdictions. Interoperability is crucial when multiple organizations are involved in responding to an incident, as it ensures that everyone can work together effectively.
- Training and Certification – Blue Card offers a structured training program that allows personnel to become certified in incident command and management. The training helps develop the skills and knowledge necessary for managing incidents safely and efficiently.
- Accountability – The Blue Card system includes mechanisms for tracking incident management actions and decisions, which can be important for post-incident analysis and accountability.

There are several industry standards that can be used as a foundation for developing Standard Operating Procedures ("SOPs") and Standard Operating Guidelines ("SOGs"), including NFPA standards and the Center for Public Safety Excellence's "Quality Improvement for the Fire and Emergency Services, 10th Edition Accreditation Model."

The M&J Team reviewed ACFR's policies and procedures, and noted that the documents provided are lacking in organization, comprehension, and formality. The Department is currently working with Lexipol to update and/or create SOPs/SOGs along with Rules and Regulations. It was also noted during M&J Team interviews that the updates have taken longer than expected due to limited staff time.

Strategic Planning

Strategic planning, goals, and objectives

ACFR does not maintain a current strategic plan. The most recent strategic plan is for FY17 – 20, 2nd edition. Upon M&J Team review of the most recent strategic plan, M&J identified that ACFR established the following initiatives:

- Encourage community involvement and feedback
- Establishment of uniformed equipment on all engine apparatus
- Improve internal communications
- Establish a Quality Assurance Team
- Improve accountability for staff training
- Expansion of the Training Branch and increase the opportunity for continuing education
- Reinstate public education
- Enhance community preparedness
- Continue to increase field operations staffing
- Diversification of funding sources

The most recent strategic plan development did not reflect a proactive community engagement element. Industry standards encourage fire departments to engage the community through surveys and workshops when creating a strategic plan. Fire departments often use the Customer-Centered Strategic Planning Process – a strategic planning approach that places a strong emphasis on understanding and meeting the needs, preferences, and expectations of customers or clients. When fire departments actively engage the community, the department fosters trust and transparency, and shows that the department values the input and concerns of community members. As a result, the community is more likely to support the department's initiatives, including funding requests, which are crucial for maintain and improving emergency services. Community members have unique insights into the specific needs and priorities of their neighborhoods or areas. By involving community members in the strategic planning process, fire departments can gather valuable information about the risks, vulnerabilities, and emergency service expectations of the community. Additionally, community input can assist fire departments in making informed decisions about resource allocation. For instance, if a community expresses concerns about the need for more paramedic services, the department can allocate resources accordingly to meet those needs. The engagement should take place during each strategic plan development because communities change over time, and needs and priorities may evolve. Consistent community involvement allows fire departments to adapt strategic plans to reflect changes in the community and remain responsive to the community.

Figure 26: Self-Evaluation of ACFR FY17 - FY20 Strategic Plan Initiatives Implementation shows ACFR's self-evaluation on the status of the key initiative.

Figure 26: Self-Evaluation of ACFR FY17 - FY20 Strategic Plan Initiatives Implementation

Initiative	Status	Comments
Encourage community involvement and feedback	Completed	ACFR created an online form on their website for comments and concerns, ramped up their social media presence and participates in numerous community events and school visits, etc. Furthermore, when the strategic plan was completed back in 2017, ACFR had very little, if any social media presence. ACFR established a social media team which was successful. In 2023, ACFR created a Captain's position for Public Education and Recruitment. The Captain is now responsible for social media postings. The Captain has also been tasked with updating ACFR's webpage (within the confines of the County's web platform).
Establishment of uniformed equipment on all engine apparatus	Completed	ACFR established a fire equipment steering committee to evaluate all fire apparatus and carried equipment. It is important to note that some of the units are set up differently based on their geography (*i.e.*, Rural engines carry less 5" hose and more 3" supply hose then the suburban engines due to water supply differences), but where possible, the equipment and engines are stocked similarly.
Improve internal communications	Completed	ACFR has increased social media presence along with the Fire Chief conducting a monthly podcast. ACFR is moving to Lexipol for better policy distribution while command staff is making a concerted effort to visit stations and complete ride-a-longs on a consistent basis.
Establish a Quality Assurance Team	Completed	ACFR has established a QA team that is headed by the Medical Director. The Department is utilizing First Pass software to assist the team in evaluating the most common medical call types.
Improve accountability for staff training	Partial	Converted 40-hour Training Captains to 56-hour Training Lieutenants with each of them being responsible for a shift (A, B, C shifts). The Training Lieutenants work with the shift District Chiefs to ensure that the training is being completed and entered correctly in the Fire rescue Academy 1 database. There are many members who either don't complete training on time or enter it incorrectly, but the process has greatly improved. When the strategic plan was conducted in 2017, ACFR had significant deficiencies in their Training Bureau. There was a lack of training, accountability, and testing processes which has now greatly improved.
Expansion of the Training Branch and increase the opportunity for continuing education	Completed	See answers from above. Additionally, ACFR established a budget for technical training reimbursement up to $500 per year/employee or until depleted. Furthermore, funded technical rescue training to re-establish a Technical Rescue Team and rejoined a State recognized Task Force. Moreover, ACFR has sponsored employees to go to paramedic school.
Reinstate public education	Partial	The Department recently added a Captain of Recruitment and Public Education who is working to integrate ACFR more into the community. ACFR's hope is to hold their "Firefighter for Day" event again soon as this event was gaining momentum in the community but stopped due to COVID-19. Additionally, ACFR has looked at offering classes such as CPR, fire extinguisher training, and Stop-the-Bleed classes on a much larger and more frequent basis.

Initiative	Status	Comments
Enhance community preparedness	Partial	Emergency Management Continuity of Operations Plans have been established, expansion of shelters, and hardening of shelters has taken place over the last several years. In Fire Operations, the Public Education and Recruitment Captain was established in 2023.
Continue to increase field operations staffing	Partial	ACFR has continued to add additional engines and rescues as needed due to response zones increasing. Additionally, ACFR implemented Kelly Days on May 22, 2023, which increases the demand for personnel resources.
Diversification of funding sources	Partial	The strategic plan was conducted prior to the Fire Assessment being approved by the Board of County Commissioners ("BoCC"). Diversifying funding sources was a major goal of the Chief back in 2017. In 2017, ACFR moved from MSTU to a Fire Assessment. The Fire Chief at the time, sought funding from both, but the BoCC replaced the MTSU with the Fire Assessment. The fire assessment has been more stable than MSTU. On the EMS side, PEMT has provided a great benefit for increased funding.

Assessment of Issues Critical to Improvement of Departmental Effectiveness

ACFR has done self-reflection and evaluation to identify and assess issues critical to the improvement of departmental effectiveness, especially related to recruiting and staffing retention. More details about these efforts are found in the Staffing and Personnel Management section earlier in this report chapter.

ACFR also recognizes the increased demand for EMS, and has invested in increasing efficiency and mitigating risks related to these services. By the end of the M&J Team's fieldwork, all rescue units were equipped with battery-powered hydraulic stretcher lift systems, to reduce the potential for patient falls or drops during the transition into or out of the rescue unit. ACFR has also deployed Tele911, allowing for the use of remote physician support on EMS calls.

ACFR is also preparing to deploy a Mobile Stroke Transport Unit, in collaboration with UF Health, to assist in improving ACFR response to stroke calls, and will allow for computerized tomography ("CT") and neuro-vascular consults. During downtime, this unit and its assigned staff can be used to train other stations and participate in public outreach and education.

Training is a critical component of ensuring effectiveness of services rendered, as well as mitigating risk and liability to the County. The current applied training program for new hires focuses primarily on fire protection and less so on risk mitigation practices such as practical driver training or situational awareness. While these risk mitigation practices are still taught in a classroom or online setting, there is not a consistent application element. In addition, there are minimal applied training opportunities for Driver Operators or other skilled positions.

Assessment of Anticipated Future Challenges

The Department is aware that many employees in leadership and critical support functions are within five years or less of retirement eligibility. The Department does not have formal succession planning or institutional knowledge capture processes in place. ACFR has not adequately contemplated and formally addressed the need for succession planning for both fire rescue operations personnel as well as support function personnel.

Additionally, the Department does not have formal, consistent leadership development programs, which may impact its ability to develop and retain leaders from within the Department. The Training Lieutenants' primary focus has been on new hire and recruit training, and has not been utilized to develop leadership training, formal mentoring, or similar programs for fire rescue operations personnel.

The actions the Department has taken to introduce a Kelly Day to address both current and future challenges related to recruitment and retention may have benefits in addressing these challenges. Additional data collection and analysis will need to be conducted, including collection of both quantitative data and qualitative data related to hiring efforts, to better understand the impact of Kelly Days on recruitment and retention.

An additional area that should be closely monitored by the Department is the relationship between Alachua County and its municipalities. As ACFR is responsible for fire protection services for four municipalities, and maintains interlocal agreements with a number of other municipalities for first response services, the ability of these municipalities to provide timely, effective services will impact ACFR's operations and potentially costs moving forward.

Past Reviews or Studies

The Department is not operating as strategically as it could be. The Department has conducted several of the studies and reviews that are common to Fire Rescue operations, such as a Master Plan, and a Fire Assessment Fee Study. These efforts are typically done on a regular schedule, to ensure consistent analysis of the current state, and to ensure that strategic efforts and cost recovery are relevant to the current operating model. The current Master Plan was completed in 2012, and the Fee Study results are approximately seven years old, both of which are on the edge of being outdated. Operating on such outdated guidance may result in decision-making that does not reflect the current conditions of the County and the Department, nor take into consideration accurate, updated future needs of the Department.

While not within scope, the M&J Team does want to acknowledge that there have been numerous audits of the billing and collections processes, which is critical to ensure effective management and recoup of EMS costs.

Communications

Internal

Chief Theus records monthly video podcasts, which are approximately 20 minutes in length, that are uploaded and shared with all Department staff. The podcasts are leveraged to share announcements and updates about what may be going on in the Department, such as an update on the implementation of Kelly Days, as well as highlight and acknowledge achievements of staff. The podcast has averaged approximately 170 views per month over the past year.

ACFR may also utilize memos for ensuring consistent dissemination of information across all divisions, districts, and shifts, although there is not a consistent communications protocol that outlines which communication method is most appropriate for different types of communications.

Dissemination of other information is reliant on use of the command structure. District Chiefs and other command staff hold regular meetings, and information shared in these meetings is then communicated to the stations by the District Chiefs. Some District Chiefs may include write-ups or summaries of the meetings and relevant take-aways, but the write-ups are not consistently completed.

External

ACFR leverages a number of methods to communicate with the public to help ensure a consistent and accessible presence for the Department. ACFR social media platforms are used to promote the efforts of the Department, provide updates on hazardous conditions, and provide other timely information to Alachua County citizens and stakeholders. The Department also uses social media to help in recruiting efforts. The Department uses Instagram, Facebook, and Twitter to recognize various members of the Department for awards or accomplishments, report on incidents where personnel made a positive or meaningful impact, and promote open job positions within the Department.

For communication during emergency events, ACFR has a stand-alone website to provide real-time updates with minimal confusion. ACFR also utilizes Everbridge to provide updates for registrants about emergency events or hazards within the County.

Grant Compliance

Grants compliance is evaluated in three primary phases:

- Grants Strategy
- Grants Management
- Grants Reporting

Many of the functions described below have been developed by the current staff within Administration and Finance, who serve as subject matter experts in the financial administration of grants. The Department does not have a formal Grants Management Procedures Manual.

Grants Strategy

Neither the County nor the Department have a formal grants strategy that governs the priorities and decision-making process around grant applications. There are no formal processes for evaluating the grant's purpose, alignment with ACFR or County mission and vision, nor a formal review and evaluation of post-grant costs for maintenance of effort or maintenance of equipment purchased under the grant.

Grants Management

Grants management functions at ACFR are generally divided into financial and programmatic responsibilities. The Finance and Administration Section is responsible for the financial components of managing grants, including contract management, payroll management, invoice processing, and financial reporting.

Once a grant has been awarded, Finance and Administration reviews the grant award for requirements related to budget, reporting, documentation, and then meets with the Departmental end-user who applied for the grant, or is planning to serve as programmatic coordinator for either grant activities or grant purchases, as applicable. Finance and Administration is responsible for coordinating with the County Office of Management and Budget and Finance to ensure the grant award has an assigned fund and project number, that funds are loaded into the budget for use, and that the grant is reviewed as an agenda item before the County Commissioners. Finance and Administration is also responsible for submitting the grant award and associated documents, such as budget amendments or contract approvals, through the agenda submission process to obtain appropriate County approval.

If there is a funding match component, then Finance and Administration works to ensure that there is a matching or similarly numbered project within the appropriate ACFR budget to allow for tracking of eligible match expenditures.

The end-user division or liaison within ACFR is responsible for ensuring that grant activities are completed and any approved purchases are made.

For equipment ordered with grant funding, there is not a formal process for grant liaisons to communicate with CSW about the grant participation in a purchase, nor are there formal processes to ensure timely and accurate recording of inventory, including capture of all grant-required inventory management data points.

Grants Reporting

Grants reporting varies based on the granting agency and their reporting requirements. Generally, the Finance and Administration Section is responsible for all Departmental grants financial reporting, with end-user grants managers responsible for either directly submitting programmatic activities or reports, or providing information to Finance and Administration to allow for combined status reports.

ACFR does not have a grants management system, so Finance and Administration utilizes monday.com for calendar tracking of all grant deliverables and reporting due dates. Other files may be saved on SharePoint, with all financial and grant award information also saved in the Fiscal File. Finance and Administration checks in with the programmatic grant manager in advance of the due date to ensure they are aware of their responsibilities and, as applicable, are on track to provide information to Finance and Administration for reporting.

As part of the grant closeout and final report process, Alachua County Finance and Administration Department reviews to confirm that the financial data reported to the granting agency matches the data recorded in the financial system.

M&J Team review of audits or monitoring reviews performed by awarding agencies noted no issues with current grants management or grant reporting as performed by the Department.

Mutual Aid and Municipal Service Delivery

ACFR maintains automatic aid agreements with various contract fire departments within Alachua County to provide for mutual response of fire and emergency rescue services, based on the proximity of the available resources. The contracted agreements are defined as "Interlocal Agreements for Fire Suppression & First Response EMS/Rescue Services." Each agreement that the Department is a part of involves a fee structure that is set-up to reimburse the County or the City for services provided when responding to calls for service within unincorporated Alachua County or other areas of the County where ACFR is responsible for responding. Figure 27: Interlocal Agreements between ACFR and Surrounding Contract Fire Departments summarizes the fee schedule for these Interlocal Agreement ("ILA") contracts that the Department is currently party to.

Figure 27: Interlocal Agreements between ACFR and Surrounding Contract Fire Departments

Municipality	Type of Agreement (Date of Agreement)	Fee Schedule	Chargeback Clause
Town of LaCrosse	ILA For Fire Suppression & First Response EMS/Rescue Services (August 30, 2019)	Per Fiscal Year: $248,731 This amount is based upon an impact rate of $605.48 per incident response.	The City shall reciprocate payment of $605.48 per response to the County when County fire apparatus are dispatched as the "Primary responder" within the municipal boundaries of the City.
Town of Micanopy	ILA For Fire Suppression & First Response EMS/Rescue Services (August 30, 2019)	Per Fiscal Year: $189,515.24 This amount is based upon an impact rate of $605.48 per incident response.	The City shall reciprocate payment of $605.48 per response to the County when County fire apparatus are dispatched as the "Primary responder" within the municipal boundaries of the City.
City of Newberry	ILA For Fire Suppression & First Response EMS/Rescue Services (August 30, 2019)	Per Fiscal Year: $206,833.10 This amount is based upon an impact rate of $713.39 per incident response.	The City shall reciprocate payment of $713.39 per response to the County when County fire apparatus are dispatched as the "Primary responder" within the municipal boundaries of the City.
City of High Springs	ILA For Fire Suppression & First Response EMS/Rescue Services (August 30, 2019)	Per Fiscal Year: $336,506 This amount is based upon an impact rate of $713.39 per incident response.	The City shall reciprocate payment of $713.39 per response to the County when County fire apparatus are dispatched as the "Primary responder" within the municipal boundaries of the City.

Municipality	Type of Agreement (Date of Agreement)	Fee Schedule	Chargeback Clause
Bradford County	ILA for Emergency Medical Services Billing and Collections (February 24, 2015)	Each month that Emergency Medical Services Billing and Collections is provided to Bradford County, the County will pay Alachua County $12,500.	N/A
City of Gainesville	Automatic Aid Agreement for Fire Rescue Services (October 10, 2006)	There is no set yearly fee amount or price per response amount. The current way funds are disbursed is by the following equation: Number of ACFR calls into the City minus the total number of GFR calls into the unincorporated County. This number is then multiplied by the Average Cost per Response. This final number equates to the monthly payment due.	N/A
Melrose Volunteer Fire Department	ILA For Fire Suppression & First Response EMS/Rescue Services (October 1, 2019)	The County shall pay the Melrose Volunteer Fire Department a flat rate amount of $263,120 every fiscal year that services are provided.	N/A
Cross Creek Volunteer Fire Department	ILA For Fire Suppression & First Response EMS/Rescue Services (October 1, 2019)	The County shall pay the Cross Creek Volunteer Fire Department a flat rate amount of $263,120 every fiscal year that services are provided.	N/A
Windsor Volunteer Fire Department	ILA For Fire Suppression & First Response EMS/Rescue Services (April 13, 2016)	The County shall pay the Windsor Volunteer Fire Department a flat rate amount of $263,120 every fiscal year that services are provided.	N/A

Each ILA includes a list of service-level agreements ("SLAs") that ACFR and the second party of the agreement must adhere to in order to avoid defaulting on the contract. Each set of SLAs within the contracts that outline an "ILA for Fire Suppression & First Response EMS/Rescue Services" includes the following key responsibilities for the City/Town Fire Department that is a party to the agreement:

- Unit response shall occur within one minute of dispatch
- All personnel must meet the Florida Fire Standards and Training Requirements
- The responding Engine, Brush, or Squad Unit shall be staffed with a minimum of two personnel
- When responding from Station, the initial first response unit must arrive on scene within 12 minutes
- The City/Town's Fire Department shall be responsible for first response Fire and EMS within the City/Town's defined fire service territory
- Provide all necessary equipment and staff to perform the duties within the ILA

ACFR is also responsible for a number of Service Level Agreements ("SLA") within the ILA. The following list includes key responsibilities of ACFR as outlined in the ILAs:

- The County shall provide a complement of BLS disposable medical supplies, and resupply consumable supplies as supplies are used during emergency incidents
- The County shall provide support for necessary training to meet ISO multi-company and automatic aid company training
- The County shall make available all electronic training and the database to all active members of the department. It is agreed that any costs associated with memberships and access fees shall be the responsibility of the department, not ACFR
- The County will provide access for County-owned radios
- The County shall be responsible for maintenance and replacement of County-owned radios

Each ILA with a City Fire Department includes a chargeback clause ensuring that the County is paid for services provided in the case that the City/Town is unable to provide fire services to an incident. The chargeback clause states as follows: "The City shall reciprocate payment of $X per response to the County when County fire apparatus (excluding rescue and command) are dispatched as the "Primary responder" within the municipal boundaries of the City. "Primary responder" is defined as the only unit dispatched to an incident or when dispatched as the closest unit due to the unavailability of appropriate apparatus from the City Fire Department."

ACFR currently is party to an automatic aid agreement for fire services with the City of Gainesville. Automatic Aid is assistance dispatched automatically by contractual agreement between two communities. If there is a fire rescue related call within the limits of the City of Gainesville, ACFR is required to be able to respond to the incident when necessary. Gainesville Fire Rescue ("GFR") is responsible for responding to all calls within the City of Gainesville limits and responds to calls outside the City limits in support of ACFR. Both within the City limits and immediately outside the City limits, the quickest unit is dispatched to respond to the call, regardless of whether that unit is ACFR or GFR. The current fee structure is paid on a monthly basis. Alachua County pays the City of Gainesville based upon the following equation: ([ACFR Total Calls into the City of Gainesville – GFR Total Calls into the County])*Average Cost per Response = Monthly Payment Due. The Average Cost per Response is calculated by the following formula: ([ACFR Fire Protection Operations Budget + GFR Fire Protection Operations Budget]/[ACFR Prior Year Number of Fire Response + GFR Prior Year Number of Fire Responses]).

The current fee structure for the ILAs for both the City/Town agreements and the contracted Fire Department agreements in unincorporated communities are all reviewed and approved each year. The amounts are adjusted annually based upon the Consumer Price Index ("CPI") from the Bureau of Labor Statistics-South Region, but there is no other regular evaluation on actual costs to fee recovery. Fee schedules are voted on annually through Alachua County Board of County Commissioners agenda items, and the updated contract amounts are included in the annual operating budget adopted by the Board.

ACFR also has agreements with both the State of Florida Department of Corrections for Fire Rescue Emergency Services to all inmates and staff within the Gainesville Work Camp, under the Florida Department of Corrections, and the State of Florida Department of Agriculture to provide fire protection services to all wildland and forest areas of Alachua County. The Florida Department of Agriculture currently pays Alachua County $0.07 per acre each year for fire suppression services. The Department currently has an ILA for Emergency Medical Billings Services. The Department provides billing and collection services to Bradford County. The fee schedule states that for each month Alachua County provides Emergency Medical Services Billing and Collections services to Bradford County, the County paid Alachua County $12,500 per month in FY15, with subsequent years' fees raised by an inflation factor of 2% each year.

General Financial Analysis

ACFR's budget is largely dedicated to supporting fire and EMS operations. Other major components of ACFR's budget include Emergency Communications and E911, Emergency Management, State and Federal grants, and long-term capital projects, such as station renovation and construction. In order to provide a clearer picture of ACFR's general financial status, this analysis does not include revenues or expenses from several of ACFR's capital funds.[4] Figure 28: ACFR Budgets vs. Actuals, FY19 - FY22 shows the final budgeted revenues, final budgeted expenses (including amendments), actual revenues, and actual expenses of the total ACFR budget from FY19 through FY22.

[4] The following analysis does not include revenues or expenses in funds 078 (FY17 State Emergency Preparedness and Assistance Grant), 310 (Fire Facilities Capital), 321 (2022 Station 21 Capital Improvement), 322 (2017 Fire Stations Construction), 335 (2022 Station 80 Capital Improvement), 343 (2014 Public Improvement Revenue Bond), 900 (General Capital Assets), and 950 (General Long Term Debt).

Figure 28: ACFR Budgets vs. Actuals, FY19 - FY22

Fiscal Year	Budgeted Revenues[5]	Budgeted Expenses[5]	Actual Revenues	Actual Expenses
FY19	$16,163,233[6]	$39,168,766	$30,944,318	$35,611,310
FY20	$35,955,321	$43,654,280	$30,369,814	$38,945,955
FY21	$34,248,434	$43,937,479	$32,347,928	$39,743,603
FY22	$36,832,682	$49,216,517	$39,119,444	$42,385,251

Several trends appear when examining ACFR's overall budget. ACFR's amended expense budgets regularly exceed ACFR's actual expenses. ACFR's actual revenues have both exceeded and fallen short of the Department's amended revenue budget, although the revenues shown in Figure 28 do not reflect General Fund contributions to EMS operations.

Much of the difference between budgeted expenses and actual expenses is due to ACFR's regular application of budget amendments that are not reflected in actual spending. Figure 29: ACFR Adopted Expense Budget, Amended Expense Budget, and Actual Expenses, FY19 - FY22 shows the expense budget as it was originally adopted, as it was amended, and the actual expenditures from FY19 through FY22.

Figure 29: ACFR Adopted Expense Budget, Amended Expense Budget, and Actual Expenses, FY19 - FY22

Fiscal Year	Adopted Expense Budget	Amended Expense Budget	Actual Expenses
FY19	$36,630,150	$39,156,766	$35,611,311
FY20	$37,351,126	$43,654,280	$38,945,955
FY21	$39,348,524	$43,937,479	$39,743,603
FY22	$41,304,423	$49,216,517	$42,385,251

ACFR's budget amendments from FY19 through FY22 resulted in net budget increases ranging from approximately $2.5 million to nearly $8 million. At the same time, ACFR's actual expenses were typically relatively close to the adopted budget, never exceeding the original adopted budget by more than $1.6 million. The difference between ACFR's amended budget and actual expenses has grown from roughly $3.5 million in FY19 to nearly $7 million in FY22.

There are certain categories of spending where ACFR is particularly prone to making amendments that ultimately go unused.

Figure 30: ACFR Budgeted and Actual Expenses in Notable Line Item, Combined FY19 - FY22 shows the total adopted expense budget, amended expense budget, and actual expenses from FY19 through FY22 for certain notable categories of spending.

[5] Final budgeted figures, as amended.
[6] The FY19 revenue budget does not reflect the fire assessment valued at more than $13 million, as this revenue source was not budgeted at the Department level during that year. Actual fire assessment revenue was recorded at the Department level and is reflected in FY19's actual revenues.

Figure 30: ACFR Budgeted and Actual Expenses in Notable Line Item, Combined FY19 - FY22

Line Item	Adopted Expense Budget	Amended Expense Budget	Actual Expenses
Repairs & Maintenance Services	$1,784,167	$3,601,407	$1,482,670
Communication Services	$3,680,866	$4,825,614	$3,065,277
Machinery & Equipment (>$5,000)	$1,490,388	$7,565,633	$4,274,867
Training & Education	$596,290	$856,441	$498,130
Software (non-capital)	$511,931	$1,343,472	$738,395

For several of these notable line items, including Repairs & Maintenance Services, Communication Services, and Training & Education, ACFR made a significant budget amendment, but ultimately spent less than the originally adopted budget. For the remaining line items ACFR did exceed the originally adopted budget, but the amendment was significantly higher than the additional spending. Many of the budget amendments in the notable line items reflect uncertainties and difficulties surrounding spending during the COVID-19 pandemic and may not reflect typical ACFR budget and spending patterns.

Fire Operations

ACFR's fire protection and prevention operations are primarily supported by the MSBU-Fire Services fund.[7] The primary source of revenue for the MSBU-Fire Services fund, typically accounting for 60-70% of the fund's total revenues, is the fire protection assessment. All landowners within the Fire Protection Services MSBU are required to pay an annual fire protection assessment. The fire protection assessment has two components. Each parcel within the MSBU is first assessed a single, base payment, currently $90.61. All improved parcels are then assessed an additional charge that is proportional to the replacement cost of the improvement, as determined by the Alachua County Property Appraiser. The remaining 30-40% of MSBU-Fire Services fund revenues come from other revenue sources, including utility service taxes, telecommunication service taxes, contributions from the County's General Fund, and charges for fire prevention inspections and reviews. Figure 31: MSBU-Fire Services Fund Budgets and Actuals, FY19 - FY22 shows the budgeted revenues, budgeted expenses, actual revenues, and actual expenses of the MSBU-Fire Services fund from FY19 through FY22.

Figure 31: MSBU-Fire Services Fund Budgets and Actuals, FY19 - FY22

Fiscal Year	Budgeted Revenues[8]	Budgeted Expenses[8]	Actual Revenues	Actual Expenses
FY19	$19,812,060	$19,812,060	$19,696,751	$18,154,511
FY20	$21,880,568	$21,880,568	$20,837,454	$18,506,115
FY21	$24,012,251	$24,012,251	$20,379,590	$20,024,911
FY22	$26,628,257	$26,628,257	$22,930,103	$20,806,716

[7] "MSBU" stands for municipal service benefit unit.
[8] Final budgeted figures, as amended.

As shown in Figure 31, ACFR maintains a balanced budget for the MSBU-Fire Services fund and the fund's actual revenues have exceeded the fund's actual expenses for all fiscal years included in the review. ACFR's final revenue and expense budgets regularly overestimate the MSBU-Fire Services fund's actual revenues and expenses, however, and the size of the gap between budgeted and actual figures has grown larger in recent years. Budgeted revenues exceed actual revenues by slightly more than $100,000 in FY19, approximately $1 million in FY20, and nearly $4 million in FY21 and FY22. Similarly, budgeted expenses exceed actual expenses by more than $1.6 million in FY19, more than $3 million in FY20, nearly $4 million in FY21, and nearly $6 million in FY22.

EMS Operations

Alachua County's EMS service largely funds itself through the ambulance fees that it bills patients that use the service. Figure 32: ACFR EMS Operations Budgets and Actuals, FY19 - FY22 shows the budgeted revenues, budgeted expenses, actual revenues, and actual expenses of the EMS portion of the Alachua County General Fund from FY19 through FY22.

Figure 32: ACFR EMS Operations Budgets and Actuals, FY19 - FY22

Fiscal Year	Budgeted Revenues[9]	Budgeted Expenses[9]	Actual Revenues	Actual Expenses
FY19	$10,924,013	$15,981,040	$14,342,820	$14,760,351
FY20	$16,391,488	$19,641,691	$13,429,281	$17,610,761
FY21	$16,141,118	$19,418,149	$15,554,880	$17,727,358
FY22	$16,595,570	$22,091,468	$20,764,970	$20,032,459

The budgets shown in Figure 32 do not reflect General Fund contributions to EMS operations, which pay for EMS expenses not covered by EMS revenues. The County's final EMS revenue budgets frequently do not reflect actual revenues, although the differences include both overestimations and underestimations of revenue. Final EMS expenditure budgets regularly overestimate the County's EMS expenses. EMS operations nearly balanced actual revenues and expenses in FY19, but growth in expenses outpaced growth in revenues during FY20 and FY21. Revenues recovered quite strongly in FY22, though, and EMS operations contributed nearly $1.7 million on net to the County's General Fund. The revenue growth that made the FY22 EMS operations surplus possible was not reflected in the budget, however, as the FY22 budget projected a shortfall of roughly $6.6 million.

[9] Final budgeted figures, as amended.

Fire and Rescue Compliance

This Section evaluates the Department's general compliance with a number of legal requirements. Detailed analysis of compliance may be found in the M&J report chapters for individual ACFR services. This section provides a high-level discussion of the following:

- Federal Laws
- Florida Statutes
- Alachua County Codes, Ordinances, and Comprehensive Plan
- Board of County Commissioners Fire Service Delivery Core Principles
- NFPA Standards
- Commission on Accreditation of Ambulance Services Standards
- Manuals, SOPs, and Medical Protocols
- Controlled Substance Management

Federal Laws

The Occupational Safety and Health Administration ("OSHA") has established the "two-in, two-out" policy as an important safety guideline in the field of emergency response and firefighting. The rule states that during firefighting operations in an immediately dangerous to life or health ("IDLH") atmosphere, there should be a minimum of two trained individuals outside the hazardous area (out) for every two individuals operating inside the hazardous area (in). The following discussion points relate to the importance and implementation of the "two-in, two-out" policy:

- Safety of firefighters – The primary objective of the "two-in, two-out" policy is to ensure the safety of firefighters. By maintaining a minimum number of personnel outside the hazardous area, a dedicated team is prepared to assist in case of an emergency or rescue situation. This rule helps to mitigate the risks and hazards faced by firefighters inside IDLH environments.
- Emergency response effectiveness – The "two-in, two-out" policy enhances the effectiveness of emergency response operations. The team outside the hazardous area can provide support, communicate with the interior team, and initiate rescue efforts promptly if needed, ensuring a more coordinated and efficient response to emergencies.
- Risk assessment and situational awareness – The "two-in, two-out" policy promotes a proactive approach to risk assessment and situational awareness. Firefighters and incident commanders must assess the hazards and risks present in the IDLH atmosphere before implementing firefighting operations. The policy encourages a thorough evaluation of the situation to determine the appropriate number of personnel required inside and outside of hazardous area.
- Training and personnel availability – Implementing the "two-in, two-out" policy emphasizes the importance of adequate training and personnel availability. Fire rescue departments need to ensure that firefighters receive proper training in firefighting techniques, rescue procedures, and hazard recognition. Additionally, maintaining sufficient personnel levels is crucial to comply with the rule and ensure the safety of all team members.

- Challenges and limitations – While the “two-in, two-out” policy is designed to enhance safety, fire rescue departments may face challenges and limitations in the policy’s implementation. In certain situations, such as initial firefighting efforts where rapid intervention is necessary, strict adherence to the policy might be challenging. Additionally, factors like limited staffing, resource availability, or the complexity of the incident scene may affect the ability to strictly maintain the “two-in, two-out” policy.
- Continuous improvement and feedback – OSHA's “two-in, two-out” policy should be seen as part of an ongoing process of continuous improvement in emergency response protocols. Regular feedback from firefighters, incident commanders, and safety professionals is essential to evaluate the effectiveness of the rule, identify potential areas for improvement, and make necessary adjustments to enhance overall safety and operational outcomes.

ACFR strives to comply with the "two-in, two-out” policy. However, with staffing of three on most suppression units, it would require either two fire engines or one fire engine and one rescue with two fire-certified personnel to be on scene before units can make an interior attack.

Florida Statutes

Chapter 633 of the *Florida Statutes* (“*F.S.*”) pertains to the fire prevention and control in the State of Florida. The chapter establishes regulations, standards, and requirements related to fire safety, prevention, and emergency response.

The following are some key provisions within Chapter 633, *F.S.*:

- Fire Safety Standards – Chapter 633, *F.S.*, sets forth fire safety standards for various types of buildings, structures, and occupancies. The chapter includes provisions for fire alarms, sprinkler systems, fire extinguishers, emergency exits, and other fire protection measures. These standards aim to ensure the safety of occupants and minimize the risk of fire-related incidents.
- Fire Prevention and Investigations – Chapter 633, *F.S.*, outlines the authority and responsibilities of the State Fire Marshal, who is responsible for fire prevention and control activities in the state. The chapter establishes procedures for fire investigations, including the collection of evidence, reporting requirements, and cooperation with law enforcement agencies.
- Firefighters and Firefighting Standards – Chapter 633, *F.S.*, defines the qualifications and training requirements for firefighters in Florida. The chapter establishes standards for firefighter certification, continuing education, and disciplinary actions. Additionally, the chapter addresses issues such as firefighter physical examinations, respiratory protection, and firefighter safety standards.
- Fireworks and Explosives – Chapter 633, *F.S.*, regulates the sale, possession, and use of fireworks and explosives in the state. The chapter outlines permit requirements, safety standards, and restrictions to ensure the safe handling and use of these materials.
- Emergency Management – Chapter 633, *F.S.*, addresses emergency management and response, including coordination between fire rescue departments, law enforcement agencies, and other emergency services. The chapter establishes the powers and duties of the State Fire Marshal and local fire rescue departments during emergency situations.
- Inspections and Permits – Chapter 633, *F.S.*, authorizes fire safety inspections of buildings and premises to ensure compliance with fire codes and standards. The chapter also establishes the process for obtaining fire safety permits and certificates of compliance.

Fire rescue departments should refer to the specific sections and provisions within Chapter 633, *F.S.*, to obtain precise and up-to-date information on fire prevention and control regulations in the State. Additionally, local ordinances and regulations may supplement or further specify the requirements outlined in the State statute.

Alachua County Codes, Ordinances, and Comprehensive Plan

Codes and Ordinances

Alachua County's codes and ordinances have a direct impact on fire rescue operations and the delivery of emergency services. These regulations are designed to ensure public safety, address building and fire safety standards, and provide guidelines for emergency response.

Alachua County Code 362 deals directly with fire prevention and protection. The code's purpose in Section 362.01 is to adopt and establish a fire prevention code that will provide regulations to protect citizens in the use of their property from conditions hazardous to life and property from fire, explosion, or exposure to hazardous materials. This also gives ACFR the authority to place mandatory burn bans in effect to protect not only the environment, but also the homes and residences of Alachua County.

The following points describe how county codes and ordinances overall affect fire rescue departments:

- Building and Fire Codes – Counties enforces building and fire codes that establish minimum safety requirements for structures. The codes dictate measures such as fire-resistant construction materials, adequate exits, fire alarm systems, and sprinkler systems. Fire rescue departments play a role in enforcing these codes by conducting inspections, ensuring compliance, and providing guidance to property owners and developers.
- Occupancy Limits – Codes and ordinances set limits on the maximum occupancy of buildings based on their size, layout, and use. The limits take into account factors such as fire safety, emergency egress, and the capacity of Fire Rescue services to handle emergencies. Fire rescue personnel may work closely with code enforcement officials to determine occupancy limits and ensure they are not exceeded.
- Hydrant Placement and Access – Codes and ordinances specify the placement and accessibility of fire hydrants throughout the county. Fire rescue departments rely on an adequate supply of water for fire suppression efforts, and the location and proper functioning of hydrants are critical. Compliance with these regulations ensures that fire hydrants are readily available and accessible for firefighting operations.
- Accessible Roadways and Streets – Codes and ordinances address the design and maintenance of roadways and streets within Alachua County. Codes and ordinances include provisions for sufficient widths, clearances, and turning radii to accommodate emergency vehicles. Fire rescue departments depend on accessible roadways to reach incident locations quickly and safely. Compliance with these regulations ensures unobstructed access for fire apparatus.
- Fire Protection Systems – Codes and ordinances establish requirements for fire protection systems, such as fire alarm systems, sprinklers, and fire extinguishers. Fire rescue departments collaborate with code enforcement officials to ensure compliance with these regulations and may respond to incidents involving these systems, such as false alarms, system malfunctions, or activation during emergencies.

- Hazardous Materials Regulations – Counties may have specific codes and ordinances governing the storage, handling, and transportation of hazardous materials. Fire rescue departments play a crucial role in responding to incidents involving hazardous materials, and these regulations help ensure the safe management of such materials within the County.
- Outdoor Burning Restrictions – Codes and ordinances may restrict or regulate outdoor burning activities, such as open burning or bonfires, to mitigate fire hazards and protect public safety. Fire rescue departments enforce these regulations and respond to incidents related to outdoor burning, such as unauthorized or uncontrolled fires.
- Emergency Response Procedures – Codes and ordinances may outline emergency response procedures, including protocols for reporting incidents, dispatching fire rescue departments, and coordinating with other agencies. Compliance with these procedures helps ensure a coordinated and effective response to emergencies and enhances public safety.

ACFR works in conjunction with code enforcement officials, building inspectors, and other relevant departments to enforce and comply with these codes and ordinances, which allows ACFR to enhance emergency response capabilities, promote public safety, and minimize the risk of fire-related incidents.

Comprehensive Plan

The Alachua County Comprehensive Plan plays a crucial role in guiding and shaping various aspects of the county's development, including the provision of fire rescue services. Here are some ways in which the Comprehensive Plan can impact ACFR:

- Land Use Planning – The Comprehensive Plan determines land use designations and zoning regulations within Alachua County, including the location and density of residential, commercial, and industrial areas. Fire rescue departments take land use decisions into account when planning the allocation of resources and establishing response times. For example, high-density residential areas may require additional fire stations or specialized equipment to ensure prompt emergency response.
- Emergency Services Infrastructure – The Comprehensive Plan addresses the infrastructure needs of the county, including transportation networks, utilities, and public facilities. The Comprehensive Plan takes into consideration the placement of fire stations, access to major roadways, and coverage areas to ensure adequate emergency service coverage throughout the county. The Comprehensive Plan helps identify areas where additional fire stations or improvements to existing infrastructure may be necessary.
- Community Safety – The Comprehensive Plan emphasizes community safety as a priority. It may include policies and strategies related to fire prevention, public education, and emergency management. Fire rescue departments commonly collaborate with other agencies and departments to implement community safety strategies, such as conducting fire safety inspections, providing public education programs, and coordinating emergency response efforts.
- Growth Management – The Comprehensive Plan guides the County's growth and development patterns. The Comprehensive plan includes projections for population growth, housing needs, and economic development. Fire rescue departments need to anticipate the impact of growth on service demands and adjust their operations accordingly. Addressing anticipated needs may involve expanding personnel, adding fire stations, or upgrading equipment to ensure adequate coverage for the growing population.

- Environmental Protection – The Comprehensive Plan addresses environmental conservation and protection within Alachua County, including policies to safeguard natural areas, wetlands, and water resources. Fire rescue departments should work in conjunction with these environmental protection efforts, considering the impact of fire suppression activities on sensitive ecosystems and implementing practices to minimize environmental damage during emergencies.
- Hazard Mitigation – The Comprehensive Plan includes hazard mitigation strategies to reduce the risk and impact of natural disasters, such as hurricanes, floods, or wildfires. Fire rescue departments collaborate with emergency management agencies to identify high-risk areas, develop emergency response plans, and implement mitigation measures. Mitigation measures can involve conducting community drills, establishing evacuation routes, and enhancing communication systems.
- Coordination and Collaboration – The Comprehensive Plan promotes coordination and collaboration among different agencies, departments, and stakeholders. Fire rescue departments work closely with other emergency services, law enforcement, public health departments, and community organizations to implement the goals and strategies outlined in the plan. Collaboration ensures a coordinated and effective response to emergencies and promotes community resilience.

The Alachua County Comprehensive Plan serves as a guiding document that influences the policies, practices, and resource allocation of ACFR. By considering factors such as land use, infrastructure, community safety, growth management, environmental protection, hazard mitigation, and collaboration, the Comprehensive Plan helps shape and enhance the capabilities of ACFR to meet the evolving needs of the community.

Board of County Commissioners Fire Service Delivery Core Principles

ACFR's mission and vision statements illustrate what a professional fire rescue department looks like. A fire rescue department should be a diverse group of professional public servants dedicated to providing emergency and non-emergency services through excellent customer service to the residents and visitors of the jurisdiction. ACFR's dedication to providing excellent customer service is made evident when you speak with the upper management of the organization. Leadership are customer-service focused and willing to always go the extra mile. Leadership has a "whatever it takes" mentality while providing the necessary services on each and every call.

National Fire Protection Association (NFPA) Standards

NFPA 1500 (Standard on Fire Department Occupational Safety, Health, and Wellness Program) is the roadmap that the fire service utilizes to ensure that they are compliant and moving in the right direction. Here are some examples and suggestions to help fire rescue departments become NFPA 1500 compliant:[10]

- Risk Assessment – Conduct a thorough risk assessment of the community you serve, identifying potential hazards and risks that may impact firefighter safety. Develop strategies and protocols to mitigate these risks effectively.
- Personnel Safety – Implement policies and procedures to ensure the safety of firefighting personnel. This includes proper selection and maintenance of personal protective equipment ("PPE"), guidelines for fitness and wellness programs, and training on safe practices during firefighting operations.
- Incident Management System – Establish an incident management system that adheres to NFPA 1500 guidelines. This includes adopting the ICS and training all personnel in its principles and procedures.
- Health and Safety Program – Develop and implement a comprehensive health and safety program for fire rescue department personnel. This program should cover areas such as medical evaluations, vaccinations, exposure control, wellness initiatives, mental health support, and rehabilitation after incidents.
- Training and Education – Ensure that all personnel receive regular training and education on firefighting techniques, hazardous materials response, emergency medical services, and other relevant areas. Maintain records of training and certifications to demonstrate compliance.
- Standard Operating Procedures – Develop and enforce SOPs that align with NFPA 1500 standards. SOPs should cover various aspects of firefighting operations, including incident response, vehicle operations, accountability, and personnel safety.
- Apparatus and Equipment – Regularly inspect, maintain, and test firefighting apparatus and equipment to ensure their operational readiness and compliance with applicable standards. Develop a system for documenting inspections and repairs.
- Incident Reporting and Analysis – Establish a robust incident reporting and analysis system to track and investigate all incidents and near-misses. Use the data collected to identify trends, improve training programs, and implement corrective actions.
- Community Risk Reduction – Engage with the community to identify and address fire risks. Offer educational programs, fire prevention campaigns, and home safety inspections to raise awareness and reduce the likelihood of fire incidents.
- Compliance Audits – Conduct regular internal audits to assess the fire rescue department's compliance with NFPA 1500 standards. Identify areas for improvement, implement corrective actions, and track progress over time.

[10] https://www.nfpa.org/News-and-Research/Resources/Community-Risk-Reduction

NFPA 1901 (Standard for Automotive Fire Apparatus) specifically focuses on the requirements for automotive fire apparatus, commonly known as fire trucks or fire engines. The standard provides guidelines for the design, construction, and performance of these vehicles to ensure they meet certain safety and operational standards.

The following are some key points and areas covered by NFPA 1901:

- Vehicle Types – NFPA 1901 addresses various types of fire apparatus, including pumper trucks, aerial ladder trucks, tanker trucks, rescue trucks, and more. It recognizes the different roles and functions of these vehicles and sets forth requirements accordingly.
- Design and Construction – The standard establishes guidelines for the design and construction of fire apparatus. It covers aspects such as chassis, cab, body, compartments, and equipment mounting. The standard emphasizes structural integrity, weight distribution, and ergonomics to ensure safe and efficient operation.
- Equipment and Systems – NFPA 1901 outlines the requirements for different systems and equipment installed on fire apparatus, including fire pumps, water tanks, hose storage, lighting systems, and communication systems. It specifies the performance criteria and maintenance procedures for these components.
- Safety Features – The standard focuses on safety features to protect firefighters during emergency operations. It includes provisions for occupant protection, such as seat belts and restraint systems, as well as visibility and warning devices, like warning lights and sirens.
- Operational Considerations – NFPA 1901 addresses operational considerations for fire apparatus, including water supply, hose loads, and equipment storage. It provides guidelines for designing and organizing these elements to enhance firefighting effectiveness and operational efficiency.
- Maintenance and Testing – The standard highlights the importance of regular maintenance and testing of fire apparatus to ensure their readiness and reliability. It includes requirements for inspection, testing, and maintenance procedures to be followed by fire rescue departments or organizations responsible for these vehicles.

It's important to note that NFPA 1901 is periodically updated to reflect advancements in technology, changes in industry practices, and lessons learned from firefighting incidents. Fire rescue departments and organizations responsible for fire apparatus refer to this standard to ensure compliance and enhance the safety and effectiveness of their firefighting operations.

Commission on Accreditation of Ambulance Services Standards

The Commission on Accreditation of Ambulance Services ("CAAS") is a non-profit organization that provides accreditation for ambulatory service providers. CAAS sets standards and evaluates ambulance agencies based on leading practices in the industry. The following bullets show key areas included in CAAS standards:

- Administration and Governance – This section focuses on the overall management, leadership, and governance structure of the EMS agency. It may cover areas such as organizational structure, policies and procedures, strategic planning, risk management, and quality improvement.
- Clinical Standards – This section addresses the clinical aspects of EMS care. It may include standards for medical direction, protocols and guidelines, patient assessment and treatment, medication management, infection control, and medical equipment.
- Human Resources – This section relates to the personnel within the EMS agency. It may cover standards for staff qualifications and certification, recruitment and retention, training and continuing education, health and safety, and employee performance evaluation.
- Fleet and Operations – This section focuses on the EMS agency's fleet of vehicles and operational procedures. It may cover vehicle maintenance and safety, communications systems, response time performance, deployment strategies, and incident reporting.
- Safety and Risk Management – This section emphasizes the importance of safety practices and risk mitigation within the EMS agency. It may include standards for workplace safety, patient and provider safety, vehicle and equipment safety, and emergency preparedness.
- Continuous Quality Improvement – This section addresses the agency's commitment to ongoing quality improvement. It may cover standards for data collection and analysis, performance measurement, customer satisfaction surveys, outcome monitoring, and feedback mechanisms.

Manuals, Standard Operating Procedures, and Medical Protocols

SOPs and medical protocols are vital components in various fields, including emergency services, healthcare, and public safety.

Here's an overview of their importance:

- Standard Operating Procedures:
    - Consistency and Uniformity – SOPs provide a consistent framework for conducting operations or tasks within an organization. They ensure that everyone follows the same procedures, resulting in uniformity and minimizing variability in outcomes. This consistency is especially crucial in emergency situations where quick and coordinated actions are required.
    - Efficiency and Effectiveness – SOPs promote efficiency by outlining the most effective and proven methods for performing tasks. They provide step-by-step instructions, workflows, and checklists that guide personnel through complex processes, reducing errors and delays. SOPs help organizations streamline their operations, optimize resource utilization, and achieve desired outcomes.

- Safety and Risk Reduction – SOPs prioritize safety by incorporating best practices, risk assessments, and hazard mitigation strategies. They outline safety protocols, precautions, and PPE requirements. Following SOPs minimizes the risk of accidents, injuries, and exposure to hazards, ensuring the well-being of both personnel and the public.
- Training and Development – SOPs serve as valuable training tools for new personnel. They provide a structured approach to learning and ensure that all employees receive consistent and standardized training. SOPs also aid in cross-training and enable personnel to fill various roles, enhancing operational flexibility and resilience.
- Continuity and Succession Planning – SOPs play a crucial role in organizational continuity and succession planning. They document critical processes, knowledge, and best practices, reducing dependency on individual expertise. In the event of personnel turnover or absences, SOPs ensure that operations can continue smoothly without disruption.

- Medical Protocols:
  - Patient Care Consistency – Medical protocols establish standardized approaches to patient care, ensuring consistency and uniformity in diagnosis, treatment, and management. They guide healthcare providers in making informed decisions based on evidence-based practices and current medical knowledge.
  - Clinical Efficiency – Medical protocols promote efficient and timely care delivery. They outline diagnostic criteria, treatment algorithms, and appropriate interventions, enabling healthcare providers to follow a systematic approach. This results in streamlined processes, reduced waiting times, and improved patient outcomes.
  - Quality and Safety – Medical protocols prioritize patient safety by incorporating best practices, safety guidelines, and infection control measures. They outline medication dosages, administration routes, and potential adverse effects to minimize medication errors and ensure patient safety. Protocols also address emergency situations, including resuscitation and life-threatening conditions, promoting standardized and effective responses.
  - Legal and Regulatory Compliance – Medical protocols help healthcare providers adhere to legal and regulatory requirements. They ensure that care is delivered in accordance with applicable laws, regulations, and ethical guidelines. Compliance with protocols reduces the risk of medical errors, malpractice claims, and regulatory penalties.
  - Collaborative Care – Medical protocols facilitate interdisciplinary collaboration and communication among healthcare providers. They establish guidelines for coordination and handoffs between different specialties or care settings, promoting effective teamwork and continuity of care.

Both SOPs and medical protocols serve as valuable tools for organizations and healthcare providers, fostering consistency, efficiency, safety, and quality in their respective fields. They are living documents that should be regularly reviewed, updated, and adapted based on evolving best practices, advancements in technology, and changes in regulations. ACFR has very clear and deliberate SOPs and medical protocols. These are in place not only as a roadmap for practitioners in the field but it also gives them the operational boundaries necessary to ensure safe operations on EMS calls as well as operating on the fire ground.

Controlled Substance Management

Controlled substances, such as narcotics, are managed and administered out of ACFR Headquarters. A Training Lieutenant is currently the only employee approved to order controlled substances for the Department, and order quantities are determined using preset levels of substances that are maintained at ACFR Headquarters. Controlled substance levels are tracked in Operative IQ, in a module that has limited access for assigned users only. Once the ordered controlled substances have arrived, the Training Lieutenant records each individual medicine using the lot number, batch or control number, the expiration date, and the amount. Operative IQ generates individual labels with the entered identification information. Once the labels are printed, the batch of medicines and associated labels are stored. All non-refrigerated medications are placed in a large safe in the Peak Load Division District Chief's office. Refrigerated medications are stored in a locked refrigerator.

Once medications are needed for distribution, they are separated into administering units and labels are placed on each unit, which is then applied to the unit with a heat-shrink plastic seal for tamper-deterrence.

Administering units are assigned based on preset levels to a locked box. An entire box is logged in Operative IQ by each administering unit's identification numbers, and boxes can be picked up by District Chiefs to take to individual stations for assignment.

At the beginning of each shift, a paramedic is assigned a kit. The paramedic reviews the kit's contents to confirm completeness and accuracy and compares the kit's contents with Operative IQ's reported contents including substance type, administering unit control number, batch number, etc. If there are any issues or discrepancies between the physical kit and the Operative IQ reported information, the paramedic is expected to contact a District Chief to receive a new kit. The previous kit will be researched to determine the source of the discrepancy.

If an administering unit is utilized during a shift, the administering paramedic must record the vial administration in Operative IQ including the vial identification number, ESO report number, waste amount, and a witness to confirm administration and waste amount.

The Department has conducted randomized audits of controlled substance utilization. This includes reviewing to identify if any employee's recorded controlled substance usage exceeds average per employee usage rates relative to overall Departmental use, as well as review for other trends in drug use, drug waste amounts or frequency, etc. Any potential discrepancies or increases in drug use or drug waste are referred to the Medical Director, who reviews the EMS PCRs to determine if recorded use appears appropriate and consistent with medical recommendations.

As part of the M&J Team's evaluation of controlled substances management, the M&J Team tested unit adherence to the above-described procedures for management and control. The M&J Team performed haphazard testing at two stations (62 and 33), as well as on rescues staged at the University of Florida Health Shands Hospital. The testing encompassed one engine and four rescue units, including RCCs.

For all units, the M&J Team tested for the following:

- Keys maintained by an individual and not stored in a central location
- The primary safe was locked and secure
- All individual storage components were separately secured and maintained
- All applicable substances had the appropriate vacuum seal and red labels still on each individual substance

The M&J Team also interviewed keyholders to understand the process for accessing, administering, documenting, and wasting the medicines and to confirm consistent understanding of procedures and practices.

The M&J Team found no instances of noncompliance, and all staff interviewed were consistent in describing procedures for access, administration, documentation of use, and wasting of unadministered medicines.

Observations and Recommendations

Observation 1: ACFR's vacancy rate on December 31, 2022, was 16.6%, including 45 vacancies in the Firefighter position that makes up the bulk of ACFR's fire and EMS operations staffing. High vacancy rates force ACFR to ask line staff to work significant amounts of overtime to ensure that ACFR's 24-hour Fire and EMS operations are adequately staffed. ACFR's efforts to fill vacancies have been partially successful, but the introduction of the Kelly Day has placed additional strain on ACFR's 24-hour staffing.

Recommendation 1: ACFR should continue their Firefighter recruitment efforts and explore using additional strategies to recruit additional Firefighters. ACFR should review the results of past hiring drives in order to find strategies that have proved successful historically and consider reimplementing these strategies.

Observation 2: ACFR's use of overtime has greatly increased over recent years, from roughly 42,000 total overtime hours in FY18 to roughly 78,000 overtime hours in FY22. High vacancy rates in fire and EMS line positions, particularly the Firefighter position, force ACFR to use overtime to fill gaps in the schedule. ACFR does not retain sufficiently detailed historical vacancy data to perform a meaningful analysis of vacancy rate on overtime usage, but the trends in ACFR's overtime usage are consistent with ACFR's increase in overtime usage being due to staffing shortages.

Recommendation 2A: ACFR should continue their existing Firefighter recruitment efforts and explore additional strategies for reducing vacancy rates.

Recommendation 2B: ACFR should begin retaining additional vacancy data, such as regular vacancy "snapshots." Retaining more detailed vacancy data will allow ACFR to conduct more thorough analyses on overtime usage, scheduling trends, recruitment efforts, and employee retention.

Observation 3A: ACFR's diversity efforts currently focus primarily on increasing minority representation in the Department's applicant pool and hiring more diverse employee classes and have produced sustained success at many of these goals. ACFR has not yet implemented any programs focused on developing and advancing employees that are members of underrepresented groups for promotion. The strict, test-based promotion system means that ACFR does not have much flexibility to target development or advancement programs towards employees that are members of underrepresented groups.

Observation 3B: The current demographic of command staff and leadership within ACFR is not comparable to the County on the basis of race and sex. 81% of Department leadership is male and 86% of Department leadership is white.

Recommendation 3: ACFR should explore options for encouraging the development and advancement of employees who are members of underrepresented groups. It may be possible for ACFR to adapt programs that have proven successful in improving the diversity of ACFR's recruitment practices to support diversity in the development and advancement of current employees. For example, ACFR could adapt RAMP's mentoring program to not only allow current employees to mentor prospective applicants but to also allow for current employees to mentor employees of lower rank that may be eligible for promotion. Employees from underrepresented groups may see significant benefits from receiving additional assistance in navigating the promotion process. As ACFR continues to create programs that help to develop underrepresented groups within the Department, ACFR should consider developing programs that elevate more individuals in underrepresented communities to leadership positions within the Department. Increasing diversity within the Department command staff has the potential to attract a more diverse applicant pool. A more diverse applicant pool gives ACFR the opportunity to increase diversity within the Department.

Observation 4: ACFR does not monitor data on the relationship between employee demographics and the promotion process. As a result, ACFR cannot adequately evaluate whether employees from underrepresented groups face additional barriers to promotion. Additionally, not recording information on the interaction between employee demographics and the promotion process makes it difficult for ACFR to evaluate the success of any programs that are intended to encourage the development and advancement of employees from underrepresented groups.

Recommendation 4: ACFR should begin tracking information on the interaction between employee demographics and the promotion process. Employee demographic information should only be used for retrospective analysis and should not factor into any promotion decisions. Information that may be useful to analyze in relation to employee demographics may include the following:

- Promotion application rates
- Promotion test scores
- Promotion list placement
- Promotion rates
- Usage of development or advancement programs, such as a potential adaptation of the RAMP mentoring program

To better capture the effect of future development or advancement programs, ACFR should collect more detailed data on several promotion cycles prior to introducing new programs or requirements.

Observation 5: At the end of the disciplinary process the, an Administrative Assistant converts the physical documents of the investigation, including the interview notes, signed Bill of Rights, etc., into digital copies that are then placed into a binder within Microsoft Access. Microsoft Access does not allow the Deputy Chief to search for old cases based upon content of the case. If the Deputy Chief wishes to refer back to an old case when deciding resolution to new cases, he is not able to do so with Microsoft Access.

Recommendation 5: In order to provide a better way to search for prior internal investigation case files that are relevant to potentially new internal investigations, the Department should consider researching an alternative to Microsoft Access to act as an internal investigation report management system. The current system, Microsoft Access, does not include a feature to search each case by type and content. Adopting a new report management system for internal investigations would provide the Deputy Chief and Chief of Fire Rescue the ability to research past internal investigations more efficiently.

Observation 6: The call load for EMS units is currently above the desired amount for the units. From October 2021 to September 2022, multiple Rescue Units had UHU values above the desired 25%. Higher UHU values have the potential to cause fatigue and burnout for personnel working in the EMS units and Rescue Units.

The increase in UHU values for EMS units is partly due to the amount of time that the EMS units are spending at hospitals within the County waiting to for a bed assignment for the patient they are currently providing care to.

Recommendation 6A: ACFR should work with area hospitals to decrease time rescue units are waiting to transfer care to the hospital. Decreasing this time with reduce UHU values allowing units to be available for additional incidents and have more time for nonemergency functions.

Recommendation 6B: ACFR should determine why peak units have experienced a decrease in UHU values while 24-hour rescue units have seen an increase, and consider the potential need for additional rescue units within the Gainesville area to assist with workload of these units. If decreased UHU values for peak load units are determined to be a result of lack of consistent staffing on a daily basis, ACFR should consider hiring additional personnel to fill the peak load positions.

Recommendation 6C: ACFR should explore a community paramedicine program with public and private partnerships to reduce EMS call volumes. Community paramedics can work in rural areas and work in a primary care role to address the needs of non-urgent EMS calls that do not require transport services.[11]

Recommendation 6D: ACFR should explore the ability to rotate personnel working on 24-hour rescue units with personnel working on 24-hour fire suppression units during a 24-hour shift (*i.e.*, rotate at eight or 12-hour intervals) to reduce fatigue and allow for training and physical fitness.

[11] Rural Health Information Hub – Community Paramedicine, ruralhealthinfo.org

Recommendation 6E: ACFR should consider adding additional rescues in areas where existing rescues exhibit consistently high UHU values. Elevated UHU values indicate a heightened demand for emergency medical services, potentially leading to delayed response times and compromised patient care. The addition of more rescues is essential to address a surge in demand, enabling quicker response to emergencies and reducing the strain on existing resources.

Observation 7: ACFR reclassified the Plans Reviewer Inspector and Fire Inspector positions and merged them into the Fire Prevention Officer position at the start of FY23. ACFR did not create a new job description for the new Fire Prevention Officer position. Instead, ACFR retained both the existing Plans Reviewer Inspector and Fire Inspector job descriptions, adding a note to each job description that the positions were reclassified to Fire Prevention Officer. The Department maintains two different job descriptions applicable to the Fire Prevention Officer position.

Recommendation 7: ACFR should create a single Fire Prevention Officer job description that encompasses all of the position's responsibilities, including the responsibilities of both the former Plans Reviewer Inspector position and the former Fire Inspector position.

Observation 8: ACFR is in the process of reclassifying the Emergency Medical Services Lieutenant position to the Emergency Medical Services Attendant position.

Recommendation 8: ACFR should complete the reclassification of the Emergency Medical Services Lieutenant position to the Emergency Medical Services Attendant position and should ensure that the job description for the Emergency Medical Services Attendant position accurately describes the position's duties.

Observation 9: ACFR currently recruits very heavily in the fire colleges within Alachua County including the Santa Fe College Institute of Public Safety. Generally, the applicants that are hired from the colleges and universities do not have ties to the community in which they are serving. ACFR reported that many new hires are leaving the Department to return to their hometowns in other parts of Florida.

Recommendation 9: The Department should focus more recruiting efforts on the local high schools within Alachua County. Recruiting in local high schools allows ACFR to reach a demographic of potential applicants that have ties to the community and are more likely to stay in the area. Receiving more local applicants could positively effect staff retention at the entry-level once they are hired.

Observation 10: ACFR currently does not utilize a Recruitment Committee to assist the Captain of Recruitment and Public Education during the visits to local schools and community organizations.

Recommendation 10: ACFR should explore establishing a Recruitment Committee that represents the Department to recruit in communities that are underrepresented. The Recruitment Committee should be comprised of a diverse group of people within the Department. The goal of the Recruitment Committee should be to assist the Captain of Recruitment and Public Education in organizing recruiting visits and events within local schools and community organizations.

Observation 11: The Department is in the process of developing a new diversity and recruitment plan since hiring a new Captain of Recruitment and Public Education.

Recommendation 11: In trying to create a more inclusive and employee friendly workplace for all personnel within ACFR, the Department should utilize resources from the "International Association of Fire Chief: Volunteer & Combinations Officer Section/Volunteer Workforce Solutions – Guide for Creating a Diverse and Inclusive Department," as well as the "Center for Public Safety Excellence: Quality Improvement for the Fire and Emergency Services; 10th Edition Accreditation Model, Category 7 – Human Resources." Specific criterion of this model can be found in Appendix A.1.

Observation 12: Recently, ACFR hired a new Captain of Recruitment and Public Education. The new Captain of Recruitment and Public Education is responsible for creating a new comprehensive diversity and recruitment plan for the Department. Prior to the COVID-19 pandemic, the Department visited schools and community organizations regularly. Only in the last two years has the Department again had the ability to visit schools and redevelop a full diversity and recruitment plan.

Recommendation 12: While developing the new diversity and recruitment plan, the Department and the new Captain of Recruitment and Public Education should consider the following strategies. The M&J Team discusses the following strategies further in the Diversity and Recruitment section of this report:

- If possible, eliminate financial barriers by paying for the physical tests rather than placing that burden on the applicant
- ACFR should consider providing in-house training to women and underrepresented individuals to prepare for the physical test as well as tutoring or coaching for candidates on the written exam
- The universality of social media, especially for younger generations, makes it an effective tool for reaching multiple communities and communicating the department's values
- Review all physical tests to ensure that they only include job-related skills and look at how the test is administered and weighted
- Review all written tests to ensure that they are written with the educational level necessary and focus on the basic skills for the job
- Reassess oral boards to ensure that a diverse group of interviewers are used and have been trained in implicit bias
- Review anti-discrimination and anti-harassment training schedules and provide more opportunities to express the County's EEOC adopted policies.

Observation 13: Decisions related to staffing, placement of Fire/EMS stations, response time benchmarking, and other decisions are reliant on accurate response data. The Department does not currently utilize any software to assist in tracking response data and performing QA on reported data.

Recommendation 13: The Department should explore purchasing a program to assist with data collection and QA.

Observation 14: Currently, GIS responsibilities are split amongst multiple County departments, including managing GIS files and layers. This may cause confusion, duplication of effort, or inconsistent maintenance of layers, or may result in the non-primary user of a layer being responsible for its maintenance. Currently, the Sheriff's Office is responsible for maintaining the layers documenting the hydrants and fire stations.

Recommendation 14: The County should assess the current assignment of GIS layer maintenance throughout all County departments with GIS responsibilities, and realign GIS layer responsibilities based on which Department is primarily reliant on that data. This realignment of responsibilities may also require analysis of current workload.

Observation 15A: The County's current process for HR recruitment and the hiring process includes multiple levels of approvals for the EAFs required for each new hire. This timeline may impact the Department's ability to make offers to and receive acceptance from the strongest candidates for operations positions.

Observation 15B: The County's EAF process is also required for all changes in pay status or employee pay code. A number of the EAFs for ACFR are related to contractual HR changes, such as level ups, stipends, or pay increases related to employee certifications.

Recommendation 15: ACFR should work with HR and the County to evaluate the EAF process for new hires in critical positions, to determine if approved, budgeted positions can be moved through an expedited or streamlined workflow, to assist ACFR in making timely offers to quality candidates.

The EAF process should also be evaluated to determine if contractually required HR changes could be modified to reduce the number of approvals required before the change can be applied, or if alternative documentation of approvals could be utilized to support the submission of the EAF.

Observation 16: The Department does not have an organized, complete set of policies and procedures, rules and regulations, or standard operating procedures/standard operating guidelines that reflect industry standards for content, organization, and detail.

Recommendation 16: The Department should utilize NFPA standards, along with the Center for Public Safety Excellence's "Quality Improvement for Fire and Emergency Services, 10th Edition Accreditation Model" to develop and organize its policies and procedures. Updated standard operating procedures/standard operating guidelines should be organized into categories (such as Operations, EMS, Fire Prevention) and should be accompanied by Rules and Regulations. Relevant criterion within the Center for Public Safety Excellence's "Quality Improvement for Fire and Emergency Services, 10th Edition Accreditation Model" can be found in Appendix A.2.

Observation 17: ACFR's most recent strategic plan was designed to serve the Department through FY20, and the Department has not developed an updated strategic plan. Additionally, the FY17-FY20 strategic plan does not reflect a proactive community engagement element.

Recommendation 17: The Department should develop an updated strategic plan, and ensure that time is dedicated to reviewing and updating this plan on a regular basis, taking into account new and future themes and concerns relevant to the Department.

The Department's next strategic plan should also include a community-driven development effort. For many successful organizations, the voice of the community drives their operations and charts the course for the future. A community-driven emergency service organization is one that seeks to gather and utilize the needs and expectations of its community in the development and/or improvement of the services provided. A detailed community-driven strategic planning process is outlined in Appendix A.3.

Observation 18: While the Department has conducted several studies and plans that are standard within the fire rescue industry, the resulting plans may be left in place for too long, or not updated in a timely manner to allow for updated information to guide strategic planning and funding forecasting.

Recommendation 18: The Department should build out a schedule and ensure adequate funding is allocated to support the regular review and, as appropriate, update or development of revised strategic plans, Master Plans, fee studies, and other applicable analysis.

Observation 19: The Department has a number of communications processes used to ensure dissemination of information throughout all levels of staff. The current processes are informal, and may differ based on the staff responsible for dissemination of information.

Recommendation 19: The Department should develop a clear communications protocol that includes consistent messaging styles and methods for different types of information. This should include processes for documenting and retaining information to be shared with future employees, and ensure that communications include sworn and civilian personnel.

Observation 20: Neither the Department nor the County have a comprehensive grants management or coordination strategy. ACFR does not strategically evaluate grant opportunities for relevance with Department mission, strategic initiatives, or resource utilization.

ACFR traditionally applies for formula-funded grants, or other grants that are offered on a regular basis. This may result in missed opportunities for needed emergency response resources, or may result in reliance on grant funds to supplement Department operations, which may pose a risk if the grant funding is not offered in the future.

The County's lack of a strategic grants strategy may result in fragmented grant pursuits across the County and potentially duplicate applications for a single grant opportunity. The lack of a strategic grants strategy may result in inefficient use of time or funding in pursuing grants that do not align with the County's overall strategic mission and direction.

Recommendation 20: ACFR should develop a comprehensive grants management strategy. This should include criteria evaluation of grant opportunities for alignment with strategic priorities of the Department, as well as evaluate the grant value relative to the costs of managing the grant, and any long-term costs related to asset maintenance, maintenance of effort requirements, and other costs that may be sustained after grant funding ends.

The County should also consider adopting a County-wide grants management strategy.

Observation 21: ACFR does not have procedures for the end-user grant liaisons and/or Finance and Administration to communicate with CSW for grant funding participation in a purchase, nor are there processes to ensure accurate and timely recording of grant-supported inventory receipt, including ensuring that the Department has captured all grant-required inventory management documentation.

Recommendation 21: The Department should develop formal procedures for purchasing and receiving assets that have been purchased in part or in whole with grant dollars. The procedures should include formal communication methods between the grant program liaison, the Administration and Finance Section, and CSW to ensure that all required documentation is maintained, and accurate inventory information is recorded for grant reporting and inventory purposes. When grant-purchased assets are being evaluated for disposal or surplus, grant award documents and corresponding regulations should be reviewed to ensure that the disposal method is in compliance with grant requirements.

5. Services

The following chapters present the current state, observations, and recommendations for the following ACFR services:

A. Emergency Medical Services
B. Fire Protection
C. Fire Prevention
D. Training Bureau and Health & Safety
E. Facilities
F. Equipment and Vehicles
G. Information and Technology Office
H. Central Supply and Inventory Management Office
I. Emergency Management
J. Enhanced 911/Communications

Within each service chapter, the following is described where applicable:

- Introduction
- Key Functions
- Staffing and Personnel Management
- Management and Administration
- Compliance
- Performance Analysis
- Service-specific Observations and Recommendations

5.A Emergency Medical Services

Introduction

ACFR provides rescue services, or emergency medical services ("EMS"), to residents and visitors in unincorporated Alachua County and each County municipality. The Department's frontline staff perform both fire protection and EMS activities, reporting up through the EMS Operations Branch chain of command during the conduct of EMS activities. Each of the Department's vehicles is staffed in order to provide both Basic Life Support ("BLS") services, as well as Advanced Life Support ("ALS") services. Services also include patient transports between incident sites and hospitals, and transfers between medical facilities when necessary. ACFR also provides emergency medical services for special events, such as University of Florida sporting events and large community events. ACFR participates in over 200 pre-scheduled events annually.

Key Functions

ACFR's key functions related to EMS include the following:

- Incident Response
- Critical Care
- Narcotics Management
- Medical Protocols Development
- Paramedic Clearance
- Patient Care Record Maintenance

Incident Response

ACFR is responsible for providing BLS and ALS services. BLS includes prehospital care such as cardiopulmonary resuscitation ("CPR") and automated external defibrillator ("AED") use. ALS includes prehospital patient care such as cardiac defibrillation, advanced airway management, intravenous therapy, etc. Rescue units are dispatched by the Alachua County Sheriff's Office Combined Communications Center to all incidents, including medical emergencies, medical non-emergencies, and fire protection incidents.

Critical Care

The Peak Load Division within the EMS Operations Branch performs critical care services (also known as intensive care services) for critically ill or injured patients who are in a life-threatening condition. Most commonly, the Peak Load Division's critical care rescue units ("RCCs") are charged with critical care of patients during inter-hospital transfers, especially between the County's growing number of free-standing emergency rooms and the associated main hospital which usually serves as the definite care facility.

Narcotics Management

Narcotics management includes ensuring that various narcotics are appropriately stored and secured, ensuring that narcotics are correctly ordered when supply is running low, and training EMS personnel on proper narcotic storage and security processes. A full evaluation of the Department's narcotics management program is included in Chapter 4 (Department Assessment) of the M&J report.

Medical Protocols Development

Command staff in the EMS Ops Branch, including the Assistant Chief of EMS Operations and the District Chief who oversees the Peak Load Division, work with the Department's contracted Medical Director to develop and update the medical protocols which govern ACFR's rescue services. Further discussion on the development of medical protocols is included in the Compliance section below.

Paramedic Clearance

ACFR leadership actively encourages line personnel to attend training for and attain paramedic certification. The Medical Director, with the assistance of EMS Ops Branch and Professional Standards Branch personnel, conducts a clearance process of any field personnel who have attained paramedic certification and wish to serve as paramedics during ACFR operations. One of the current Training Lieutenants conducts an initial written examination for all staff seeking paramedic clearance – any staff who pass the initial examination respond to simulations set by the Medical Director of various emergency medical scenarios. Only personnel who have received paramedic clearance from the Medical Director after passing the written and simulated examinations may perform ALS-level services and fill roles that require paramedic certification (such as Rescue Lieutenant/Lead Medic, EMS Attendant, Driver/Operator, and company officer positions and above).

Patient Care Record Maintenance

Per State statutes, staff who respond to emergency medical incidents must compile and maintain patient care records detailing actions taken and care given during incident response. Further discussion on the maintenance of patient care records is included in the Compliance section below.

Staffing and Personnel Management

The EMS Ops Branch is led by an Assistant Chief, who oversees the District Chiefs, field personnel, and Training Lieutenants during the conduct of any EMS operations. ACFR requires that all 24-hour line personnel within the Fire Rescue Operations Section attain emergency medical technician ("EMT") certification. The EMS Ops Branch also includes a Peak Load Division, led by a District Chief who reports directly to the Assistant Chief of EMS Ops. The Peak Load Division consists of five RCCs, each staffed by a full-time EMT Driver and EMS Lieutenant (ACFR is currently changing the EMS Lieutenant position to EMS Attendant). The Peak Load Division also utilizes *Pro Re Nata* ("PRN") employees, or on-call employees, who fill open shifts when full-time staff are unavailable. At the time of this report, 16 of the 20 FTE positions allocated to the Peak Load Division were filled.

24-Hour Personnel

The Department pays for new field staff without EMT certification to attend an EMT training program to attain the necessary certification before being assigned to start actively responding to any incidents. In order to ensure vehicles remain permitted at the ALS level (as discussed further in the Compliance section below), firefighters without EMT certification are only staffed to vehicles that already have at least one EMT and paramedic assigned.

The Department also pays for personnel seeking to attain paramedic certification to attend a paramedic training course and to sit for the certification examination. As previously discussed, before a firefighter certified as a paramedic may begin serving as a paramedic during ACFR operations, the staff member must receive clearance from the Medical Director. ACFR requires paramedic certification and clearance for promotion to Driver/Operator and above. Line personnel who attain State of Florida paramedic certification are eligible to receive $7,500 in annual incentive in addition.

In addition to standard fire rescue operations positions, such as firefighter, Driver/Operator, and Lieutenant, ACFR companies also include EMS-focused Rescue Lieutenant positions. Employees who serve as Rescue Lieutenant act as the lead paramedic on rescue units. ACFR is in the process of reclassifying the Rescue Lieutenant position as a Lead Medic, which will allow the Department to create a single path for promotion, rather than the dual EMS and fire protection tracks that currently exist. ACFR is also implementing policies requiring all new paramedics in the Department to undergo Lead Medic training so all paramedics can occupy the Lead Medic role on rotation, improving cross-training and avoiding creating EMS and fire protection silos within field personnel.

Peak Load Division

The Peak Load Division is organized into five separate critical care rescue units, with staggered shift start times. Staff are divided between two shifts that alternate on-duty days – one shift works Monday, Tuesday, and Friday one week, and then Wednesday, Thursday, and either Saturday or Sunday the next week; the other shift alternates with the first shift. Shifts last 13 hours Monday through Thursday and 14 hours Friday through Sunday. Three of the units (RCC2, RCC3, and RCC5) operate Saturdays while the remaining two (RCC1 and RCC4) operate Sundays. The RCCs are housed at Station 33, but while on-duty are dispatched from various stations around the County.

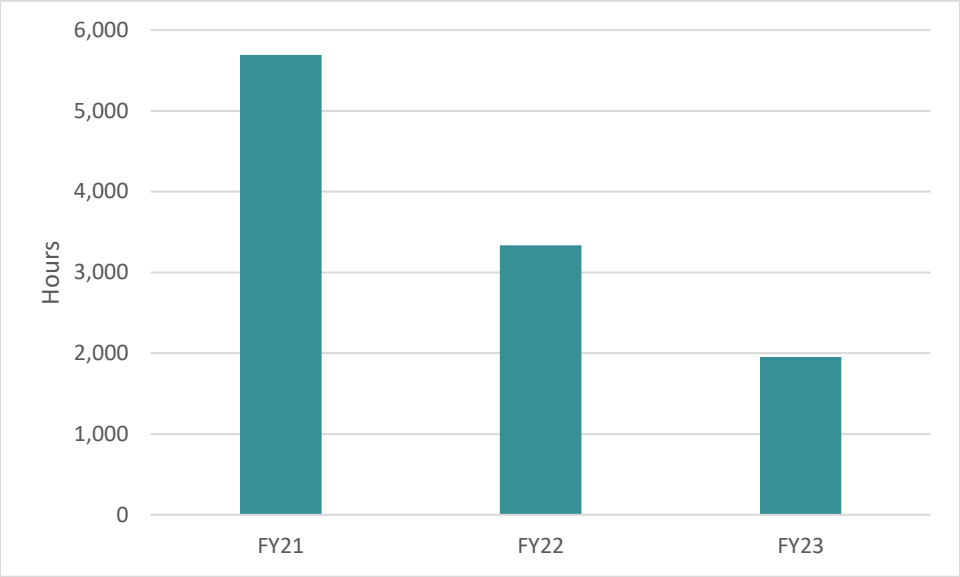
Each RCC in operation is staffed with one EMT Driver and one EMS Lieutenant (the Department is in the process of reclassifying the EMS Lieutenant role as an EMS Attendant). EMS Lieutenants/Attendants must attain certification and clearance at the paramedic level, and operate similarly to Recue Lieutenants/Lead Medics on 24-hour rescue units in the provision of ALS-level services. Many, though not all, of the Peak Load Division paramedics are critical care certified, which is a higher-level paramedic certification. The Peak Load Division District Chief is looking to fill the gap by sending the remaining paramedics for critical care certification.

RCC units respond both to inter-facility transfer requests initiated by hospitals and free-standing emergency rooms and to emergency dispatch calls. RCC personnel can respond to all incident types except vehicle accidents and only participate in EMS activities during fire incident responses as RCC personnel do not have protective ensembles (*i.e.*, extrication gear) and are not required to hold firefighter certification.

EMT Drivers and EMS Attendants are eligible to work overtime and can be mandated to work overtime. The step-by-step process for overtime begins when a vacant shift is not filled by the scheduled personnel within the Peak Load Division. Next, the shift is offered to the PRNs who work part-time in the Peak Load Division. Currently, the Peak Load Division has 20 active part-time PRNs that have the ability to pick up vacant shifts. The PRNs are able to pick up shifts in the RCCs when they become available and are not picked up by a full-time Peak Load Division employee. PRNs are required to work a minimum of one shift every two months to stay active as a part-time employee.

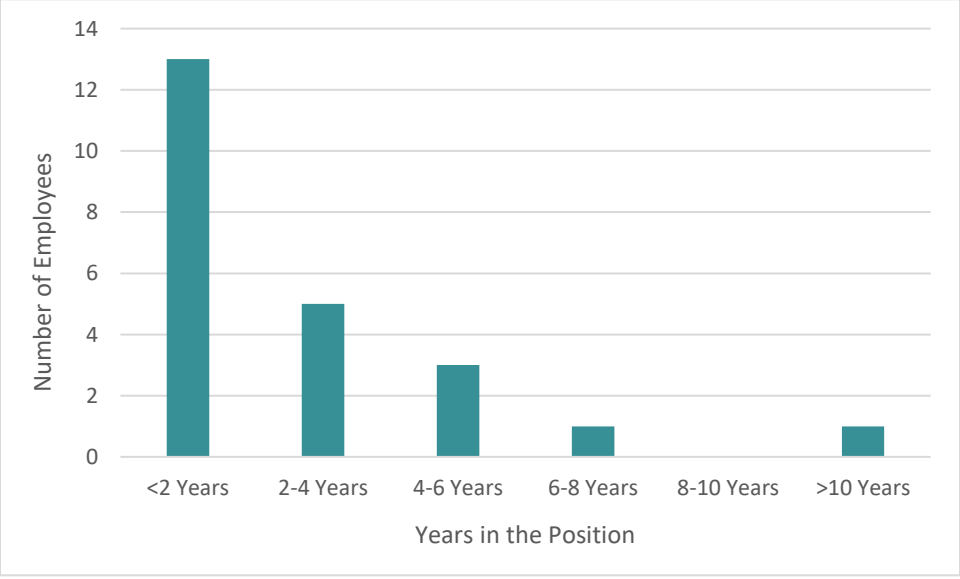
If no PRNs are able to take the available shift, the shift is offered up as overtime to the Peak Load Division Staff. Telestaff outbounds the opportunity to work overtime to qualified personnel. Figure 33: Peak Load Division - Total Standard Overtime Hours shows the total amount of overtime hours that have been worked on RCC units from FY21 to FY23.

Figure 33: Peak Load Division - Total Standard Overtime Hours



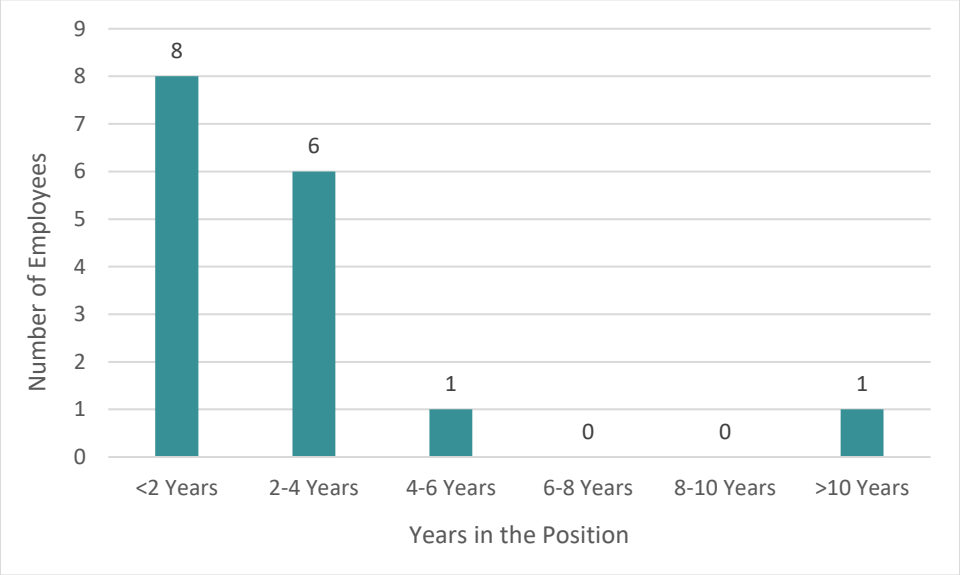
From FY18 to FY23, EMS Attendants, on average, stayed in the position for an approximate average of two years, as shown in Figure 34: EMS Attendant Retention Data - FY18 to FY23.

Figure 34: EMS Attendant Retention Data - FY18 to FY23



EMT Drivers also stay in the position, on average, approximately two years. Figure 35: EMT Driver Retention Data - FY18 to FY23 shows the years that an employee stays in the EMT Driver position.

Figure 35: EMT Driver Retention Data - FY18 to FY23



Management and Administration

The Department places priority on meeting the medical needs of Alachua County, and ensuring consistent, quality service delivery. The Department has developed several strategies and initiatives to ensure ACFR is prepared to deliver these services, both in the present and into the future. This includes the purchase and installation of Stryker Powerload battery-powered hydraulic stretcher lifts in rescues, and assessing the potential to utilize RFID tags to track controlled substances. ACFR leverages partnerships with the University of Florida Health Shands Hospital ("UF Health Shands") and HCA Florida North Florida Hospital ("North Florida Hospital"), which continue to provide enhanced, high-quality pre-hospital medical services throughout the County. The recent partnership with UF Health Shands to deploy a Mobile Stroke Transport Unit reflects ACFR's ability to assess future needs and seek out resources and partnerships to meet those needs.

As demand continues to increase for pre-hospital medical treatment, as well as medical transport, the County may need to conduct additional research and analysis about how to best to issue Certificates of Public Convenience and Necessity.

The Department relies heavily on ESO, ACFR's electronic patient care record system, to ensure consistent and accurate capture of medical service provision details necessary for billing as well as for state and federal reporting. The Department has noted some challenges with ESO's ability to submit data to national databases, which is a feature that ACFR pays for. Currently the Department must prepare and submit two reports, as ESO is unable to produce what is required. Ongoing issues with data that is captured may not always be exported and reported completely, and which requires manual compilation, may create issues for Alachua County related to both compliance and credibility.

Strategic Initiatives

The following are short-term goals and long-term strategic initiatives for the Department's EMS operations set forth by ACFR leadership in interviews as possible opportunities to improve efficiency and service delivery.

- Expand on Tele911 (Tele911 is discussed further in the Performance Analysis section below).
- Provide a quality service to the community by ensuring that ACFR personnel deliver the best care on emergency calls and transports.
- Achieve a positive difference in the community by utilizing the Community Health Team along with Tele911 (the Community Health Team is discussed further in the Performance Analysis section below).
- Deliver intravenous antibiotics to the community via the Community Health Team or ACFR's personnel with the Medical Director's approval.
- Achieve a more manageable call load for all units, as well as improve work conditions and manage overtime.
- Continue to reap the benefits of advanced technology in EMS, such as ultrasounds, new defibrillators, and portable chest x-ray machines on rescue units.
- Implement a more robust orientation program directed towards new hires that fully prepares staff to utilize EMS resources (Community Health Team, Tele911, etc.).

Similar programs have been successful nationwide to reduce EMS incidents which in turn decreases workload and leads to decreased paramedic/EMT burnout. However, ACFR currently lacks sufficient and consistent funding for many of the initiatives and programs identified by leadership as potential opportunities for improving service delivery.

Compliance

Florida Statutes and Florida Administrative Code

The primary governance for State of Florida EMS systems and transport services ("EMS providers") derives from Chapter 401, *Florida Statutes* ("*F.S.*"), which directs the Department of Health ("DOH"), Division of Emergency Preparedness and Community Support to set specific regulations, guidelines, and standards for EMS providers. The DOH regulations, guidelines, and standards comprise Chapter 64J-1 of the *Florida Administrative Code* ("*F.A.C.*"). The M&J Team evaluated whether ACFR's emergency medical services are meeting legal requirements, recommended standards, and best management practices against Chapter 64J-1, *F.A.C.* The following analysis describes the *F.A.C.* sections relevant to ACFR and the Department's adherence to those requirements. The *F.A.C.* sections included in the analysis pertain to the following topics:

- Advanced Life Support Service License – Ground
- Medical Direction
- Vehicle Permits
- Emergency Medical Technicians
- Paramedics

- Records and Reports
- Inspections
- Security of Medications

Advanced Life Support Service License – Ground

Section 64J-1.003, *F.A.C.*, establishes the procedures an ALS provider must follow to obtain and maintain licensure. Vehicles permitted at the ALS level must be equipped with at least the equipment contained on the vehicle minimum equipment lists detailed in the *F.A.C.* section any time the vehicle is available for call. During the M&J Team's testing of ACFR's controls and management of controlled substances, no equipment from the vehicle minimum equipment list were noted to be missing. During the DOH routine inspection of two units in 2015, ACFR was noted to be using pediatric electrodes that did not coincide with DOH recommendations, but ACFR had on record a letter of variance from the Medical Director, which maintains compliance per 64J-1.003(4), *F.A.C.*

Sections 64J-1.003 and 64J-1.013, *F.A.C.*, further sets requirements for the staffing of ALS transport and non-transport vehicles. Per DOH regulations, all ALS vehicles must be staffed by a certified paramedic or licensed physician to provide patient care and a driver who has attained an EMT or higher certification in order to respond to ALS emergencies. All firefighting and rescue apparatus operated by ACFR generally meet the staffing requirements for ALS operations through the level of staffing required by the Department. During those infrequent times an employee with paramedic licensure is not available to staff an RCC unit, the Department operates the vehicle as a BLS emergency vehicle, per *F.A.C.* guidance. As the Department requires all operational staff to obtain EMT certification, all vehicles are able to consistently achieve BLS staffing requirements. As the Department encourages staff attain paramedic licensure and requires all employees at the Driver/Operator level or above to attain paramedic licensure, ACFR consistently operates both transport and non-transport at ALS levels consistent with DOH regulations.

Medical Direction

Section 64J-1.004, *F.A.C.*, governs the requirements, qualifications, and responsibilities of an EMS provider's medical director. Every EMS provider must have a licensed physician with a Doctor of Medicine or a Doctor of Osteopathic Medicine degree on contract as the medical director, who is responsible for developing standing orders or protocols for the provision of medical care by EMTs and paramedics. ACFR contracts with UF Health Shands for Medical Direction. A licensed physical from UF Health Shands serves as the Department's Medical Director and a licensed physician at North Florida Hospital currently serves as the Associate Medical Director. The Medical Director drafted the current version of the medical protocols in 2020, with updates made at least every six months based upon urgent changes in standard of care identified by industry experts or in response to trends in service delivery by ACFR (*i.e.*, when the Medical Director identifies an improvement in how ACFR field personnel can address a specific type of case). The medical protocols are available in all rescues and at all ACFR facilities; currently, the Department is in the process of moving medical protocols online for better ease of access by units in the field.

Section 64J-1.004, *F.A.C.*, further requires medical directors to apply a quality assurance ("QA") process to the EMS provider's patient care to ensure records and reports are complete and accurate, and performance standards are being met for drugs, equipment, system protocols, and procedures. The ACFR Medical Director oversees the Department's QA program alongside the Peak Load Division District Chief. Chapter 7.15A of ACFR's policies and procedures identifies a series of cases for which reports are to be reviewed for QA by the Medical Director, Associate Medical Director, or medical fellows at local hospitals under the direction of the Medical Director. The Medical Director or their designee reviews cases involving airway techniques, determination of death, narcotic medication use (*e.g.*, Fentanyl, Morphine, and Versed), strokes, and trauma cases, among other categories identified in Policy Chapter 7.17A. All other EMS reports are initially reviewed through FirstPass, a clinical QA software which identifies and flags specific information and exclusions – reports flagged through FirstPass as needing additional review are reported up the chain of command to District Chiefs and to the Medical Director for further review as needed. After conducting QA of reports, the Medical Director addresses concerns with field staff or adjusts medical protocols and training.

Vehicle Permits

Section 64J-1.007, *F.A.C.*, requires an EMS provider to maintain proper permits for all ground vehicles used for ALS and/or BLS medical services. The section also notes that BLS vehicles cannot be used as a substitute for ALS level services when an ALS vehicle is taken out of service for routine maintenance or repairs. As discussed more thoroughly in Chapters 5.B (Fire Protection) and 5.F (Equipment/Vehicles) of the M&J report, ACFR emergency response vehicles meet the standards set by National Fire Protection Association ("NFPA") 1900 (Standard for Aircraft Rescue and Firefighting Vehicles, Automotive Fire Apparatus, and Automotive Ambulances) and U.S. General Services Administration policy GSA-KKK-1822 (Federal Specifications for Ambulances). The vehicles used as the backup fleet by ACFR for when a primary fleet apparatus is out of service are vehicles rotated out of frontline service and into reserve service, ensuring all emergency vehicles utilized by ACFR are permitted at the ALS level.

Emergency Medical Technicians

While the majority of Section 64J-1.008, *F.A.C.*, governs the qualifications and procedures for certification of an individual as an EMT, subsection 64J-1.008(2)(a), *F.A.C.*, is relevant to the Department as the subsection pertains to the number of hours of refresher training EMTs must achieve in order to maintain active certification. ACFR ensures EMTs meet their required training hours on an annual and biannual basis; Training Lieutenants, District Chiefs, and company officers are responsible for tracking each field employee's training hours and certification status, helping to ensure that the Department's EMTs maintain consistent certification. For any new employees without prior EMT certification, the Department pays for non-certified employees to attend an EMT certification program, most commonly at Santa Fe College in Gainesville (for those with firefighter certification but no EMT certification) or one of the State's fire colleges (for those without EMT or firefighter certifications).

Paramedics

Similar to the EMT section, Section 64J-1.009, *F.A.C.*, primarily addresses the qualifications and procedures for certification of an individual as a paramedic. As ACFR encourages field staff to pursue and attain their paramedic certification, the Department frequently pays for employees to attend a paramedic certification course, most commonly at Santa Fe College. The Department provides the training courses required for employees to maintain their paramedic certification, as required by subsection 64J-1.009(2)(a), *F.A.C.*, including quarterly paramedic training conducted by the Medical Director. Additionally, before any employee can begin operating as a paramedic for ACFR, the employee must pass a paramedic clearance process overseen by the Medical Director. If an employee does not meet the Medical Director's standards for providing appropriate service delivery at the paramedic level, the Department does not allow the employee to function as a paramedic. The paramedic clearance process instituted by ACFR exceeds standards set by the State of Florida for EMS providers.

Records and Reports

Section 64J-1.014, *F.A.C.*, sets requirements for EMS provider reporting and records retention. ACFR maintains prehospital patient records and records of all actions taken during cases in ESO. ESO integrates with both the Florida Prehospital EMS Tracking and Reporting System ("EMSTARS") and the National EMS Information System ("NEMSIS"), so all reports created and approved through ACFR's internal QA process are automatically exported to both EMSTARS and NEMSIS, meeting State and Federal requirements. ESO is also able to export reports and data to Alachua County's local hospitals for physician access to the prehospital patient care records, as well as to various state registries, such as the Florida Trauma Registry. Field staff are expected to complete EMS reports in ESO for all actions taken while providing medical services during a call, and any failure to properly document actions are redressed by the Medical Director and upline command staff. Subsection 64J-1.014(5), *F.A.C.*, requires EMS providers maintain a copy of patient care records for at least five years. ACFR staff suggested that because ESO is a cloud-based system, patient care records are retained indefinitely. A review by the M&J Team of the ESO contract indicated patient care records will only be destroyed upon termination of the business relationship between ACFR and ESO. As the contract is still active, it appears that no records have been destroyed to date.

Inspections

Section 64J-1.018, *F.A.C.*, provides guidance for DOH compliance monitoring inspections of EMS providers on a regular, recurring basis. DOH last conducted inspections of ACFR in March 2015 and April 2017. According to ACFR staff, DOH was scheduled to conduct another periodic inspection in 2020, but was delayed due to the COVID-19 pandemic; the M&J Team has experienced similar delays in DOH inspections in other Florida counties due to the pandemic.

The DOH Bureau of Emergency Medical Oversight performs an inspection of personal records, service records, facilities, BLS vehicles, ALS vehicles, and conducts equipment tests. The 2015 and 2017 inspections found no deficiencies in the maintenance of personnel records and any equipment identified as missing or malfunctioning on the randomly selected vehicles were corrected prior to completion of the inspections. In 2017, of the 110 vehicle, medical equipment, medical supplies, and ALS medicine requirements, one vehicle had three deficiencies which were corrected prior to completion of the inspection and the second vehicle had two deficiencies which were corrected prior to completion of the inspection. No deficiency identified affected the Department's ability to perform ALS services, and DOH did not issue a corrective action statement.

Security of Medications

Section 64J-1.021, *F.A.C.*, requires ALS providers to develop and maintain operating procedures for the management and security of controlled substances procured, stored, and used by the EMS provider. Subsection 64J-1.021(2), *F.A.C.*, requires operating procedures meet the minimum Federal requirements specified by Title 21, Chapters II and III of the *Code of Federal Regulations* ("*CFR*"). Chapter 4 (Department Assessment) of the M&J report includes a detailed explanation of ACFR's procedures and practices governing controlled substance management and administration. During testing, the M&J Team found no instances of noncompliance, and all staff interviewed were consistent in describing procedures for access, administration, documentation of use, and wasting of unadministered medicines. The M&J Team found ACFR's protocols and practices to be in line with Section 64J-1.021, *F.A.C.*, and 21 *CFR*.

Commission on Accreditation of Ambulance Services

In addition to the statutory requirements of the *Florida Statutes* and *Florida Administrative Code*, ACFR also adheres to the leading practices and standards set by CAAS, which has accredited the Department's ambulance services through 2025. Because CAAS accredits private entities in addition to public EMS providers, the standards established by CAAS are generally higher than those set by local, State, or Federal statutes.

CAAS assesses EMS provider operations on the following categories:

- Organization
- Inter-agency relations
- Management
- Financial management
- Community relations and public affairs
- Human resources
- Clinical standards
- Safe operations & managing risk
- Equipment & facilities
- Communications center

CAAS reviewers score an ambulance service on 109 characteristics, or standards, as either a "3" for full compliance, a "2" for partial compliance, or a "1" for noncompliance. Of the 109 characteristics, ACFR scored a "3" on 107 characteristics on the first review, with the two "2" scores raised to a "3" after addressing the noted deficiencies. The two noted deficiencies were for outdated and missing performance evaluations and incomplete standards for securing ALS supplies. ACFR developed updated standards for both the conduct of performance evaluations and the securing of ALS supplies. The M&J Team noted during testing that both policies were being followed by the Department.

While not a compliance requirement, the M&J Team noted ACFR does not list CAAS accreditation on the Department's webpages, which is a common practice for accredited agencies to identify the high standards met by the EMS provider.

Performance Analysis

The performance analysis of ACFR's EMS operations focuses on three sets of analyses:

- Benchmarks
- Alternative Service Delivery
- Efficiency of Program Activities

Benchmarks

In order to determine and evaluate appropriate benchmarks for ACFR, the M&J Team divided analysis into the following categories:

- Workload versus Number of Units
- Response Time versus Industry Standards
- Benchmark Analysis

Workload versus Number of Units

Workload was discussed previously in this report in Chapter 4 (Department Assessment) of the M&J report. This section highlights the workload of EMS units, which in ACFR are called "rescues." Rescues are transport units that are often known to the public as ambulances. Although rescues primarily respond to EMS incidents, they also respond to fire incidents as well. Therefore, workload is based on all incidents that the units respond to.

Workload is a measure of how busy each unit within the Department is and could be analyzed from a simplistic view as to the number of incidents to which it responds. However, incident responses vary in length of time so while two units may respond to the same number of incidents, the actual work involved may vary greatly. The better measure of workload is referred to as unit hour utilization ("UHU"). With this method, the amount of time assigned to incidents is compared to the amount of time the unit is in-service and is expressed as a percentage of the whole. For instance, a UHU value of 25% means that the unit is operating on incidents 25% of the time it is in service, thus only being available for other emergencies 75%. When units from neighboring fire stations all have high UHU values, it means that new emergencies will have increased response times because it is highly likely that the closest, second closest, and even third closest units are not available due to being on other incidents.

UHU only considers the time the unit is dispatched to the time the unit returns to service. It does not include the time it takes for a unit to drive back to the fire/EMS station, complete any necessary paperwork such as required patient care reports, or non-emergency activities such as training. Figure 36: How a Firefighter Spends a 24-hour Shift Besides Emergency Responses displays typical time commitments of a firefighter/paramedic in a 24-hour shift besides emergency responses. Figure 36 is based on typical career firefighters in fire rescue departments across the United States and not on directly to ACFR. ACFR specific nonemergency duties vary depending on the station, but include the activities listed in Figure 36.

Figure 36: How a Firefighter Spends a 24-hour Shift Besides Emergency Responses

Activity	Hours	Percent of Shift
Physical Fitness	2	8.3%
Training	2	8.3%
Meals[1]	2	8.3%
Housework and Apparatus Inspections	2	8.3%
Non-Emergency Activities[2]	2	8.3%
Administrative Duties[3]	2	8.3%
Rest	6	25%
Total	**18**	**75%**

[1] Includes three meals per shift with prep and clean up time
[2] Includes community outreach, building inspections, hydrant inspections, and fueling apparatus
[3] Includes reports, performance evaluations, and payroll

While there are limited formal performance measures to use as a target measure, in May 2016, Henrico County (VA) Division of Fire published an article after studying their department's EMS workload.[12] As a result of the study, Henrico County Division of Fire developed a general commitment factor scale for their department. Figure 37: Commitment Factors as Developed by Henrico County (VA) Division of Fire, 2016 is a summary of the findings as it relates to commitment factors.

Figure 37: Commitment Factors as Developed by Henrico County (VA) Division of Fire, 2016

Factor	Indication	Description
16%-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.
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.
26%-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 exceed goals.
30%	"Line in the Sand"	Not Sustainable: Commitment Threshold—community has less than a 70% chance of timely emergency service and immediate relief is vital. Personnel assigned to units at or exceeding 30% 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.

[12] "How Busy Is Busy?" fireengineering.com

Figure 38: ACFR Rescue Units UHU shows the UHU for ACFR units based on the fiscal year, October 1 to September 30. The calculations assume that all units except for peak units were in-service 24 hours each day. Calculations for peak units were used for the hours these units are in service daily.

Figure 38: ACFR Rescue Units UHU

Apparatus	FY18	FY19	FY20	FY21	FY22
RCC1	52.23%	49.76%	43.54%	46.47%	43.69%
RCC2	52.73%	52.64%	43.39%	38.05%	40.19%
RCC3	52.17%	49.52%	46.52%	44.50%	46.08%
RCC4	52.15%	49.78%	45.97%	43.40%	31.97%
RCC5	38.42%	45.74%	34.75%	37.47%	36.18%
Rescue 20	16.19%	13.08%	11.91%	14.46%	13.84%
Rescue 21	17.24%	16.54%	13.79%	16.65%	17.81%
Rescue 23	37.71%	35.94%	30.35%	35.01%	33.79%
Rescue 24	23.32%	20.85%	13.19%	18.19%	13.22%
Rescue 28	N/A	4.91%	9.22%	11.91%	12.21%
Rescue 30	27.14%	29.81%	26.91%	29.58%	29.55%
Rescue 31	27.76%	28.54%	25.88%	29.40%	29.96%
Rescue 33	31.82%	31.10%	23.52%	28.39%	29.71%
Rescue 34	N/A	N/A	17.53%	30.77%	32.21%
Rescue 35[1]	36.61%	37.70%	30.61%	29.53%	30.91%
Rescue 36	N/A	N/A	N/A	N/A	24.27%
Rescue 41	10.17%	10.11%	10.01%	11.69%	10.43%
Rescue 62	8.85%	9.33%	8.27%	9.53%	9.43%
Rescue 80	36.66%	36.18%	33.45%	37.83%	34.33%
Rescue 81	21.58%	20.01%	18.16%	22.36%	20.28%

[1] Rescue 3 became Rescue 35 in FY20.

The call load for EMS units (rescues) are above desired for many units. Rescues 23, 30, 31, 33, 34, 35, and 80 had UHU values of above 25% from October 1, 2021, to September 20, 2022. Rescues 23, 34, 35, and 80 were above the 30% level. These high UHU values will mean greater fatigue on personnel and will take away from time for training and other non-emergency duties. Also, with all of these units with high UHU values in the Gainesville area, this could lead to increased response times in this area due to rescue units responding from other stations to cover incidents.

Peak load units (RCC1, RCC2, RCC3, RCC4, and RCC5) do not fall within the same measurement as mentioned in Figure 37 because they are not working a 24-hour shift. A desired UHU level for peak load units is 50%. This leaves time within the shift for breaks, physical fitness, training, and report writing. The five years analyzed have shown a decrease in UHU values for the peak units.

Interviews with ACFR staff indicated an issue with rescues being held at hospitals waiting to transfer care of patients and return to service. ACFR staff indicated that the Department has strong relationships with each of the area hospitals, but hospital staffing concerns and lack of available patient beds have resulted in slower transfers of care of patients from EMS units to hospitals. Ensuring rapid transfer of care of patients to hospitals is critical for various reasons that collectively contribute to the efficiency and effectiveness of emergency medical services. Quick transfers play a pivotal role in managing multiple emergencies simultaneously, allowing resources to become available promptly for subsequent incidents. An optimized resource allocation ensures that EMS personnel can respond to emergencies with minimal delays, enhancing overall community safety. Moreover, quick transfers alleviate the workload on EMS teams, providing personnel with the necessary time for training, skill development, and maintaining physical fitness. By reducing the burden on responders, this approach contributes to the management of emergency services, fostering a system that is not only responsive but also well-prepared for various scenarios.

Turnaround time, a critical aspect of EMS operations, refers to the duration it takes for a rescue to transfer patient care upon reaching a hospital and become available for another call. The process involves the patient handover, where effective communication between EMS personnel and hospital staff ensures a smooth transition of care. Challenges to turnaround time include emergency department congestion, administrative processes (such as documentation and restocking), and the need for collaboration between EMS agencies and hospitals. While specific benchmarks can vary, many EMS agencies target a turnaround time of 20 minutes or less. Achieving this goal enhances the overall responsiveness of the EMS system, as quick turnaround times contribute to reduced response times and increased availability for subsequent emergencies. Continuous monitoring, data analysis, and collaboration with healthcare facilities are integral to improving and maintaining efficient turnaround times in emergency medical services.

Figure 39: ACFR Rescue Units Wait Time UHU shows the UHU for ACFR rescues for fiscal year 2022, wait time UHU (the percent of time the unit in service spent transferring care at the hospital), and how much of the current workload is spent transferring care at the hospital (wait time UHU represented as a percentage of total UHU). The calculations assume that all units, except peak load units, were in service 24 hours each day. Calculations for peak load units were used for the hours these units are in service daily.

Figure 39: ACFR Rescue Units Wait Time UHU

Apparatus	FY22 Total UHU	Wait Time UHU	Percent of UHU Spent on Transferring Care
RCC1	43.69%	13.12%	30.04%
RCC2	40.19%	12.68%	31.54%
RCC3	46.08%	13.89%	30.14%
RCC4	31.97%	10.00%	31.28%

Apparatus	FY22 Total UHU	Wait Time UHU	Percent of UHU Spent on Transferring Care
RCC5	36.18%	11.19%	30.94%
Rescue 20	13.84%	3.39%	24.50%
Rescue 21	17.81%	4.47%	25.07%
Rescue 23	33.79%	10.83%	32.06%
Rescue 24	13.22%	3.81%	28.85%
Rescue 28	12.21%	3.27%	26.77%
Rescue 30	29.55%	9.84%	33.31%
Rescue 31	29.96%	10.29%	34.33%
Rescue 33	29.71%	8.84%	29.75%
Rescue 34	32.21%	10.22%	31.73%
Rescue 35	30.91%	9.73%	31.48%
Rescue 36	24.27%	8.69%	35.80%
Rescue 41	10.43%	2.64%	25.34%
Rescue 62	9.43%	2.33%	24.66%
Rescue 80	34.33%	11.55%	33.65%
Rescue 81	20.28%	5.98%	29.47%

Response Time versus Industry Standards

From the perspective of the citizen, their judgment of the fire rescue department is often based on how quickly units arrive to assist when the citizen calls 911. National standards identified in NFPA 1225 (Standard for Emergency Services Communications) and 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) are used to assess the response time performance for career fire departments.

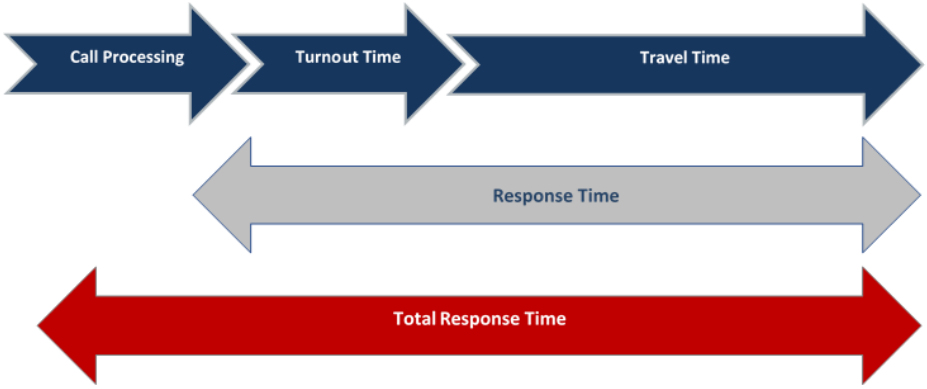
Response time performance is comprised of the following components:

- Call Processing Time – The amount of time between when a call is answered by the 911 Primary Public Safety Answering Point ("PSAP") or dispatch center, and when resources are dispatched.
- Turnout Time – The time interval between when response units are notified of the incident and when the apparatus begins to respond.
- Travel Time – The 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 – The time from initial alerting of an incident until arrival on the scene. Response Time equals the sum of "Turnout Time" and "Travel Time."
- Total Response Time – This is the most apparent time to the caller requesting emergency services, as the time from when the emergency call is placed until units arrive on the scene.

Tracking the individual components of response time can help the ACFR identify impediments to timely response, and make operational adjustments to improve, including developing response time goals and standards that are both relevant and achievable. Fire service leading practices recommend that fire service organizations monitor and report the components of Total Response Time.

The Total Response Time Continuum is comprised of the three elements described above—Call Processing, Turnout Time, and Travel Time. Figure 40: Total Response Time Continuum is an illustration of the Total Response Time Continuum.

Figure 40: Total Response Time Continuum



Historically, fire rescue departments 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.

Percentile 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. The percentile measurements 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 the results of each category are not additive, meaning 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 travel 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 turnout time and travel time.

The following calculations only include call types labeled as a top priority when received. The following call types are labeled top priority:

- Breathing Problems
- Cardiac Arrest
- Chest Pain
- Seizures
- Electrocution
- Heart Problems
- Stroke
- Gunshot Wound or Stabbing
- Unconscious

Call Processing Performance

The industry standard for call processing (or alarm handling) time is NFPA 1225. This standard recommends that communication centers have call processing times of not more than 60 seconds, 90% of the time. EMS call processing at the 90th percentile for the five years analyzed was 1 minute, 30 seconds.

Turnout Performance

The second component of the Total Response Time Continuum, and one that is directly affected by response personnel, is turnout time performance. Turnout time is the time it takes personnel to receive the dispatch information, move to the appropriate apparatus, put on necessary protective equipment, and begin responding to the incident. NFPA 1710 recommends a 90th percentile fractile turnout time of 60 seconds for EMS incidents. The extra 20 seconds for fire or special operation incidents takes into consideration the time it takes personnel to put on specific equipment for these types of incidents. EMS turnout performance at the 90th percentile for the five years analyzed was 1 minute, 26 seconds.

Travel Performance

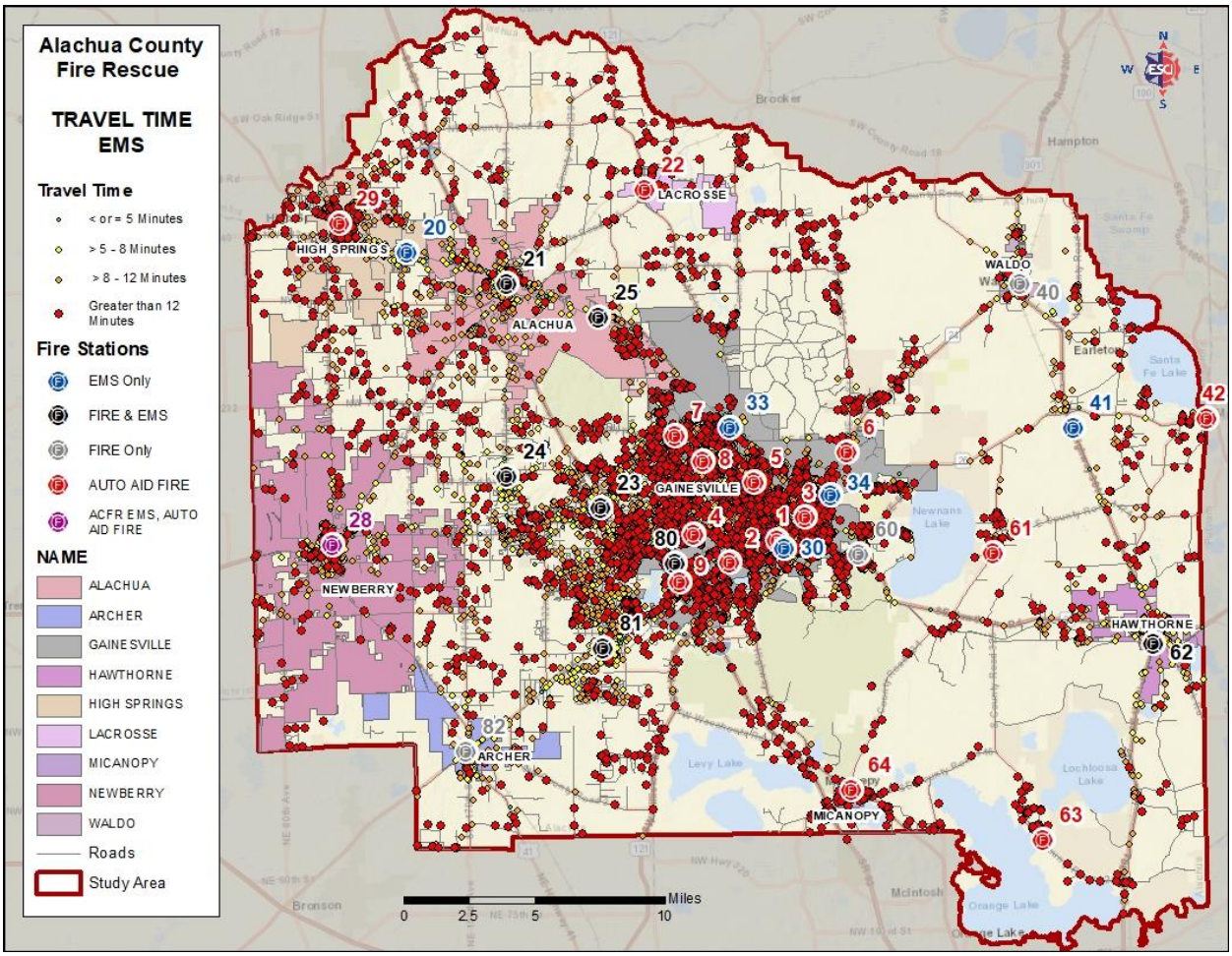
Travel time is the third component of the response time continuum. Travel time is the amount of time between when the apparatus departs for the call and when it arrives on-scene and is measured at the 90th percentile. It is important to understand travel time is not specifically a factor of speed as much as it is the result of proper placement of fire stations from which the emergency response begins. NFPA 1710 recommends the first due fire or EMS unit travel and arrive on the scene within 4 minutes (240 seconds). EMS travel performance at the 90th percentile for the five years analyzed was 11 minutes, 46 seconds.

Response Time Performance

Response time is the amount of time from initial notification to the fire rescue department until the first unit arrives on-scene. While not specifically addressed by NFPA 1710, it is a combination of the turnout and travel time standards or 5 minutes (300 seconds) for EMS responses. EMS response time at the 90th percentile for the five years analyzed was 12 minutes, 42 seconds.

Figure 41: EMS Response Time and Locations shows the location and the correlated response time of all EMS incidents from October 1, 2020, to September 30, 2022. The map includes all priority of incidents. During this period, 16.30% of responses had a response time of 5 minutes or less, 33.88% had a response time of greater than 5 minutes to 8 minutes, 32.06% had a response time of greater than 8 minutes to 12 minutes, and 17.76% had a response time of greater than 12 minutes.

Figure 41: EMS Response Time and Locations



It is important to point out that there are a lot of response times greater than 12 minutes in the Gainesville area. This can be contributed to the workload of units this area, forcing units that have a further travel time to response, thus increasing response times.

Total Response Time Performance

Total response time performance is the final part of the Total Response Time Continuum. This is the total time from the time the emergency call is received by the dispatch center to the time the first emergency unit arrives on the scene of the incident. Although there is not a national standard for total response time, an expected standard can be calculated by adding the NFPA standards for call processing time performance, turnout time performance, and travel time performance. This expected standard is 6 minutes for EMS incidents. EMS total response time at the 90th percentile for the five years analyzed was 13 minutes, 29 seconds.

A comparison of ACFR's total response time and the calculation's components to NFPA standards is shown in Figure 42: ACFR EMS Response Times vs. NFPA Standards:

Figure 42: ACFR EMS Response Times vs. NFPA Standards

	NFPA Standard	ACFR 90th Percentile
Call Processing Time	60 seconds	1 minute, 30 seconds
Turnout Time	60 seconds	1 minute, 26 seconds
Travel Time	4 minutes	11 minutes, 46 seconds
Response Time	5 minutes	12 minutes, 42 seconds
Total Response Time	6 minutes	13 minutes, 29 seconds

Benchmark Analysis

Response time performance greatly depends on the ability to reach incidents in a timely manner. Although ACFR is a career department, NFPA 1720 (Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments) has demand zones based on population density and response times for each of these demand zones. These demand zones and response times are shown in Figure 43: NFPA 1720 Demand Zones.

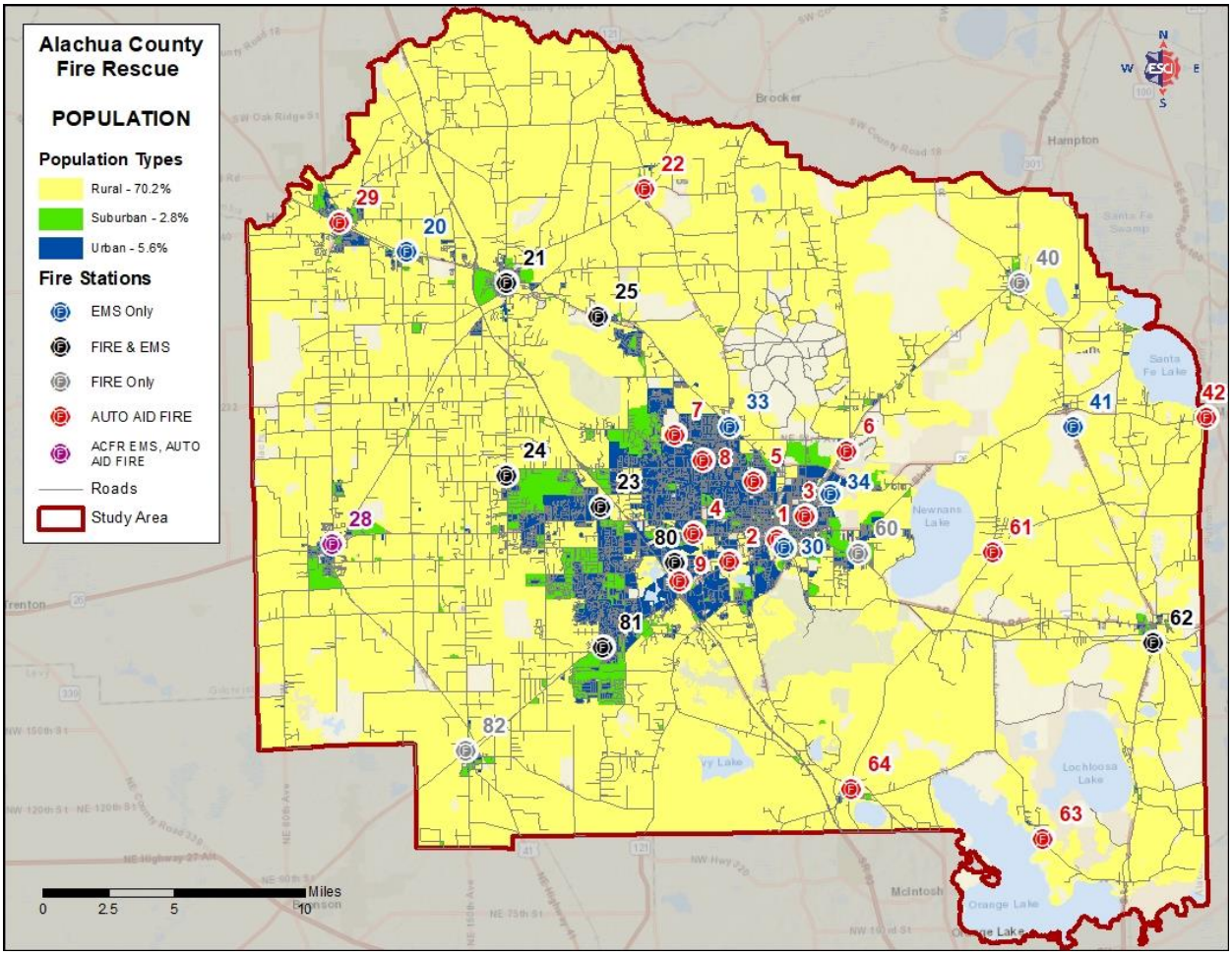
Figure 43: NFPA 1720 Demand Zones

Category	Population Density/ sq mi	Response Time
Urban	> 1,000	9 minutes
Suburban	500 to 1,000	10 minutes
Rural	< 500	14 minutes

Fire departments can establish response standards outside of NFPA guidelines, provide the response standards comply will applicable local, state, and federal laws and regulations. While NFPA standards are widely recognized and followed in the fire service, fire departments have the flexibility to develop response standards that are tailored to the community's specific circumstances. However, prioritizing safety, legal compliance, and community needs is important establishing standards.

Figure 44: Population Density shows the population density of Alachua County is mostly rural (70.2%).

Figure 44: Population Density



EMS Coverage

NFPA 1710 states a fire rescue department shall establish a response time objective of eight minutes or less for the arrival of an advanced life support unit at an emergency medical incident. Figure 45: EMS Coverage shows that 67% of road miles in the County are within 8 minutes of an ACFR station with a transport unit.

Figure 45: EMS Coverage

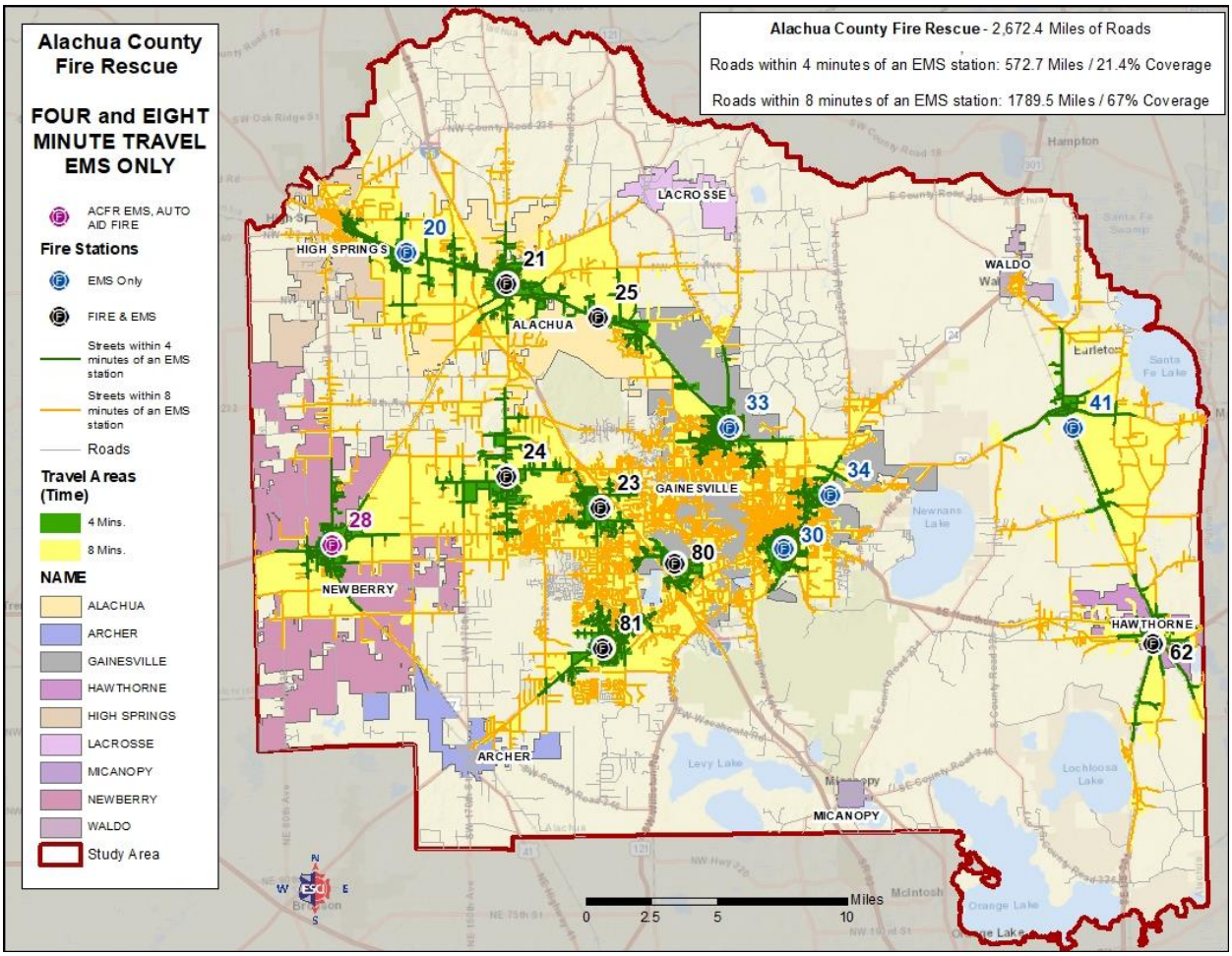
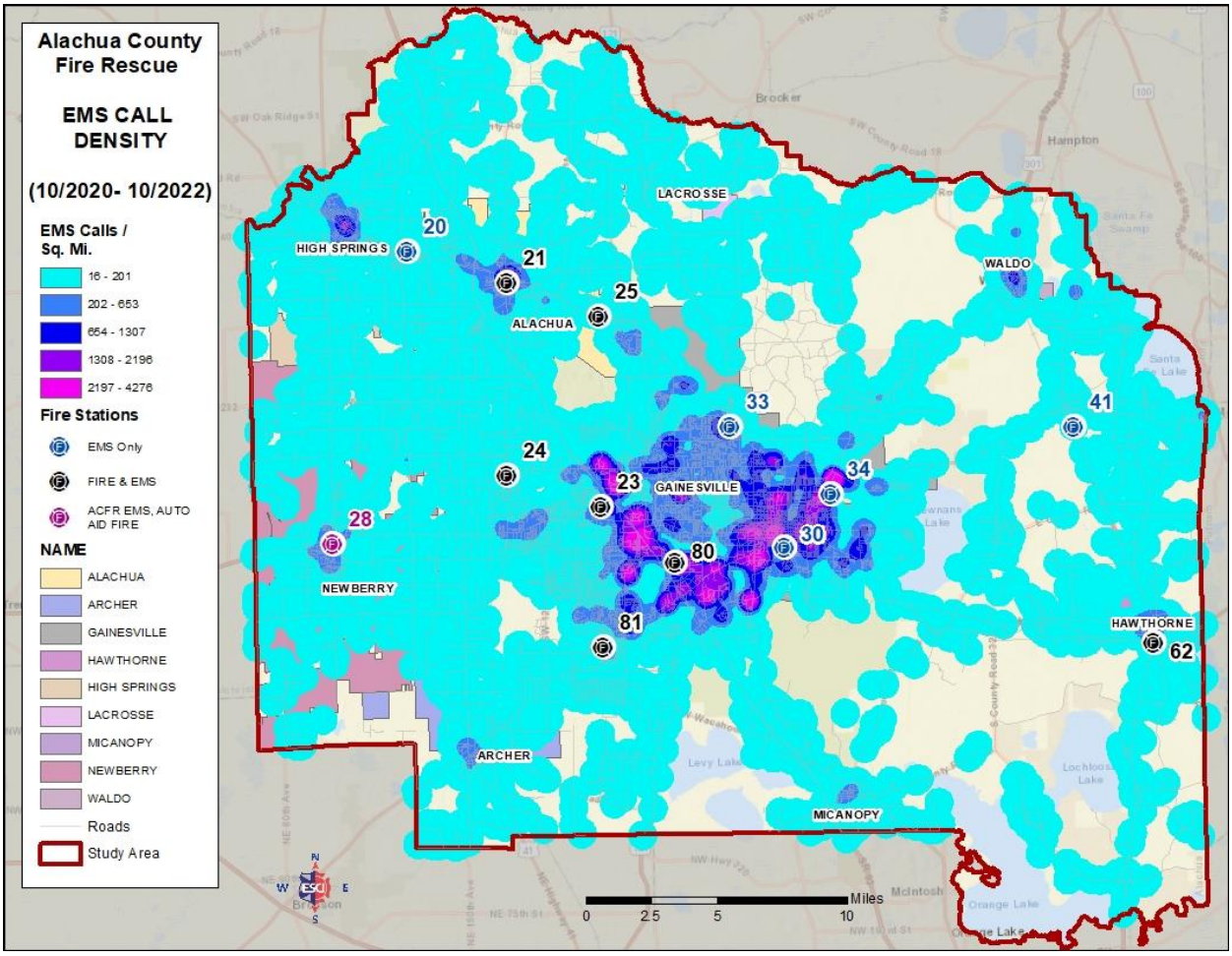


Figure 46: EMS Heat Map shows an EMS incident density heat map for October 1, 2020, to September 30, 2022, incidents. Figure 46 helps compare where gaps in coverage are with where incidents occur. For instance, if there is a large agricultural area that doesn't produce any emergency incidents then there wouldn't make sense to locate resources there, thus justifying the lack of coverage in those areas.

Figure 46: EMS Heat Map

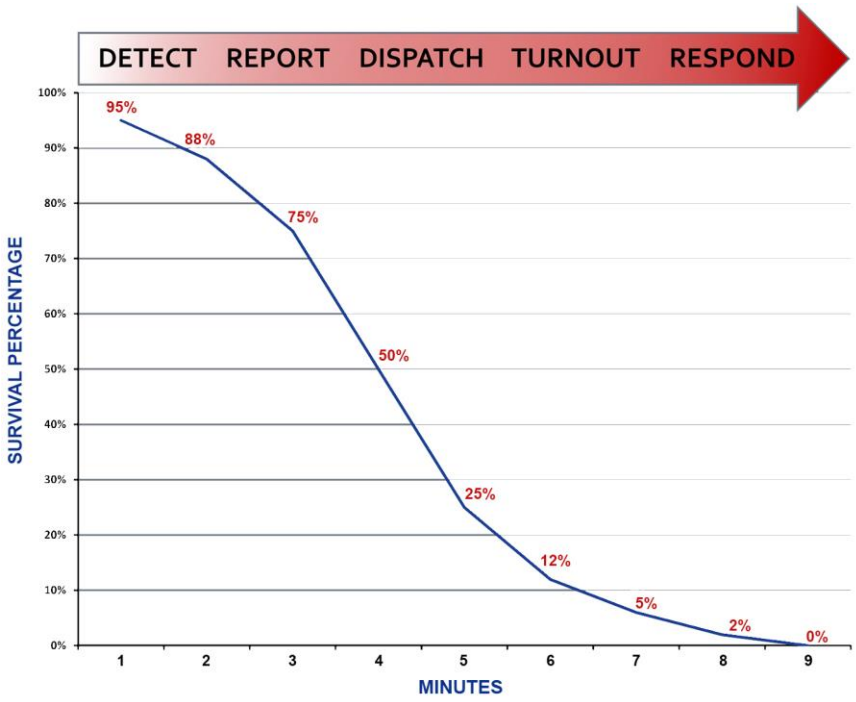


Cardiac arrest is the most significant life-threatening medical event in emergency medicine today. A victim of cardiac arrest has mere minutes in which to receive lifesaving care if there is to be any hope for resuscitation.

The American Heart Association ("AHA") issued a set of cardiopulmonary resuscitation guidelines designed to streamline emergency procedures for heart attack victims and 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% 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 lead to emergency cardiac care can be graphically illustrated, as in Figure 47: Cardiac Arrest Event Sequence.

Figure 47: Cardiac Arrest Event Sequence



The percentage of opportunity for recovery from cardiac arrest drops quickly as time progresses. The stages of medical responses are very similar to the components described for fire responses. Research stresses the importance of immediate CPR, rapid cardiac defibrillation, and administration of certain medications as a means of improving the opportunity for successful resuscitation and survival. ACFR can increase survival rates by educating citizens on how to do CPR or hands-only CPR.

Alternative Service Delivery

The following analysis provides two alternative service delivery models: community paramedicine programs and a two-tier system for service delivery. ACFR has begun implementing community paramedicine programs, while the two-tier system for service delivery is occasionally utilized during periods of need based upon staffing levels.

Community Paramedicine

ACFR provides pre-hospital ALS emergency medical care and transport services 24 hours per day, seven days a week through the deployment of 15 fire-based rescue units and five single certification (paramedic and emergency medical technician) rescues. Additionally, ACFR has five Critical Care Peak load units that run 13 to 14 hours days strategically located throughout the County. ACFR is the only licensed ALS transport unit in the County.

In addition to on-shift personnel providing BLS and ALS care as part of EMS incident responses, ACFR has introduced new initiatives and resources to expand the Department's EMS capabilities. For example, ACFR has developed a Community Health Team ("CHT") that is run through medical internals at local hospitals and ACFR's Captain of Health and Safety. The CHT manages members that utilize the E911 system frequently and assists with their needs so as not to be transported to the hospital all the time.

The CHT is made up of EMTs and paramedics from ACFR who come in on their days off (and receive incidental overtime pay) to assist with home assessments, patient checkups, etc. ACFR allows members to participate based on voluntary selection and utilizes medical interns from local hospitals when available. Medical interns assist with phone calls, scheduling of appointments, locating other resources, and patient/candidate research. Currently the CHT works at Headquarters and Stations 30 and 33.

The CHT has been doing home assessments based on referrals from ACFR crews in the field, teaching fall prevention to the elderly, assisting with medication compliance, finding resources for behavioral/elderly services, and public education for health and wellness. Currently there is no true funding for the program.

In addition to the CHT, ACFR utilizes Tele911 which is a Telehealth company that partners with EMS agencies across the nation. Tele911 allows ACFR to virtually bring a certified ER physician to the scene and prevent unnecessary transports to the emergency room. ACFR can provide "treatment in place" (for non-critical patients) which results in less cost and time for the patient, keeps rescues available for critical calls, and assists with keeping the emergency rooms from becoming overcrowded.

The Tele911 physician can call in prescriptions for the patient while they are on the phone with the patient and ACFR crews. Tele911 has a Patient Care Coordinator that follows up with the patient within 24-hours to see how they are doing. Tele911 also assists ACFR crews with patients that refuse medical treatment/transport that are considered high-risk refusals (diabetics, chest pain, congestive heart failure, etc.). When ACFR crews utilize Tele911 and contact the physician virtually, the physician is also able to try and convince the patient that they need to be transported.

Tele911 staff trained ACFR leadership and 20 paramedics (a mix of rescue and engine personnel) within the Department on the program and the technology. ACFR learned how to access the doctors virtually on their tablets and learned expectations/policies for Tele911. ACFR crews respond to medical emergencies as normal and after they assess the patient and determine that the patient does not require transport but would benefit from a Telehealth visit, they prompt Tele911 by using the app on their devices. Tele911 doctors are available 24/7.

These programs are great alternatives for EMS responses and work to reduce the number of EMS incidents as well as reduce the number of transports. These programs are new so data on how they are working in ACFR is not available, but the expectation is that the programs will help reduce workload of units.

Two-Tier System

In EMS delivery, there are two common levels of service: BLS and ALS. Both BLS and ALS care are vital steps in the AHA's Chain of Survival, which is a sequence of actions that can increase survival rates of cardiac arrest and other emergencies. The Chain of Survival is shown in Figure 48: AHA's Chain of Survival.

Figure 48: AHA's Chain of Survival

The 5 links in the adult out-of-hospital Chain of Survival are:

- **Recognition** of cardiac arrest and **activation** of the emergency response system
- Early **cardiopulmonary resuscitation (CPR)** with an emphasis on chest compressions
- Rapid **defibrillation**
- Basic and advanced emergency medical services
- Advanced life support and post-cardiac arrest care

A BLS provider is not authorized to performed invasive procedures and may only administer a few select medications. ALS providers perform invasive procedures and administer a wider array of medications. For ALS procedures to be performed, an EMS unit must include ALS providers (such as paramedics or licensed physicians), and must have ALS equipment available. EMTs are only certified to provide BLS-level care.

Due to the amount of training needed to become a paramedic and nationwide shortage of paramedics, many organizations have experienced difficulty recruiting recruit ALS-trained personnel. ACFR does work with current employees to get field personnel trained to the ALS level, however this takes time and budget.

Many fire rescue department utilize a two-tier system with both ALS transport units and BLS transport units. A two-tier system allows fire rescue departments to spread limited personnel and resources and can allow ALS providers to release patients not requiring ALS-level care to BLS crews, which can put the ALS providers back in service faster. The practice can help with retention by reducing the workload of ALS units, including the number of mandatory holdovers needed for ALS providers. Within the current ACFR structure, most suppression units are staffed with ALS personnel and equipment that could be utilized if needed to upgrade a BLS transport unit.

Departments considering a two-tier system should conduct a cost-benefit analysis of the model, understanding the importance of developing in-depth medical protocols governing determination of whether ALS or BLS care is required to avoid misdiagnosing patients and increasing the ambulatory service's liability.

Efficiency of Program Activities

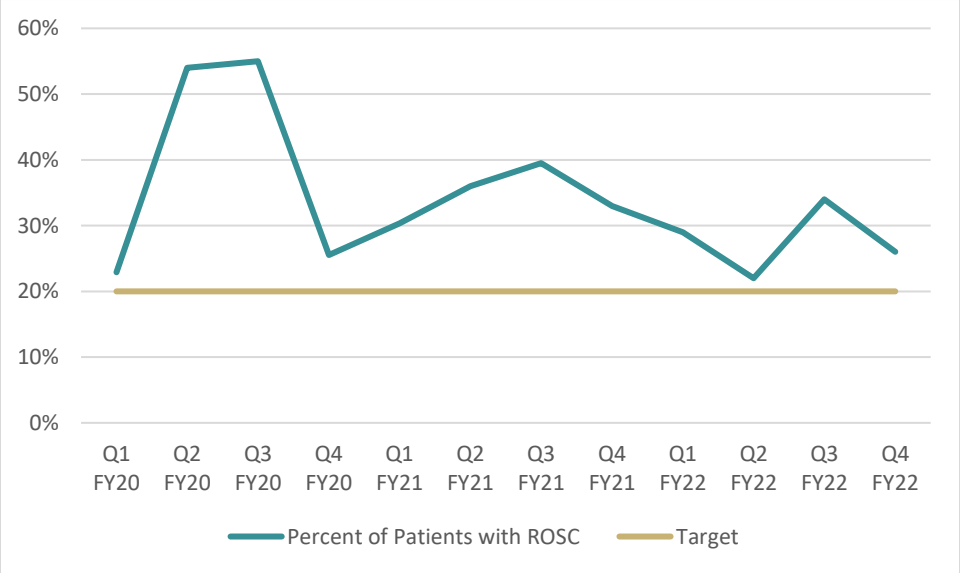
ACFR response time for EMS (not including call processing time, as that is determined by the Alachua County Sheriff's Office, not ACFR) at the 90th percentile response is higher than the national standard for maximum response time by approximately 7 minutes, suggesting the Department's rescue units are not able to appropriately traverse the County in a timely and effective manner. As previously noted, response time performance is expected to differ depending on the demand zone (urban, suburban, or rural). However, the Department's response time for EMS at the 90th percentile is higher than even the NFPA maximum recommendation for rural response time. Calculations by the Department indicate goals were not met in FY20 or FY21 (calculations were not conducted for prior years or FY22) for the percentage of rescue units that arrived within the expected response times set by the Department, as demonstrated in Figure 49: ACFR EMS Response Time Goals and Actuals, by Demand Zone.

Figure 49: ACFR EMS Response Time Goals and Actuals, by Demand Zone

Demand Zone	Response Time Goal	Percent Goal of Units Achieving Response Time Goal	FY20 Percentage	FY21 Percentage
Urban	6 min	80.00%	38.50%	33.80%
Suburban	8 min	80.00%	55.80%	50.00%
Rural	12 min	80.00%	56.50%	52.50%

However, while ACFR is not meeting Department-set goals or NFPA standards for EMS response time, the Department has consistently exceeded goals for the percent of non-traumatic cardiac arrest patients with the return of spontaneous circulation ("ROSC"), or the resumption of sustained breathing and cardiac activity. Figure 50: Percent of Non-traumatic Cardiac Arrest Patients with ROSC shows the quarterly percentage of patients with ROSC for the past 12 quarters, each of which exceed the Department's goal of 20%.

Figure 50: Percent of Non-traumatic Cardiac Arrest Patients with ROSC



Determination of the Department's efficiency and effectiveness of EMS operations depends on the goals and priorities of ACFR and Alachua County leadership. Measuring response time, coverage of the County within 8 minutes by an EMS transport unit, and volume of calls and transports per rescue unit can determine an EMS provider's efficiency and effectiveness. However, during conversations with Department leadership, the emphasis for EMS operations appeared to be put on the actual patient care provided and ensuring all patients in Alachua County receive the same pre-hospital care. When the M&J Team requested customer service satisfaction surveys, the Department indicated none had been performed in the last five years, so the M&J Team was not able to determine whether patients feel they receive appropriate pre-hospital care. However, the fact that ACFR has consistently met important medical-care goals, such as the percent of non-traumatic cardiac arrest patients with ROSC indicates a high level of service delivery by the Department.

Additionally, the Department has undertaken initiatives to improve efficiency in EMS operations. The introduction of the Peak Load Division shifted critical care responsibilities from 24-hour employees who are cross-trained for both fire protection and EMS operations to 40-hour employees who are specially trained in critical care services. The introduction of Tele911 allows for better real-time interfacing between ACFR, patients, and licensed physicians, improving the pre-hospital patient care experience. And through the efforts of the Medical Director and Department leadership, ACFR continues to introduce tools and technology intended on continuing to remain on the forefront of public sector EMS service delivery.

Observations and Recommendations

Observation 1: Because critical care rescue units do not have turnout gear, RCCs do not respond to vehicle accidents. If a unit is on the road and encounters a vehicle accident, staff have a duty to act as the first unit on the scene, which RCCs cannot currently do without turnout gear.

Recommendation 1: ACFR should consider providing RCCs with PPE, such as a protective jumpsuit, that protects staff in the event a unit without turnout gear encounters and has to serve as first responders to a vehicle accident.

Observation 2: ACFR does not list CAAS accreditation on the Department's webpages, which is a common practice for accredited agencies to identify the high standards met by the EMS provider.

Recommendation 2: ACFR leadership should work with the Alachua County Communications Office and/or the Information and Telecommunications Services Department to include the CAAS accreditation logo on the ACFR homepage.

Observation 3: ACFR leadership stresses the importance of providing high-quality, consistent pre-hospital care to all Alachua County residents and visitors, but does not actively capture patient satisfaction. The ACFR webpages do include a satisfaction survey, though the M&J Team did not receive any data regarding responses submitted.

Recommendation 3: ACFR should actively encourage patients and other Alachua County residents and visitors who use ACFR's services to provide feedback – either through the digital satisfaction survey or other means – regarding the Department's service delivery. The Department can include a note in billing statements, encourage participation through social media and outreach, or request feedback during community events. ACFR leadership should consider customer feedback when evaluating whether programs are meeting intended purposes and community needs.

Observation 4: ACFR has implemented a Community Health Team to improve EMS operations efficiency and decrease the workload of field personnel by mitigating the number of hospital transports required. The CHT is primarily comprised of staff who volunteer on their days off and medical interns at the local hospitals. The CHT does not currently have funding and operates under a limited scope.

Recommendation 4: ACFR leadership should evaluate how the CHT is currently being utilized and determine how the Department wants to use the CHT to address changing needs within the community. Some considerations for ACFR leadership include:

- Seeking public and private partnerships for the CHT, such as the University of Florida;
- Researching grant funding for the CHT;
- Preparing a budget for the CHT;
- Increasing participation in the CHT, utilizing internal and external recruitment efforts; and
- Expanding the scope of the CHT to include services such as delivering IV antibiotics and vaccinations.

Observation 5: ACFR has introduced community paramedicine programs, such as Tele911 and the Community Health Team, as alternatives to traditional EMS response (*i.e.*, ambulatory services). Community paramedicine programs across the country have worked well for many fire rescue departments in reducing EMS responses and unit workloads. Resources and new initiatives do, however, add additional costs to the Department's budget.

Recommendation 5: ACFR leadership should perform an annual cost-benefit analysis of community paramedicine programs (including Tele911, the Community Health Team, and any future initiatives) to measure effectiveness and efficiency of each program.

Observation 6: ACFR permits all emergency response vehicles at the ALS level, encouraging operations staff to attain paramedic licensure in order to provide the highest level of pre-hospital care. Many fire rescue departments utilize a two-tier system of BLS and ALS providers to maximize resources and improve employee retention. Additionally, paramedic licensure for certification at the ALS level costs the sponsoring department and put personnel and vehicles out of service during training.

Recommendation 6: ACFR should conduct a cost-benefit analysis to determine whether the current system of permitting all vehicles and as many field personnel as possible at the ALS level is efficient and effective for the Department, or if ACFR should consider a two-tier system with both ALS transport units and BLS transport units.

Observation 7: ACFR is not meeting established goals for achieving EMS unit response times that meet national standards or ACFR-established maximums. ACFR rescue units regularly report response times higher than recommended maximums for urban, suburban, and rural demand zones, which can be attributed to a number of factors, such as number of units available and location of stations.

Recommendation 7: ACFR should work with a third-party vendor that specializes in emergency response to update the Department's master plan, which can address ways to improve response time and overall service delivery.

5.B Fire Protection

Introduction

ACFR provides fire protection services to all of unincorporated Alachua County and to certain municipalities within the County with which the County maintains signed interlocal agreements. ACFR's fire protection services are performed by staff located within the Fire Operations Branch of the Department's Fire Rescue Operations Section. While its origins are as an ambulance service, ACFR has provided fire protection services to unincorporated Alachua County for nearly 40 years.

Key Functions

ACFR's key functions related to Fire Protection include the following:

- Incident Preparation
- Incident Response

Incident Preparation

ACFR fire protection personnel are responsible for ensuring that they are constantly prepared to respond to emergency situations. Line personnel spend time between incidents cleaning and maintaining facilities and equipment, restocking supplies, and refueling vehicles as needed. The Department regularly inspects response vehicles and coordinates with the Alachua County Public Works Department's Fleet Management Division ("Fleet Management"), who performs all vehicle maintenance and repair, to keep vehicles in good working order and minimize service disruptions. ACFR personnel are required to wash the exterior of their assigned vehicle at the beginning of each shift and as needed throughout the day.

The Central Storage Warehouse ("CSW") resupplies busy, urban stations twice per week and less busy, rural stations once per week. Personnel at each station are responsible for tracking the station's supplies and updating the Department's inventory management software, OperativeIQ. Workers at each station submit inventory requests through OperativeIQ, which automatically adds any items where the recorded inventory is below a minimum value.

ACFR line personnel periodically test and inspect fire protection equipment to ensure that it remains safe, effective, and compliant with relevant standards. Figure 51: ACFR Fire Protection Equipment Testing shows the fire protection equipment tested or inspected by ACFR line personnel, the tests or inspections performed, and the test or inspection frequency.

Figure 51: ACFR Fire Protection Equipment Testing

Equipment	Test	Frequency
Fire Hydrant	Flush Test	Annually
Fire Hydrant	Pressure Test	Annually
Fire Hydrant	Fire Flow Test	Every Five Years
Bunker Gear	Advanced Inspection	Annually
Fire Hose	Service Testing	Annually
SCBA	Basic Inspection	Each Shift
SCBA	Detailed Inspection	Weekly
Ladder	Service Testing	Annually

Company officers are responsible for ensuring that their company is fully trained and fit for duty. While all line personnel must hold the appropriate state certifications, ACFR units also undergo periodic training to ensure that they know and have practice executing the correct procedures for responding to different emergency situations, can carry out demanding rescue tasks, and are able to effectively work together in challenging environments. Line personnel must be both physically and mentally healthy, properly dressed, neatly groomed, alert, and ready for duty for the entirety of their shift.

Incident Response

ACFR fire protection personnel respond to 911 calls for emergency situations such as structure fires, brush fires, EMS requests, natural disasters, automobile accidents, hazardous materials incidents, mass casualty incidents, alarms, emergencies that require technical rescue, and gas leaks. The Department's 11 frontline fire suppression apparatuses are stationed in strategic locations across the County to minimize the time that it takes for first responders to arrive at the scene of an emergency. Dispatchers stationed in the Alachua County Sheriff's Office Combined Communications Center ("CCC") receive distress calls from across the County on the E911 system. The dispatchers assess each call and use the County's radio system to dispatch law enforcement and/or fire rescue personnel from the appropriate jurisdiction(s). ACFR maintains interlocal agreements with several municipalities across the County that allow for cross-border incident responses. Under an interlocal agreement, first responders from the municipal fire rescue department can be dispatched to a fire in unincorporated Alachua County and an ACFR unit can be dispatched to a fire within the municipality. Interlocal agreements enhance ACFR's incident response capabilities by allowing the closest unit to respond to each incident, regardless of jurisdiction.

ACFR locates water tankers in rural areas of the County in order to facilitate fire suppression in areas without access to hydrants or other alternative water sources. The Department's four water tankers, each of which can transport between 2,500 and 4,000 gallons of water, provide the basis for the determination by the Insurance Services Office ("ISO") that ACFR can deliver an appropriate water supply to rural properties without an otherwise readily available water supply. The M&J Team further discusses ISO ratings in the Performance Analysis section of this report chapter.

ACFR has maintained a heavy rescue truck since August 2022 that is primarily staffed by line personnel who are certified and equipped to perform technical rescue operations such as vehicle extrications, confined space rescues, and rope rescues. The heavy rescue truck removes a standard fire engine's water delivery capability and instead serves as a "rolling toolbox" for fire rescue operations. The heavy rescue truck carries a range of equipment, including chainsaws, power equipment, hand tools, and extrication equipment.

Following each incident, the company officer of each responding unit is responsible for creating and submitting a report that gives a narrative of the incident and details the actions taken by the apparatus' crew. ACFR uses software from ESO to collect and store incident reports. Each incident report is tied to the relevant Computer Assisted Dispatch ("CAD") record created by dispatchers. ACFR uses these reports to track Department performance, such as incident volume, incident response time, and incident outcomes.

ACFR does not currently designate an incident safety officer on most emergency incidents. National Fire Protection Association ("NFPA") Standard 1710 (Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments) recommends an incident safety officer shall be deployed upon confirmation of a structural fire, at special operation incidents, or when significant risk is present to the member due to the nature of an incident. The National Institute for Occupational Safety and Health Fire Fighter Fatality Investigation and Prevention Program conducts investigations of fire fighter line-of-duty deaths to formulate recommendations for preventing future deaths and injuries. Many of these investigations reveal that an incident safety officer was not in place during these line-of-duty deaths.

Through interviews with ACFR personnel and staff, the M&J Team learned that the shift Training Lieutenant occasionally serves as an incident safety officer. However, the Training Lieutenant position is not in the response matrix and the position is not backfilled through overtime when the shift Training Lieutenant is off duty. Department leadership indicated plans for the Health and Safety Officer to provide incident safety training to additional response personnel.

Staffing and Personnel Management

Fire protection services are carried out by the line personnel within the Fire Operations Branch, and are split into three shifts – A Shift, B, Shift, or C Shift. The Assistant Chief of Fire Operations oversees the Fire Operations Branch. Six District Chiefs report to the Assistant Chief of Fire Operations. Alachua County consists of two districts – District 5 and District 6. Each shift consists of two District Chiefs. For each shift, one District Chief oversees the stations in District 5 and another District Chief oversees the stations within District 6. A standard shift for line personnel within the Fire Operations Section lasts 24 hours. Not including any overtime, 24-hour personnel within the Fire Operations Section have 48 hours off shift after a full day of work, unless they volunteer to work any overtime, special events, or are mandated overtime.

Companies (or the personnel who are staffed to a station during a shift) are comprised of employees who hold one of four different position classifications: Lieutenant, Rescue Lieutenant, Driver/Operator, or Firefighter. Figure 52: Fire Operations Branch Allocation Positions shows the current allocation amount of each position within the Fire Operations Section and the current number of positions filled:

Figure 52: Fire Operations Branch Allocation Positions

Position	Allocated Amount	Current Staff Amount	Notes
District Chief	6	6	
Lieutenant	36	38	This number includes the count of three Training Lieutenants in the position during FY23
Rescue Lieutenant	36	36	
Driver/Operator	36	35	
Firefighter	160	115	This count does not include Firefighters in training at the time of the M&J Team's fieldwork

Currently, ACFR has six District Chief positions within the Fire Operations Branch; all six are filled. According to NFPA 1710, a District Chief must be able to arrive at any fire rescue incident anywhere within their assigned district within 480 seconds (8 minutes) of the original call. Alachua County consists of approximately 825 square miles of land. With only two District Chiefs on shift at a time, it is not possible for the District Chiefs to arrive on scene within 8 minutes at every possible location for a fire rescue incident.

Figure 53: District Chief Span of Control shows the number of direct reports per District Chief, as well as the total line personnel on shift within each district. ACFR's current unit staffing levels require at least 65 employees to work per shift to fully staff the 11 frontline fire suppression units and the 15 24-hour EMS units, plus the two 24-hour District Chief positions. Because District Chief 8 represents the 40-hour District Chief assigned to EMS who oversees the Peak Load Division, District Chief 8 was not included in the analysis.

Figure 53: District Chief Span of Control

District Chief	Direct Reports per Shift	Minimum Personnel per Shift
District Chief 5	9	23
District Chief 6	10	40
Total	**19**	**63**

Span of control refers to the number of subordinates or teams that a supervisor can effectively manage and oversee. Benchmarks for span of control can vary depending on the organization, industry, and specific circumstances. In general management and leadership roles, a commonly recommended span of control is between five and 10 subordinates. The general range allows for effective supervision and communication while preventing excessive managerial layers. NFPA 1561 (Standard on Emergency Services Incident Management System) recommends of span of control of three to seven subordinates per supervisor, which includes the Incident Commander ("IC"). The NFPA-recommended range allows for flexibility based on incident complexity. Throughout the fire service industry, the span of control for District Chiefs varies based upon department size, area served, and specific roles and responsibilities for the District Chief.

Adding a District Chief to the ACFR command structure would allow for a more effective span of control for both emergency and nonemergency duties. Additionally, an additional district would increase District Chief coverage, allowing for a chief officer to arrive on scene faster. The absence of a chief officer on scene in a timely manner to serve as the dedicated IC for a multiunit incident contributes to firefighter injury and death. The IC is responsible for overall scene management, including strategic decision-making, resource allocation, and incident coordination. In the absence of an IC, these critical functions may not be effectively managed, increasing the risk of uncoordinated actions and resource misallocation. Delayed response times mean decisions on resource deployment, firefighting tactics, and hazard mitigation may be delayed or suboptimal, putting firefighters at greater risk for injury or death.

The National Institute for Occupational Safety and Health ("NIOSH"), through the NIOSH Fire Fighter Fatality Investigation and Prevention Program, conducts in-depth investigations into firefighter line-of-duty deaths and provides recommendations to prevent similar incidents in the future. Many NIOSH reports highlight the need for a chief officer to arrive on scene as an IC. District Chiefs receive specialized training in incident command and management – the District Chief's expertise and experience are essential for effective decision-making and incident coordination.

Figure 54: District Chief Potential Span of Control Average shows what a potential span of control would be for ACFR with the addition of one District Chief. Figure 54 assumes the number of direct reports and total personnel are divided equally between the District Chiefs. The change would bring the span of control of direct reports per shift within the NFPA-recommended range of three to seven.

Figure 54: District Chief Potential Span of Control Average

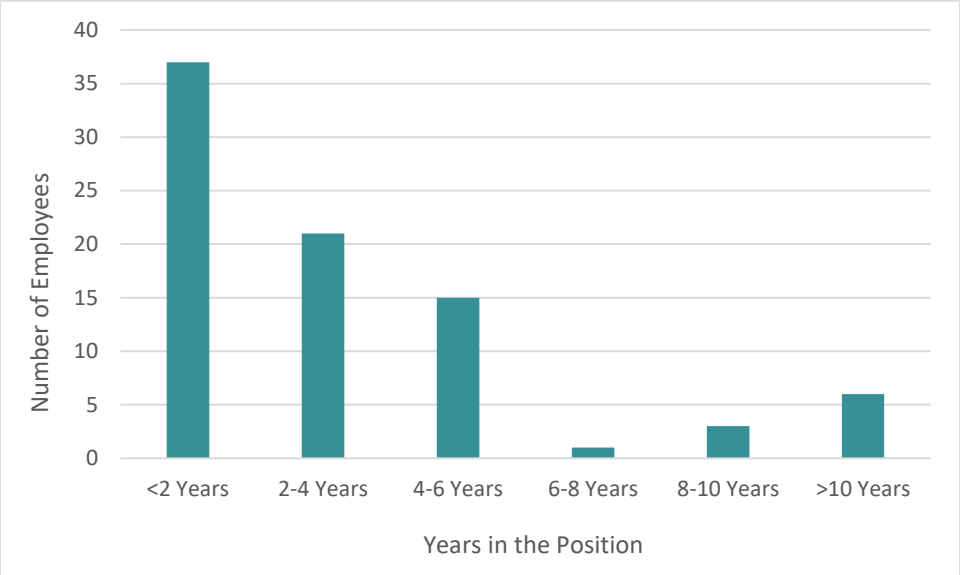
Direct Reports per Shift	Minimum Personnel per Shift
6.33	21

The Firefighter position, as of FY23, included 160 allocated positions. At the time of the M&J Team's fieldwork, the Department was in the process of training a large class of Firefighters to fill vacant positions.

Within the Department there are nine different engine company vehicles that perform fire protection services. According to NFPA 1710, engine companies should have a minimum of "four on duty members." According to an apparatus staffing spreadsheet submitted to the M&J Team by ACFR, the Department currently staffs engines with a minimum of three on-duty personnel including one Lieutenant, one Driver/Operator, and one Firefighter.

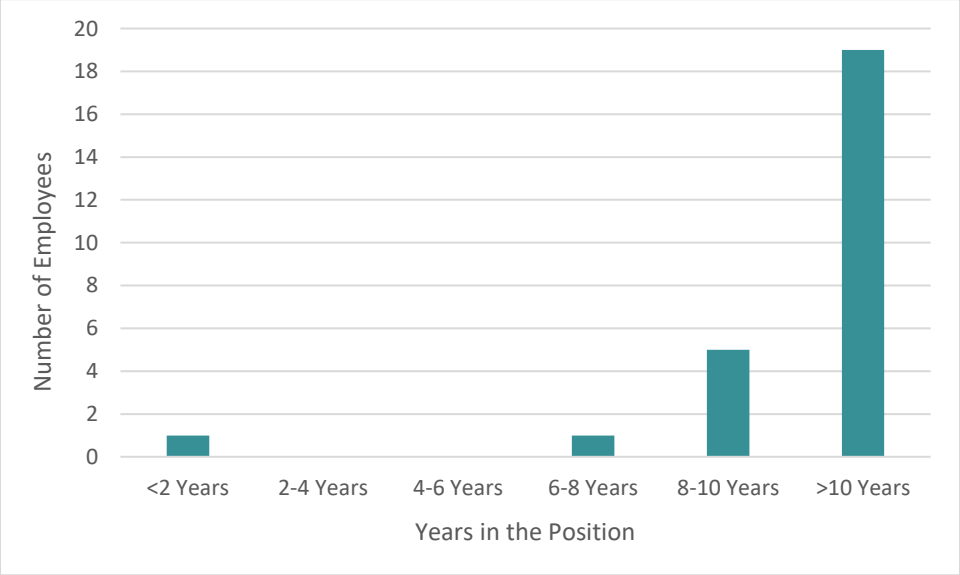
Firefighter retention in the Department is important to ensure that the allocated amount of Firefighter positions is always fully staffed. Figure 55: Firefighter Retention Data - FY18 to FY23 shows how many years, on average, Firefighters are staying in the position before being promoted or leaving the Department.

Figure 55: Firefighter Retention Data - FY18 to FY23



ACFR requires anyone promoting into the Driver/Operator position to hold certification as a paramedic and be cleared by the Medical Director to function as a paramedic on Departmental operations. As shown in Figure 56: Driver/Operator Retention Data - FY18 to FY23, once Firefighters promote to the Driver/Operator position, the retention rate rises, with more than half of employees from FY18 to FY23 staying in the position for 10 or more years.

Figure 56: Driver/Operator Retention Data - FY18 to FY23



The high turnover rate for the Firefighter position, as previously shown, has negatively affected the ability to fill shifts fully with the currently staffed FTEs. The Department is forced to offer overtime if staff scheduled for the shift aren't available, and if no out-of-class personnel on the shift are able to "act up," or fill a position they have been qualified to fill but have not yet been promoted to. Out-of-class personnel are employees who meet the necessary requirements to fill the position they are acting in, but have not yet been promoted to the vacant position. Overtime hours for employees that provide fire protection services has risen per year in the last three years as shown in Figure 57: Number of Firefighter Overtime Hours - FY21 to FY23.

Figure 57: Number of Firefighter Overtime Hours - FY21 to FY23

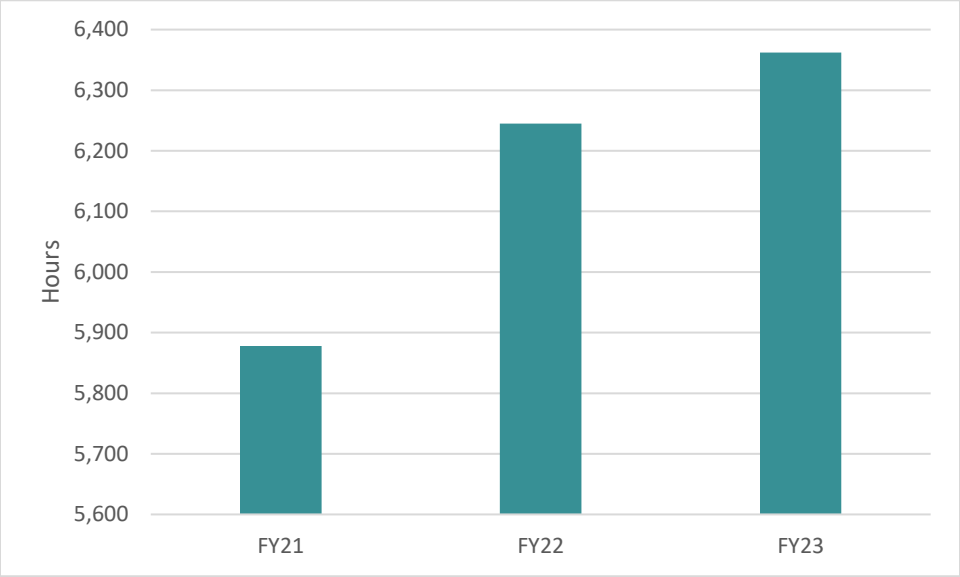
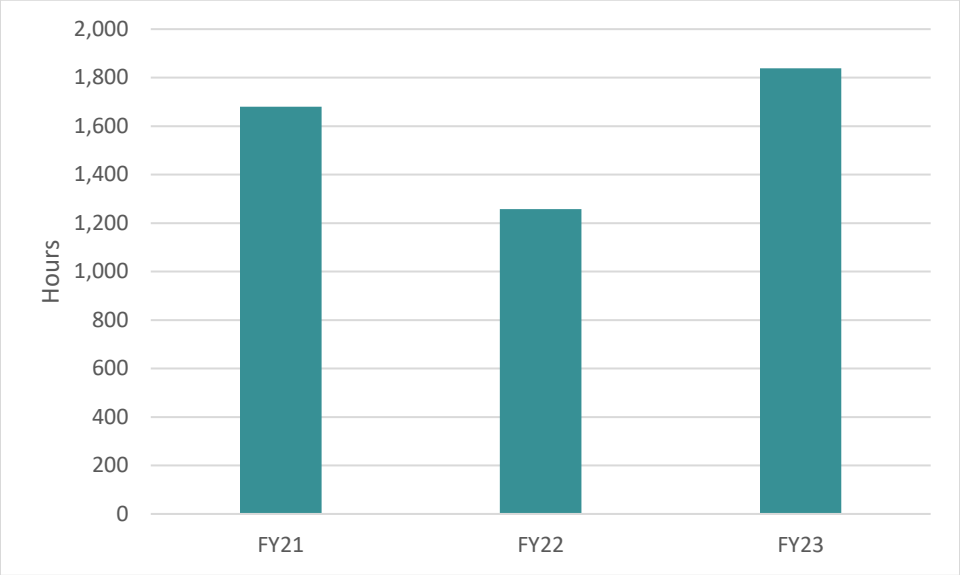


Figure 58: Firefighter Mandatory Overtime - FY21 to FY23 shows the number of mandatory overtime assignments served by the Firefighter position from FY21 to FY23. Mandatory overtime is assigned when other options to fill a vacant shift fail, including offering the shift as regular overtime or offering the shift to out-of-class personnel. Mandatory overtime interrupts the 48 hours of off-shift time that 24-hour personnel receive after working one standard 24-hour shift.

Figure 58: Firefighter Mandatory Overtime - FY21 to FY23



Management and Administration

Strategic Initiatives

A review of the Fire Ops Branch's strategic initiatives was performed through two evaluations:

- Level of Service Guidelines and Current Master Plan Recommendations
- Current and Future Trends

Level of Service Guidelines and Current Master Plan Recommendations

The current level of service guidelines are based on the 2012 Master Plan. The industry standard for master plans are roadmaps that are used by fire and EMS departments for 10 to 15 years. However, it is important to have three to five strategic plans that consistently evaluate level of service as well as an annual Standards of Cover document.

Figure 59: 2012 Master Plan Facility Recommendations and Figure 60: 2012 Master Plan Apparatus Recommendations show the facility and apparatus recommendations that were presented in the 2012 Master Plan.

Figure 59: 2012 Master Plan Facility Recommendations

Recommendation	Status	Notes
Replace Rescue 2 with a new station	Completed	Station 30 constructed to house Rescue 30 and Rescue 31 (previously Rescue 2 and 3)
Replace Rescue 9 with a new station	Completed	Station 33 constructed to house Rescue 33 (previously Rescue 9)
Relocate Station 16 to 23rd Avenue NW and 83rd Street NW	Not Completed	Station 16 is now Station 23
Relocate Station 19 to SW 45th and Archer	Not Needed	This recommendation was no longer needed when the City of Gainesville annexed the area

Recommendation	Status	Notes
Close Station 20	Not Completed	Once Station 21 is constructed, this plan on moving Rescue 20 can be explored
Replace Station 21 in Alachua	Planned	Planned to move Station 21 15909 NW 173rd Street Alachua, FL 32615
Relocate Station 25 to Hawthorne	Completed	Station 25 is now Station 62 located at in Hawthorne
Construct a new station on Highway 20 at County Road 234	Not Completed	This recommendation was based on Stations 61 and 63 being unable to provide service
Construct a new station at Highway 441 and Turkey Creek Boulevard	Completed	Station 25 is in operation out of a temporary station with plans to construct a permanent station
Construct a new station at 24th Avenue SW and 100th Street SW	In Progress	Station 80 is planned to be constructed at 10180 SW 24th Avenue, Gainesville, FL 32607
Construct a new station at 63rd Boulevard NW and 71st St NW	Not Completed	This recommendation was based on service demand increasing in the southwest of Gainesville

Figure 60: 2012 Master Plan Apparatus Recommendations

Recommendation	Status	Notes
New Rescue in Micanopy	Not Completed	Evaluate service demand to see if this is needed
New Rescue in Newberry	Completed	Rescue 28 operates from Newberry
New Rescue in High Springs	Completed	Rescue 21 operates from the City of Alachua, thus reducing the workload of Rescue 20 in High Springs

The other proposed recommendations from the 2012 Master Plan for apparatus were part of new stations being constructed. Since these stations were not constructed, the need for personnel and apparatus related to the proposed station are not discussed in the M&J report.

Staffing recommendations included an increase to 32 personnel per shift. Staffing has significantly increased since personnel counts during development of the 2012 Master Plan to a total of 63 personnel per shift not including peak load units.

Figure 61: Fire Heat Map shows a figure shows a fire incident density heat map for incidents occurring from October 1, 2020, to September 30, 2022. The map helps to compare gaps in coverage to where incidents occur. A fire heat map when compared with a fire coverage map (Figure 62: Fire Coverage Map) and fire travel map (Figure 63: Fire Travel Map) can help a fire rescue department assess the need for additional fire stations or resources.

Figure 61: Fire Heat Map

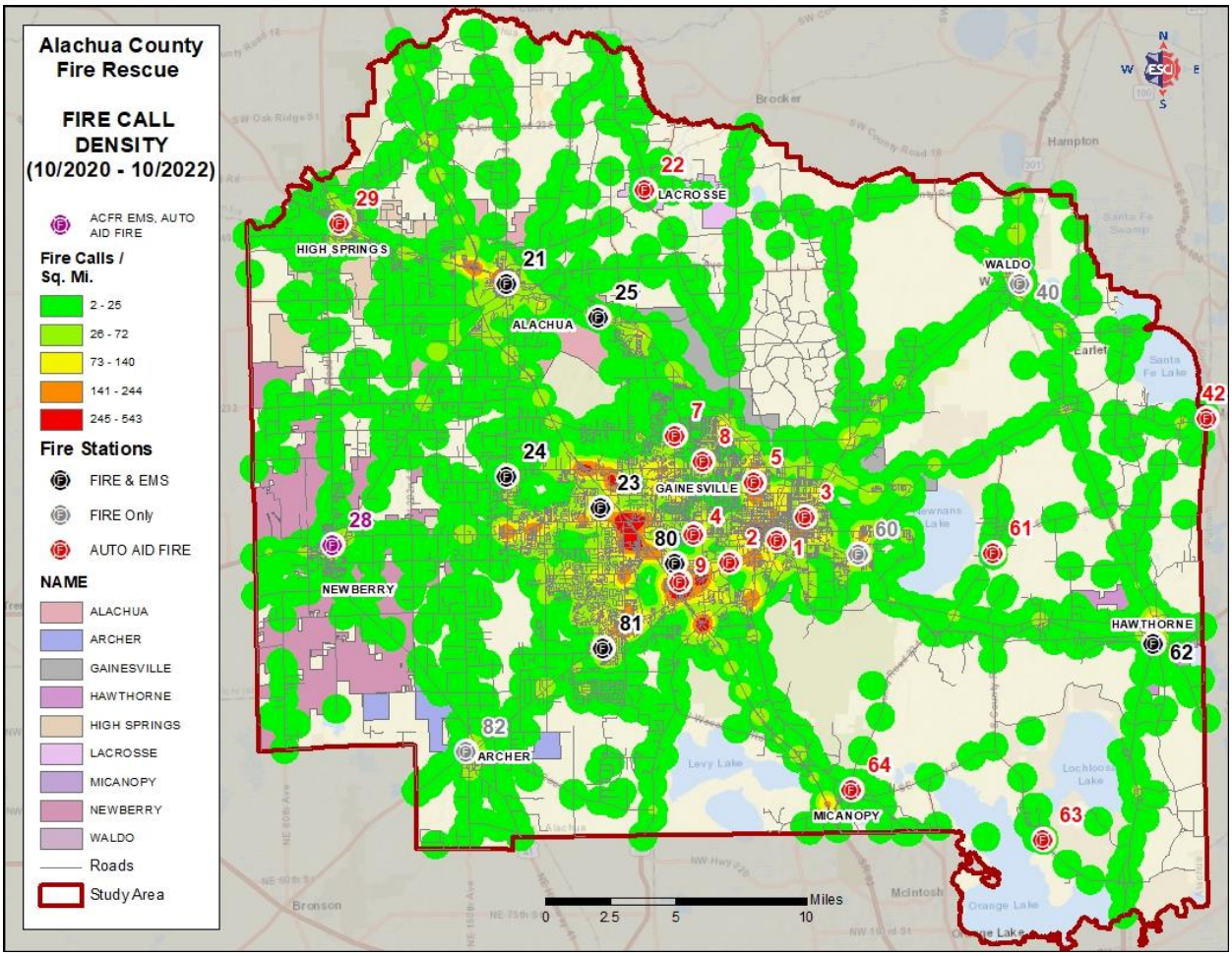


Figure 62: Fire Coverage Map

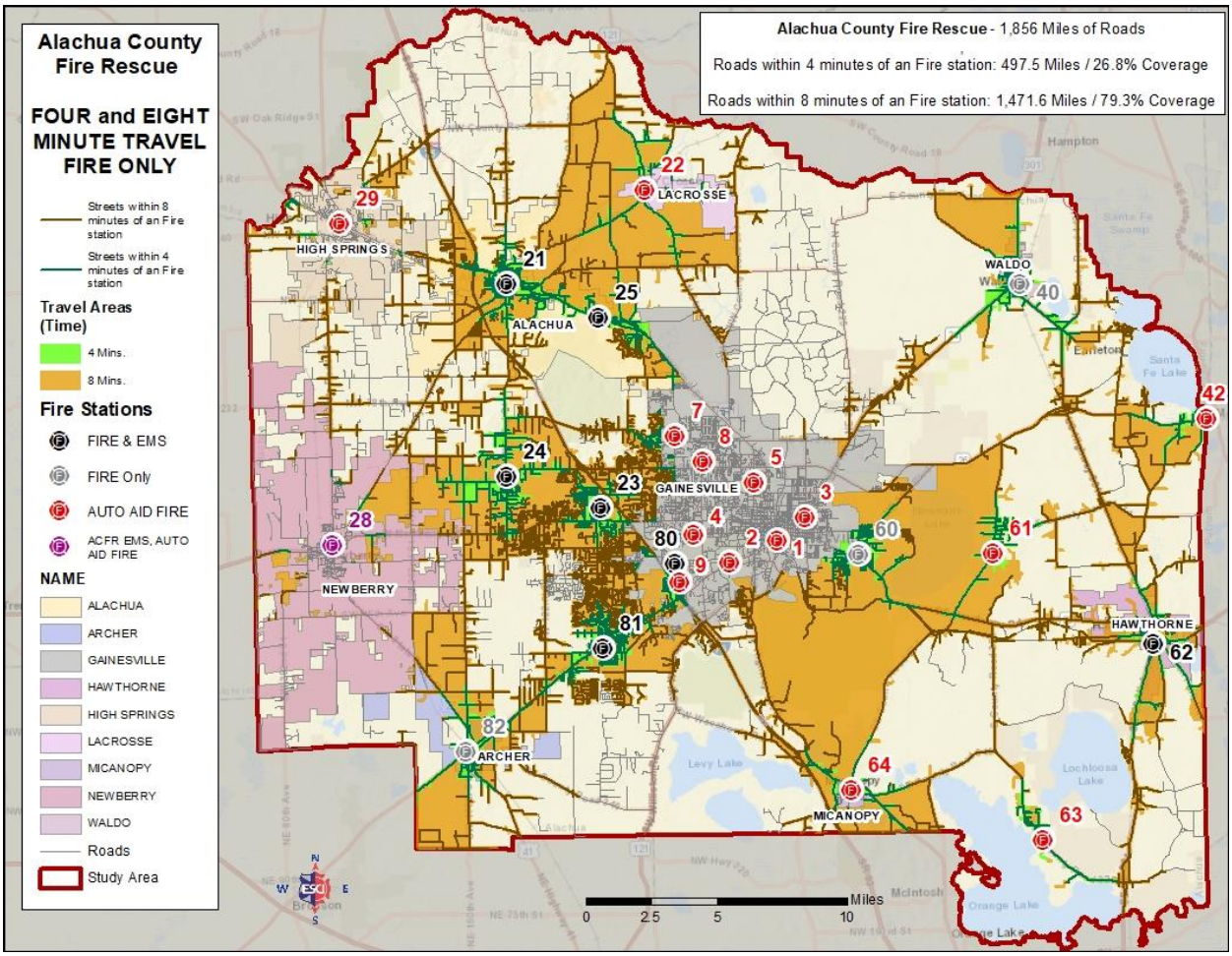
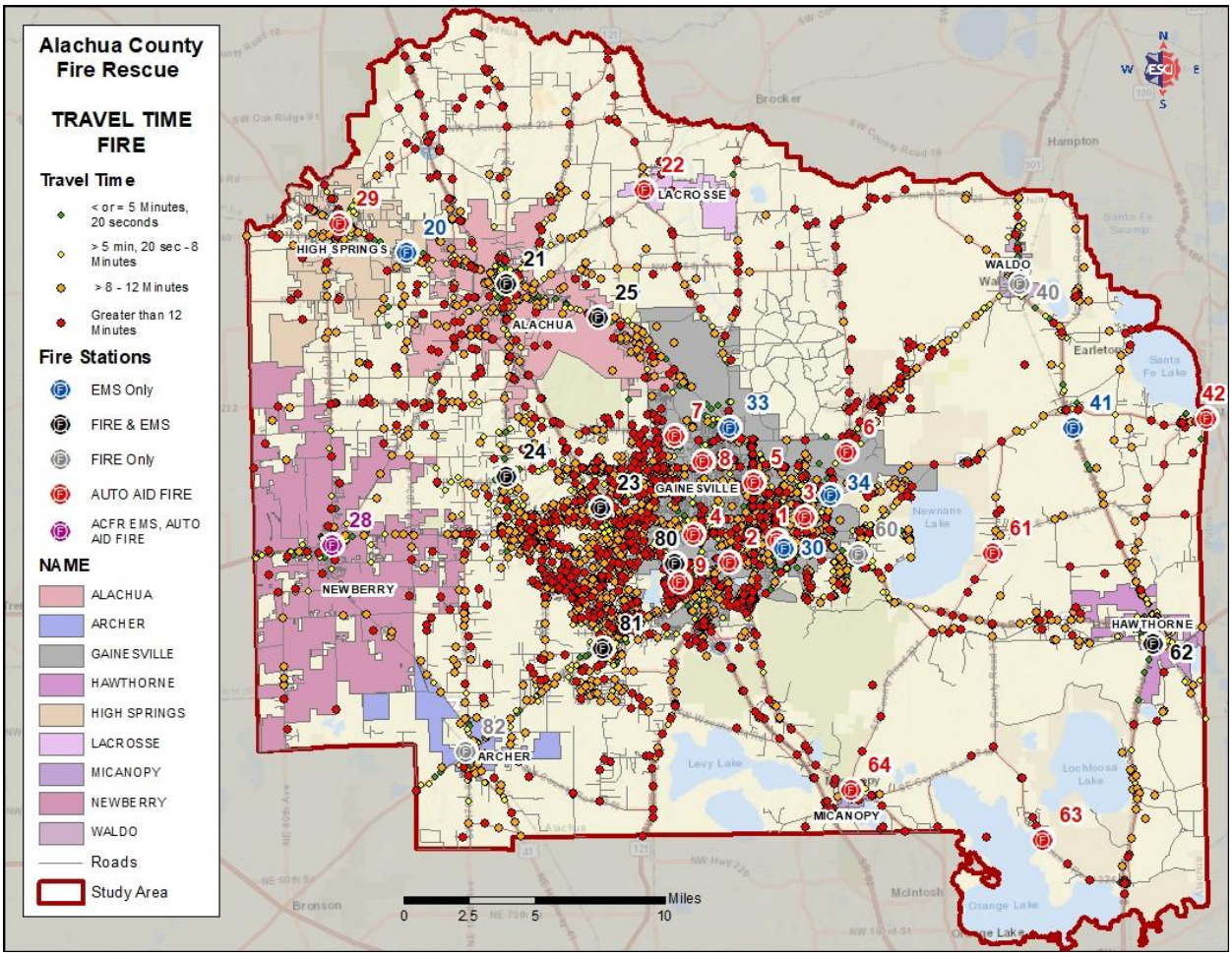


Figure 63: Fire Travel Map



Current and Future Trends

ACFR is preparing to supplement fire service in areas of the County where local municipalities, such as Micanopy, cannot continue to provide adequate service. This will require additional personnel and resources to staff these areas. ACFR is working on plans to deal with issues in these areas if they occur. Growth in Alachua County will continue to affect fire protection coverage.

One item of interest in the fire service is the growing number of electric vehicles. Many people that are moving to these types of vehicles are setting up home charging stations within their homes. If the electrical infrastructure of these homes does not support charging stations, there could be an increase in fire-related incidents.

Compliance

Florida Statutes and Florida Administrative Code

The primary governance for State of Florida firefighter employers derives from Chapter 633, *Florida Statutes* ("*F.S.*"), which directs the Department of Financial Services, Division of the State Fire Marshal ("State Fire Marshal") to set specific regulations, guidelines, and standards for firefighter employers. Chapter 69A-62, *Florida Administrative Code* ("*F.A.C.*"), establishes the standards for firefighter employment and firefighter employers, such as ACFR. The M&J Team evaluated whether ACFR's fire protection operations are meeting legal requirements, recommended standards, and leading management practices against Chapter 69A-62, *F.A.C.* The following analysis describes the *F.A.C.* sections relevant to ACFR and the Department's adherence to those requirements.

Requirements Applicable to Fire Scenes

Section 69A-62.003, *F.A.C.*, establishes 29 *CFR* 1910.134(g)(4), commonly known as the Occupational Safety and Health Administration's "two-in, two-out" policy, as standard operating practice for Florida firefighter employers during fire suppression activities. Subsection 69A-62.003(1), *F.A.C.*, requires all firefighters to successfully complete the training requirements set by Chapter 69A-37, *F.A.C.*, before participating in two-in, two-out operations. As previously noted, ACFR pays for all new employees without prior firefighter certifications to attend a certified fire college/academy in order to attain the necessary certifications required for two-in, two-out operation participation.

Section 69A-62.003, *F.A.C.*, further requires firefighter employers to understand the training standards of any entity with which the firefighter employer maintains a mutual aid, automatic aid, or similar agreement. As further discussed in Chapter 5.D (Training Bureau and Health & Safety) of the M&J report, each of ACFR's ILAs provide for joint training between Alachua County and the local municipalities which maintain fire rescue departments.

Firefighter Employer Comprehensive Safety and Health Program

Section 69A-62.021, *F.A.C.*, requires the development of health and safety policies and procedures, especially in regard to fire suppression and other emergency responses. Section 69A-62.021, *F.A.C.*, requires policies governing safety and health training, incident command, instruction for emergency vehicle operators, and procedures for analysis and reporting of accidents and near misses. While ACFR maintains policies governing many of the specific topics addressed in Section 69A-62.021, *F.A.C.*, the Department does not maintain a policy for an overall health and safety training program meeting all of the State Fire Marshal requirements. Furthermore, while ACFR maintains a policy on identifying a Safety Officer for major incident responses, the Training Lieutenants, who are identified by Department practice as the Safety Office for major incidents, are not included in the dispatch matrix. As a result, most incident responses do not have a Safety Officer present beyond the District Commander and/or company officer, who generally are charged with performing other incident command responsibilities.

Section 69A-62.021, *F.A.C.*, further requires policies for enforcing safety rules and regulations, especially in regard to records, documentation, and incident reporting. At the completion of each incident, responding units complete an incident report in ESO, which is supposed to automatically format and upload reports for any incident other than EMS calls to the National Fire Incident Reporting System ("NFIRS"). ACFR staff noted ESO integration issues with NFIRS and indicated the system is not auto-generating fire reports based upon the EMS report submitted. ESO is an EMS-first system, so all reports are initially entered as EMS reports and the system is supposed to automatically workflow the report into an NFIRS-compliant fire report based upon the incident type. As a result, ACFR staff are having to duplicate reports in order to ensure incidents are properly reported to NFIRS, resulting in concerns not all non-EMS incidents are actually being reported to the Federal database. Though Section 69A-62.021, *F.A.C.*, does not require reporting to the Florida Fire Incident Reporting System ("FFIRS"), most firefighter employers in the State report the same information to FFIRS as to NFIRS, though ACFR has the same concerns about FFIRS reporting as NFIRS reporting due to ACFR's current configuration of ESO. However, ACFR leadership indicated a current initiative to address fire reporting gaps and develop a more robust report writing and QA process to match the professional levels of the EMS side.

Of note: A high-level review by the M&J Team of incident data from calendar years 2018 through 2022 did not indicate any incidents were not reported to NFIRS, however, the incident numbers from the NFIRS report list and the total incidents lists the M&J Team received were not consistent for calendar years 2020 through 2022, resulting in the M&J Team not being able to confirm with absolute certainty that all incidents were reported to NFIRS. The different incident numbers do, however, support ACFR's note that current ESO issues are requiring staff to create two separate reports (one EMS and one fire) for each incident.

Cancer Prevention Best Practices

Section 69A-62.025, *F.A.C.*, encourages firefighter employers to achieve the leading practices outlined in the Employer Cancer Prevention Best Practices – Self-Assessment Tool ("checklist") developed by the State Fire Marshal's Bureau of Fire Standards and Training. The checklist identifies leading practices a firefighter employer can employ in the following categories:

- Personal Protective Equipment ("PPE")
- Decontamination
- Fire Apparatus
- Fire Stations/Offices
- Personal Protective Ensemble

The checklist provides guidance for additional categories related to wildland firefighters and fireline personnel, which are not applicable to ACFR. Each of the leading practices is based upon State statutes, State administrative code, and/or NFPA standards.

ACFR's implementation of the leading practices included in the checklist is inconsistent. For example, the checklist recommends firefighter employers provide each employee with continuous access to clean protective ensembles (commonly referred to as "turnout gear" or "bunker gear"). After most fire incident responses, firefighters need to decontaminate their turnout gear, both on-site and through the use of extractors located at fire stations. However, ACFR does not consistently supply employees with a backup set of turnout gear for use while primary gear is being cleaned or repaired, and the backup gear (or loaner gear, as it is temporarily loaned to an employee) stored at CSW does not always properly fit the employees who need to use the loaner gear. As a result, firefighters may be required to respond to incidents in ill-fitting (and therefore not fully functional) protective ensembles, or turnout gear that has not fully dried or been decontaminated. Furthermore, ACFR policies relevant to protective ensembles, fire apparatus, and fire incident response do not fully address post-fire on-scene and in-station decontamination, as would meet the standards of Section 69A-62.025, *F.A.C.* In practice, however, the M&J Team did note proper decontamination practices occurring during walkthroughs of various stations upon the completion of incident responses.

The checklist also recommends firefighter employers offer health and fitness programs, with related policies. ACFR has established a Fitness Team comprised of certified trainers and other members of the Department who assist with fitness testing for applicants, annual fitness testing of employees, and have established various programs to help employees maintain their overall health and fitness. Annual fitness assessments are designed to meet NFPA standards and ACFR maintains a comprehensive policy chapter governing the Department's health and fitness program, as required by Section 69A-62.025, *F.A.C.* Additionally, the Budget and Fiscal Services Department's Risk Management Division administers a County-wide wellness program with associated policies and numerous health and wellness opportunities.

Inspection or Investigation by the State Fire Marshal

Section 69A-62.032, *F.A.C.*, provides procedures and requirements for investigations by the State Fire Marshal. While the majority of Section 69A-62.032, *F.A.C.*, only applies to State operations, and not ACFR operations, Subsection 69A-62.032(11), *F.A.C.*, requires firefighter employers to notify the State Fire Marshal of any employee fatality or serious on-duty injury that required a hospitalization of greater than 24 hours within four hours of the occurrence. ACFR leadership indicated they do not maintain a count of the number of incidents reported to the State Fire Marshal that result in investigations, but did discuss procedure. Incident commanders notify the ACFR Fire Marshal of serious injuries or fatalities that occur during fire incident responses; the Fire Marshal immediately dispatches himself to the scene and notifies the State Fire Marshal. After the State has conducted an investigation, reports are exchanged between the State Fire Marshal and the ACFR Fire Marshal – the ACFR Fire Marshal maintains reports per Subsection 69A-62.032(11), *F.A.C.*, requirements.

ACFR staff appeared less certain of the process for on-the-job injuries that occur outside of fire incident responses. Anecdotally, multiple staff indicated the Health and Safety Officer is responsible for reporting on-the-job injuries occurring outside of fire incident responses, however staff could not identify the responsible party while the Captain of Health and Safety position was vacant.

Recordkeeping Responsibilities of Firefighter Employers

Section 69A-62.033, *F.A.C.*, sets guidelines for firefighter employer to retain records of incidents, certifications, and other records and reports required by Chapters 69A-37 and 69A-62, *F.A.C.*, and Chapters 440 (Workers' Compensation) and 633, *F.S.*, for at least five years. Required records are retained indefinitely in digital format, either on Alachua County-hosted servers or the Department's cloud-based services (such as ESO or KnowledgeLake), while physical files of pre-hire documentation are destroyed.

Notice of Violation

The State Fire Marshal's Bureau of Fire Standards and Training ("Bureau") conducts regular reviews of firefighter employers based upon the criteria in Chapter 69A-62, *F.A.C.* The most recent inspection by the Bureau of ACFR was December 2021. Per Section 69A-62.034, *F.A.C.*, the Bureau can issue a Notice of Violation to any firefighter employer not in compliance with *F.A.C.* standards. During the December 2021 inspection, the Bureau noted four out of the 31 compliance requirements were not met by ACFR: incomplete self-contained breathing apparatus maintenance records, incomplete information on an air compressor filter tag, incomplete annual apparatus pump test records, and incomplete annual aerial service test records. As of September 13, 2022, the compliance date for ACFR, the Department had brought all four requirements into compliance and the compliance criteria required were met, indicating the Department had complied with the requirements of Section 69A-62.034, *F.A.C.*, to bring indicated violations into compliance.

Accreditation

ACFR does not currently hold accreditation for fire protection services and leadership indicated no current plans to seek accreditation. Many fire rescue departments work to attain accreditation from the Commission on Fire Accreditation International ("CFAI") to ensure and indicate a high level of service delivery and industry standards. Two particular advantages of CFAI accreditation include required maintenance of a Community Risk Reduction Program and annual self-assessments of all programs and services.

Core Values

The 2017-2020 ACFR Strategic Plan identified four core values which the Department's employees are expected to adhere to while providing fire rescue services:

- Communication – Transfer or exchange of ideas or information between parties and understanding the intent or meaning of the message through any media.
- Integrity – The courage to stay true to [an employee's] character and organizational values in the face of adversity.
- Diversity – [The] organization embraces the differences among [the] employees and reflects the unique nature of [the] community.
- Compassion – A sincere desire to demonstrate kindness, provide care, and alleviate the suffering of those [the Department] serve[s].

Through initiatives such as the Fire Chief's monthly podcast, the Department has embraced opportunities to ensure communication from senior leadership down to frontline staff. As previously noted, though, in Chapter 4 (Department Assessment) of the M&J report, differing communication styles at the District Chief level limit leadership's ability to ensure consistent messaging to all frontline staff.

Conversations with ACFR staff, walkthroughs of Departmental facilities, and a review of documentation and recent local news articles about ACFR did not indicate any concerns with the integrity of the Department's professionals.

As discussed in Chapter 4 (Department Assessment) of the M&J report, ACFR's has implemented initiatives to enhance the Department's diversity through recruitment, retention, and inclusion programs aimed at the County communities that are underrepresented in the Department.

ACFR has introduced initiatives and resources, especially in regard to EMS operations, that aim to improve the service delivery experience for Alachua County residents and visitors. Customer support initiatives aim to treat residents and visitors with compassion while ensuring the Department provides all services at the highest possible standards.

Performance Analysis

The performance analysis of ACFR's fire protection operations focuses on five sets of analyses:

- Apparatus/Equipment Maintenance
- Inter-agency Training
- Benchmarks
- Alternative Service Delivery
- Efficiency of Program Activities

Apparatus/Equipment Maintenance

Fleet maintenance is a necessary component of keeping emergency response apparatus in service. There are two types of maintenance commonly performed on fire rescue departments' fleets. The first type is preventive maintenance, which includes tasks such as cleaning, lubrication, oil changes, adjustments, inspections, and replacement of parts. Preventative maintenance provides care to emergency response apparatus against potential major repairs. Emergency response apparatus are commonly scheduled for preventive maintenance based on usage and age.

The second type of maintenance is corrective maintenance. Corrective maintenance is needed when a problem occurs and must be corrected to return the emergency response apparatus to service. The cost of corrective maintenance varies significantly depending on the issue. Fire rescue departments commonly include corrective maintenance in the budget, oftentimes basing estimates on what was spent on that in the past. Corrective maintenance costs generally increase as the age of a fleet increases. Fire rescue departments often try keeping corrective maintenance costs down through an effective preventive maintenance program.

NFPA 1911 (Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Emergency Vehicles) provides guidelines for the inspection, maintenance, testing, and retirement of fire apparatus to ensure proper functioning and readiness for emergency response. While the specific requirements and adoption of NFPA 1911 may vary by jurisdiction, many fire rescue departments and fire rescue services use this standard as a reference for maintaining their apparatus fleet. Some key areas addressed in NFPA 1911 include:

- Inspection Procedures – The standard outlines procedures for regular inspections of fire apparatus, including both visual and operational checks. Visual and operational checks include inspections of vehicle systems, components, equipment, and overall condition.
- Maintenance and Testing – NFPA 1911 provides guidance on the maintenance and testing of various systems and components of fire apparatus, such as the chassis, engine, electrical systems, pump, hoses, ladders, and communication equipment. The standard includes recommendations for service intervals, testing procedures, and documentation.
- Equipment and Tool Inventory – The standard emphasizes the importance of maintaining an inventory of equipment and tools carried on the fire apparatus. The standard provides guidance on organizing, securing, and inspecting these items to ensure they are ready for use during emergencies.
- Record-Keeping – NFPA 1911 emphasizes the need for comprehensive record-keeping to track maintenance activities, inspections, repairs, and testing results. Records serve as a valuable resource for tracking the history and condition of each apparatus.
- Retirement Criteria – The standard provides criteria for determining when a fire apparatus should be retired from service. It includes considerations such as age, mileage, maintenance history, technological advancements, and compliance with current safety standards.

Preventive Maintenance Cycles

NFPA 1911 provides recommended cycles for preventative maintenance for fire and rescue apparatus, with maintenance conducted within 24 hours of an apparatus reaching each 3,000-mile interval:

- Cycle A (every 3,000 miles) – same-day basic maintenance, oil change, and visual inspection
- Cycle B (every 6,000 miles) – same-day basic maintenance, oil change, and visual inspection
- Cycle C (every 12,000 miles) – in-depth maintenance (apparatus left in shop)

The preventive maintenance cycle for diesel fire apparatus is similar to the general cycle, but with some specific considerations for diesel engines. Below is an outline of the preventive maintenance cycle for diesel fire apparatus per NFPA 1911:

- Cycle A:
    - Daily inspections – Conduct visual checks for any signs of leaks, damage, or abnormalities in the engine compartment, including fuel and oil leaks.
    - Fluid level checks – Regularly check and maintain appropriate levels of engine oil, coolant, transmission fluid, and diesel exhaust fluid (if applicable).
    - Fuel system checks – Inspect the fuel filters, fuel lines, and fuel tanks for any signs of contamination or blockages.

- Battery checks – Inspect and maintain the condition of batteries, including cleaning terminals and checking the charge.
- Air intake system inspection – Inspect the air intake system for any signs of restriction or damage.

- Cycle B:
  - Belt and hose inspections – Inspect and replace engine belts and hoses as needed, paying special attention to the cooling system and the serpentine belt that drives various engine accessories.
  - Cooling system maintenance – Test and maintain the operation of the cooling system, including the radiator, coolant hoses, clamps, and water pump.
  - Air filter replacement – Inspect and replace the engine air filter as needed to ensure proper airflow.
  - Fuel system maintenance – Clean or replace fuel filters, and inspect and clean the fuel injectors if necessary.
  - Exhaust system inspection – Inspect the exhaust system for leaks, damage, or excessive rust.
- Cycle C:
  - Engine tune-up – Perform engine tune-up tasks such as replacing fuel injectors, checking and adjusting valve clearances, and inspecting turbocharger functionality.
  - Fuel system calibration – Calibrate the fuel injection system for optimal performance and fuel efficiency.
  - Comprehensive electrical system check – Inspect and maintain the operation of electrical switches, gauges, and controls.
  - Comprehensive equipment checks – Inspect and maintain specialized firefighting equipment, including pumps, hoses, and foam systems.
  - Comprehensive chassis and body inspection – Inspect the chassis, body, and compartments for signs of corrosion, structural issues, or damage.

Aligning mileage tracking with fueling events, fire rescue departments can leverage benefits in terms of accuracy, regularity, streamlined planning, efficiency, data analysis, and compliance. The approach allows for a systematic and reliable method of capturing mileage information, ensuring that maintenance intervals are based on actual usage patterns.

By integrating mileage tracking with fueling, fire rescue departments more efficiently manage maintenance schedules, ensuring that maintenance tasks are performed at appropriate intervals and minimizing the risk of overlooking or delaying important maintenance activities. Integration also enables better allocation of resources, as apparatus can be serviced during fueling events, optimizing operational efficiency and reducing downtime.

Furthermore, the combined data of mileage and fuel consumption can provide valuable insights into the performance of apparatus, fuel efficiency, and potential maintenance issues. Fire rescue departments can analyze data to identify patterns, trends, or abnormalities that can inform decision-making related to maintenance optimization, equipment replacement, or operational improvements.

Additionally, accurate mileage records at the time of fueling can support compliance efforts, whether for regulatory reporting, grant applications, or internal documentation. Fire rescue departments can ensure responsible parties have the necessary mileage data readily available for any compliance requirements.

Overall, tracking mileage for preventive maintenance on fire apparatus at the time of fueling is a practical and effective approach that allows fire rescue departments to efficiently manage maintenance, optimize resources, and maintain the operational readiness and reliability of their apparatus.

ACFR maintains tasks lists for preventative maintenance performed on medium and heavy apparatus, similar to the cycle recommended in NFPA 1911. The Department and Fleet Management have a task list for Cycle A and Cycle B inspections, which meet the recommended standards for basic maintenance, with a separate task list for Cycle C inspections, involving more in-depth maintenance for apparatus.

Inter-agency Training

Currently, the only inter-agency training in which ACFR participates is joint training sessions with the local municipalities that staff their own fire departments. For example, the interlocal agreement with the City of Newberry requires that the County "provide support for necessary training to meet ISO multi-company and automatic aid company training." Training sessions with the relevant municipalities occur similar to intra-Departmental multi-company trainings (*i.e.*, joint training between units from different ACFR stations) rather than joint training exercises conducted between two entirely independent departments. The interlocal agreements also indicate the ACFR District Chief will function as the incident commander, alleviating chain of command concerns, and require ACFR to provide electronic training resources to the city department in order to ensure the various agencies are using the same terminology and operating procedures.

The interlocal agreement with the City of Gainesville, however, does not contain the same provisions for multi-company exercises and the sharing of training resources. Though ACFR was not able to provide documentation on inter-departmental training conducted, staff suggested ACFR has conducted occasional, but irregular, joint trainings with Gainesville Fire Rescue, with recent sessions primarily focused on implementing Tele911. Staff also indicated ACFR personnel also participate in an annual mass casualty drill at the Gainesville Regional Airport ("GNV") per GNV requirements (the drill is in-person at GNV once every three years and a tabletop exercise the other two years) and occasionally a mass casualty incident training at the University of Florida. Select personnel also participate in exercises for the Florida Infectious Disease Transport Network, as Alachua County serves as the regional coordinator for the program.

Anecdotally, the Department has not conducted inter-departmental training with local law enforcement agencies in recent years. Additionally, the Department has not conducted inter-departmental training with contiguous counties or regional partnerships.

Benchmarks

In order to determine and evaluate appropriate benchmarks for ACFR, the M&J Team divided analysis into the following categories:

- General Benchmarks
- Workload versus Number of Units
- Response Time versus Industry Standards
- Benchmark Analysis

General Benchmarks

A fire rescue department should have the resources needed to effectively mitigate the incidents that have the highest potential to impact the community negatively. As the actual or potential risk increases, the need for higher numbers of personnel and apparatus also increases. With each type of incident and corresponding risk, specific critical tasks need to be accomplished, and certain numbers and types of apparatus should be dispatched. This section considers the community's risks identified previously in the report and illustrates the number of personnel that are necessary to accomplish the critical tasks at an emergency.

Work at fire emergencies can be categorized into two key components – life safety and fire flow. Life safety relates to the number of building occupants, their location within the structure, their status, and their ability to take self-preservation action. Life safety tasks involve the search, rescue, and evacuation of victims. The fire flow component creates an environment within the building that allows entry by firefighters and/or the escape of occupants, as well as the delivery of enough water to extinguish the fire. This helps to create an environment within the building that allows entry by firefighters.

The number and types of tasks needing simultaneous action will 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
- Scene safety
- Search and rescue
- Fire attack
- Salvage
- Water supply
- Pump orientation
- Ventilation
- Backup/rapid intervention
- Environmental protection

A critical task analysis also applies to non-fire type emergencies including medical, technical rescue, and hazardous materials emergencies. Numerous simultaneous tasks must be completed to effectively control an emergency. The Department's ability to muster needed numbers of trained personnel quickly enough to make a difference is critical to successful incident outcomes.

The following definitions and discussion apply to the process for classifying risk which will lead to an illustration of the minimum emergency incident staffing recommendation.

- Low Risk – A risk category measurement at a low level where threats are measured considering the probability of occurrence, and hazard, danger, or loss is measured in consequence.
- Moderate Risk – A risk category measurement at a moderate level where threats are measured considering the probability of occurrence, and hazard, danger, or loss is measured in consequence.
- High Risk – A risk category measurement at a high level where threats are measured considering the probability of occurrence, and hazard, danger, or loss is measured in consequence.
- Maximum Risk – A risk category measurement at a maximum level where threats are measured considering the probability of occurrence, and the hazard, danger, or loss is measured in consequence.

Figure 64: Example of Critical Task Staffing Analysis Based on Risk[13]

Firefighter Personnel Needed Based on Level of Risk				
	Structure Maximum Risk	**Structure High Risk**	**Structure Moderate Risk**	**Non-Structure Low Risk**
Attack Line	4	4	2	2
Back-up Line		2	2	2[a]
Support for Hose Lines/Water Supply		3	2[b]	
Ventilation	4	2	2	
Search and Rescue	4	2	2	
Forcible Entry/Support		2	2	
Standby/Rapid Intervention Team	4	2	2	
Driver/Pump Operator	1	1	1	1
2nd Apparatus/Ladder Operator		1		
Command	2	1	1	1[b]
Communications/Safety	1	1	1	
Accountability		1		
Rehabilitation	2			
Building Fire Pump Monitor	1[a]			
Attack line—Floor Above the Fire	2			
Evacuation Management Teams	4			
Elevator Operations Manager	1			
Lobby Operations	1			
Transport Equipment to Staging	2			
EMS Crews	4			
Division/Group Supervisors	4			
Total	**40–41**	**22**	**16–17**	**3–6**

[a] indicates tasks may not be required at all incidents.
[b] indicates task may be completed concurrently with others.

[13] Adapted from "Community Risk Assessment: Standards of Cover, Sixth Edition." Center for Public Safety Excellence (2016).

As a comparison, Figure 65: Example of Tasks and Staff Required as Defined in NFPA 1710 is from NFPA 1710 and illustrates the critical staffing for tasks associated with various types of structural fires.

Figure 65: Example of Tasks and Staff Required as Defined in NFPA 1710[14]

Task	Single-Family Dwelling[1]	Open-Air Strip Mall[2]	Apartments[3]	High-Rise[4]
Command	1	2	2	2
Apparatus Operator	1	2	2	1
Handlines (2 members on each)	4	6	6	4
Support Members	2	3	3	
Victim Search & Rescue Team	2	4	4	4
Ground Ladders/Ventilation	2	4	4	
Aerial Operator (if ladder used)	(1)	(1)	(1)	
Initial Rapid Intervention Team	4	4	4	
Initial Medical Care Component		2	2	
Building Fire Pump Monitor				(1)
Hoseline–Floor Above Fire				2
Rapid Intervention Team				4
Accountability Officers (fire floor & floor above)				4
Evacuation Management Teams				4
Elevator Operations Manager				1
Incident Safety Officer				1
Interior Staging Manager				1
Member Rehabilitation				2
Vertical Ventilation Crew				4
Lobby Control				1
Transport Equipment				2
External Base Operations				1
EMS Crews with Transport				4
Total Required:	**16(17)**	**27(28)**	**27(28)**	**42(43)**

[1] Typical 2,000 sq. ft., two-story single-family dwelling without a basement and no exposures.

[2] Typical open-air strip mall/shopping center ranging from 13,000 to 196,000 sq. ft.

[3] Typical 1,200 sq. ft. apartment within a three-story, garden-style apartment building.

[4] Building with the highest floor more than 75 feet above the lowest level of fire department vehicle access.

[14] 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 (2016).

ACFR maintains three response plans. The response plans are shown in Figure 66: Response Plans.

Figure 66: Response Plans

Area	Response Plan	Number of Personnel
Gainesville Area	2 engines, 1 truck, 1 squad (GFR), 1 District Chief, 1 rescue	14 to 15[a]
Hydrant Area	2 engines, 1 District Chief, 1 rescue, 1 truck (if available)	9 to 13[a]
Non-Hydrant Area	2 engines, 2 tankers, 1 District Chief, 1 rescue, 1 truck (if available)	7 to 15[a]
[a] Gainesville Fire Rescue ("GFR") staffs trucks (aerials) with four and ACFR staffs their quint with three		

The response plans for non-hydrant areas does not factor that if a tanker and engine are dispatched from the same station they are cross staffed. For instance, a structure fire in-between the Micanopy and Cross Creek area would bring and engine and tanker from both stations that have a daily minimum staffing of two.

It is recommended that response plans are adjusted so that at least 15-16 personnel are dispatched on the initial assignment for all areas. An example is shown in Figure 67: Recommended Response Plans.

Figure 67: Recommended Response Plans

Area	Response Plan	Number of Personnel
Gainesville Area	3 engines, 1 truck, 1 squad (GFR), 1 District Chief, 1 rescue	17 to 18[1]
Hydrant Area	3 engines, 1 District Chief, 2 rescues, 1 truck	17 to 18[1]
Non-Hydrant Area	4 engines,[3] 2 tankers, 1 District Chief, 2 rescues, 1 truck (if available)[4]	15 to 19 [1,2]
[1] Gainesville Fire Rescue ("GFR") staffs trucks (aerials) with four and ACFR staffs their quint with three [2] Staffing varies from two to three engines depending on availability [3] At least two engines with a staffing of three that are not cross staffing a tanker [4] Trucks (aerials) are often too far from non-hydrant areas to be included		

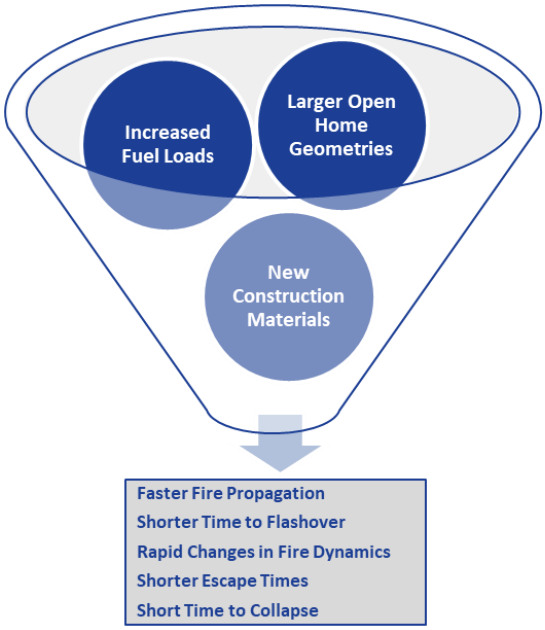
Most fires within buildings develop predictably unless influenced by highly flammable materials. Ignition, or the beginning of a fire, starts the sequence of events. A visible flame may take several minutes or even hours from the time of ignition to appear. The smoldering stage is very dangerous, especially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

Once flames do appear, the sequence continues rapidly. Combustible material adjacent to the flame heat 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 the point of visible flames 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.

There have been changes in the residential fire environment over the past several decades, such as larger homes, different home geometries, increased synthetic fuel loads, and changing construction materials.[15]

Figure 68: Changes in the Fire Environment & Effect on Fire Dynamics



Since flashover has such a dramatic influence on the outcome of a fire event, the goal of any fire agency is to apply water 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).

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, the estimate for the time occupants have to escape a structure fire 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.

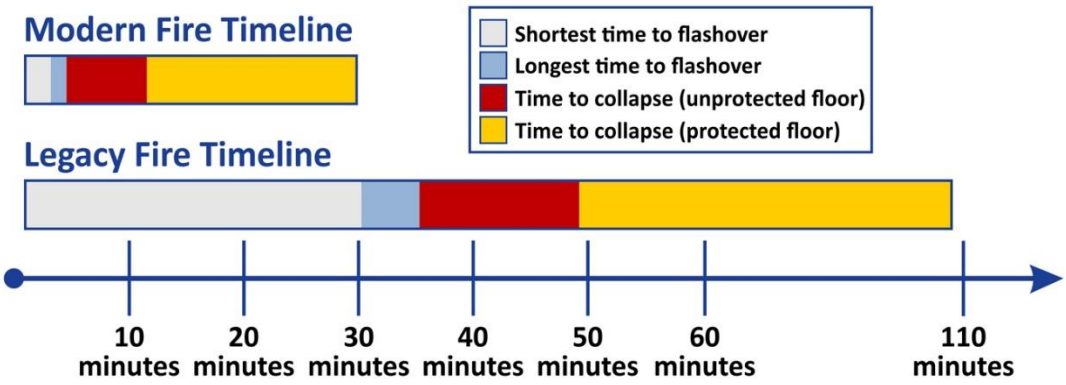
[15] Stephen Kerber, *Analysis of Changing Residential Fire Dynamics, and their Implications on Firefighter Operational Timeframes*. Underwriters Laboratories.

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. "Lightweight" 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. The changes to building structures create a dangerous environment for firefighters.

Additionally, 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 accelerates fire spread and increases the amount of water needed to control a fire effectively. These factors make the need for early application of water essential to a successful fire outcome.

Several events must take place quickly to make it possible to achieve fire suppression before flashover. Figure 69: Fire Growth vs. Reflex Time illustrates the sequence of events with a comparison of modern materials vs. legacy materials.

Figure 69: Fire Growth vs. Reflex Time[16]



As demonstrated by the sequence of events in Figure 69, the application of water in time to prevent flashover is a serious challenge for any fire rescue department. The timely application of water is critical, though, as studies of historical fire losses can demonstrate.

The NFPA 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 shown in Figure 70: Loss Rates by Fire Spread, Home Structure Fires (2012–2016), fire losses, casualties, and deaths rise significantly as the extent of fire damage increases.

[16] Stephen Kerber, *Analysis of Changing Residential Fire Dynamics, and their Implications on Firefighter Operational Timeframes.* Underwriters Laboratories.

Figure 70: Loss Rates by Fire Spread, Home Structure Fires (2012–2016)[17]

Flame Spread	Rate Per 1,000 Fires		Average Dollar Loss
	Civilian Deaths	Civilian Injuries	
Confined fire or fire spread confined to origin	0.4	11.1	$1,200
Confined to room of origin, including confined fire and fire confined to object	1.8	23.8	$4,000
Spread beyond the room of origin but confined to floor of origin	16.2	76.3	$35,000
Spread beyond the floor of origin	24.6	55.0	$65,900

Insurance Services Office

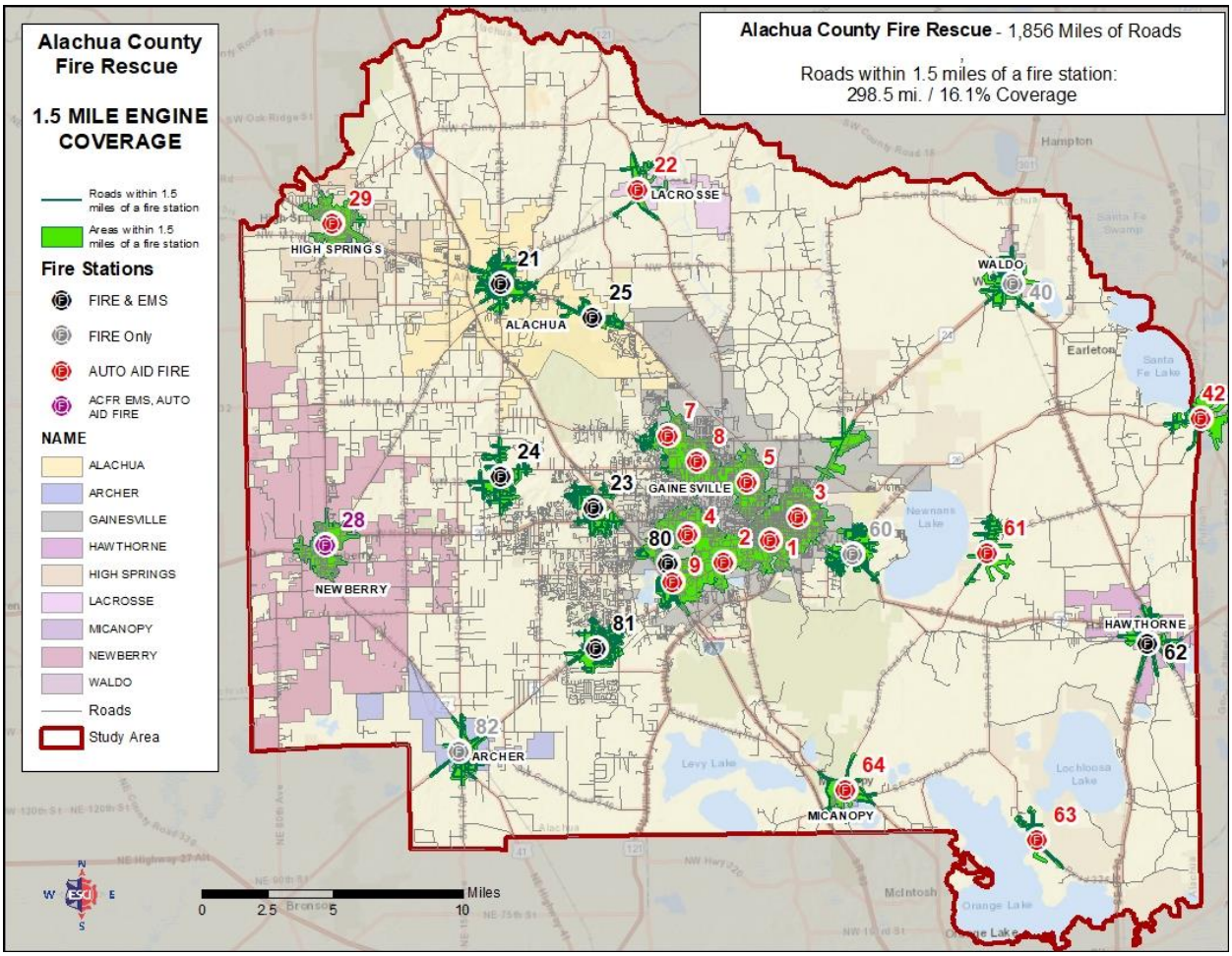
The mission of the fire service is to save lives and protect property. ISO is a national data analytics provider that evaluates fire protection for communities across the country. ISO has created the Fire Suppression Rating Schedule ("FSRS"), which is a manual containing the criteria used in reviewing the fire prevention and fire suppression capabilities of individual communities or fire protection areas. The FSRS measures the major elements of a community's fire protection system and develops a numerical grading called a Public Protection Classification ("PPC®"). A PPC® score ranges from ranging from 1 (best protection) to 10 (no protection). Alachua County currently has a PPC® score of 3.

Engine Company Performance

A key area of credit towards a PPC® score is the degree to which structures protected by the fire rescue department fall within a 1.5-road-mile service area of a fire station with a fire engine. The 1.5-road-mile standard is used to estimate a 4-minute travel time for first responding units as recommended by NFPA 1710. Engine company performance is analyzed by ISO in the "Deployment Analysis" item of the PPC® score. Figure 71: ACFR 1.5 Road Mile Travel Distance shows that 16.1% of road miles within the ACFR fire response area are within 1.5 miles of a fire engine response.

[17] Term "home" includes one- and two-family homes, manufactured homes, & apartments or other multi-family housing, regardless of ownership. Source: *National Fire Protection Association Standard 1710*, 2020 Edition.

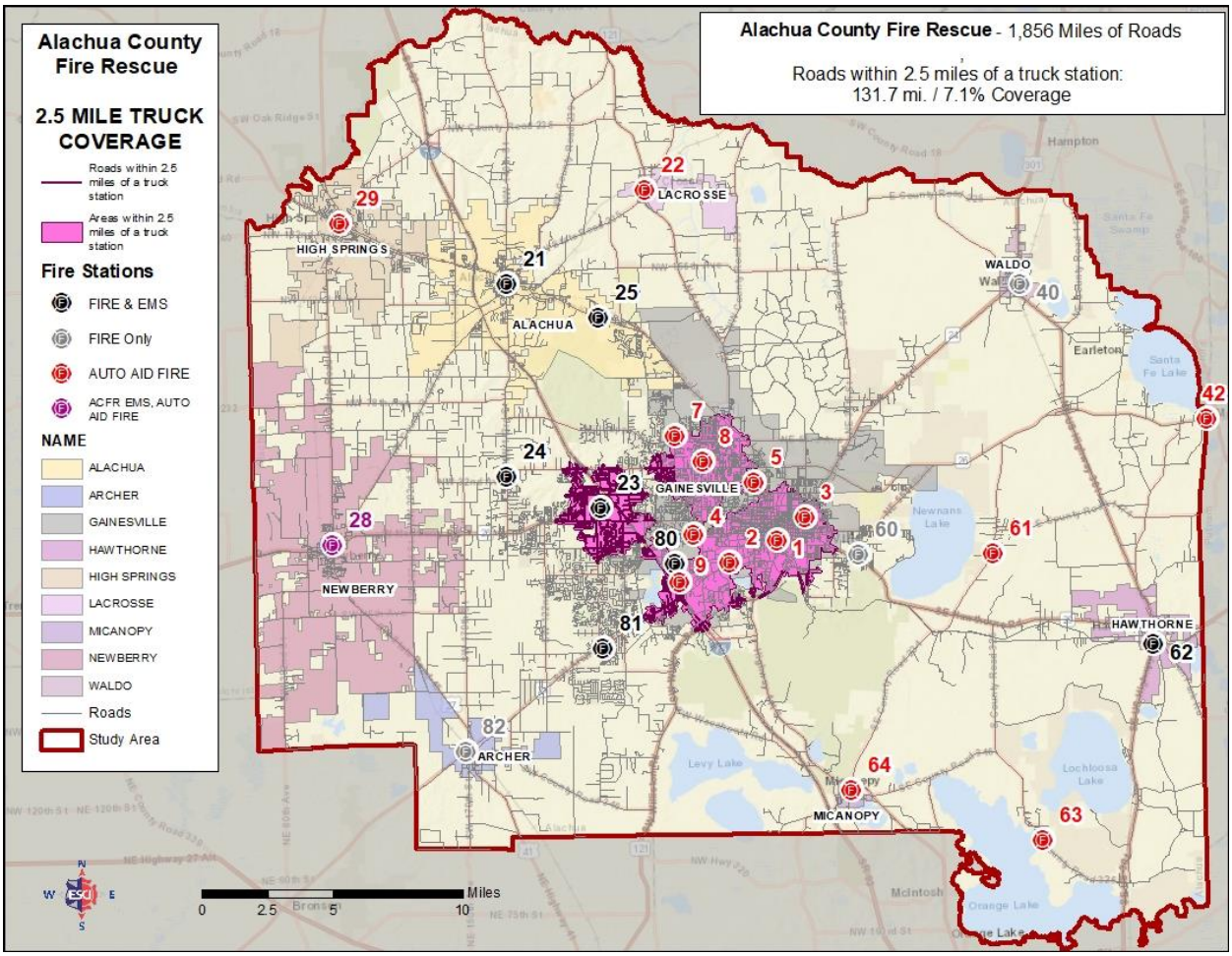
Figure 71: ACFR 1.5 Road Mile Travel Distance



Ladder (Truck) Company Performance

Another component of the PPC® score is the credit for ladder (truck) companies within a 2.5-road-mile travel distance. The 2.5-road-mile standard is used to estimate an 8-minute travel time. Within the calculation, ISO examines the number of buildings with a "Needed Fire Flow" greater than 3,500 gallons per minute (*i.e.*, buildings with more than three stories). Buildings meeting the ISO minimum for ladder (truck) companies are located around the Gainesville area. Figure 72: ACFR 2.5 Road Mile Travel Distance shows that 7.1% of the ACFR fire service area falls within 2.5 road miles of the ladder (truck) company.

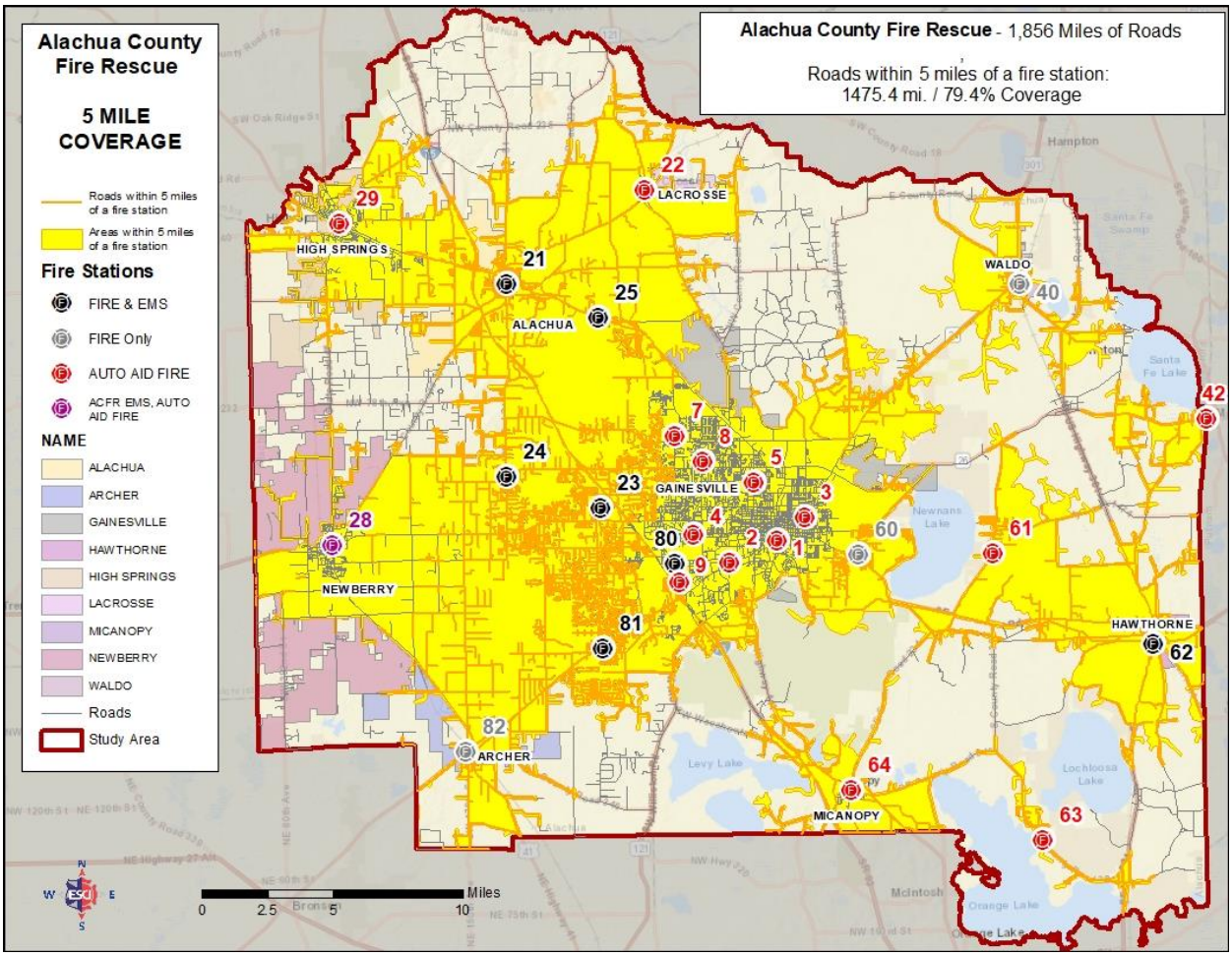
Figure 72: ACFR 2.5 Road Mile Travel Distance



Fire Station Coverage

To receive a PPC® rating that indicates fire coverage available from ISO, structures must generally be located within five road miles of a fire station with a fire suppression unit. Areas outside of five road miles are subject to receiving a PPC® rating of 10, meaning that no fire rescue department coverage is available. Figure 73: ACFR 5 Road Mile Fire Station Coverage shows that 79.4% of the ACFR fire service area is within five miles of a ACFR fire station.

Figure 73: ACFR 5 Road Mile Fire Station Coverage



ISO recognizes alternative water supply systems, including dry hydrants, suction points, large-diameter hose relays, and hauled water using tanker shuttles. Hauled water systems play a role in the ISO rating because they provide an alternative water supply source that can be used by firefighters to combat fires. ISO evaluates a community's fire protection capabilities based on various factors, including the availability of water sources and the ability to deliver water to the scene of a fire. The procedure for determining a system's capability involves running a timeline analysis. The timeline analysis considers apparatus arrival times, travel times, discharge rates, fill rates, fire flow at the fire site, wait time for apparatus to fill or discharge the water supply, and supply delivery capability. The water delivery system must be available 365 days a year and provide 250 gallons per minute for a two-hour duration within five minutes of the arrival of the first apparatus. The ISO requirement for a water delivery system is a critical benchmark for evaluating the effectiveness of alternative water supply systems, such as hauled water systems using tanker shuttles.

ACFR receives credit from ISO for the Department's hauled water system, as part of the Department's 03/10 PPC® rating (as last evaluated in 2020). In order to receive this credit, ACFR relies on the training of personnel on tanker shuttle operations and having and maintaining fire apparatus, such as tankers, to carry the required amount of water. A well-organized and efficient hauled water system can positively influence a community's PPC® rating, which can, in turn, help lower property insurance rates for residents and businesses within the community that are not located in a fire hydrant area.

Workload versus Number of Units

Workload was discussed previously in report Chapter 4 (Department Assessment) of the M&J report. This section will highlight the workload of fire units, which in ACFR are engines, the heavy rescue, and the quint. Although these units are fire suppression units, they additionally respond to EMS incidents. Therefore, workload is based on all incidents that the units respond to.

Workload is a measure of how busy each unit within the Department is and could be analyzed from a simplistic view as to the number of incidents to which it responds. However, incident responses vary in length of time so while two units may respond to the same number of incidents, the actual work involved may vary greatly. The better measure of workload is referred to as unit hour utilization (UHU). With this method, the amount of time assigned to incidents is compared to the amount of time the unit is in-service and is expressed as a percentage of the whole. For instance, a UHU value of 25% means that the unit is operating on incidents 25% of the time it is in service, thus only being available for other emergencies 75%. When units from neighboring fire stations all have high UHU values, it means that new emergencies will have increased response times because it is highly likely that the closest, second closest, and even third closest units are not available due to being on other incidents.

UHU only considers the time the unit is dispatched to the time the unit returns to service. It does not include the time it takes for a unit to drive back to the fire/EMS station, complete any necessary paperwork such as required patient care reports, or non-emergency activities such as training. In addition to emergency response, firefighters devote time to maintaining their physical fitness. Regular physical training is essential to ensure that firefighters are physically prepared for the strenuous demands of emergency situation, promoting both their own safety and the effectiveness of their responses. Alongside physical fitness efforts, firefighters actively engage in continuous training to stay updated on the latest firefighting technique, equipment operation, and safety protocols. Regular drills and simulations are integral to keeping skills sharp, contributing to the overall Departmental readiness.

Firefighters take on the responsibility of maintaining and inspecting equipment and apparatus – a responsibility that is paramount to the safety of both the firefighting personnel and the communities served, underscoring the proactive and preventative aspect of firefighters' daily duties. In addition to emergency response and equipment maintenance roles, firefighters engage in station upkeep. Cleaning the fire station is a shared responsibility, contributing to a hygienic and organized environment conducive to quick response times. A consistent cleaning routine includes maintaining living quarters, communal spaces, and equipment storage areas.

Firefighters also play a crucial role in community outreach and education initiatives, such as conducting fire safety presentations, participating in community events and celebrations, and collaborating with schools to educate the public of fire prevention measures. By fostering strong connections with the community and emphasizing the importance of prevention alongside emergency response capabilities, firefighters contribute significantly to the overall safety and well-being of the areas they serve during their shifts.

Figure 74: How a Firefighter Spends a 24-hour Shift Besides Emergency Responses displays typical time commitments of a firefighter/paramedic in a 24-hour shift besides emergency responses. Figure 74 is based on typical career firefighters in fire departments across the United States and not on directly to ACFR. ACFR specific nonemergency duties vary depending on the station, but include the activities listed in Figure 74.

Figure 74: How a Firefighter Spends a 24-hour Shift Besides Emergency Responses

Activity	Hours	Percent of Shift
Physical Fitness	2	8.3%
Training	2	8.3%
Meals[1]	2	8.3%
Housework and Apparatus Inspections	2	8.3%
Non-Emergency Activities[2]	2	8.3%
Administrative Duties[3]	2	8.3%
Rest	6	25%
Total	**18**	**75%**

[1] Includes three meals per shift with prep and clean up time
[2] Includes community outreach, building inspections, hydrant inspections, and fueling apparatus
[3] Includes reports, performance evaluations, and payroll

Figure 75: ACFR Suppression Units UHU shows the UHU for ACFR units based on the fiscal year, October 1 to September 30. The calculations assume that all units except for peak units were in-service 24 hours each day.

Figure 75: ACFR Suppression Units UHU

Apparatus	FY18	FY19	FY20	FY21	FY22
Engine 21	7.36%	6.90%	5.67%	6.35%	7.03%
Engine 24	3.20%	2.21%	3.21%	3.80%	4.29%

Apparatus	FY18	FY19	FY20	FY21	FY22
Engine 25	1.58%	3.06%	2.45%	2.85%	2.67%
Engine 40	3.32%	3.89%	4.26%	4.42%	3.98%
Engine 60	4.72%	4.59%	5.37%	5.69%	4.93%
Engine 62	2.86%	3.47%	3.21%	3.14%	3.55%
Engine 80	8.61%	6.95%	7.41%	7.49%	9.19%
Engine 81	5.86%	5.47%	5.84%	5.99%	6.10%
Engine 82	3.14%	2.62%	2.94%	3.57%	3.06%
Heavy Rescue 23[1]	10.89%	10.09%	10.20%	10.36%	10.59%
Quint 23	5.72%	4.27%	5.05%	6.02%	5.48%

[1] Squad 23 became Heavy Rescue 23 in FY22.

All suppression units (engines, heavy rescue, and quint) have a UHU value below the ideal commitment range. Therefore, the workload of these units and personnel assigned to them is acceptable at current call loads. Even in areas with a low call volume, a fire suppression unit remains indispensable for maintaining emergency response capability, particularly in the context of ISO evaluations. ISO assesses fire departments and communities, taking into account factors such as equipment, staffing, and water supply to determine PPC® scores. The presence of a fire engine is vital to meeting ISO criteria, as it ensures an immediate response to emergencies, carries firefighting equipment and water supply, and often supports emergency medical services. If a community lacks a fire engine, particularly in areas beyond five miles from a fire station, the community's PPC score can suffer, as a higher PPC score may lead to higher insurance rates for property owners in that community. Additionally, in some cases, insurance companies may consider a lack of adequate fire protection infrastructure as a reason to limit or deny coverage altogether.

Response Time versus Industry Standards

From the perspective of the citizen, judgment of the local fire rescue department is often based on how quickly units arrive to assist when the citizen calls 911. National standards identified in NFPA 1225 (Standard for Emergency Services Communications) and 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) are used to assess the response time performance for career fire rescue departments.

Response time performance is comprised of the following components:

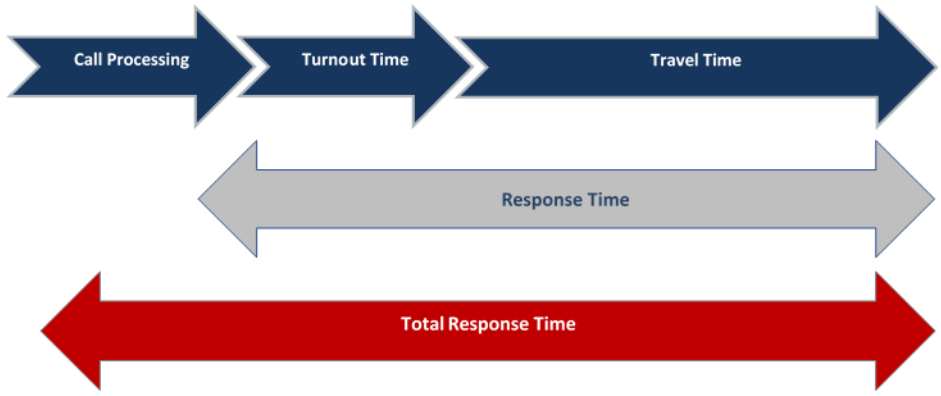
- Call Processing Time – The amount of time between when a call is answered by the 911 Primary Public Safety Answering Point (PSAP) or dispatch center, and when resources are dispatched.
- Turnout Time – The time interval between when response units are notified of the incident and when the apparatus begins to respond.
- Travel Time – The 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 – The time from initial alerting of an incident until arrival on the scene. Response Time equals the sum of "Turnout Time" and "Travel Time."
- Total Response Time – This is the most apparent time to the caller requesting emergency services, as the time from when the emergency call is placed until units arrive on the scene.

Tracking the individual components of response time can help the ACFR identify impediments to timely response, and make operational adjustments to improve, including developing response time goals and standards that are both relevant and achievable. Fire service leading practices recommend that fire service organizations monitor and report the components of Total Response Time.

The Total Response Time Continuum is comprised of the three elements described above – Call Processing, Turnout Time, and Travel Time. Figure 76: Total Response Time Continuum is an illustration of the Total Response Time Continuum.

Figure 76: Total Response Time Continuum



Historically, fire rescue departments 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.

Percentile 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. The data 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 the results of each category are not additive, meaning 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 travel 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 turnout time and travel time.

For the following calculations, only high priority fire call types were used – primarily structural fire incidents.

Call Processing Performance

The industry standard for call processing (or alarm handling) time is NFPA 1225. This standard recommends that communication centers have call processing times of not more than 60 seconds, 90% of the time. Fire call processing at the 90th percentile for the five years analyzed was 2 minutes, 12 seconds.

Turnout Performance

The second component of the Total Response Time Continuum, and one that is directly affected by response personnel, is turnout time performance. Turnout time is the time it takes personnel to receive the dispatch information, move to the appropriate apparatus, put on necessary protective equipment, and begin responding to the incident. NFPA 1710 recommends a 90th percentile fractile turnout time of 80 seconds for fire or special operations incidents. Fire turnout performance at the 90th percentile for the five years analyzed was 1 minutes, 32 seconds.

Travel Performance

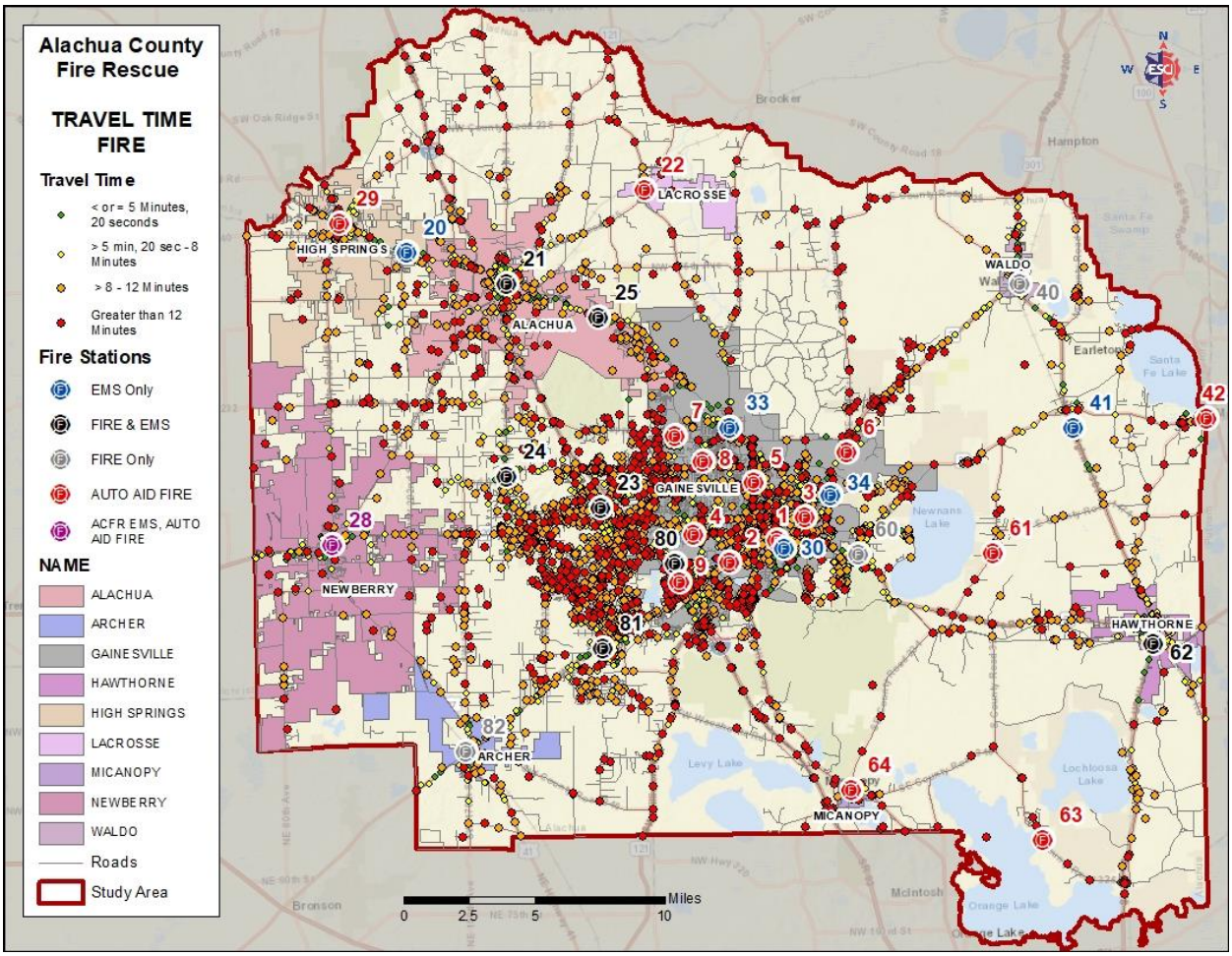
Travel time is the third component of the response time continuum. Travel time is the amount of time between when the apparatus departs for the call and when it arrives on-scene and is measured at the 90th percentile. It is important to understand travel time is not specifically a factor of speed as much as it is the result of proper placement of fire stations from which the emergency response begins. NFPA 1710 recommends the first due fire or EMS unit travel and arrive on the scene within 4 minutes (240 seconds). Fire travel performance at the 90th percentile for the five years analyzed was 9 minutes, 59 seconds.

Response Time Performance

Response time is the amount of time from initial notification to the fire rescue department until the first unit arrives on-scene. While not specifically addressed by NFPA 1710, it is a combination of the turnout and travel time standards or 5 minutes, 20 seconds (320 seconds) for fire and special operations incidents. Fire response time at the 90th percentile for the five years analyzed was 10 minutes, 55 seconds.

Figure 77: Fire Response Time and Locations shows the location and the correlated response time of fire incidents from October 1, 2020, to September 30, 2022. The map includes all fire call types of all priority levels. During this period, 23.45% of responses had a response time of 5 minutes, 20 seconds or less, 29.87% had a response time of greater than 5 minutes, 20 seconds to 8 minutes, 30.27% had a response time of greater than 8 minutes to 12 minutes, and 16.41% had a response time of greater than 12 minutes.

Figure 77: Fire Response Time and Locations



Total Response Time Performance

Total response time performance is the final part of the Total Response Time Continuum. This is the total time from the time the emergency call is received by the dispatch center to the time the first emergency unit arrives on the scene of the incident. Although there is not a national standard for total response time, an expected standard can be calculated by adding the NFPA standards for call processing time performance, turnout time performance, and travel time performance. This expected standard is 6 minutes, 20 seconds for fires and special operation incidents. Fire total response at the 90th percentile for the five years analyzed was 12 minutes, 25 seconds.

A comparison of ACFR's total response time and the calculation's components to NFPA standards is shown in

Figure 78: ACFR Fire Protection Response Times vs. NFPA Standards.

Figure 78: ACFR Fire Protection Response Times vs. NFPA Standards

	NFPA Standard	ACFR 90th Percentile
Call Processing Time	60 seconds	2 minutes, 12 seconds
Turnout Time	80 seconds	1 minute, 32 seconds
Travel Time	4 minutes	9 minutes, 59 seconds
Response Time	5 minutes, 20 seconds	10 minutes, 55 seconds
Total Response Time	6 minutes, 20 seconds	12 minutes, 25 seconds

Benchmark Analysis

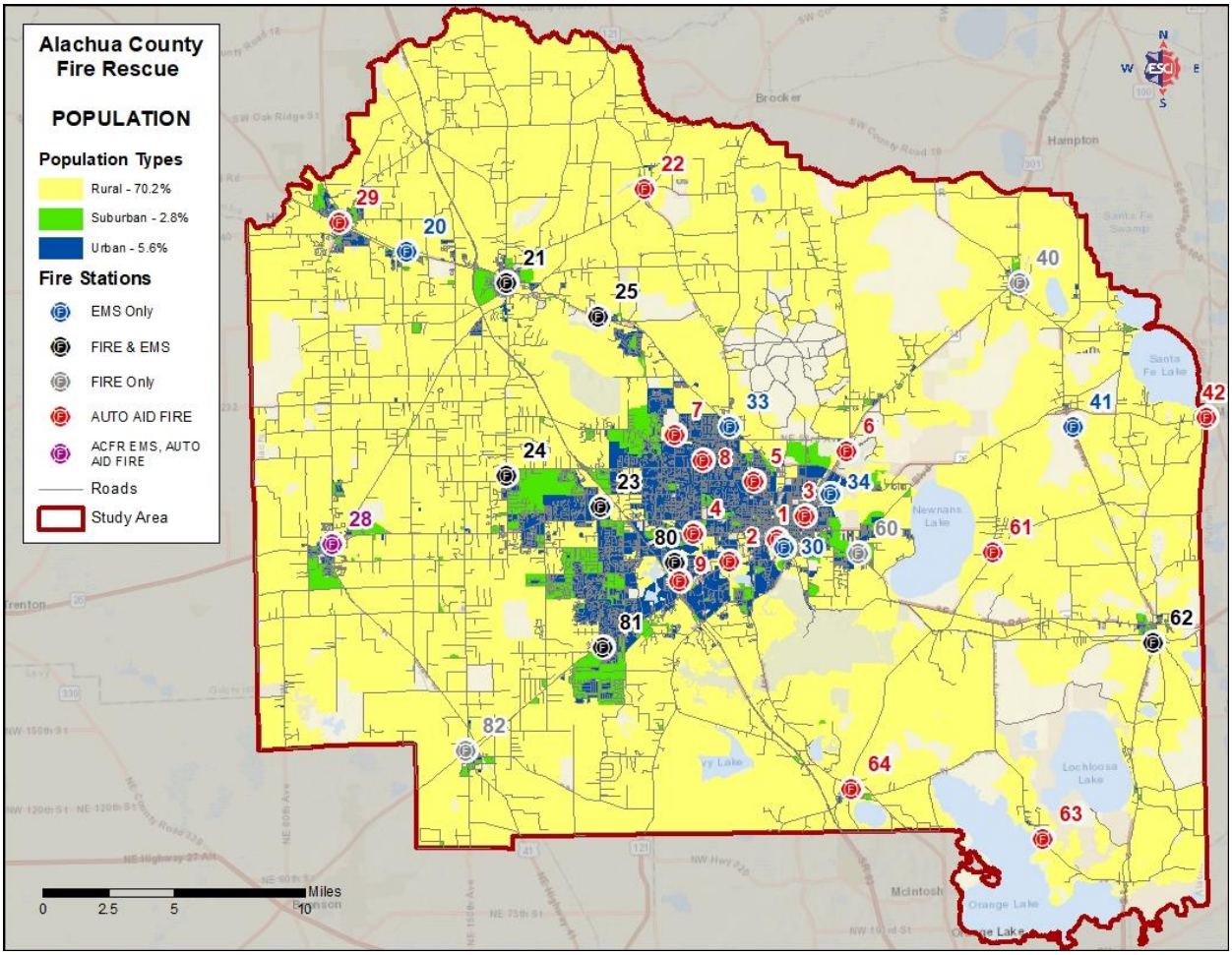
Response time performance greatly depends on the ability to reach incidents in a timely manner. Although ACFR is a career department, NFPA 1720 *(*Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments) has demand zones based on population density and response times for each of these demand zones. These demand zones and response times are shown in Figure 79: NFPA 1720 Demand Zones.

Figure 79: NFPA 1720 Demand Zones

Category	Population Density/ sq mi	Response Time
Urban	> 1,000	9 minutes
Suburban	500 to 1,000	10 minutes
Rural	< 500	14 minutes

Figure 80: Population Density shows the population density of Alachua County is mostly rural (70.2%).

Figure 80: Population Density



Fire Coverage

The NFPA is an industry trade association that develops and provides standards and codes for fire rescue departments 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 rescue 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) is recommended to arrive to the incident within 480 seconds, or 8 minutes. The following figure illustrates ACFR's ability to meet these standards based upon predicted travel times using historical traffic data from Esri for traffic patterns at 8:00 a.m. on Monday mornings. Unshaded pockets indicate the area falls outside of the model's maximum extension from the road network. Only road miles in the County outside of Gainesville, LaCrosse, Micanopy, Newberry, and High Springs were included. Automatic aid stations were included for their response areas that fall within unincorporated areas.

Figure 81: Fire Coverage Map shows that 26.8% of road miles are within four minutes of a fire station and 79.3% are within 8 minutes of a fire station.

Figure 81: Fire Coverage Map

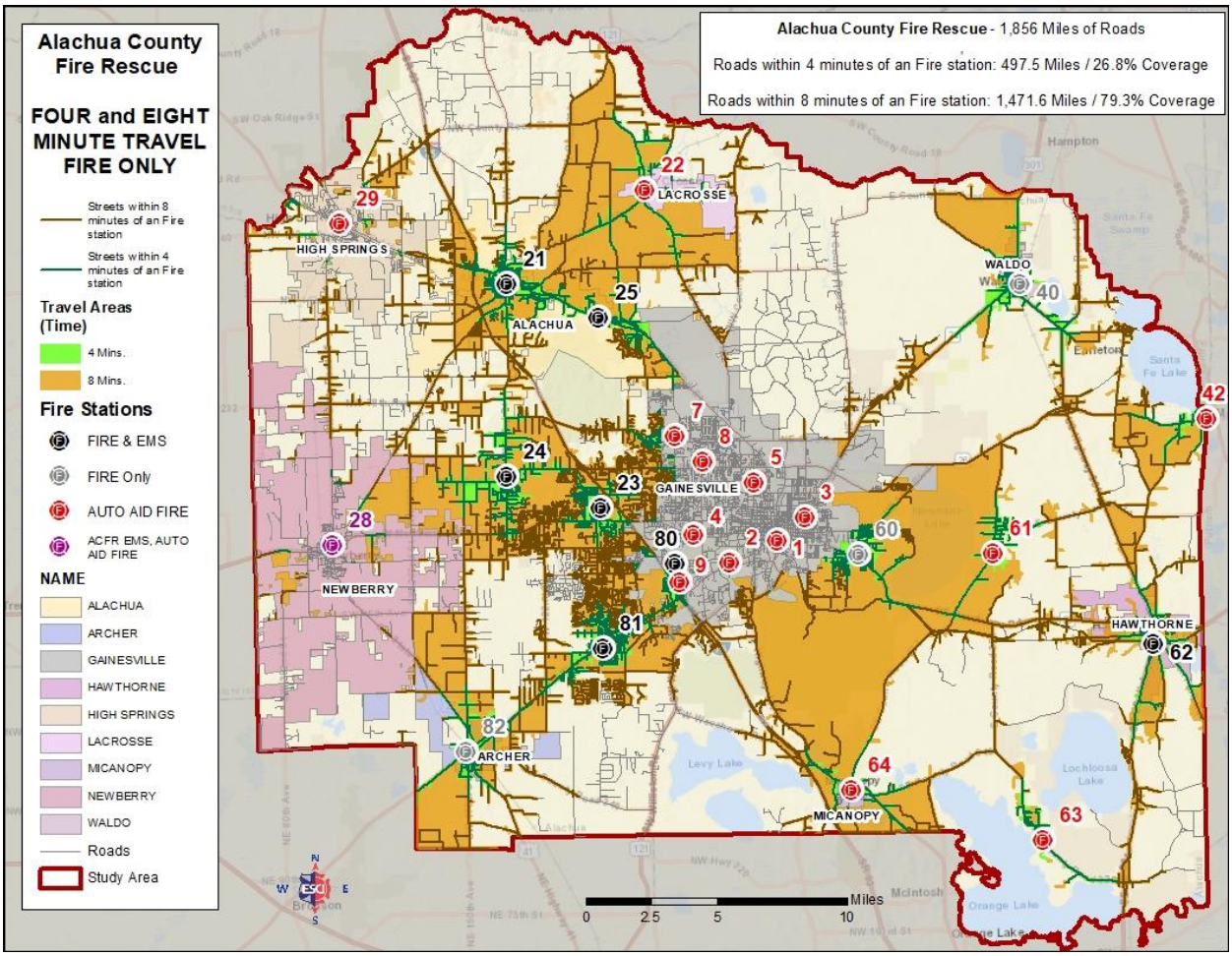
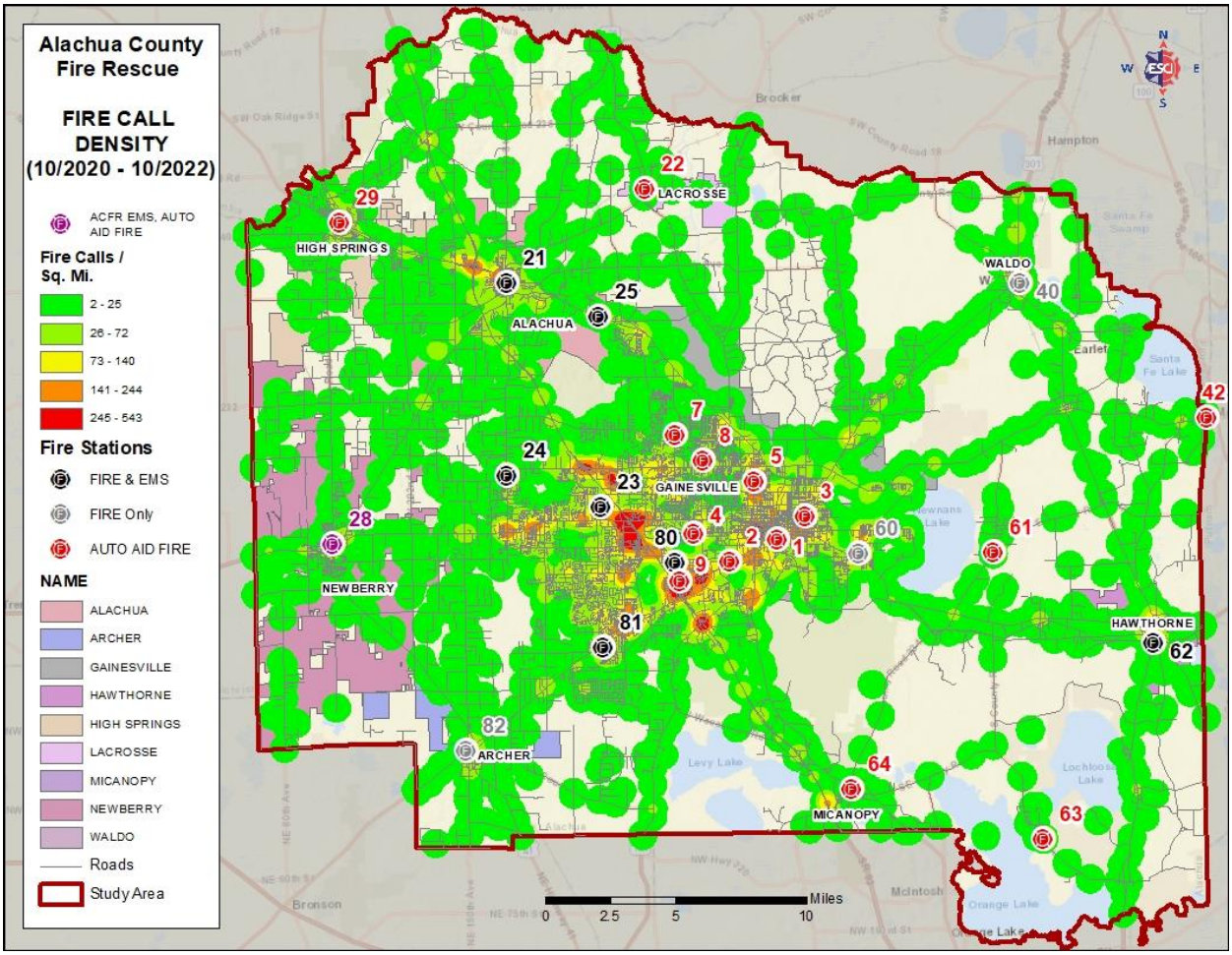


Figure 82: Fire Heat Map shows a fire incident density heat map for incidents from October 1, 2020, to September 30, 2022. This map helps compare gaps in coverage to where incidents occur. For instance, if there is a large agricultural area that doesn't produce any emergency incidents then there wouldn't make sense to locate resources there, thus justifying the lack of coverage in those areas.

Figure 82: Fire Heat Map



Alternative Service Delivery

There are very few options and alternatives for fire service delivery. There have been options explored across the nation such as roaming fire engines and trying to place units where the incidents are predicted. However, there are many legal issues that revolve around removing units from the fire station where they are supposed to be assigned.

Volunteer firefighters across the nation are declining and the use of volunteer firefighters is not recommended for ACFR. Privatization of fire services is also not recommended due to cost and the decreased ability for the County to directly control the level of service.

It is imperative that ACFR takes advantage of nationally established consensus standard metrics to justify and ensure they have the needed proof and back up to support requests for the needed people, tools, and time to deliver these components of the system. The key components of any system are listed in Figure 83: Measuring System Effectiveness.

Figure 83: Measuring System Effectiveness

There is a direct relationship between available personnel and equipment, and the timing of their application in an emergency on fire rescue department effectiveness. Increasing or decreasing one or more of these components can have a significant effect on the overall ability of the system to mitigate an emergency incident efficiently, safely, and effectively.

The following discussions provide a look at alternative service delivery models utilized by fire rescue departments to meet service delivery expectations with limited budgets, personnel, and resources.

Rapid Response Vehicles

An alternative fire service delivery is the use of rapid response vehicles. Rapid response vehicles (which are often called mini-pumpers, and which are similar to a brush truck) respond to fire-related emergencies in place of a fire engine. The benefits of rapid response vehicles include cost efficiency (as rapid response vehicles are cheaper for fire rescue departments to purchase) and more ease of maneuverability. Rapid response vehicles can also be used to provide support during EMS calls in order to decrease the frequency of larger apparatus responding to medical emergencies, which can add to wear and tear on vehicles.

However, rapid response vehicles do not carry the large volumes of water needed in non-hydrant areas. Additionally, the inclusion of rapid response vehicles in a fire rescue department's fleet increases the number of vehicles the department must purchase and maintain, and funds are required to equip these units. Furthermore, departments that do use rapid response vehicles staff the vehicles through cross staffing. Cross staffing refers to the practice of assigning Firefighters to multiple units. Cross staffing requires Firefighters to move their gear from unit to unit, which increases the time needed to respond, thus increasing overall response times.

Rapid response vehicles work best when heavy fire apparatus, such as fire engines, are experiencing a high workload and a fire rescue department responds to a high number of automatic fire alarms. ACFR heavy apparatus do not current experience a high workload or respond to a high number of automatic fire alarms. As neither scenario is relevant to ACFR, rapid response vehicles is not a recommended form of alternative service delivery for the Department.

Peak-level Staffing

Another alternative service method increasingly used in the fire suppression industry is peak-level staffing. Peak-level staffing adjusts the number of fire units or staffing of current units based on peak-time hours. Peak-time hours for most fire rescue departments are between 6:00 a.m. and 9:00 p.m., which coincides with residents and visitors being awake and performing activities. However, even though the lowest service demand occurs during the night, a national study by the U.S. Fire Administration analyzing data from 2014 to 2016 found fatal residential fires were the highest between 1:00 a.m. to 2:00 a.m. and 4:00 a.m. to 5:00 a.m. Additionally, the study found 48% of residential fatal fires occurred in the eight-hour period of 11:00 p.m. to 7:00 a.m.[18] ACFR's current fire call load does not suggest a need to analyze of peak-level staffing for the Department's fire protection services.

Supplement Staffing

Fire rescue departments commonly supplement staffing through automatic and mutual aid agreements with neighboring jurisdictions to provide coverage for a defined geographic area. Automatic aid is when the 911 center automatically dispatches units from both departments. Mutual aid is when one department reaches out to another to request support for a particular incident. ACFR maintains interlocal agreements, primarily for automatic aid, with the fire rescue departments serving the following communities: Cross Creek, Gainesville, High Springs, LaCrosse, Melrose, Micanopy, Newberry, and Windsor. ACFR does not maintain formal automatic or mutual aid agreements with any contiguous counties.

During M&J Team fieldwork, ACFR personnel expressed concerns that many of the municipalities within the County do not have enough staff to reliably respond to incidents per the interlocal agreements. Staffing concerns can greatly impact both the ability for a fire rescue department to respond to incidents and the safety of responders working on an incident when a department does not have enough personnel on scene in a timely manner. Several of the contract fire departments (and especially rural fire departments) in the County only have two trained members on duty at any given time.

Since the municipal departments in the County have the hard capital resources – fire stations and fire apparatus – ACFR has the opportunity to assist with staffing municipal units. ACFR can assist municipal departments by ensuring each unit has at least three trained members riding on each apparatus. However, ACFR shouldn't heavily rely upon contract fire departments with limited staffing to supplement the Countywide services provided.

[18] *Fatal Fires in Residential Buildings (2014-2016), Topical Fire Report Series* Volume 19, Issue 1 /June 2018, U.S. Department of Homeland Security, U.S. Fire Administration, National Fire Data Center.

Efficiency of Program Activities

The low UHU value for suppression units indicates appropriate utilization of the workforce and effective distribution of the Department's workload across units, which is beneficial for ACFR, especially given that minimum staffing levels are frequently only achieved through overtime, as discussed in Chapter 4 (Department Assessment) of the M&J report. However, incident report data indicates fire response times at the 90th percentile exceeded industry standards by approximately 6 minutes, though was within the appropriate response time range for rural incident response, as recommended by NFPA.

As with EMS operations, determination of whether the Department's fire protection operations are efficient and effective depends upon the goals and priorities of ACFR and Alachua County leadership. Measuring response time or staff utilization can determine whether staff are utilized efficiently. However, if the Department is focused on compassion and quality of service, a more appropriate measurement may be the value of property saved versus the value of property lost, or the number of lives saved during fire incident responses. Perceptions of the Department indicate that ACFR is often an EMS-driven department. While ACFR has upgraded equipment for each of the Department's service areas, certain systems and resources are perceived to have been selected based upon the utilization for EMS operations and don't provide the same degree of utility or ease of use for fire protection operations or other Departmental services. However, the introduction of an Assistant Chief for Fire Operations indicates that the Department understands the importance of focusing on both EMS and fire protection operations and will potentially allow the Department to continue enhancing the efficiency and effectiveness of fire protection operations.

Observations and Recommendations

Observation 1: ACFR does not currently designate an incident safety officer on most emergency incidents. Through the Training Lieutenant position occasionally serves as an incident safety officer, the position is not in the response matrix, so Training Lieutenants are not automatically dispatched to incidents. Department leadership indicated discussions suggesting the Health and Safety Officer or other qualified personnel provide incident safety training to additional response personnel.

Recommendation 1: ACFR should designate an incident safety officer where personnel are working in an immediately dangerous to life or health atmosphere. ACFR can consider the addition of a shift incident safety officer or can designate a specific member of each shift to function as the incident safety officer. For example, on structure fires, the Lieutenant on the third-arriving engine could be designated the incident safety officer. The Department should follow through on plans for the Health and Safety Officer or other qualified personnel to provide incident safety officer training to response personnel.

Observation 2: According to industry standards, a District Chief must be able to arrive at any fire rescue incident anywhere within their assigned district within 8 minutes of the original call. With only two 24-hour District Chiefs on shift at a time, it is not possible for the ACFR District Chiefs to arrive on scene within 8 minutes at every possible location in their assigned district for a fire rescue incident.

Recommendation 2: ACFR should consider establishing a third district and third 24-hour District Chief position to ensure field leadership can continue to meet the needs of the Department and the County.

Observation 3: ACFR does not maintain policies governing a comprehensive health and safety program meeting the requirements set by the State Fire Marshal. While the absence of a Health and Safety Officer at the time of the Audit could be a contributing factor to this lack of a comprehensive program, the M&J Team did not receive historical evidence of a comprehensive health and safety program. A comprehensive program should have a transition plan in place to remain active and effective even during a position vacancy.

Recommendation 3: ACFR leadership and the Health and Safety Officer should develop policies establishing and maintaining a comprehensive health and safety program that comply with the requirements set by the State Fire Marshal. The policies should include a temporary transition plan which ensures the program does not lapse in the event of a vacancy in the Health and Safety Officer position.

Observation 4: ACFR's report management system, ESO, is supposed to automatically generate fire incident reports from EMS reports for compliance reporting to FFIRS and NFIRS. Due to ESO workflow and integration issues, however, the system is not auto-generating NFIRS-compliant reports, causing staff to duplicate efforts and create two reports – an EMS report and a fire report – for the same incident.

Recommendation 4: ACFR leadership should work with a representative from ESO to ensure all technical requirements and expectations are being met by the system. If the system continues to lack the promised integration and capabilities, ACFR leadership should work with the County Attorney to seek a solution, such as reimbursement of funds for services not provided.

Observation 5: ACFR's implementation of leading practices for employee cancer prevention set by the State Fire Marshal is inconsistent. For example, the Department lacks comprehensive policies for decontamination of turnout gear and apparatus.

Recommendation 5: The Health and Safety Officer and ACFR leadership should conduct regularly scheduled reviews of the State Fire Marshal's Employer Cancer Prevention Best Practices – Self-Assessment Tool and determine whether the Department's policies and practices meet the leading practices included in the guidelines. Department leadership should ensure all policies are up-to-date and complete, and practices are meeting set policies.

Observation 6: ACFR does not consistently supply employees with a backup set of turnout gear for use while primary gear is being cleaned or repaired, and the loaner gear stored at CSW does not always fit the employees who use the loaner gear. As a result, firefighters may be required to respond to incidents in ill-fitting protective ensembles, or turnout gear that has not fully dried or been decontaminated.

Recommendation 6: ACFR leadership should investigate whether grant opportunities exist for the purchase of backup turnout gear for frontline employees. ACFR leadership and County leadership should develop budgets that progressively add more backup gear to the Department's inventory over the next five to 10 years.

Observation 7: ACFR staff noted in interviews the Health and Safety Officer is responsible for reporting on-the-job injuries occurring outside of fire incident responses, however staff could not identify the responsible party while the Health and Safety Officer position was vacant.

Recommendation 7: The Health and Safety Officer and Fire Marshal should develop policies for the Department that govern the reporting of on-the-job injuries, both that occur during and outside of fire incident responses, including provisions identifying the party or parties responsible for reporting when either the Health and Safety Officer position and/or Fire Marshal position is vacant.

Observation 8: ACFR does not currently hold accreditation for fire protection services and leadership indicated no current plans to seek accreditation. Many fire rescue departments work to attain accreditation to ensure and indicate a high level of service delivery and industry standards.

Recommendation 8: ACFR leadership, especially the Assistant Chief of Fire Operations, should consider working to attain accreditation for fire protection services from CFAI. At a minimum, ACFR leadership should review the standards set by CFAI to guide enhancements for fire protection operations in the Department.

Observation 9: The primary inter-agency training in which ACFR participates is multi-company training with local municipalities (except the City of Gainesville) with which ACFR already shares training resources. ACFR has not participated in inter-departmental training with law enforcement in recent years, nor has ACFR traditionally participated in inter-departmental training with contiguous counties or regional partnerships. Select personnel in the Department do participate in training exercises with the Gainesville Regional Airport on an annual basis and the University of Florida on an irregular basis.

Recommendation 9: The ACFR Fire Rescue Operations Section should host and participate in more regular inter-departmental and inter-agency training with a series of volunteer and career fire rescue services, including local municipalities and jurisdictions, contiguous counties, and regional and State agencies and partnerships. Beyond traditional fire and EMS incident response training, ACFR should also host and participate in more regular inter-departmental and inter-agency training with non-fire rescue departments, such as law enforcement agencies and public safety dispatchers.

Observation 10: ACFR is not meeting established goals for achieving fire protection unit response times that meet national standards or ACFR-established maximums. ACFR emergency response units regularly report response times higher than recommended maximums for urban, suburban, and rural demand zones, which can be attributed to a number of factors ranging from number of units available and location of stations to ability of personnel to put on equipment in a timely manner.

Recommendation 10: ACFR should work with a third-party vendor that specializes in emergency response to update the Department's master plan, which can address ways to improve response time and overall service delivery. The updated master plan should include a standards of document cover, which divides the County into response zones based on population density, risk, and target hazards, and develops response targets for each response zone.

Observation 11: Although ACFR is a 100% career organization, the Department's response area is predominately rural. The Department's current response targets and service-level goals are predominately set based upon NFPA 1710 standards for career departments with predominately urban and suburban response areas. Fire departments can establish response standards outside of NFPA guidelines, provided the standards comply with applicable local, state, and federal laws and regulations. Legally, the M&J Team cannot set response standards for ACFR or recommend a specific set of response standards.

Recommendation 11: ACFR should establish response standards based upon the population and area served, while prioritizing safety, legal compliance, and community needs.

5.C Fire Prevention

Introduction

The fire prevention responsibilities of ACFR are performed by the Life Safety/Internal Affairs Division. The Life Safety/Internal Affairs Division is responsible for fire safety building inspections in unincorporated Alachua County and contracted municipalities, arson investigations, and architectural plan reviews, and is overseen by the Division Chief/Fire Marshal ("Fire Marshal"). The Fire Marshal oversees three Fire Prevention Officers and one half-time Staff Assistant.

Key Functions

Responsibilities of the Life Safety/Internal Affairs Division include the following key functions:

- Fire Safety Inspections
- Architectural Plan Reviews
- Arson Investigations
- Employee Misconduct Investigations

Fire Safety Inspections

The Safety/Internal Affairs Division is responsible for conducting annual fire and life safety inspections for various commercial buildings within unincorporated Alachua County in accordance with Section 633.206 of the *Florida Statutes* ("*F.S.*"). Inspections must be conducted, either by the local fire prevention agency or another relevant jurisdiction, for all State-owned buildings, hospitals, nursing homes, assisted living facilities, adult family-care homes, correctional facilities, public schools, transient public lodging establishments, public food service establishments, elevators, migrant labor camps, mobile home parks, lodging parks, recreational vehicle parks, recreational camps, residential and nonresidential child care facilities, facilities for the developmentally disabled, motion picture and television special effects productions, tunnels, and self-service gasoline stations. While ACFR has responsibility over many of the facilities identified in Section 633.206, *F.S.*, the Department is not responsible for the inspections conducted by the following jurisdictions:

- The State Fire Marshal has responsibility for State-owned and State-leased buildings;
- Alachua County Public Schools conducts inspections of the public schools within the County;
- Santa Fe College contracts with a private company to conduct annual inspections, though ACFR does conduct plan review for the college; and
- The Florida Agency for Health Care Administration ("AHCA") inspects the area hospitals.

Architectural Plan Reviews

The Florida Building Code, which incorporates the Florida Fire Prevention Code ("FFPC"), requires that builders obtain a permit before beginning any new construction and any construction that enlarges, alters, repairs, moves, demolishes, or changes the occupancy of an existing structure, except for minor repairs. The FFPC is based on NFPA 1 (Fire Code) and NFPA 101 (Life Safety Code). ACFR's Life Safety/Internal Affairs Division reviews architectural drawings for compliance with the FFPC as a part of the building permitting process. State-certified Firesafety Inspectors serving as Fire Prevention Officers in the Life Safety/Internal Affairs Division conduct architectural drawing reviews for construction in unincorporated Alachua County, the City of Alachua, the City of Archer, the City of Hawthorne, the Town of LaCrosse, and the City of Waldo. The Department will assume architectural plan review responsibilities for new construction in the Town of Micanopy beginning October 1, 2023.

Unincorporated Alachua County, the City of Alachua, the City of Archer, the City of Hawthorne, and the Town of LaCrosse use electronic plan review systems, while the City of Waldo uses paper copies to review architectural drawings. Alachua County Growth Management, which manages the planning and permitting process within unincorporated Alachua County, uses the Citizenserve software platform for intake and acceptance of architectural drawings as part of the building permit application process. Citizenserve is a software platform designed for managing permitting, code enforcement, planning and zoning, and other community development functions. The relevant departments in the City of Alachua, City of Archer, City of Hawthorne, and Town of LaCrosse accept architectural drawings submitted by builders either as paper copies, which are later scanned, or as digital files. The City of Waldo's Development Review Coordinator only accepts paper copies of architectural drawings for review.

The Life Safety/Internal Affairs Division's plan review process begins when ACFR receives a copy of the architectural drawings to be reviewed from the relevant County or municipal department. An automation in Citizenserve notifies the Life Safety/Internal Affairs Division via email when architectural drawings from unincorporated Alachua County have been uploaded and are ready for review. Relevant departments in the City of Alachua, City of Archer, City of Hawthorne, and Town of LaCrosse send electronic copies of architectural drawings for inspection to the Life Safety/Internal Affairs Division. The City of Waldo's Development Review Coordinator notifies the Life Safety/Internal Affairs Division whenever the City has plans ready for review and ACFR sends someone out to Waldo to pick up a paper copy of the plans.

The Life Safety/Internal Affairs Division uses Citizenserve to track the architectural drawing review process. The Life Safety/Internal Affairs Division receives plans from Alachua County Growth Management through Citizenserve and creates Citizenserve entries for plans received from the City of Alachua, City of Archer, City of Hawthorne, Town of LaCrosse, and City of Waldo. Using workflow in Citizenserve, the Fire Marshal assigns plans to individual Fire Prevention Officers for review.

After the Life Safety/Internal Affairs Division receives and processes a copy of the architectural drawings, the assigned Fire Prevention Officer reviews the drawings for compliance with the FFPC. If the Fire Prevention Officer conducting the review determines that the submitted drawings do not comply with the FFPC, the Life Safety/Internal Affairs Division will work with the submitting builder and their architect so that the architect can adjust the drawings and, when possible, create a solution that meets all code requirements and fits within the builder's budget.

ACFR maintains several policies that reference the architectural drawing review process, but there is no formal ACFR policy or procedure that governs how Fire Prevention Officers should review architectural drawings for compliance with the FFPC. The Fire Marshal maintains a physical binder that contains paper copies of unofficial policies, procedures, and job aide documents, which the Fire Marshal is in the process of formalizing and digitizing. The Fire Marshal's binder does not include a policy that governs the review of architectural drawings or any relevant job aide documents.

ACFR charges submitters a fee for review of architectural drawings that is based on both the square footage of the construction and the complexity of any reviewed fire suppression or alarm systems. For construction within unincorporated Alachua County, the Life Safety/Internal Affairs Division uses Citizenserve to both calculate the correct plan review fee and bill the plan review fee directly to the submitter. ACFR does not finalize the review of architectural drawings for construction in unincorporated Alachua County until the submitter has paid the plan review fee. Fire Prevention Officers calculate plan review fees due for plan reviews of structures in the City of Alachua, City of Archer, City of Hawthorne, Town of LaCrosse, and City of Waldo and bill the municipalities for the fee. The City of Alachua, City of Archer, City of Hawthorne, Town of LaCrosse, and City of Waldo are responsible for passing the bills on to the individual or organization that submitted the plans for review. ACFR does not require the Cities of Alachua and Waldo to pay all plan review fees before the Life Safety/Internal Affairs Division will finalize the architectural drawing review.

Arson Investigations

The Life Safety/Internal Affairs Division is responsible for conducting arson investigations within Alachua County. The Fire Marshal conducts interviews of all on-scene personnel and completes a thorough review of the area in which the fire occurred. The Fire Marshal is responsible for creating a hypothesis that explains how the fire was potentially started and if there is any evidence of foul play. According to the ACFR Fire Marshal Class Specification Bulletin, the Fire Marshal is called out to incident scenes for every building structure fire, is incendiary in origin, involves loss of life or injury, or involves substantial damaged or destroyed property. For fires that result in over one million dollars' worth of property damage, or if the investigation from the Fire Marshal ends without conclusion, the State Fire Marshal is called out to the scene to take over the investigation. The Fire Marshal investigates the scene of the fire, but only areas where burns are visible, or property is damaged. The Fire Marshal is not allowed to investigate areas of a structure where the fire did not cause any damage or burns.

Employee Misconduct Investigations

The Fire Marshal is also responsible for working with the District Chiefs to investigate employee misconduct. The Fire Marshal begins the investigation after being notified by the Assistant Chief of Fire Operations, the Assistant Chief of EMS Operations, or the Assistant Chief of Professional Standards of a complaint. The Fire Marshal gathers facts about the alleged incident by interviewing all parties involved. Once all interviews have been completed, the Fire Marshal submits a report of facts to the Deputy Chief, the relevant Assistant Chief, and the relevant Union for review. Once the Fire Marshal has submitted the report, decisions about disciplinary action are the responsibility of the Assistant Chief, after a discussion with the County offices included in the weekly HR Consult meeting. The weekly HR Consult meetings include representatives from the County Attorney's Office, Equal Opportunity Office, Human Resources Department, and Risk Management Division of the Budget and Fiscal Services Department. ACFR internal investigations discussed in the HR Consult meetings include, but are not limited to, traffic incidents that could result in County liability, drug-related violations, ACFR-employee traffic citations, and other incidents that might result in financial losses for the County. In addition to general notices of investigations, ACFR brings to the HR Consult meetings disciplinary recommendations that might result in changes to a staff member's employment status with the County – namely suspensions and terminations. The HR Consult ensures disciplinary actions are consistent across the County, fair, follow County policies and ordinances, and limit the County's risk of litigation.

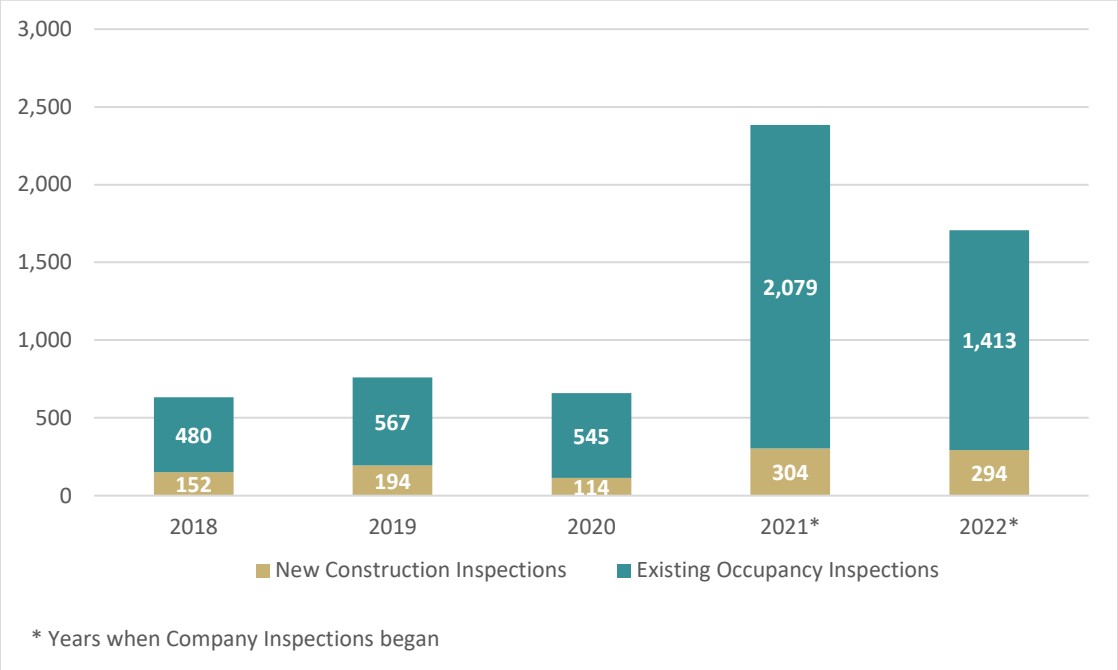
Staffing and Personnel Management

The Life Safety/Internal Affairs Division currently consists of the Fire Marshal, three Fire Prevention Officers, and one half-time Staff Assistant. Prior to FY2023, the Fire Prevention Officer position was classified as two Plans Reviewers and one Fire Inspector. The reclassification to Fire Prevention Officer allows Life Safety/Internal Affairs Division staff to be interchangeable in their responsibilities. For example, prior to the change to Fire Prevention Officer, Plans Reviewers were not trained to complete the tasks of the Fire Inspector and vice versa. The change in classification allows for each employee in the Life Safety/Internal Affairs Division to perform all the same responsibilities.

The Department currently does not have a detailed policy that outlines a succession plan for the Life Safety/Internal Affairs Division that describes how employees should be trained to take over the responsibilities of the Fire Marshal if the position becomes vacant. The M&J Team learned from interviews that a binder exists with all the responsibilities of the Fire Marshal and includes a copy of the Fire Marshal's desk manual. Employees are to refer to the binder if the Fire Marshal is absent.

The Life Safety/Internal Affairs Division performs business fire safety inspections for businesses within Alachua County. The Life Safety/Internal Affairs Division is allocated three Fire Prevention Officers. The addition of company inspections to the Life Safety/Internal Affairs Division responsibilities has increased the number of inspections that the Life Safety/Internal Affairs Divisions performs, as shown below in Figure 84: Building Inspections Performed by the Life Safety/Internal Affairs Division. Figure 84 does not include architectural drawing plan reviews.

Figure 84: Building Inspections Performed by the Life Safety/Internal Affairs Division



The FFPC updates every three years. The FFPC adopted the 2018 NFPA Standard requiring business inspections to be completed annually, biannually, or triennially depending on the risk classification of the business. The Fire Marshal has begun training Engine Company Lieutenants to complete business fire safety inspections to account for the increased inspection frequency requirement. Currently, the Fire Marshal and Fire Prevention Staff are having to provide quality assurance to each business fire safety inspection completed by the Lieutenants who are trained to do so.

Performance Analysis

Fire and Life Safety Inspections

Fire Prevention should be the cornerstone for all activities performed by a fire department. The prevention of fire and loss of life, human suffering (injuries to civilians and firefighters), environmental harm, and property damage is the optimum return on investment for fire agencies. Proactive involvement in construction, code enforcement, educating the public to prevent destructive fires, and training the public to survive them is the best accomplishment of fire prevention.

The most effective way to combat fire is to prevent them from occurring in the first place. A strong fire prevention program, based on locally identified risk and relevant codes and ordinance, reduces loss of property and life, and the personal and community-wide disruption that accompanies a catastrophic fire.

Alachua County has adopted the 7th Edition of the FFPC and Florida Specific Amendments per Section 69A-3.012 of the *Florida Administrative Code*. In addition to the FFPC, the County has a Land Development Code. ACFR follows the rules set forth in the FFPC and NFPA codes and standards, in addition to any State of Florida required modifications or adoptions.

Fire code enforcement and administration is the responsibility of the Fire Prevention Division with the Fire Prevention Manager holding the title of Fire Marshal. Three Fire Protection Officers and the Fire Marshal are devoted to the inspection program to verify and enforce fire and life safety code compliance. In addition to the three Fire Protection Officers, ACFR has taught a 24-hour class to fire lieutenants that are assigned to engine/ladder companies to conduct fire safety inspections. The lieutenants utilize a check list that is provided to them from the Fire Marshal that assists them in the inspections.

The company officer inspection sheet utilizes a pass or fail checkbox and has the officer look at the following items: sprinkler system present, fire alarm present, suppression system present, electrical, egress, extinguishers, emergency lights, and exit signs. There is a space at the bottom of the checklist that has a place for notes along a line for the company officer to sign and the business representative to sign. At the bottom of the checklist states that any failures need to be corrected within 30-days.

ACFR advised that there is a Special Magistrate hearing that may be used for code violations/fines, but they have not needed to do so. The Fire Marshal stated that Special Magistrate is handled through the County's Code Enforcement Division and that ACFR is working on getting training in their system so that everything is documented correctly.

Section 10.2.7 of NFPA 1 provides a minimum frequency schedule for fire inspections: high risk inspections are performed annually, moderate risk inspections are performed biennially, and low risk inspections are performed triennially. Lieutenants complete 85% of the company inspections but the Fire Marshal is unsure if there are any businesses that are not in their database since the County does not issue or require business licenses. The inspections that do not get done via the company inspections tend to be churches or remote work offices. The Fire Marshal will reassign those inspections to one of his regular inspectors for them to attempt to make entry or contact. This is an area that the Fire Marshal is working on to try to improve.

In addition to the engine/ladder companies conducting the inspections they can fill out a pre-plan of the building/occupancy in the event of a fire. The pre-plan information has been placed on the backside of the inspection form. The company officer will then place the information into the ESO software for future use.

ACFR's inspectors and/or company officers perform the following inspections on an annual basis:

- Private and charter schools
- Daycares
- Assisted living facilities and nursing homes
- Medical facilities – offices, clinics

Annual inspections for private and charter schools are conducted annually with the inspectors following NFPA 101, Chapter 14 – New Educational Occupancies or Chapter 15 – Existing Educational Occupancies. The inspection reports are uploaded into a State Educational reporting system so that the State ensures that a safety inspection was completed and if there are any deficiencies. Daycares follow the same annual inspections but follow NFPA 101 Chapter 16 – New Day-Care Occupancies or Chapter 17 – Existing Day-Care Occupancies.

Assisted living facilities, nursing homes, ambulatory care, doctors' offices, dentists' offices, and other medical facilities are inspected annually per the FFPC along with AHCA. AHCA licenses and regulates Florida health care facilities, including hospitals, nursing homes, assisted living facilities, home health agencies and ambulatory surgery centers.

When asked about inspecting County facilities such as schools, courthouses, commission chambers, etc. the Fire Marshal stated that ACFR does not currently inspect them due to staffing. Alachua County Public Schools conducts the required inspections of the public schools within the County.

AHCA conducts annual inspections of area hospitals, which may take them one to three weeks depending on the size of the facility. ACFR is not currently involved in the inspection of hospitals.

Architectural Drawing Review

NFPA 1730 (Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations) requires that all personnel that perform plan reviews meet the job requirements detailed in NFPA 1031 (Standard for Professional Qualifications for Fire Inspector and Plan Examiner, now incorporated within NFPA 1030 [Standard for Professional Qualifications for Fire Prevention Program Positions]). Florida's Firesafety Inspector certification is based on NFPA Standard 1030's required qualifications. As all Fire Prevention Officers must be certified as Firesafety Inspectors in order to perform reviews of architectural drawings, the Life Safety/Internal Affairs Division complies with NFPA Standard 1730's qualification requirement for plan review.

NFPA Standard 1730 also establishes a set of minimum plan review elements. A review of architectural drawings for compliance with the Florida Fire Prevention Code entails performing all of the architectural drawing elements of NFPA Standard 1730's minimum plan review elements. The portions of NFPA Standard 1730's minimum plan review elements that are not performed during the architectural drawing review are performed during a pre-occupancy inspection of the completed construction conducted by a Fire Prevention Officer.

The Life Safety/Internal Affairs Division uses both Citizenserve and ESO to track how many sets of architectural drawings ACFR reviews each year. The M&J Team reviewed Citizenserve summaries of architectural drawing reviews. As Alachua County Growth Management and the Life Safety/Internal Affairs Division started using Citizenserve midway through calendar year 2020, the M&J Team only reviewed records of architectural drawing reviews for parts of calendar year 2020 and all of calendar years 2021 and 2022. Figure 85: Architectural Drawing Reviews Conducted by the Life Safety/Internal Affairs Division shows the number of architectural drawings that the Life Safety/Internal Affairs Division has conducted per year.

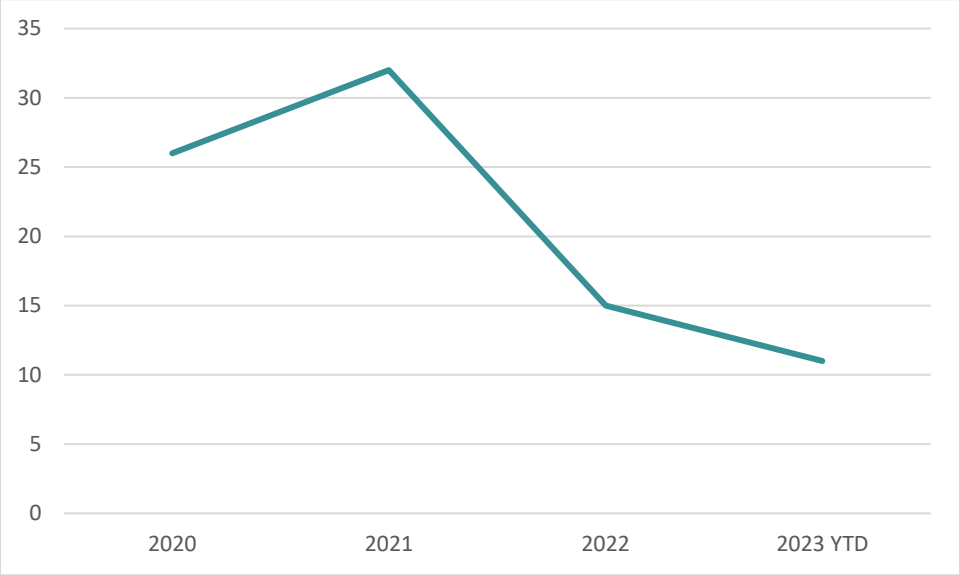
Figure 85: Architectural Drawing Reviews Conducted by the Life Safety/Internal Affairs Division

Calendar Year	Architectural Drawing Reviews Conducted
(Partial) 2020	42
2021	256
2022	293

Arson Investigation Process

The Fire Marshal is responsible for conducting arson investigations within Alachua County. Figure 86: Arson Investigations Conducted shows the number of arson investigations conducted by the Fire Marshal over the last three years.

Figure 86: Arson Investigations Conducted



As shown in Figure 86, the need for arson investigations in the County saw an uptick from 2020 to 2021 and then dropped by a large margin from 2021 to 2022. The arson investigation process begins with the Fire Marshal being called out to the incident scene by the ranking Incident Commander. According to ACFR Policy Chapter 8.12, if the Incident Commander deems the fire origin to be "readily apparent and not incendiary in nature" the Incident Commander will thoroughly document the findings in ESO and the Fire Marshal will not be required to investigate. ESO is the management system that ACFR uses to create reports that contain information about each fire rescue incident in order to keep track of fire rescue incident data.

If it is necessary for the Fire Marshal to investigate, the Fire Marshal will receive an on-scene report from the on-scene Incident Commander. The Fire Marshal will then walk around the damaged structure in order to investigate any details of the fire that would assist in the investigation. The on-scene Incident Commander is responsible for ensuring that the integrity of the incident scene is maintained so that the Fire Marshal can collect accurate information regarding the cause of the fire and overall damage of the structure. After performing the exterior review of the structure, the Fire Marshal gathers together the first crew that arrived on scene to gain more information about the potential cause of the fire.

Next, the Fire Marshal attempts to get into contact with the property owner and property appraiser to assess the full amount of damage caused by the fire incident. If the monetary loss is more than one million dollars, the Fire Marshal contacts the State Fire Marshal to perform a formal investigation. Once the property has been appraised post-damage, the Fire Marshal enters the structure using a "right hand search technique" throughout the burned parts of the structure. The "right hand search technique" requires the Fire Marshal to move around the damaged areas of the structure while keeping their right hand across the wall of a structure. It is important that the Fire Marshal does not enter any parts of the structure that were not affected by the fire and/or show no sign of burning. If the Fire Marshal enters areas of a structure that have not been affected by the fire, the investigation is corrupted. During this part of the process, the Fire Marshal takes pictures of each item of interest within the burned area of the structure. Once an area of origin is found, the Fire Marshal begins to rule out causes of the fire. The Fire Marshal checks to see if the fire was caused by an electrical issue, and if the Fire Marshal deems that the fire was not caused by an electrical issue, the Fire Marshal will rule it out and move on to the next most likely cause of the fire. The Fire Marshal formulates a hypothesis for the cause of the fire after discovering the origin of the fire. This hypothesis may not always define a direct cause of the fire but helps ensure that further investigation is pointed in the right direction. In the case that the Fire Marshal cannot figure out the origin of the fire, the State Fire Marshal is called in to investigate further.

Once the Fire Marshal is finished reviewing the incident scene, the Fire Marshal turns the incident scene back over to the on-site crew or homeowner. To end the process, the Fire Marshal writes up a summary report and submits the report into ESO. The Fire Marshal coordinates and liaisons with the State Fire Marshal if the Fire Marshal deems the origin of the fire to be criminal in nature.

Internal Affairs Investigations

The concept of internal affairs is very broad and unique to each fire rescue department that has this office/position. However, the primary purpose of having an internal affairs officer is to investigate and find facts related to what occurred when a firefighter is accused of misconduct. An investigation may also give insight into a policy itself that may have issues.

Within ACFR, the Fire Marshal conducts Internal Affairs investigations. The approximate number of investigations conducted each year is 20. Most investigations are primarily violations of protocol and/or standards.

Before an investigation begins in ACFR, a complaint must be made either from an internal or external source. The complaint is submitted to the appropriate on-duty District Chief with a complaint form. The District Chief logs the complaint in the daily shift report and then follows up with the complainant to gain more information regarding the complaint. Once the District Chief gathers all necessary information from the employee under investigation and complainant, the District Chief will submit the complaint to the Chief and Deputy Chief of Fire Rescue, or the relevant Assistant Chief. If additional investigation is necessary, it will be referred to the Fire Marshal for follow-up.

If the complaint is determined to need an investigation, the following process will occur:

- The Fire Marshal notifies the employee through email that they have been placed under investigation. The email contains a Formal Notice of Investigation ("FNOI") along with a copy of the Florida Firefighter's Bill of Rights ("BOR")
- The FNOI has a "to be determined" date on it as witnesses must be interviewed first

- The FNOI is delivered, via channels, to the Union Vice President of Discipline/Grievances ("Union VP"), the Union Executive Board, and the employee under investigation
- ACFR utilizes a form from HR which include the Garrity and Weingarten rights statements if the complaint has any criminal inuendoes
    - Garrity and Weingarten rights provide Union employees the right to have a Union steward present at all proceedings
- The employee under investigation signs and dates the BOR and emails it back to the Fire Marshal
- The Fire Marshal then collects data – reports, creates a witness list for interviews
- Witness interviews are conducted either in person or via phone and are recorded
- If ACFR personnel are witnesses, they are offered union representation when they do their compelled statements. Additionally, if a phone interview is conducted for ACFR personnel on their day(s) off they are compensated
- The Fire Marshal will ask the employee under investigation if they have any witnesses they would like to have interviewed
- The employee under investigation is then brought in for their interview along with union representation or a person of their choice
    - The Fire Marshal will advise the employee under investigation and their representation that the conversation will be recorded
    - The Fire Marshal will advise the employee under investigation of what the FNOI and interview are for
    - The Fire Marshal asks if the employee under investigation is familiar with the incident
    - The Fire Marshal will then ask the employee under investigation pointed questions regarding the complaint
    - The employee under investigation will be asked at the end if they have anything further, or if they would like to add to their interview
    - The union representative will also be asked if they have any questions
- Once the investigation is completed the Fire Marshal will produce a summary that will go to the Assistant Chief in charge of the branch the employee under investigation is assigned to
    - The Assistant Chief will make a recommendation that is reviewed by the Human Resources Consult team

If complaints are criminal in nature, the complaint is automatically handled by the Alachua County Sheriff's Office and the Alachua County HR Department.

Case documentation reviewed as part of the Assessment indicated that within the internal affairs process, investigations are comprehensive, non-biased, evidence based and consistent.

Inspector Workload

Recent fire prevention staffing studies suggest that the ideal annual workload for full-time fire inspectors should be about 500-750 fire inspections of all types — new construction, existing structures, complaints, and code compliance follow-ups.[19] The suggested capacity accounts for the time required to travel between inspections, to conduct and document the inspection, to research code issues, to conduct follow-up and compliance activities, and to testify in code interpretation and correction hearings or court cases.

Figure 87: ACFR Inspection Statistics shows the number of new construction inspections and existing occupancy inspections completed by ACFR from FY18 through FY22.

Figure 87: ACFR Inspection Statistics

Fiscal Year	New Construction Inspections	Existing Occupancy Inspections	Total Inspections
FY18	152	480	632
FY19	194	567	761
FY20	114	545	659
FY21	304	2,079[a]	2,383[a]
FY22	294	1,413[a]	1,707[a]
[a] Start of Operations Company Inspections of existing occupancy inspections			

The increase in inspections in FY21 and FY22 was due to operations companies beginning to conduct inspections after the Lieutenants attended the 24-hour class taught by the Fire Marshal. ACFR employed a single fire inspector from FY18 through FY21, which means that the inspector completed a total of 632 inspections in FY18, 761 inspections in FY19, and 659 inspections in FY20.

Fee Analysis

The base fee that ACFR charges for fire and life safety inspections is determined by the square footage of the structure being inspected. Figure 88: Comparison of Base Fire and Life Safety Inspection Fee Schedules compares ACFR's base fee schedule with the base fee schedules charged by the City of Gainesville Fire Rescue Department and the St. Johns County (FL) Fire Rescue Department.

[19] "Fire Prevention Caseload and Resource Requirements," by M. Montgomery and K. Kistner for the Harris County (TX) Fire Marshal's Office, 2016; "Risk-Based Inspection Programs: How to Calculate Staffing Needs," M. Montgomery, 2019; and others.

Figure 88: Comparison of Base Fire and Life Safety Inspection Fee Schedules

Alachua County		City of Gainesville		St. Johns County	
Area (thousands of square feet)	**Fee**	**Area (thousands of square feet)**	**Fee**	**Area (thousands of square feet)**	**Fee**
0-3	$76.75	0-3	$80.50	0-5	$38.00
3-5	$88.75	3-5	$93.25		
5-10	$100.75	5-10	$105.75	5-12	$53.00
10-25	$113.75	10-15	$120.00		
		15-20	$130.00	12-25	$88.00
		20-25	$140.00		
25-50	$125.25	25-30	$150.00	25-50	$105.00
		30-35	$160.00		
		35-40	$170.00		
		40-45	$180.00		
		45-50	$190.00		
50-75	$137.25	50-60	$200.00	50-75	$123.00
		60-70	$210.00		
		70-80	$220.00		
75-100	$149.25			75-100	$140.00
		80-90	$230.00		
		90-100	$240.00		
100-125	$161.50	100+	$240.00 + $10.00 for each additional 20,000 sq ft	100-250	$175.00
125-150	$173.75				
150-175	$185.75				
175-200	$198.00				
200+	$198.00 + $12.00 for each additional 25,000 sq ft			250-500	$210.00
				500-750	$245.00
				750-1,000	$280.00
				1,000+	$350.00

All three fire rescue departments set fees using different square footage ranges. ACFR's fire and life safety inspection fee schedule tends to be somewhat higher than St. Johns County Fire Rescue's fee schedule and somewhat lower than Gainesville Fire Rescue's fee schedule.

If a structure does not pass the initial inspection, ACFR does not charge a fee for the first reinspection of the structure. If a structure does not pass its first reinspection, ACFR charges double the standard rate for all additional reinspections. If a structure does not pass the initial inspection, Gainesville Fire Rescue charges double the standard rate for all reinspections. St. John's County Fire Rescue charges the standard rate for all inspections and reinspections.

ACFR charges additional fees on top of the base fees for specialized types of inspections, such as inspections of sprinkler systems, pre-engineered fire suppression systems, and fire alarm systems. Figure 89: Comparison of Specialized Inspection Fee Schedules compares the fees charged by ACFR, St. John's Fire Rescue, and the Marion County (FL) Fire Rescue Department for inspections of fire sprinkler systems, pre-engineered fire suppression systems, and fire alarm systems.

Figure 89: Comparison of Specialized Inspection Fee Schedules

Inspection	Alachua County Fee	Marion County Fee	St. Johns County Fee
Fire Sprinkler System (Total of Rough and Final)	$125.00 per riser + $65.00 per additional story + $0.75 per head	$140.00 for initial riser + $30.00 per additional riser + $0.50 per head	$81.00 + $1.00 per head over 50
Pre-Engineered Fire Suppression System	$70.00 per system	$65.00 + $5.00 per head	$68.00
Fire Alarm Systems (Total of Rough and Final)	$100.00 per panel + $20.00 per additional story + $0.50 per additional device	$65.00 + $1.50 per device over 50	$54.00 + $1.50 per device over 10

Looking at specialized inspections, ACFR's fee schedule tends to be higher than St. Johns Fire Rescue's fee schedule. ACFR's fee schedule is roughly comparable to Marion County Fire Rescue's fee schedule, although both fee schedules vary significantly depending on the details of the structure being inspected.

ACFR's current inspection fee schedules were established between 2017 and 2019, while industry best practices suggest that fire rescue departments review their inspection fee schedules every three years.

Observations and Recommendations

Observation 1: The Life Safety/Internal Affairs Division does not currently have a Department-specific operational policy in place regarding succession planning in regard to the Fire Marshal position. Currently, Fire Prevention Officers are to refer to a binder that lists the responsibilities and processes used by the Fire Marshal.

Recommendation 1: The Life Safety/Internal Affairs Division should consider implementing a formal succession plan for the Fire Marshal position. The Fire Marshal would be able to use the designed succession plan to train the Fire Prevention Officers in case that the Fire Marshal is not able to perform their responsibilities.

Observation 2: ACFR reviews architectural drawings from the City of Waldo for compliance with the FFPC. The City of Waldo conducts most plan reviews using paper copies of the architectural drawings. ACFR conducts all other architectural drawing reviews using digital versions of the architectural drawings. When the City of Waldo has plans ready for ACFR to review, the Department sends personnel to the City offices to pick up a physical copy of the plans.

Recommendation 2: ACFR should work with the City of Waldo to streamline the architectural drawing review process by making it so the Department does not need to send personnel out to the City to pick up physical copies of architectural drawings. ACFR could either ask that City of Waldo personnel deliver the plans to ACFR or develop a system for the City of Waldo to deliver plans to ACFR digitally.

Observation 3: ACFR does not have a formal policy or procedure that governs how Fire Prevention Officers are to review architectural drawings for compliance with the Florida Fire Prevention Code. A Fire Prevention Officer must be a State-certified Firesafety Inspector in order to conduct architectural drawing reviews and should be able to review architectural drawings without a Department-provided guide, but not having a formal document to guide Fire Prevention Officers in conducting reviews may lead to inconsistencies in review practices and outcomes.

Recommendation 3: The Life Safety/Internal Affairs Division should develop a formal procedure for reviewing architectural drawings for compliance with the Florida Fire Prevention Code. Additionally, the Life Safety/Internal Affairs Division should consider creating job aide documents, such as checklists and step-by-step walkthroughs, which will help ensure that Fire Prevention Officers conduct reviews thoroughly and in a consistent manner. Job aides may be particularly useful when evaluating compliance with more technical parts of the Florida Fire Prevention Code that do not apply to every set of architectural drawings reviewed, such as sprinkler systems, fire alarm systems, and pre-engineered fire suppression systems.

Observation 4: The Fire Marshal maintains physical binders that contain paper copies of a number of unofficial policies, procedures, job aide documents, a listing of the Fire Marshal's responsibilities, and the Fire Marshal's desk manual. The Fire Marshal is currently in the process of formalizing and digitizing the documents contained in the Fire Marshal's reference binders.

Recommendation 4: ACFR should ensure that the Fire Marshal completes the ongoing formalization and digitization of the Fire Marshal's reference binders.

Observation 5: Due to staffing concerns, ACFR does not currently conduct fire and life safety inspections of County facilities (not already covered by other jurisdictions, such as Alachua County Public Schools), including courthouses and County offices. AHCA performs annual inspections of hospitals but does not include ACFR as a part of the inspection process.

Recommendation 5A: ACFR should increase the number of State-certified Firesafety Inspectors within the Department so that the Department has sufficient staff to conduct fire and life safety investigations of County facilities. ACFR can meet this goal though some combination of hiring additional Fire Prevention Officers and/or certifying Lieutenants in the Fire Rescue Operations Section.

Recommendation 5B: ACFR should begin conducting required fire and life safety inspections of County facilities. ACFR should additionally begin to work with AHCA, as appropriate and necessary, to conduct required fire and life safety inspections of hospitals within the County.

Observation 6: During the Internal Affairs Investigation process, the Fire Marshal is responsible for interviewing the employee under investigation in person and each witness either in person or on the phone. Currently, the Fire Marshal is responsible for taking notes in each of these interviews. The notes taken are very important to the resolution of the case because they can provide witness testimonies regarding the complaint.

Recommendation 6: Because of the importance of the interview notes from meetings with witnesses and employees under investigation, ACFR should look into working with a company that can create complete transcriptions of the recorded interviews. Having transcriptions of recorded interviews could be helpful if there is a complaint which requires a large number of interviews to be transcribed.

Observation 7: ACFR's current inspection fee schedules were established between 2017 and 2019. While ACFR's fee schedules are similar to the fee schedules used by comparable fire rescue departments, industry best practices are to review fee schedules at least every three years.

Recommendation 7: ACFR should review inspection fee schedules used by other comparable fire rescue departments once every three years and adjust the Department's fee schedules as needed to remain in line with industry trends.

Observation 8: After completing the internal affairs investigation process, the Fire Marshal sends a Final Investigation Summary to the Chief of Fire Rescue, the Deputy Chief of Fire Rescue, the relevant Assistant Chief, and the Union Executive Board. The Final Investigation Summary does not currently include a disposition of the findings (*i.e.*, not sustained, sustained, exonerated, unfounded, or policy failure) or the relevant policy violation, Collective Bargaining Agreement ("CBA") violation, or Standard Operating Procedure.

Recommendation 8: The Fire Marshal should ensure that, as applicable, the Final Investigation Summary states relevant findings, violations of standard operating procedures, rules and regulations, the final disposition, and/or the CBAs.

5.D Training Bureau and Health & Safety

Introduction

The following chapter describes the Training Division, as well as the Department's Health and Safety function.

A comprehensive training program is one of the most critical factors for helping to ensure the safe and effective provision of emergency services. To ensure maximum effectiveness and safety in complex environments, firefighters and officers must acquire and maintain sufficient initial training, ongoing training, and continuing medical education. Failure to provide necessary training endangers firefighters and members of the public, and exposes the fire rescue department to liability. In addition, a well-trained workforce substantially contributes to better emergency incident outcomes and community services.

The Training Division consists of three Training Lieutenants ("TLs") who report to the Assistant Chief of Professional Standards. TLs are responsible for the development and delivery of training for the employees of the Fire Rescue Operations Section. TL positions are designed for one-year rotations to allow each ACFR Lieutenant to serve in the TL role for a year before rotating back to serving as a company officer. TLs have previously specialized in EMS, fire suppression, technical rescue, or other subject matter areas; recently, however, specialization has not been consistently considered in filling the TL positions. Additionally, multiple staff currently serving as TLs have been in the position for longer than the one-year expectation.

Per statutory requirements for firefighter employers in the State of Florida, ACFR is required to maintain a comprehensive health and safety program that works to improve safety in Department operations and provide services that improve employee physical and mental wellbeing. The Department's Health and Safety Officer ("HSO") is a captain-level position that reports to the Assistant Chief of EMS Ops. In conjunction with the Safety Committee, which is comprised of frontline and command structure staff, the HSO is responsible for managing internal health programs, tracking internal safety incidents (such as vehicle crashes and on-the-job injuries), and recommending training programs based upon trends in Departmental safety practices.

Key Functions

As the two primary roles are distinct, the key functions have been organized to represent the two distinct roles covered in this section:

- Training Division Key Functions
- Health & Safety Key Functions

Training Division Key Functions

TLs within the Training Division are responsible for the following key functions:

- Training Design and Delivery
- Personnel Certification Monitoring
- Promotional Testing

In addition to their key functions, the individual TLs are also responsible for secondary responsibilities including serving as system administrators for the FireRescue1 Academy and ESO systems, assisting the Medical Director with paramedic clearance, managing medicine orders and the supplies located at the Headquarters, and managing any special projects assigned by ACFR leadership.

Training Design and Delivery

The TLs work with the Assistant Chief of Professional Standards to develop an annual training schedule for each year, identifying the training courses, materials, and exercises field personnel should complete each month to maintain compliance with *Florida Statutes* ("*F.S.*"), *Florida Administrative Code* ("*F.A.C.*"), Insurance Services Office ("ISO"), and National Registry of Emergency Medical Technicians training and certification/recertification requirements. The TLs use a series of tools, such as FireRescue1 Academy (the Department's new learning management system ["LMS"]), simulator software, and websites/digital textbooks offered by various instruction companies, to develop and deliver monthly courses in a variety of areas ranging from fire suppression and prevention activities to EMS leading practices to emergency vehicle operation.

The Training Division started implementation of the FireRescue1 Academy in January 2023; previously the Department utilized Vector Solutions (formerly known as TargetSolutions) as the LMS. Since switching to FireRescue1 Academy, the TLs have been tasked with migrating data from Vector Solutions to FireRescue1 Academy. The Training Division uses the LMS for virtual instruction, as well as certification and recertification tracking to ensure members of the Fire Rescue Operations Section remain compliant with State, Federal, and industry requirements for continuing education.

The Training Division is also responsible for the upkeep and management of the Loften Training Center, including equipment maintenance and overall training center repairs – a responsibility ACFR shares with the Alachua County Board of Education, which also uses the facility for Loften High School's Academy of Fire and Emergency Medical Services.

Of note: While the TLs are responsible for overseeing the delivery of training for frontline staff, the members of the Training Division are not always the personnel actually teaching courses. When the TLs aren't directly training frontline staff, the TLs identify subject matter experts (from within and outside the Department) to provide instruction. When companies are assigned virtual learning courses, company officers and District Commanders are responsible for ensuring staff complete the courses in a timely manner.

Personnel Certification Monitoring

TLs are responsible for monitoring job-related certifications for line personnel within ACFR, including firefighter, EMT or paramedic, fire instructor, fire officer, or specialty certifications. Certifications and training credits applied toward maintaining certifications are tracked in FireRescue1 Academy. Company officers email new certifications and recertifications for company staff to the TLs; the TLs update new certification and recertification information into FireRescue1 Academy and identify continuing training requirements and expiration dates.

Promotional Testing

As outlined in the International Association of Fire Fighters ("IAFF") General Unit Collective Bargaining Agreement ("IAFF CBA"), TLs conduct promotional testing for any employees who have met the State and Departmental criteria for Driver/Operator, Rescue Lieutenant, EMS Attendant, and Lieutenant roles. For example, in addition to meeting the qualifications for Firefighter (EMT certification and State of Florida Firefighter certification, or the nationally recognized Pro Board Firefighter I and II certification), candidates for Driver/Operator must attain State of Florida paramedic certification and Pump Operator certification. After TLs have identified candidates for promotional testing (as determined by tracking certifications in the LMS), TLs conduct written, oral, and/or practical examinations to test candidates' understanding of the role sought and the candidates' capabilities. Candidates who pass the examination(s) are placed on a promotional list based upon assessment scores. In the event two or more candidates have the same assessment scores, placement on the promotional list takes into account a combination of seniority, performance reviews, and disciplinary history. Vacancies are filled by employees on the promotional lists, starting at the top and moving downward through eligible candidates. Promotional lists are valid for two years; upon exhaustion or expiration of a promotional list, TLs have 90 calendar days, per the IAFF CBA to conduct new promotional testing and develop a new promotional list for the relevant position.

Of note: The EMS Attendant promotional tests and lists are only available to employees in the Peak Load Division, and the Rescue Lieutenant promotional tests and lists are being retired as the Department changes to using a single ladder of promotion (employees start as a Firefighter and then can promote to Driver/Operator and then to Lieutenant based upon qualifications).

Health and Safety Officer Key Functions

The HSO is responsible for the following key functions:

- Health and Safety Program Coordination
- Station Inspections
- Safety Committee Leadership

The HSO is also responsible for maintaining vaccination records for employees within the Department, overseeing light duty shift employees, and recording accidents that involve ACFR vehicles in order to identify Departmental safety trends and provide recommendations to promote safer vehicle operation practices.

Health and Safety Program Coordination

The HSO is responsible for management and coordination of health and safety programs within the Department. Health and safety programs include the Peer Support Program, a program aimed at providing mental and emotional support for employees after critical incidents, and the LifeScan annual physical exam. The LifeScan annual physical exam offers employees at ACFR annual health testing on a wide range of potential health concerns including cancer screening, A1C tests, mental health evaluations, etc. The HSO is also responsible for ensuring that adequate fitness facilities are provided to the employees working at the stations, including workout equipment and general exercise equipment (*e.g.*, treadmills, weights, etc.).

Station Inspections

The HSO is responsible for ensuring that State-required station inspections are completed. Station inspections include checking various aspects of the interior and exterior of the station including, but not limited to, housekeeping and cleanliness, apparatus and maintenance areas, laundry and equipment disinfecting areas, building exteriors and grounds, hazardous material, and electrical wiring.

Safety Committee Leadership

The HSO is responsible for overseeing the Safety Committee. The Safety Committee consists of a selected group of individuals from each fire rescue classification who are responsible for working with the County's Budget and Fiscal Services Department's Risk Management Division ("Risk Management") and the County Safety Team (a County-government-wide committee) to evaluate ACFR vehicle and personnel accidents to determine best practices and prevention efforts. The HSO works with the Safety Committee to develop and recommend to ACFR leadership policies and procedures that promote safety in the workplace and additional training that mitigates risk.

Staffing and Personnel Management

Training Division

Prior to the current structure of the Training Division, the Division was staffed with 40-hour personnel in the form of three Training Captains (at the time the Professional Services Branch was known as the Technical Services Branch). A reorganization of the Technical Services Branch in 2020 resulted in the Training Division changing from three 40-hour Training Captains to three 56-hour Training Lieutenants.

Each of the three TLs serves on an operational shift – A Shift, B Shift, or C Shift – and is responsible for the delivery and oversight of training to the field personnel during the 24-hour shift. While the TL position is anecdotally supposed to rotate each year among each of the Lieutenants in the Fire Rescue Operations Section, ACFR does not have an explicit policy governing the TL position and the one-year rotation. As a result of the lack of policies governing the TL position, company officers rotating into the roles are generally selected on a more voluntary basis based on personal interest and has resulted in several TLs remaining in the position for longer than the one-year term.

In addition to the primary responsibility of designing and delivering training, TLs have a series of secondary and tertiary responsibilities. Secondary responsibilities include managing FireRescue1 Academy and ESO, maintaining the Loften Training Center, monitoring personnel certifications, administering promotional training, and assisting the Medical Director with paramedic clearance (which is discussed in more detail in Chapter 5.A [Emergency Medical Services] of the M&J report).

Incident response has become a tertiary responsibility of the TLs, though staff suggested in interviews that the inclusion of Training Division staff in incident response was previously more frequent. According to staff interviews, staff believe the IAFF CBA permits TLs to respond to major incidents as a Safety Officer supporting the incident commander, but only after 6:00 p.m. and through the end of the TL's shift the next morning. The M&J Team's review of the current IAFF CBA, however, did not validate this claim, suggesting this policy was excluded from the current version of the collective bargaining agreement (which went into effect October 1, 2022). Regardless of IAFF CBA restrictions, TLs do not frequently respond to incidents as the Alachua County Sheriff's Office Combined Communications Center (the County's emergency dispatch body) does not include the TLs in the dispatch matrix. While TLs are issues portable radios and are required to listen to the radio per Departmental policies, TLs are usually only assigned to an incident in the computer-aided dispatch ("CAD") system when the TLs self-dispatch and self-assign themselves to the incident in the CAD.

TLs are also formally or informally responsible for various special projects throughout the year, ranging from labeling training equipment for tracking purposes to rebuilding the burn box in the Loften Training Center's live fire burn building. Due to the heavy administrative workload of TLs and the temporary nature of the TL position, TLs are not always able to finish special projects before the end of a staff member's time in the TL position. For example, a previous TL had begun building a new burn box for the Loften Training Center, but as that individual has now left the position, the new burn box remains incomplete while the current burn box exhibits signs of excessive use, posing a potential safety hazard.

Health and Safety Officer

The HSO position within ACFR is held by a Captain who reports to the Assistant Chief of EMS Ops. This position was vacant for approximately three months in the beginning of 2023, and had been offered to an external applicant as of April. Anecdotally, the responsibilities of the HSO have depended upon the interpretation of the position's duties by the person currently in the position. Because the Department has limited documentation of the position's duties and responsibilities, future HSOs may interpret the position's responsibilities differently, rather than maintaining a consistent set of duties and actions across all future holders of the position.

ACFR's HSO is responsible for overseeing the overall health and safety program in the Department. Health and safety activities include reviewing on-the-job injuries, vehicle accidents, exposures to hazardous materials ("HazMat") and communicable diseases, and other incidents that result in injury or damage to property. Many of the position's reviews require the HSO to work closely with Risk Management on investigations and initiatives aimed at mitigating Departmental risk. Upon review of injuries and accidents, the HSO is charged with developing policies, procedures, and training recommendations to help Department employees address and mitigate future risk. The HSO also conducts inspections of facilities and equipment, identifying hazards and providing suggestions on how to protect employees from identified hazards.

The HSO can, similarly to the TLs, dispatch themself to major incidents to serve as an on-site Safety Officer in support of incident commanders. However, the duties of the HSO rarely allow for the HSO to respond to incidents, so the HSO is charged with establishing policies and training guidance to help prepare other response personnel to serve in the on-site Safety Officer role during incidents.

In addition to conducting inspections and reviews on an individual basis, the HSO serves as the chair of the Safety Committee, which is charged with conducting reviews of accident and injury trends from the viewpoints of different employee levels and positions. The HSO leads the Safety Committee in conducting reviews, while also recording and publishing meeting minutes to adhere with statutory requirements.

As a captain, the HSO is expected to have a degree of empowerment and leadership, with the authority to steer policy and develop health and safety programs. Departmental policies and current documentation of the HSO's responsibilities don't provide for a level of authority that fully empowers an HSO to meet State-required responsibilities, which could result in an inconsistent ability of future HSOs to steer policy and oversee health and safety programs.

As ACFR onboards a new HSO, ACFR leadership identified several responsibilities the command structure desires the HSO take accountability for, including the following:

- Developing a more holistic view of health and wellness in the Department (including physical fitness, the Peer Support Program, and the LifeScan annual physical exam);
- Maintaining vaccination records in a manner compliant with State and Federal regulations;
- Providing input during the construction of new stations to help guarantee leading practices in healthy and safe design;
- Delivering training to employees on how to recognize and address health and safety risks, in order to prepare future incident Safety Officers and build a succession plan for the HSO role; and
- Ensuring safety inspections are conducted regularly and in compliance with State statutes.

Currently, the Department does not maintain policies governing the responsibilities of the HSO and how those responsibilities are conducted. Similarly, ACFR does not maintain policies governing an overarching health and safety program designed to help Department employees understand how best to avoid unnecessary risk and liability.

Management and Administration

The Department has taken initial steps to revise and update its strategy for orientation and ongoing training of staff. ACFR needs to continue to refine, enhance, and critically evaluate current practices, programs, and standards to develop a strategic direction forward. This strategic planning process should include formal strategic plans related to the initial and continuing development of staff, and should ensure training and support in departmental interactions and processes, and not just direct job functions.

The vacancy of the HSO position has identified several gaps in the Department's processes for ensuring consistent coverage of roles and responsibilities that are typically assumed by a single position or role. For example, the Safety Committee has also lapsed somewhat over the past year based on people taking the responsibility of running the Safety Committee and championing its responsibilities. This vacancy also highlighted the Department's assignment of roles and responsibilities based on individuals who may be in positions, versus assignment based on the nature and priority of the role.

The Department should ensure it is evaluating functions, such as controlled substance management and administration, on-the-job injury tracking and reporting, and vehicle accident reporting, to ensure that these functions are adequately documented, and appropriately assigned to positions based on like functions and not the individual currently in the position.

The Department does not have a formal procedure for evaluating responsibilities of vacant positions to ensure consistent coverage and performance of the vacant position's assigned duties.

Compliance

The following compliance analysis examines various requirements that comprise fire rescue department health and safety programs. While many components of training programs require fire rescue departments to adhere to state statutes and national standards, a discussion regarding training standards, continuing education, certification, and recertification cannot be separated from an evaluation of benchmarks and on-the-job performance – as a result the training compliance portion of this report chapter is discussed in depth in the next section, Performance Analysis.

The compliance analysis focuses on the following health and safety topics:

- Safety Committee
- Documentation of Employee Incidents
- Investigations of Wrongdoing
- Documentation of Employee Protected Health Information
- Respiratory Equipment Fit Testing
- Protective Air Standards

While the M&J Team did identify concerns with the conduct of the Safety Committee, the M&J Team did not identify any issues with the other processes discussed in this report section.

Safety Committee

State statutes require every fire rescue department employing 20 or more firefighter employees establish and maintain a workplace safety committee responsible for promoting the health and safety of employees during the conduct of emergency and non-emergency job responsibilities (633.810(2)(a), *F.S.*). Section 69A-62.043, *F.A.C.*, establishes the requirements for the committee's responsibilities and actions.

The ACFR Safety Committee is charged with reviewing and evaluating all employee accidents, such as vehicle accidents, to identify common trends and themes the Department can address through preventative training measures. Reviews of incident data has led to various training initiatives, such as the Emergency Vehicle Operator Course ("EVOC") refresher training conducted in early 2023. Section 69A-62.043, *F.A.C.*, additionally requires safety committees provide recommendations on how fire rescue departments can improve policies, procedures, and programs to enhance firefighter safety. The ACFR Safety Committee does make recommendations, when appropriate, to Department leadership for updates to policies and procedures based upon reviews of incident reports and safety inspections of fire stations. The Safety Committee meets regularly, generally at a station, to review the last two months' injuries and accidents and discuss improvements to training programs and report writing. Per *F.A.C.* requirements, the ACFR Safety Committee takes minutes of all meetings, though rely on the Health and Safety Officer to disseminate meeting minutes, which has not been consistent depending on the current HSO or vacancy in the HSO position. In general, the HSO functions as the chair of the Safety Committee, resulting in the Safety Committee's functions being greatly dependent on the person in the HSO role. In the absence of an HSO, the Safety Committee has relied heavily upon the Assistant Chief of EMS Ops and Risk Management. ACFR's policy for Departmental Reporting (Chapter 7.15) puts the onus upon the HSO to review incidents with Risk Management and the Safety Committee to discuss and determine recommendations.

While not related to the functioning of a safety committee, Section 633.522(4), *F.S.*, requires "the compensation, selection, and function of workplace safety committees shall be a mandatory topic of negotiations with any certified collective bargaining agent for firefighter employers that operate under a collective bargaining agreement." The M&J Team's review of the IAFF CBA did not identify inclusion of the Safety Committee in the agreement.

Documentation of Employee Incidents

Employee incidents are primarily reported through a centralized Alachua County electronic form that is supposed to be completed by the supervisor of the employee involved in the incident. According to County staff, the incident form is designed to encourage supervisors to ask questions of the employee and initiate the process of addressing risky behavior prior to any official documentation of investigations of wrongdoing. In ACFR, the form responses are transmitted from the employee's supervisor to the employee's District Chief, who provides additional commentary and provides corrective action recommendations to ACFR leadership as appropriate.

Data received from Risk Management indicated ACFR personnel were involved in 368 claims between FY18 and FY22, including 302 worker's compensation claims, 58 vehicle accident claims, and eight general claims. Each incident receives a unique claim file which is maintained by Risk Management and accessible by relevant parties (in ACFR, Risk Management, or the public through Public Records Requests) – documentation of the incident itself does not include privileged information, so no sensitive information is shared when documentation is made available to parties not involved in the incident. Risk Management transfers the claim file to the County Attorney's office if the claim progresses to a legal claim. In general, claim files are kept separate from personnel files, unless claims lead to a formal investigation of wrongdoing, as discussed in the next subsection.

Staff suggested the largest concern with documentation of employee incidents is not the incidents themselves but instead near misses, or accidents that almost happen due to employees' behavior or training but don't actually result in an accident. Field personnel frequently do not report issues with vehicles or missing equipment if those issues or the missing equipment is not crucial to the immediate work at hand, resulting in differences between vehicles' capabilities and units' preparation. There is not a culture of proactive communication in the Department regarding trends and behaviors that could lead to injury, loss, and property damage, resulting in employees not consistently communicating potential risk factors before those risk factors become actual issues. The Safety Committee is supposed to provide an open environment for discussions of potential risks and means to mitigate identified risks without fear of disciplinary action or reprimand. However, as discussed in the previous subsection, the Safety Committee does not currently operate consistently or in a way that encourages proactive communication.

Investigations of Wrongdoing

When reports detailing employee incidents indicate willful neglect or other instances of wrongdoing, or when statements made by multiple employees (or employees and supervisors) involved in an incident don't match up, claims move into investigations of wrongdoing. As detailed in Chapter 5.C (Fire Prevention) of the M&J report, the Fire Marshal conducts investigations into possible scenarios of employee misconduct and issues a summary report, which is provided to ACFR leadership for determination of corrective actions. Reports detailing investigations of wrongdoing are attached to employee files. A full discussion of investigations of wrongdoing is included in Chapter 5.C.

Documentation of Employee Protected Health Information

Documentation of employee protected health information ("PHI") is a joint responsibility of the HSO, Risk Management, and the Alachua County Human Resources ("HR") Department. Initial testing of potential hires' physical fitness is conducted by Risk Management and recorded in KnowledgeLake, Alachua County's document management system. Risk Management contracts with a third-party vendor to conduct pre-hire physicals and review applicants' immunization records, which allows Risk Management to make a pass/fail determination of the new hire's physical capability to perform the firefighter job. The third-party vendor's report on each potential hire is recorded in KnowledgeLake and the physical copy of the report is destroyed. Risk Management provides the HR Department and end-user department (such as ACFR) with only the pass/fail determination and provides ACFR with vaccination records for any applicant deemed eligible for hire (according to Risk Management's physical fitness requirements – ACFR still gets to determine applicants' eligibility from other standpoints before an offer is made).

In regard to employees' PHI, documentation is maintained by both Risk Management and the HSO. The HSO is supposed to work with TLs to ensure physical fitness training is included in the annual training plan (which is discussed more in the Performance Analysis section of this report chapter). Documentation of relevant physical fitness training is documented by ACFR staff (primarily company officers and TLs) in FireRescue1 Academy, the Department's training software. The annual medical physical results, however, are documented by Risk Management in KnowledgeLake and kept separate from other personnel files (to maintain employees' privacy).

Fit-for-duty testing is conducted by Risk Management when required by the Family and Medical Leave Act ("FMLA"). Alachua County does not regularly require fit-for-duty testing and documentation for employees taking a leave of absence for most injuries, military duty, or other non-FMLA leaves of absence. When fit-for-duty testing is conducted, Risk Management maintains documentation of the test results and provides the end-user department (in this case ACFR) only with the pass/fail results.

Respiratory Equipment Fit Testing

Ensuring National Fire Protection Association ("NFPA") compliance is crucial for fire rescue departments, particularly when it comes to fit testing for personal protective equipment ("PPE"), such as respiratory masks. NFPA 1500 (Standard on Fire Department Occupational Safety, Health, and Wellness), NFPA 1981 (Standard on Open-Circuit Self-Contained Breathing Apparatus ["SCBA"] for Emergency Services), and other equipment-specific NFPA standards outline the guidelines and requirements for fit testing procedures.

Fit testing is an essential component of an effective respiratory protection program within fire rescue departments. Fit testing ensures that each Firefighter's respiratory mask provides an adequate seal and protection against harmful contaminants in the environment. Fit testing procedures, conducted in accordance with the applicable NFPA standards, help to determine the proper fit and ensure that the respirators meet the required safety standards.

NFPA standards provide guidance on various aspects of fit testing, including the acceptable methods (*e.g.*, qualitative or quantitative fit testing), the frequency of testing, and the required documentation and record-keeping practices. ACFR conducts annual tests of the equipment and records test data and results into FitTrack Gold, a record and analysis software for equipment fit testing. Each employee tests their equipment in April – the process usually takes several weeks to complete. Process testing by the M&J Team indicated the Department's fit testing adherers to NFPA 1852 (Standard on Selection, Care, and Maintenance of Open-Circuit Self-Contained Breathing Apparatus).

Fire rescue departments should regularly review the relevant NFPA standards and follow guidelines to maintain compliance with fit testing requirements. Compliance not only helps ensure the safety and well-being of firefighters but also demonstrates a commitment to adhering to recognized industry standards.

Protective Air Standards

Specific directives from the Fire Chief comprise Chapter 10.2 (SCBAs & Respiratory Program) of the Department's policies. The policy chapter outlines the directive that SCBAs are to be worn during the initial attach stages of structural or automotive fires, as well as during overhaul and salvage operations and during any operation where hazardous airborne contaminants exist or there is potential for inhalation related injuries. The purpose of the Department's Respiratory Protection Program is to meet the guidelines established by Title 29 Section 1910.134 of the *Code of Federal Regulations* ("*CFR*"). 29 *CFR* 1910.134 sets the requirements for respiratory protection, as determined by the Occupational Safety and Health Administration ("OSHA").

The intent behind fire rescue departments maintaining a robust respiratory program is to reduce personnel's exposure (both acute and chronic) to airborne toxins and to provide breathable air in oxygen-deficient environments. ACFR has established a Respiratory Protection Program with a multi-teared system of responsibilities ranging from District Chief (the position that manages the program) down to the individual responder. One of the HSO's responsibilities is to ensure that masks are appropriately issued, tested, and properly fit to each employee. The HSO is also responsible for maintaining the Department's records of fit test results, repairs, service, and annual testing of SCBA and components.

Additionally per 29 *CFR* 1910.134, ACFR employees receive an annual physical to ensure field personnel are physically able to perform fire rescue operations while wearing the SCBA.

Performance Analysis

The following performance analysis focuses on benchmarks and standards established for fire rescue training programs. The analysis includes an evaluation of on-the-job training and instruction, assessment of resources available to the Training Division, and a review of whether training programs are adequately addressing and reducing risk and liability.

Benchmarks, Standards, and On-the-job Evaluation

As part of the determination ISO makes of a fire rescue department's ability to suppress fires, ISO reviews training requirements based upon the jurisdiction and the edition of the Public Protection Classification manual in use. The following discussion of appropriate benchmarks provides a general overview of the training requirements commonly assessed by ISO, training program performance indicators recommended by the Commission on Fire Accreditation International ("CFAI"), and an evaluation of the on-the-job training and instruction offered to personnel.

The discussion of training benchmarks, standards, and on-the-job evaluation focuses on the following topics:

- ISO Criteria
- Recruit Training
- Firefighter Training
- Officer Training
- Specialized Training
- Training Records
- Training Facilities and Equipment
- Live Fire Training
- CFAI Performance Indicators

ISO Criteria

In general, ISO evaluates a training program's ability to provide initial firefighter training, as well as professional development opportunities and the 192 training hours required each year per NFPA 1001 (Standard for Fire Fighter Professional Qualifications). ISO assesses the adequacy and comprehensiveness of the training curriculum, including topics such as firefighting techniques, HazMat response, emergency medical services, and incident management. Additional NFPA standards that set training requirements assessed by ISO include:

- NFPA 472 - Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents
- NFPA 1002 – Standard for Fire Apparatus Driver/Operator Professional Qualifications
- NFPA 1021 – Standard for Fire Officer Professional Qualifications
- NFPA 1451 - Standard for a Fire and Emergency Service Vehicle Operations Training Program

The following outline provides an overview of the training requirements ISO recommends to achieve maximum credit:

- Training Facilities
    - 18 hours of training-facility-based training per year per firefighter (NFPA 1001)
- Company Training
    - 16 hours of company training at fire stations per year per firefighter (NFPA 1001)
- Officer Training
    - Certification of each officer (NFPA 1021)
    - 12 hours of continuing education per year per officer (NFPA 1021)
- Driver/Operator Training
    - 60 hours of classes for new Driver/Operators (NFPA 1002 and 1451)
    - 12 hours of classes per year for existing Driver/Operators (NFPA 1002 and 1451)
- Hazardous Materials
    - 6-hour session per year per firefighter (NFPA 472)
- Recruit Training
    - 240 hours of structure-fire-related training in the first year of employment per recruit (NFPA 1001)

In addition to the specific training hours for various levels of employee, ISO awards credit for fire rescue departments that conduct an annual pre-fire planning inspection of each commercial, industrial, institutional, and other similar structure within the jurisdiction. ISO only grants maximum credit if records of inspections include complete and up-to-date notes and sketches.

ACFR provides training through a combination of internal and external training. Initial certification of recruits and new Driver/Operator training are conducted through external training programs, such as the Florida State Fire College in Marion County, while the employees' company, HazMat, and continuing training are conducted by ACFR staff or subject matter experts brought in by the Training Division for specific courses. Ongoing Driver/Operator training is primarily provided through online EVOC series offered through the Department's LMS, though the Department does provide some limited practical exercises.

ACFR's scores for training from the last ISO evaluation, conducted in April 2020, are shown in Figure 90: ACFR Training Scores for April 2020 ISO Evaluation.

Figure 90: ACFR Training Scores for April 2020 ISO Evaluation

Criteria	Credit Available	ACFR Earned Credit
Facilities, and Use For maximum credit, each firefighter should receive 18 hours per year in structure fire related subjects as outlined in NFPA 1001.	35.00	14.00
Company Training For maximum credit, each firefighter should receive 16 hours per month in structure fire related subjects as outlined in NFPA 1001.	25.00	17.42
Classes for Officers For maximum credit, each officer should be certified in accordance with the general criteria of NFPA 1021. Additionally, each officer should receive 12 hours of continuing education on or off site.	12.00	15.28
New Driver/Operator Training For maximum credit, each new Driver/Operator should receive 60 hours of Driver/Operator training per year in accordance with NFPA 1002 and NFPA 1451.	5.00	5.00
Existing Driver/Operator Training For maximum credit, each existing Driver/Operator should receive 12 hours of Driver/Operator training per year in accordance with NFPA 1002 and NFPA 1451.	5.00	4.98
Training on Hazardous Materials For maximum credit, each firefighter should receive 6 hours of training for incidents involving hazardous materials in accordance with NFPA 472.	1.00	0.78
Recruit Training For maximum credit, each firefighter should receive 240 hours of structure fire related training in accordance with NFPA 1001 within the first year of employment or tenure.	5.00	5.00
Pre-Fire Planning Inspections For maximum credit, pre-fire planning inspections of each commercial, industrial, institutional, and other similar type building (all buildings except 1-4 family dwellings) should be made annually by company members. Records of inspections should include up-to-date notes and sketches.	12.00	0.00
TOTAL	**100.00**	**62.46**

Overall, training is weighted nine out of a total 50 points available in the fire department portion of the ISO assessment, which is roughly 20% and the third-highest weighted category after company personnel (15 points) and deployment analysis (10 points). ACFR's score out of nine is 5.62 (or 62.46% of the total possible score).

As noted in Figure 90, ACFR is strongest in the training areas for which staff are sent to external training programs (recruit training and new Driver/Operator training), as well as officer training, which ISO scores higher than the maximum. Ongoing training for line personnel (company training, HazMat training, and existing Driver/Operator training) score 70% or higher, with existing Driver/Operator training a near-perfect score. The dichotomy between the officer training and the line personnel training is notable, though, suggesting a higher emphasis on training advanced personnel (many of whom are required to meet the NFPA 1001 guidelines in addition to the Driver/Operator and/or officer requirements).

The two criteria for which the Department scored lowest are training facilities (40% of the available credit) and pre-fire planning inspections (0% of the available credit). ACFR's training facilities are discussed more thoroughly in the "Training Facilities and Equipment" subsection below, and ACFR's fire prevention services are discussed more thoroughly in Chapter 5.C (Fire Prevention) of the M&J report.

Of note: the M&J Team recognizes the latest ISO inspection was conducted in 2020. Since that time, the Department has rearranged the Training Bureau, changed the LMS in use, and implemented new training initiatives. The M&J Team's analysis combines the ISO assessment with the M&J Team's observations and assessment. Furthermore, the M&J Team recognizes ISO scores are just one of many factors used by insurance companies to determine insurance premiums. The M&J Team uses ISO as a benchmark for training due to the criteria's common use in the fire suppression industry and ISO's condensing down of NFPA standards into evaluable areas.

Recruit Training

ISO evaluates whether a fire rescue department adequately provides 240 hours of structure-fire-related training to new recruits within the first year of a recruit's employment. ACFR primarily meets this requirement through sending new employees to training academies, including the Florida State Fire College, to receive initial training and certifications.

ACFR has also established an extensive check-off policy that every new employee must complete during the first 12 months in the field. Many of the tasks detailed in the task book are derived from NFPA 1400 (Standard on Fire Service Training), which provides guidance on necessary Job Performance Requirements. ACFR exceeds the standard set in NFPA 1400 by breaking down each skill in the task book, ranging from response-related skills, such as recognizing specific EMS equipment, to daily responsibilities, such as maintaining common-use appliances in the station.

Firefighter Training

As previously noted, ISO reviews a department's ability to meet the minimum of 16 training hours per month for firefighter companies. The 192 annual training hours must be in topics related to structure fires, so EMS, extrication, and technical rescue training do not count toward the required hours.

The M&J Team reviewed training plans from 2018, 2021, and 2022, as well as a draft training plan training calendar (which are two separate publications) for 2023. The 2021 and 2022 annual training plans provided the best overview of training schedules established by the TLs and included monthly breakdowns of the topics (and locations when appropriate) covered in fire, EMS, technical rescue, and miscellaneous training/testing (including out-of-class training, promotional testing, and new recruit task book testing). The training plans outline the pairing between engines and rescues to ensure multi-company training. The training plans also outline the ISO and EMS renewal requirements personnel must attain and how personnel can attain those requirements by listing out resources (such as the LMS or external training opportunities), hours offered by the Training Division, and expectations for company officers to conduct training exercises. TLs maintain a list of qualified internal and external instructors (including individuals with Fire Instructor or specialty qualification) who can teach topics covered by the annual training plan in support of the company officers. Interviews with staff indicated the administrative rote tasks performed by the TLs result in limited opportunities for the Training Division to conduct trainings, other than those held at the Loften Training Center – instead the TLs focus on providing support to company officers.

Data received from Risk Management indicated vehicle accidents were the highest frequency set of claims handled by Risk Management for ACFR after worker's compensation. Staff indicated when new recruits to ACFR and new Driver/Operators are taught to drive emergency vehicles at fire academies, ACFR personnel are not taught through consistent use of the same make and model of vehicles the Department uses, though the Department does provide orientation training on ACFR's vehicles. The Department does not maintain a facility for driving training, so new recruits' and Driver/Operators' primary driving training occurs at facilities and in vehicles maintained by other entities (such as the Florida State Fire College). While Station 25 has some space available for limited practical training and TLs will set up a cones course at Santa Fe College's Institute of Public Safety ("IPS"), most driver training is external because neither Station 25 nor IPS constitutes a proper driver training facility. While reviewing the draft 2023 training calendar for ACFR, the M&J Team noted six of the nine months that included EVOC were dedicated to online courses (the other three were cone courses).

In general, the HSO is supposed to operate as the liaison between Risk Management and the Training Division in order to help the TLs identify additional training exercises necessary for addressing trends in risk and liability. As previously discussed, this responsibility of the HSO has varied depending on which individual is serving as HSO. Staff suggested in interviews that discussions between the Assistant Chiefs of EMS Ops and Professional Standards resulted in specific training courses designed to address trends in unsafe driving practices. The TLs don't review data beyond required certification monitoring, so rely on the HSO and Safety Committee to recommend training exercises for limiting risk and liability.

Interviews indicated staff perceive that training was not a priority of previous ACFR administrations, who provided limited resources made available to the Training Division, which resulted in the low training score from ISO. The 2021 through 2023 annual training plans are much more comprehensive and strategic than the 2018 plan, indicating the Training Division has placed more importance on firefighter training in the last three years and is working to fill training gaps with the limited resources available.

Officer Training

ISO looks at the training programs provided to fire officers, including company officers and chief officers. The training requirements for officers often involve leadership and management skills, incident command, decision-making, resource allocation, and effective supervision of personnel. ISO evaluates the training provided to ensure it meets the necessary standards for effective leadership within an organization.

ACFR meets ISO standards for officer training by offering continuing education courses for current officers as well as preparation courses for personnel qualified to take promotional tests and personnel on promotional lists who may act out of class when necessary. In 2023, the Training Division began scheduling leadership training to help current and future officers better manage personnel. Additionally, ACFR encourages fire officers to attend external trainings when appropriate, which the TLs enter into the LMS to ensure appropriate credit is awarded.

Specialized Training

ISO considers specialized training to be the programs relevant to a community's risks and hazards. Specialized training may include areas such as high-angle rope rescue, water rescue, confined space rescue, technical rescue, HazMat, wildland firefighting, and other specialized disciplines. A department's capability to handle these specific emergencies is assessed by ISO.

The Training Division schedules HazMat training that meets ISO and NFPA requirements. ACFR also schedules a wide range of technical rescue training (*e.g.*, high-angle and low-angle rope rescue, building collapse and shoring, and trench rescue) approximately five to six months out of the year. A heavy rescue apparatus, which went into service in late 2022, is located at Station 23. While the Heavy Rescue 23 is the only technical rescue vehicle currently in ACFR's fleet, the Department has reintroduced training opportunities (primarily at the Florida State Fire College) for staff on the technical rescue team to attain the qualifications for vehicle machinery rescue ("VMR") certification as set by NFPA 1006 (Standard for Technical Rescue Personnel Professional Qualifications).

Training Records

ISO reviews departments' documentation and records management related to training. Records retention includes maintaining accurate and up-to-date training records for each member of the department, documenting completed training hours, certifications, and licenses. Proper record-keeping is crucial for demonstrating compliance and ensuring that training requirements are met.

The TLs maintain Departmental personnel's training records in the LMS. With the introduction of FireRescue1 Academy, the TLs migrated relevant records from Vector Solutions to the new system. Anecdotally, the migration of records was not a smooth process and TLs were required to correct a lot of the information in the new system.

In general, the LMS automatically tracks training hours completed by personnel through courses hosted by the platform; other training hours, such as practical hours, are input by the company officers or TLs. Certifications are emailed to the TLs for entry into the system, which the TLs also use to monitor for compliance with recertification requirements.

Training Facilities and Equipment

ISO considers the availability and adequacy of training facilities and equipment within ACFR, including training props, burn buildings, classrooms, training grounds, and simulators. ACFR's primary training facility is the Loften Training Center, which is shared with Loften High School's Academy of Fire and Emergency Medical Services. The site includes an air-conditioned classroom which, at times, holds up to 20 employees, though the building was not designed for more than 10 or so people. The classroom building includes an air compressor for employees' air packs and a locked storage closet for equipment. Staff noted, though, that the combination to the storage closet is well-known and equipment is frequently borrowed without accountability (the Training Division does not maintain an equipment sign-out sheet or similar resource). Neither the classroom building nor the overall site has bathroom facilities for personnel; the non-profit plant nursery next to the training facility has allowed ACFR personnel to use the portable restrooms located at the nursery.

The training center has a 15-year-old reserve fire engine that is used for training, two retired school buses used for heavy-lifting training, and a movable forcible entry prop. Tools on the reserve engine are often swapped out by companies during training when the training equipment is newer or in better shape than companies' tools. Due to the state of the reserve engine and the equipment at the training center, many units use the active-duty vehicles and equipment rather than the training equipment. Additionally, units are frequently forced to use active-duty equipment due to limited numbers of training equipment available, such as hand tools, ladders, packs, air bottles, and hoses. The Department does not currently have extrication equipment set aside for training. Using frontline trucks and equipment to conduct training exercises increases the amount of wear and tear on equipment, which can be difficult to mitigate before a unit is called upon to respond to an incident.

In addition to the classroom facility, the Loften Training Center also contains a burn building – a three-story structure made of metal shipping containers (commonly referred to as "Conex boxes"), which is a little over a decade old. The first two levels are connected by staircases inside the structure, with the third floor only accessible by an external staircase. The burn building relies on one Conex box in the back of the structure to serve as the burn box, where firefighters must reach in order to put out the flames and complete the training exercise. The structure allows for smoke to fill the remaining Conex boxes and the Training Lieutenants create temporary prop hazards and walls to create a new layout for each training, based upon the purpose of each exercise. The burn box currently in use shows signs of extreme wear. A former Training Lieutenant had been in the process of constructing a new burn box, but rotated out of the TL position before the new burn box was completed. Most of the maintenance for the training facility, as well as the construction of props (*e.g.*, ramps, entanglement hazards, wall breach props, etc.) used during training exercises, is performed by ACFR personnel – most commonly the TLs. If ACFR personnel notice someone in the community throwing out furniture, wood, or other materials that could be used for a training prop, members of the Department will frequently pick up those potential supplies in order to use them for exercises. Additionally, the Department relies heavily upon wood donated by local businesses for the construction of training props, especially as props rarely survive multiple training exercises.

Anecdotally, the third floor of the burn building is used infrequently. The roof has been used for ropes training as part of technical rescue and other specialized training. NFPA 1402 (Standard on Facilities for Fire Training and Associated Props) and NFPA 1403 (Standard on Live Fire Training Evolutions) recommend annual inspections by the fire department of live-fire training facilities and inspections by a licensed engineer with live-fire training structure expertise once every five years. Interviews with ACFR staff did not indicate the last time the burn building was inspected by an external party and documentation was not available indicating the results of any inspections within the last 10 years.

While the Loften Training Center meets the basic needs of firefighter training for ACFR, the lack of resources, space, and professional upkeep at the facility prevents the training center from meeting all needs of personnel training for the Department. Due to its location, the Loften Training Center is not convenient for many units in the Department – pulling units 20 or more miles across the County for training, while necessary, can leave gaps in coverage and increase units' unavailability during transit. The Department does try, however, to use the Peak Load Division's Critical Care rescue units to cover for rescue units who are in training and Engine 80, which is based in Gainesville, relocates to cover units without nearby stations. In order to efficiently schedule units for training, a single exercise is often repeated with different units over the course of several weeks to account for difficulty and travel and coverage.

The Loften Training Center's location also causes accessibility issues for some emergency apparatus. The leadup to the facility includes narrow roads which are not fully paved and include multiple speed reduction devices (humps and bumps), causing issues for large emergency vehicles.

In addition to the Loften Training Center, Station 62 in Hawthorne includes a training tower, but the location is not convenient for any units other than those located at Station 62. Station 23 has a simple Conex structure that proactive companies use for multi-company training, but the structure only serves to create a search-and-rescue maze environment for low-light training. As the Department cannot utilize the Station 23 structure for live-fire training, the structure is not regularly included in the training matrix and schedule (though has occasionally been included in past years' annual training plans depending on needs).

Live Fire Training

ISO evaluates fire rescue departments' live fire training activities, including adherence to safety protocols and compliance with recognized standards, such as NFPA 1403. ISO assesses procedures, documentation, and safety measures to ensure that live fire training exercises are conducted safely and effectively.

ACFR has a specified training ground with a drill tower and scheduled annual training for live fire rotation, as discussed in the previous subsection (Training Facilities and Equipment). The Training Division works to ensure live fire training occurs under the guidelines of NFPA 1403. ACFR Policy Chapter 3.5 (Live Fire Training-Conex Training Prop) states that only personnel with the State of Florida Live Fire Training Instructor certification are allowed to function as the Safety Officer or Instructor-in-Charge during live fire training exercises, adhering to both NFPA 1403 and *Florida Administrative Code*.

CFAI Performance Indicators

Following initial training, emergency services personnel should actively participate in ongoing training, including testing to ensure that practical skills and knowledge are maintained. CFAI addresses "Training and Competency" in the *Fire & Emergency Service Self-Assessment Manual (8th edition)* and lists several performance indicators under the headings of training and education program requirements, performance, and resources. Some of these competencies include the following:

- The fire rescue department has a process in place to identify training needs. The process identifies the tasks, activities, knowledge, skills, and abilities required to deal with anticipated emergency conditions.
- The fire rescue department's training program is consistent with the mission statement, goals, and objectives and meets the department's needs.
- The training program is consistent with legal requirements for performing mandatory training.
- The fire rescue department identifies minimum levels of training required for all positions in the organization.
- A command and staff development program is in place and encourages the pursuit of professional credentialing.
- A process is in place to ensure that personnel are appropriately trained.
- The fire rescue department provides a training schedule that meets the organization's needs.
- The fire rescue department evaluates individual and crew performance through validated and documented performance-based measurements.
- The fire rescue department analyzes student evaluations to determine the reliability of training conducted.
- The fire rescue department maintains a training records management system that meets recognized standards.
- Facilities and apparatus are provided to support the fire rescue department's all-hazards training needs. The fire rescue department has plans addressing any facilities and apparatus not available internally to complete training activities.
- The fire rescue department has instructional personnel with teaching qualifications and expertise to meet its needs.
- Instructional materials are current, support the training program, and are easily accessible.
- The fire rescue department has a process for purchasing, developing, or modifying curriculum to meet the department's needs.
- Equipment utilized for training is properly maintained per the fire rescue department's operational procedures. The fire rescue department makes training equipment readily accessible to instructional personnel.

- The fire rescue department maintains a current inventory of all training equipment and resources.
- A selection process is in place for training and educational resource materials.
- Training materials are evaluated at least annually, to reflect current practices and meet the needs of the fire rescue department.

Observations and Recommendations

Observation 1A: The Training Division has experienced significant turnover within the last three years, with the transition away from three 40-hour Training Captains to three 56-hour Training Lieutenants, and the introduction of one-year terms for the TL positions. The TLs serve numerous important functions within the Department, such as designing and delivering training, monitoring personnel certification, and promotional testing, there is no formalized position description or policy chapter for the TLs or Training Division as a whole (though the M&J Team does acknowledge multiple policy chapters do exist regarding the training that is to be provided to Department employees).

Observation 1B: The Department's informal policy of rotating Training Lieutenants on a one-year cycle has resulted in a lack of consistency among TLs and the termination of numerous special projects prior to completion (including a new burn box for the Loften Training Center's burn building).

Observation 1C: Staff perceive that ACFR has historically not emphasized the importance of employee training, with previous administrations not providing the Training Division with the necessary resources to develop a comprehensive training program. While the current administration recognizes the important of employee training, the Training Division's resources are still limited, and the Department's training infrastructure does not fully meet the needs of the employees.

Recommendation 1A: ACFR should evaluate and strengthen the overall infrastructure of the Department's training program, realigning positions and functions, and ensuring the training program has the necessary resources to meet State regulatory requirements and national standards. While the current model of on-shift Training Lieutenants can be effective, the current model would function more effectively with the reintroduction of a Training Captain – a 40-hour employee who can bridge the gap between the Assistant Chief of Professional Standards and the TLs, and who can directly interface with the Health and Safety Officer and the Captain of Recruitment & Public. The Department should evaluate whether all of the responsibilities currently performed by the TLs are appropriate for a Lieutenant-level employee, or whether certain rote administrative tasks (such as entry of certifications into the LMS) can be performed by non-certified personnel. As the Department continues to grow to meet the demands of the County, the Training Division's staff and infrastructure should proportionally grow in order to ensure the regulatory training needs of ACFR are met and to ensure Department employees are properly prepared to mitigate risk and liability.

Recommendation 1B: The Department should formalize a position description or policy chapter for the Training Lieutenants that outlines the specific number of years that a Lieutenant is able to serve in the Training Lieutenant position. The formalized position description should also include specific job responsibilities and criteria a Lieutenant must possess in order to be eligible to become a TL. The Department should strictly follow the formalized position description and its eligibility requirements in order to stay consistent in the selection of TLs and the duration that a Lieutenant may be allowed to be in the TL position. The Department should consider expanding the rotation among Lieutenants serving in the TL position beyond the one-year cycle currently implemented through informal policy.

Observation 2: *Florida Statutes* and the *Florida Administrative Code* set requirements for the functioning of fire rescue departments' Health and Safety Officer and health and safety programs. ACFR's health and safety programs – and many related functions ranging from reporting to investigations and inspections – depend heavily upon the individual in the HSO role and whether the HSO role is filled or vacant. The vacancy of the HSO position has identified several gaps in the Department's processes for ensuring consistent coverage of roles and responsibilities that are typically assumed by a single position or role. This vacancy also highlighted the Department's haphazard assignment of roles and responsibilities based on individuals who may be in positions, versus assignment based on the nature and priority of the role.

Recommendation 2: The Department should ensure it is continuously evaluating functions, such as controlled substance management and administration, on-the-job injury tracking and reporting, and vehicle accident reporting, to ensure that these functions are adequately documented, and appropriately assigned to positions based on like functions and not the individual currently in the position. ACFR should develop specific policies that set the expectations and governance of the Health and Safety Officer role and overall health and safety program, rather than just provide a job description of the HSO role with a list of disconnected duties and responsibilities. Additionally, the Department should ensure functions assigned to the HSO are appropriately maintained and continued when there is a vacancy in the HSO role by ensuring appropriate staff are cross-trained and policies provide identification of the roles that are responsible for covering the HSO's duties during a vacancy.

Observation 3: The operation of the ACFR Safety Committee and the performance of its duties as required by *Florida Statutes* and the *Florida Administrative Code* rely heavily on the duties performed by the person currently in the Health and Safety Officer role.

Recommendation 3A: The Health and Safety Officer should develop a policy chapter governing the responsibilities and operations of the Safety Committee to ensure all statutory requirements are met even in the absence of an HSO.

Recommendation 3B: ACFR should evaluate the current composition of the Safety Committee to ensure it is compliance with Florida requirements. Once the Department has met compliance standards, it should develop strategic goals and objectives to drive the mission and use of the Safety Committee. The County may also need to consider an appropriate authority level for the Safety Committee, which may include reporting directly to the County Manager or Risk Manager for certain performance metrics or reports.

Observation 4: The Department's collective bargaining agreement does not include the compensation, selection, and function of the Safety Committee, as required by *Florida Statutes* and the *Florida Administrative Code*.

Recommendation 4: ACFR should work with the HR Department and the County Attorney to determine whether the CBAs are compliant with *Florida Statutes* and the *Florida Administrative Code* regarding the inclusion or non-inclusion of the ACFR Safety Committee.

Observation 5: Field personnel frequently do not report near-miss situations that could have resulted in accidents and/or injuries, nor issues with vehicles or missing equipment if those issues or the missing equipment is not crucial to the immediate work at hand, resulting in differences between vehicles' capabilities and units' preparation. The Safety Committee is supposed to provide an open environment for discussions of potential risks and means to mitigate identified risks without fear of disciplinary action or reprimand. However, the Safety Committee does not currently operate consistently or in a way that encourages proactive communication.

Recommendation 5: ACFR should encourage a culture of proactive communication regarding trends and behaviors that could lead to injury, loss, and property damage. The composition and functionality of the Safety Committee should encourage employees to raise concerns of unsafe behavioral trends and near-miss situations to the Safety Committee for discussion by employees of all levels on how to mitigate and avoid potential risk, liability, and dangerous situations. The Safety Committee should encourage a welcoming environment for general discussion and sharing of ideas rather than a forum to air complaints.

Observation 6A: ACFR's training facilities, including the Loften Training Center, the Station 62 tower, and the Station 23 Conex building do not fully meet the training needs of the Department's frontline personnel. The lack of adequate and enough equipment requires trainees to utilize Department staff, especially, Training Lieutenants, to locate resources (including trash) from members of the community for use as training props. Staff also use frontline vehicles and equipment rather than training equipment, due to limited availability and poor condition, resulting in additional wear and tear upon frontline apparatus, which field personnel are not always able to address prior to incident response. TLs commonly construct training props and reconfigure the Loften Training Center burn building themselves during their limited on-shift time as well as during their off-shift time to meet the needs of company training.

Observation 6B: The Loften Training Center is not conveniently located for a majority of the Department's fire rescue companies. The campus upon which the training center sits also causes accessibility problems for the Department's emergency response vehicles.

Recommendation 6: ACFR should evaluate the current training needs of the Department and ensure training facilities meet the requirements set by ISO, NFPA, and the Training Division. If ACFR leadership determines the current training facilities do not adequately meet Departmental needs, ACFR leadership should work with County leadership to identify opportunities to upgrade the Loften Training Center or opportunities for one or more new training complexes in the County (including possible joint facilities with other local municipalities). The Department should consider the following, at a minimum, when evaluating training facility needs:

- Adequate equipment storage, including appropriate levels of security and a check-out system for equipment;
- A full inventory of equipment of tools, including reserve apparatus, extrication equipment, hoses, and ladders;
- Utilization of the burn building's third floor and regular reconstruction of the structure's burn box to avoid unsafe conditions due to excessive wear and tear;
- Certification and recertification inspections by Department staff on an annual basis and by a licensed engineer on a five-year basis;
- Accessibility to the facility for heavy apparatus, both in terms of travel time for remote units and road conditions leading to the campus; and
- Inclusion of a concrete pad and driving course appropriate for training and testing on fire rescue apparatus.

5.E Facilities

Introduction

Appropriately designed, well maintained, and properly located facilities are critical to a fire rescue department's ability to provide services in a timely manner. The M&J Team evaluated 14 fire rescue stations operated by ACFR.

The M&J Team performed a walkthrough of each fire station focusing on construction, building condition, building amenities, and visible problems or concerns. Each fire station varied in terms of its construction/renovation date and condition. Some of the stations observed are nearing or have already reached their maximum capacity in terms of room for future expansion as workload and service demand increase. As a result, ACFR may have significant facility sustainment and refurbishment costs that will need to be addressed soon.

ACFR's facility needs are evident in the current configurations of many of the fire stations, which have very little room for crews and apparatus. Many of the buildings do not meet ADA requirements and are not in compliance with recommendations from the National Fire Protection Association's ("NFPA") standard for life safety initiatives. Some examples include a lack of sprinkler systems, portable fire extinguishers, and emergency exits and lighting. Another concern regards the ability to properly decontaminate employees and their equipment in accordance with NFPA 1581 (Standard on Fire Department Infection Control Program). Current configurations at all fire stations do not provide adequate space for the decontamination of equipment and clothing separately from cooking, eating, and other living spaces.

The M&J Team recommends that each station have a thorough evaluation for structural integrity and regulatory compliance. After the service delivery and performance recommendations are reviewed, then consideration can be given to the need for newly constructed or renovated fire stations that are capable of appropriately housing the necessary staff to meet future needs and that meet applicable standards as well as provide the appropriate response coverage for the service area. ACFR has constructed new stations in recent times and could be used as a blueprint moving forward. The newer stations have acceptable configurations. The M&J Team's evaluation should not be considered an inspection but rather a general overview and initial impression. Further inspection and analysis by appropriate professionals are warranted to determine improvement and refurbishment needs in a prioritized manner. The inventory of the evaluated ACFR stations is included in the report.

County Facilities Management currently provides for routine maintenance of ACFR fire stations. The process now for routine work is that a repair order is prepared and sent to the County Facilities Management Department, which then completes the work order.

Over the past few years, the fire service has become increasingly concerned with the issue of firefighter cancer and cancer-prevention practices. One such practice is to limit firefighter exposure to products of combustion, as well as minimizing/eliminating exposure to diesel fumes/soot (from fire apparatus). One preventative measure is to limit/reduce firefighter exposure to toxic products of combustion which occur *after the fire* (aka, off-gassing).

Appendix B of the M&J report contains additional discussion about facilities health and safety best practices, including:

- Automatic Sprinkler Protection
- Cancer Prevention Engineering
- Back-in Bays
- Hurricane Protection
- Facility Security
- Separate Sleeping Quarters
- Heart Safe Alert Tones
- Decontamination Area

Station Inventory

The M&J Team visited 14 ACFR stations and compiled an inventory of the condition and features present at each station. The two remaining stations out of which ACFR operates are not owned or maintained by Alachua County (one is owned and maintained by the City of Newberry Fire Department, and the other owned and maintained by the State of Florida). The stations included in the inventory are:

- Station 20
- Station 21[20]
- Station 23
- Station 24
- Station 25
- Station 30
- Station 33
- Station 40
- Station 41
- Station 60
- Station 62
- Station 80
- Station 81
- Station 82[21]

Figure 91: Station Inventory Condition Descriptions describes the grades that the M&J Team used to describe each station's overall condition.

Figure 91: Station Inventory Condition Descriptions

Condition	Description
Excellent	• Like new condition. • No visible structural defects. • The facility is clean and well maintained. • The interior layout is conducive to function with no unnecessary impediments to the apparatus bays or offices. • No significant defect history. • Building design and construction match the building's purposes. • Age is typically less than 10 years.

[20] Station 21 is owned and maintained by the City of Alachua.
[21] Station 82 is owned by the City of Archer and operated by ACFR under a long-term lease.

Condition	Description
Good	• The exterior has a good appearance with minor or no defects. • Clean lines, good workflow design, and only minor wear of the building interior. • Roof and apparatus apron are in good working order. They are absent any significant full-thickness cracks or crumbling of apron surface or visible roof patches or leaks. • Building design and construction match the building's purposes. • Age is typically less than 20 years.
Fair	• The building is structurally sound with a weathered appearance and minor non-structural defects. • The interior condition shows normal wear and tear but flows effectively to the apparatus bay or offices. • Mechanical systems are in working order. • Building design and construction may not match the building's purposes well. • Showing increasing age-related maintenance, but with no critical defects. • Age is typically 30 years or more.
Marginal	• The building is structurally sound with a weathered appearance and moderate non-structural defects. • Full-thickness cracks and crumbling of concrete on apron may exist. • The roof has evidence of leaking and/or multiple repairs. • The interior is poorly maintained or showing signs of deterioration with moderate non-structural defects. • Problematic age-related maintenance and/or defects are evident. • May not be well suited to its intended purpose. • Age is typically greater than 40 years.
Poor	• The building is cosmetically weathered and worn with potential structural defects, although not imminently dangerous or unsafe. • Large, multiple full-thickness cracks and crumbling of concrete on apron may exist. • The roof has evidence of leaking and/or multiple repairs. • The interior is poorly maintained or showing signs of advanced deterioration with moderate to significant non-structural defects. • Problematic age-related maintenance and/or major defects are evident. • May not be well suited to its intended purpose. • Age is typically greater than 50 years.

Figure 92: ACFR Station Inventory contains the inventory of the 14 stations visited and inspected by the M&J Team.

Figure 92: ACFR Station Inventory

Station 20							
Address/Physical Location:	16935 NW US Hwy 441, High Springs, FL 32643						
	**General Description:** A two-bay fire station built in 1997. Houses one Rescue.						
Structure							
Construction Type	Type II						
Date of Construction	1997						
Auxiliary Power	None						
General Condition (See rating sheet)	Good						
Apparatus Bays	1	Drive-Through		0	Back-In		
Special Considerations (ADA)	Bathrooms fitted with handles in restroom facilities						
Square Footage	Approx. 1,709 (1,029 heated)						
Facilities Available							
Sleeping Capacity	1	Bedrooms		2	Beds		
Exercise/Workout Facilities	Yes. All equipment is in apparatus bay						
Kitchen Facilities Type	Residential						
Individual Lockers/Storage Assigned	Yes						
Bathroom Facilities	1	Showers		2	Toilets		
Training/Meeting Rooms	None						
Washer/Dryer	Yes	Station Wear/Linen		Yes	PPE		
Safety & Security							
Fire Detection/Suppression	No	Sprinklers	Yes	Smoke Detectors			
Decontamination Area	Only basin sink in bays.						
Security	Normal Door locks, recently installed key card reader on front door						
Apparatus Exhaust System	None						
CO Detectors	None						
Station Alerting System	Tones only						

Station 21							
Address/Physical Location:	15040 NW US Hwy 441, Alachua, FL 32615						
	**General Description:** A six-bay fire station built in 1980. Houses one Engine, one spare Engine, and one Brush Truck. This station is owned and maintained by the City of Alachua.						
Structure							
Construction Type	Type II						
Date of Construction	1980						
Auxiliary Power	None						
General Condition (See rating sheet)	Fair						
Apparatus Bays	0	Drive-Through		6	Back-In		
Special Considerations (ADA)	None						
Square Footage	4,895						
Facilities Available							
Sleeping Capacity	1	Bedrooms – bunkroom		3	Beds		
Exercise/Workout Facilities	Yes. Equipment is in apparatus bay and bunkroom						
Kitchen Facilities Type	Commercial						
Individual Lockers/Storage Assigned	Yes						
Bathroom Facilities	1	Showers		1	Toilets		
Training/Meeting Rooms	None						
Washer/Dryer	Yes	Station Wear/Linen		No	PPE		
Safety & Security							
Fire Detection/Suppression	No	Sprinklers	Yes	Smoke Detectors			
Decontamination Area	None						
Security	Normal Door locks						
Apparatus Exhaust System	None						
CO Detectors	None						
Station Alerting System	Tones only						

Station 23				
Address/Physical Location:	1600 Fort Clarke Blvd, Gainesville, FL 32606			
	**General Description:** A four-bay fire station built in 1993. Houses one Quint and one Heavy Rescue.			
Structure				
Construction Type	Type II			
Date of Construction	1993			
Auxiliary Power	Built in Generator			
General Condition (See rating sheet)	Fair			
Apparatus Bays	3	Drive-Through	0	Back-In
Special Considerations (ADA)	Bathrooms fitted with handles in restroom facilities			
Square Footage	7,544			
Facilities Available				
Sleeping Capacity	5	Bedrooms	13	Beds
Exercise/Workout Facilities	Yes. All equipment is in apparatus bay			
Kitchen Facilities Type	Commercial			
Individual Lockers/Storage Assigned	Yes			
Bathroom Facilities	3	Showers	4	Toilets
Training/Meeting Rooms	None			
Washer/Dryer	Yes	Station Wear/Linen	No	PPE
Safety & Security				
Fire Detection/Suppression	Yes	Sprinklers	Yes	Smoke Detectors
Decontamination Area	Only basin sink in bays.			
Security	Normal Door locks, recently installed key card reader on front door			
Apparatus Exhaust System	None			
CO Detectors	None			
Station Alerting System	Tones only			

Station 24					
Address/Physical Location:	3509 NW 143rd St, Gainesville, FL 32606				
	**General Description:** A four-bay fire station built in 2011. Houses one Medical Support Unit, one Engine, one Rescue, and one Brush Truck.				
Structure					
Construction Type	Type II				
Date of Construction	2011				
Auxiliary Power	Built in Generator				
General Condition (See rating sheet)	Good				
Apparatus Bays	4	Drive-Through	0	Back-In	
Special Considerations (ADA)	Bathrooms fitted with handles in restroom facilities				
Square Footage	Approx. 10,000				
Facilities Available					
Sleeping Capacity	3	Bedrooms	11	Beds	
Exercise/Workout Facilities	Yes. All equipment is in apparatus bay				
Kitchen Facilities Type	Commercial				
Individual Lockers/Storage Assigned	Yes				
Bathroom Facilities	5	Showers	4	Toilets	
Training/Meeting Rooms	None				
Washer/Dryer	Yes	Station Wear/Linen	Yes	PPE	
Safety & Security					
Fire Detection/Suppression	Yes	Sprinklers	Yes	Smoke Detectors	
Decontamination Area	Only basin sink in bays.				
Security	Normal Door locks, recently installed key card reader on front door				
Apparatus Exhaust System	None				
CO Detectors	None				
Station Alerting System	Tones only				

Station 25							
Address/Physical Location:	12825 NW US Hwy 441 Alachua, FL 32615						
	**General Description:** A one-bay fire station built in 2020. Houses one Engine.						
Structure							
Construction Type	Type II						
Date of Construction	1990						
Auxiliary Power	Built in Generator						
General Condition (See rating sheet)	Fair						
Apparatus Bays	1	Drive-Through	0	Back-In			
Special Considerations (ADA)	Bathrooms fitted with handles in restroom facilities						
Square Footage	1,104						
Facilities Available							
Sleeping Capacity	1	Bedrooms – bunkroom	7	Beds			
Exercise/Workout Facilities	Yes. Equipment is in apparatus bay and bunkroom						
Kitchen Facilities Type	Residential						
Individual Lockers/Storage Assigned	Yes						
Bathroom Facilities	2	Showers	2	Toilets			
Training/Meeting Rooms	None						
Washer/Dryer	Yes	Station Wear/Linen	No	PPE			
Safety & Security							
Fire Detection/Suppression	Yes	Sprinklers	Yes	Smoke Detectors			
Decontamination Area	None						
Security	Normal Door locks, recently installed key card reader on front door						
Apparatus Exhaust System	None						
CO Detectors	None						
Station Alerting System	Tones only						

Station 30							
Address/Physical Location:	930 SE 5th St, Gainesville, FL 32601						
	**General Description:** A two-bay EMS station built in 2009. Houses two Rescues and one Training Lieutenant.						
Structure							
Construction Type	Type II						
Date of Construction	2009						
Auxiliary Power	None						
General Condition (See rating sheet)	Good						
Apparatus Bays	2	Drive-Through	0	Back-In			
Special Considerations (ADA)	Bathrooms fitted with handles in restroom facilities						
Square Footage	Approx. 4,900 (2,600 heated)						
Facilities Available							
Sleeping Capacity	6	Bedrooms	6	Beds			
Exercise/Workout Facilities	Yes. All equipment is in apparatus bay						
Kitchen Facilities Type	Commercial						
Individual Lockers/Storage Assigned	Yes						
Bathroom Facilities	4	Showers	4	Toilets			
Training/Meeting Rooms	None						
Washer/Dryer	Yes	Station Wear/Linen	No	PPE			
Safety & Security							
Fire Detection/Suppression	Yes	Sprinklers	Yes	Smoke Detectors			
Decontamination Area	Only basin sink in bays.						
Security	Normal Door locks, recently installed key card reader on front door						
Apparatus Exhaust System	None						
CO Detectors	Yes						
Station Alerting System	Tones only						

Station 33							
Address/Physical Location:	5901 NW 34th Blvd, Gainesville, FL 32653						
	**General Description:** A four-bay fire station built in 2019. Houses one 24-hour Rescue and the Peak Load Division.						
Structure							
Construction Type	Type II						
Date of Construction	2019						
Auxiliary Power	Built in Generator						
General Condition (See rating sheet)	Good						
Apparatus Bays	4	Drive-Through	0	Back-In			
Special Considerations (ADA)	Bathrooms fitted with handles in restroom facilities						
Square Footage	Approx. 7,800						
Facilities Available							
Sleeping Capacity	4	Bedrooms	4	Beds			
Exercise/Workout Facilities	Yes. All equipment is in apparatus bay						
Kitchen Facilities Type	Commercial						
Individual Lockers/Storage Assigned	Yes						
Bathroom Facilities	2	Showers	3	Toilets			
Training/Meeting Rooms	None						
Washer/Dryer	Yes	Station Wear/Linen	No	PPE			
Safety & Security							
Fire Detection/Suppression	Yes	Sprinklers	Yes	Smoke Detectors			
Decontamination Area	Only basin sink in bays.						
Security	Normal Door locks, recently installed key card reader on front door						
Apparatus Exhaust System	None						
CO Detectors	None						
Station Alerting System	Tones only						

Station 40							
Address/Physical Location:	14377 NE US Hwy 301, Waldo, FL 32694						
	**General Description:** A two-bay fire station built in 2019. Houses one Engine, one Tanker, and one Brush Truck.						
Structure							
Construction Type	Type II						
Date of Construction	2019						
Auxiliary Power	Built in Generator						
General Condition (See rating sheet)	Good						
Apparatus Bays	2	Drive-Through		0	Back-In		
Special Considerations (ADA)	Bathrooms fitted with handles in restroom facilities						
Square Footage	Approx. 4,900						
Facilities Available							
Sleeping Capacity	7	Bedrooms		7	Beds		
Exercise/Workout Facilities	Yes. All equipment is in apparatus bay						
Kitchen Facilities Type	Commercial						
Individual Lockers/Storage Assigned	Yes						
Bathroom Facilities	4	Showers		4	Toilets		
Training/Meeting Rooms	None						
Washer/Dryer	Yes	Station Wear/Linen		No	PPE		
Safety & Security							
Fire Detection/Suppression	Yes	Sprinklers	Yes	Smoke Detectors			
Decontamination Area	Only basin sink in bays.						
Security	Normal Door locks, recently installed key card reader on front door						
Apparatus Exhaust System	None						
CO Detectors	None						
Station Alerting System	Tones only						

Station 41							
Address/Physical Location:	5715 NE US Hwy 301, Hawthorne, FL 32640						
	**General Description:** A two-bay fire station built in 1998. Houses one Rescue and one reserve Engine.						
Structure							
Construction Type	Type II						
Date of Construction	1998						
Auxiliary Power	Built in Generator						
General Condition (See rating sheet)	Good						
Apparatus Bays	2	Drive-Through		0	Back-In		
Special Considerations (ADA)	Bathrooms fitted with handles in restroom facilities						
Square Footage	Approx. 4,900						
Facilities Available							
Sleeping Capacity	1	Bedrooms		7	Beds		
Exercise/Workout Facilities	Yes. All equipment is in apparatus bay						
Kitchen Facilities Type	Residential						
Individual Lockers/Storage Assigned	Yes						
Bathroom Facilities	2	Showers		3	Toilets		
Training/Meeting Rooms	None						
Washer/Dryer	Yes	Station Wear/Linen		No	PPE		
Safety & Security							
Fire Detection/Suppression	Yes	Sprinklers	Yes	Smoke Detectors			
Decontamination Area	Only basin sink in bays.						
Security	Normal Door locks, recently installed key card reader on front door						
Apparatus Exhaust System	None						
CO Detectors	None						
Station Alerting System	Tones only						

Station 60							
Address/Physical Location:	1320 SE 43rd St, Gainesville, FL 32641						
	**General Description:** A two-bay fire station built in 1992. Houses one Engine, one Tanker, one Brush Truck, and one District Chief.						
Structure							
Construction Type	Type II						
Date of Construction	1992						
Auxiliary Power	Built in Generator						
General Condition (See rating sheet)	Good						
Apparatus Bays	2	Drive-Through		0	Back-In		
Special Considerations (ADA)	Bathrooms fitted with handles in restroom facilities						
Square Footage	Approx. 4,900 (2,600 heated)						
Facilities Available							
Sleeping Capacity	6	Bedrooms		6	Beds		
Exercise/Workout Facilities	Yes. All equipment is in apparatus bay						
Kitchen Facilities Type	Commercial						
Individual Lockers/Storage Assigned	Yes						
Bathroom Facilities	2	Showers		2	Toilets		
Training/Meeting Rooms	None						
Washer/Dryer	Yes	Station Wear/Linen		Yes	PPE		
Safety & Security							
Fire Detection/Suppression	Yes	Sprinklers	Yes	Smoke Detectors			
Decontamination Area	Only basin sink in bays.						
Security	Normal Door locks, recently installed key card reader on front door						
Apparatus Exhaust System	None						
CO Detectors	None						
Station Alerting System	Tones only						

Station 62							
Address/Physical Location:	7405 SE 221st St, Hawthorne, FL 32640						
	**General Description:** A four-bay fire station built in 1977. Houses one Engine, one Tanker, one Brush Truck, and one Rescue.						
Structure							
Construction Type	Type II						
Date of Construction	1977						
Auxiliary Power	Built in Generator						
General Condition (See rating sheet)	Fair						
Apparatus Bays	0	Drive-Through		4	Back-In		
Special Considerations (ADA)	Bathrooms fitted with handles in restroom facilities						
Square Footage	3,400						
Facilities Available							
Sleeping Capacity	1	Bedrooms – bunkroom		7	Beds		
Exercise/Workout Facilities	Yes. Equipment is in apparatus bay and bunkroom						
Kitchen Facilities Type	Residential						
Individual Lockers/Storage Assigned	Yes						
Bathroom Facilities	2	Showers		2	Toilets		
Training/Meeting Rooms	None						
Washer/Dryer	Yes	Station Wear/Linen		No	PPE		
Safety & Security							
Fire Detection/Suppression	Yes	Sprinklers	Yes	Smoke Detectors			
Decontamination Area	None						
Security	Normal Door locks, recently installed key card reader on front door						
Apparatus Exhaust System	None						
CO Detectors	None						
Station Alerting System	Tones only						

Station 80							
Address/Physical Location:	2000 SW 43rd St, Gainesville, FL 32607						
	**General Description:** A two-bay fire station built in1990. Houses one Engine and two Rescues.						
Structure							
Construction Type	Type II						
Date of Construction	1990						
Auxiliary Power	Built in Generator						
General Condition (See rating sheet)	Fair						
Apparatus Bays	2	Drive-Through		0	Back-In		
Special Considerations (ADA)	Bathrooms fitted with handles in restroom facilities						
Square Footage	4,895						
Facilities Available							
Sleeping Capacity	1	Bedrooms – bunkroom		7	Beds		
Exercise/Workout Facilities	Yes. Equipment is in apparatus bay and bunkroom						
Kitchen Facilities Type	Commercial						
Individual Lockers/Storage Assigned	Yes						
Bathroom Facilities	2	Showers		2	Toilets		
Training/Meeting Rooms	None						
Washer/Dryer	Yes	Station Wear/Linen		No	PPE		
Safety & Security							
Fire Detection/Suppression	Yes	Sprinklers	Yes	Smoke Detectors			
Decontamination Area	None						
Security	Normal Door locks, recently installed key card reader on front door						
Apparatus Exhaust System	None						
CO Detectors	None						
Station Alerting System	Tones only						

Station 81							
Address/Physical Location:	7000 SW 88th St, Gainesville, FL 32607						
	**General Description:** A two-bay fire station built in 1999. Houses one Engine, one Rescue, and one Brush Truck.						
Structure							
Construction Type	Type II						
Date of Construction	1999						
Auxiliary Power	Built in Generator						
General Condition (See rating sheet)	Fair						
Apparatus Bays	2	Drive-Through	0	Back-In			
Special Considerations (ADA)	Bathrooms fitted with handles in restroom facilities						
Square Footage	3,600						
Facilities Available							
Sleeping Capacity	1	Bedrooms – bunkroom	7	Beds			
Exercise/Workout Facilities	Yes. Equipment is in apparatus bay and bunkroom						
Kitchen Facilities Type	Commercial						
Individual Lockers/Storage Assigned	Yes						
Bathroom Facilities	2	Showers	2	Toilets			
Training/Meeting Rooms	None						
Washer/Dryer	Yes	Station Wear/Linen	No	PPE			
Safety & Security							
Fire Detection/Suppression	Yes	Sprinklers	Yes	Smoke Detectors			
Decontamination Area	None						
Security	Normal Door locks, recently installed key card reader on front door						
Apparatus Exhaust System	None						
CO Detectors	None						
Station Alerting System	Tones only						

Station 82							
Address/Physical Location:	17128 SW Archer Rd, Archer, FL 32618						
	**General Description:** A two-bay fire station built in 1999. Houses one Engine, one Brush Truck, and one Tanker. This station is owned by the City of Archer and operated by ACFR under a long-term lease.						
Structure							
Construction Type	Type II						
Date of Construction	1999						
Auxiliary Power	Built in Generator						
General Condition (See rating sheet)	Fair						
Apparatus Bays	5	Drive-Through		0	Back-In		
Special Considerations (ADA)	Bathrooms fitted with handles in restroom facilities						
Square Footage	6,000						
Facilities Available							
Sleeping Capacity	2	Bedrooms – bunkroom		5	Beds		
Exercise/Workout Facilities	Yes. Equipment is in apparatus bay.						
Kitchen Facilities Type	Residential						
Individual Lockers/Storage Assigned	Yes						
Bathroom Facilities	2	Showers		3	Toilets		
Training/Meeting Rooms	None						
Washer/Dryer	Yes	Station Wear/Linen		No	PPE		
Safety & Security							
Fire Detection/Suppression	Yes	Sprinklers	Yes	Smoke Detectors			
Decontamination Area	None						
Security	Normal Door locks, recently installed key card reader on front door						
Apparatus Exhaust System	None						
CO Detectors	None						
Station Alerting System	Tones only						

Performance Analysis

Current Station Conditions, Code Compliance, and Anticipated Useful Life

The majority of ACFR's stations are in good condition, which indicates that the facilities are in good working order and have minor or no defects. Four of the stations visited were listed as being in fair condition, which indicates that the buildings show some wear and tear and require some age-related maintenance but are still quite usable. In interviews with facilities maintenance, the control of ACFR facilities came back under the control of Alachua County's Facilities Management Department in 2022 after being under the County Public Works Department.

Throughout interviews and site visits it was relayed to the M&J Team that ACFR personnel do minor maintenance around the station such as painting, which is common in fire departments across the country. Also, in interviews the M&J Team was told that the overhead bay doors are the biggest issue within the stations. The bay doors are often out of service and during site visits some stations had to move apparatus around to respond out of different doors. Out-of-service bay doors force drive-through bays to function as back-in bays, which is a serious safety concern. Alachua County Facilities has recently started a preventive maintenance program for the overhead doors to improve the doors' reliability. The bay door preventative maintenance program is new so data on how it is working is not yet available.

Stations were built to codes current at the time of construction, however, many stations did not have a carbon monoxide detector, as is required by the current building code.

A well-maintained fire rescue station can last over 50 years. Many jurisdictions across the U.S. have fire rescue stations that are more than 100 years old. ACFR stations are generally well maintained, which helps extend the life of the stations.

Current Station Locations

Construction of any fixed facility, like a station, represents a considerable cost to a fire rescue department and the County government. Not only is the cost of building a station significant, but the ongoing cost of a new facility's continued operation on an ongoing basis needs to be considered. The actual cost of construction varies widely based on a number of factors and variations in design, function, capacity, and site conditions. Further, costs are affected by local labor and materials pricing. Figure 93: Coverage Summary shows the coverage for both fire and EMS with current stations as well as the projected moves of Stations 21, 25, and 80 that are included in the County's Capital Improvement Program ("CIP").

Figure 93: Coverage Summary

Coverage	Fire Current	EMS Current	Fire Future	EMS Future
4-minute	26.8%	21.4%	29.4%	21.9%
8-minute	79.3%	67.0%	81.3%	66.2%

As shown in Figure 93, there is an increase in both fire and EMS 4-minute coverage. There slight decrease in 8-minute EMS coverage. The slight decrease in future EMS 8-minute coverage following the relocation of stations can likely be attributed to changes in the proximity to access roads. While the shift in station locations has led to an overall improvement in both fire and EMS 4-minute coverage, the adjustment may have increased the distance emergency vehicles must traverse to reach certain areas within the 8-minute timeframe for EMS services.

Figure 94: Fire Coverage with Stations 21, 25, and 80 New Locations shows the fire coverage based on the projected move of Stations 21, 25, and 80.

Figure 94: Fire Coverage with Stations 21, 25, and 80 New Locations

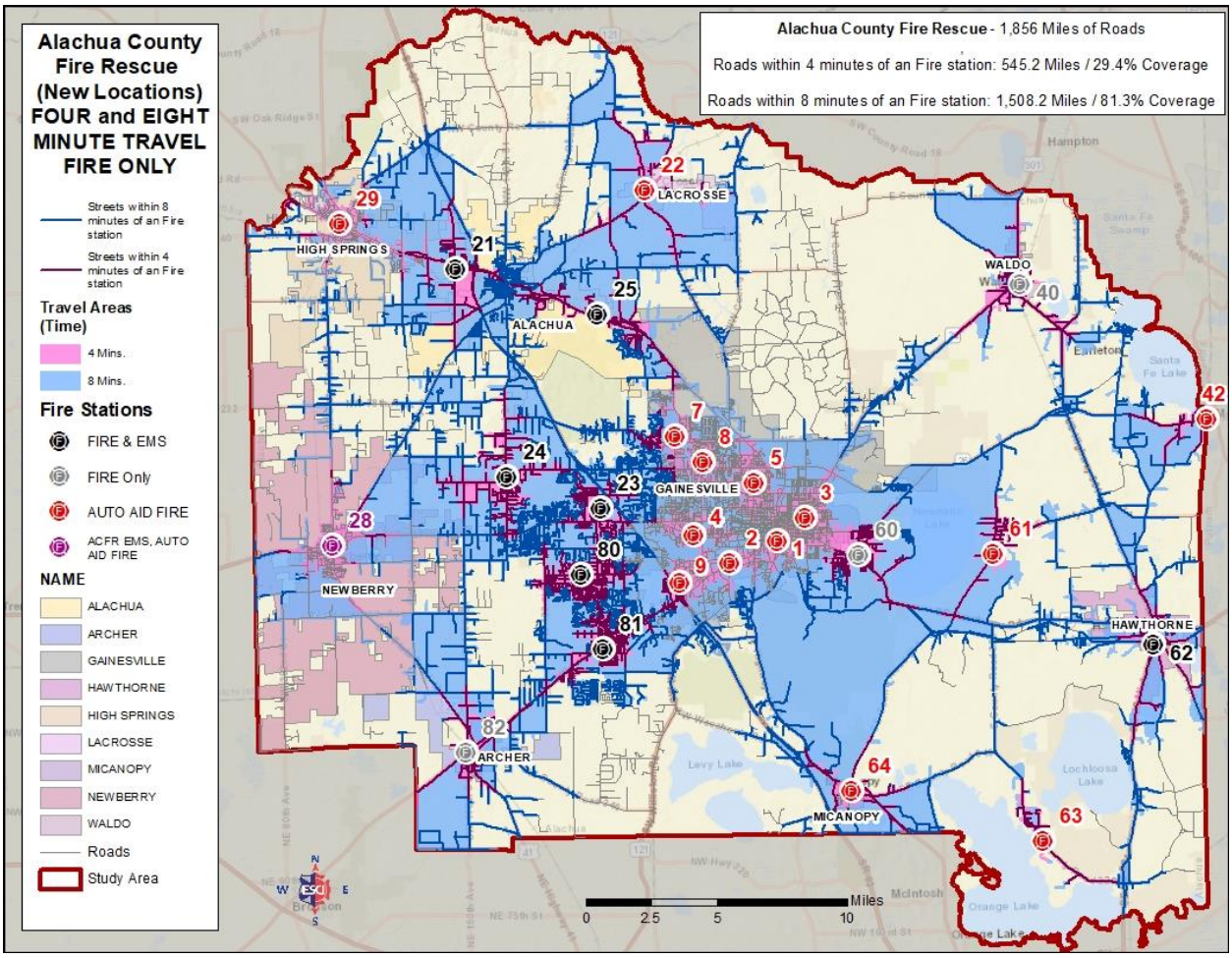


Figure 95: EMS 4-Minute Coverage with Stations 21, 25, and 80 New Locations and Figure 96: EMS 8-Minute Coverage with Stations 21, 25, and 80 New Locations show the EMS coverage based on the projected move of Stations 21, 25, and 80.

Figure 95: EMS 4-Minute Coverage with Stations 21, 25, and 80 New Locations

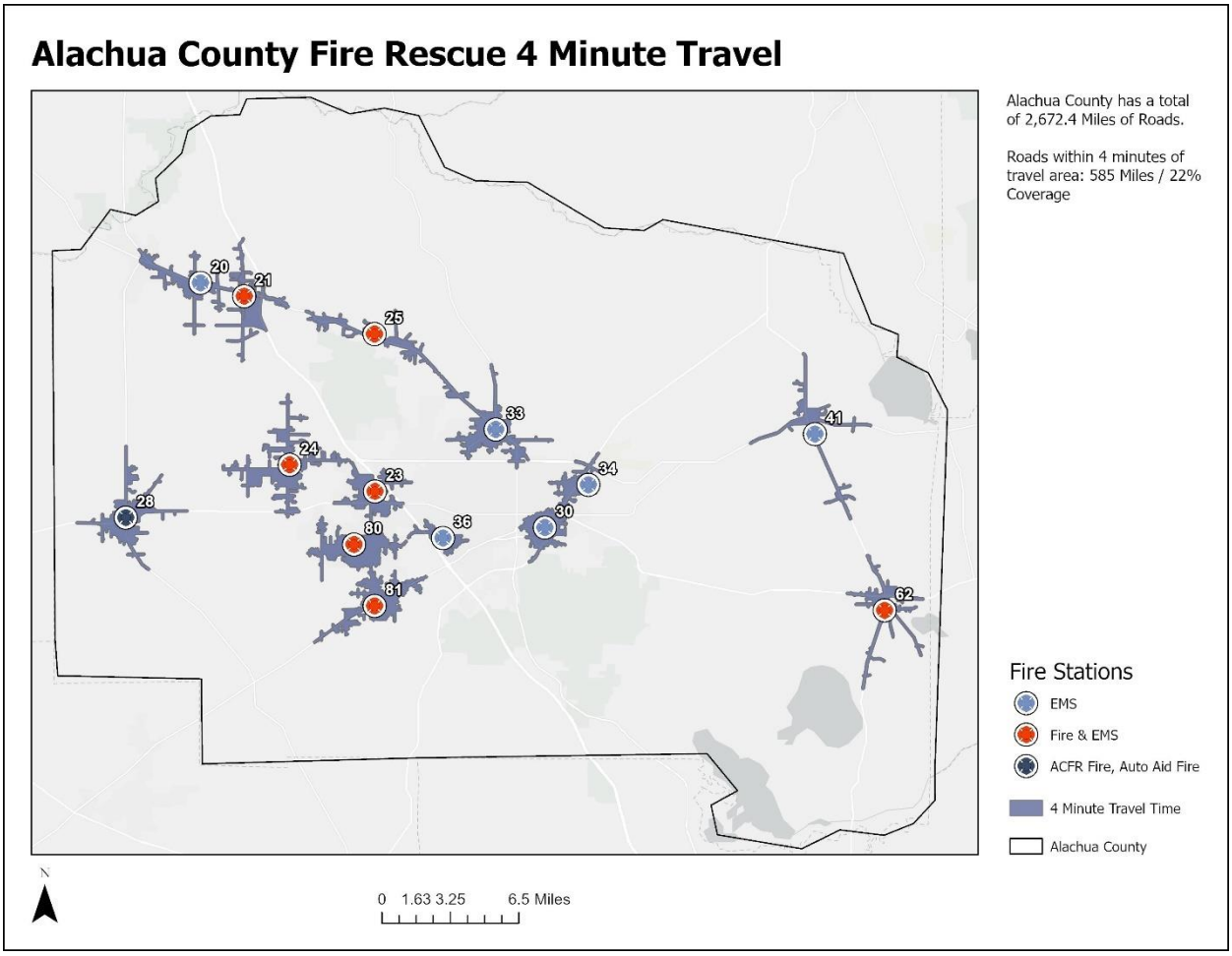
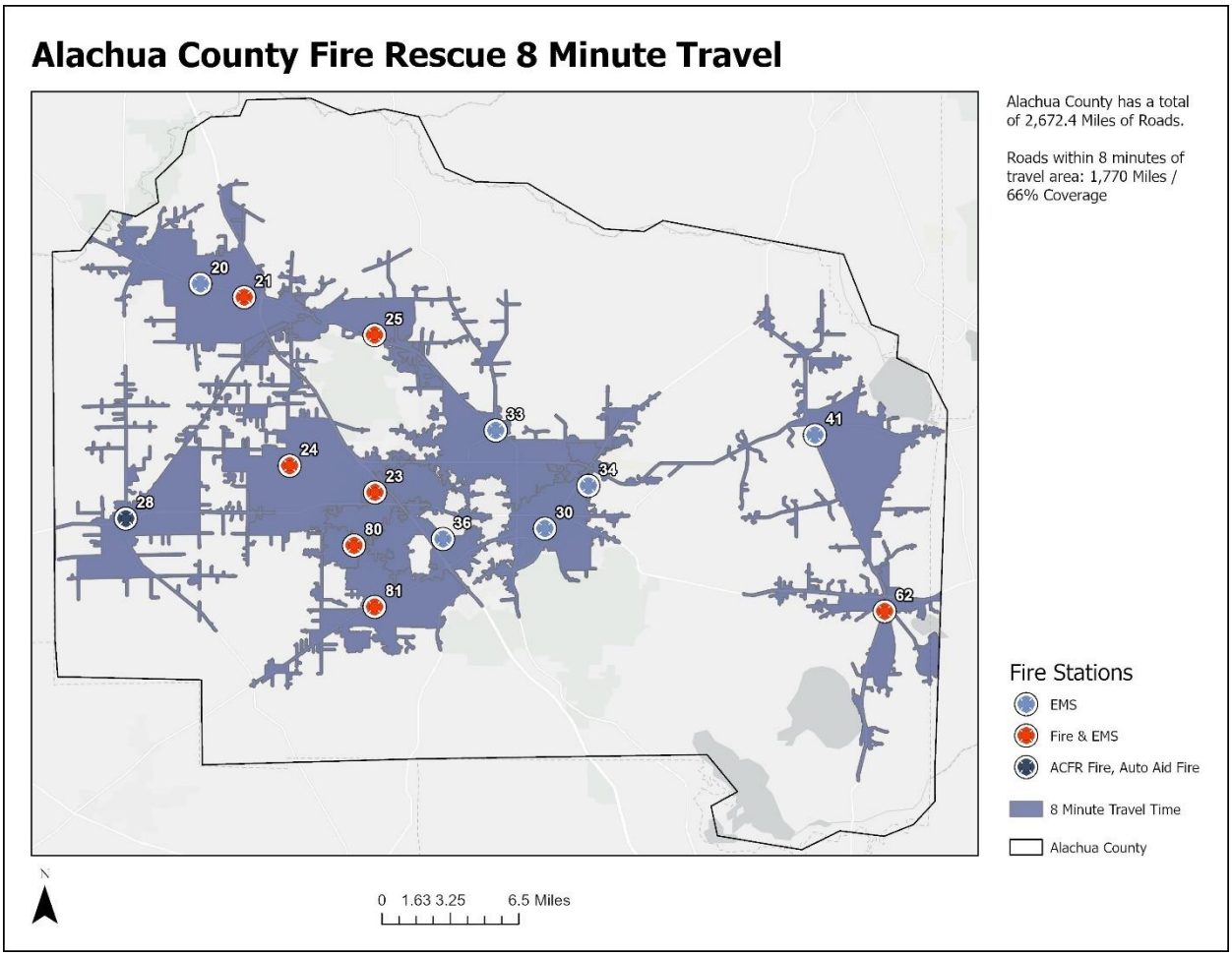


Figure 96: EMS 8-Minute Coverage with Stations 21, 25, and 80 New Locations



New developments along with increased target hazards creates the need for additional fire stations and/or response units. Policy makers must determine when and where to add fire stations or response units and at what cost is a desired level of service to be achieved. The problem comes in finding a quantifiable threshold to determine that point for each specific situation, because it varies from community to community and even within a specific jurisdiction. The overall answer is part financial and part professional judgment. In fact, in the literature of the fire service today, there is very little definitive guidance on how this should be accomplished.

Fire rescue departments can take several steps to identify where to locate new stations, including:

1. Identifying areas with minimum coverage
2. Identifying feasible locations for a new facility or response resource
3. Evaluating those locations using specific criterion

Working Alarm Systems and Communications Infrastructure

The current state of working alarm systems and communications for ACFR is different in each station. Most of the stations have sprinkler systems in them, however, there is no specific standalone standard dedicated solely to sprinkler systems in fire stations. However, fire protection standards and codes provide guidance on the design, installation, and maintenance of sprinkler systems in various types of buildings, including fire stations. The primary standards governing fire sprinkler systems are developed by the NFPA in the United States. The most relevant NFPA standards for sprinkler systems in fire stations include:

- NFPA 13 (Standard for the Installation of Sprinkler Systems) – NFPA 13 provides comprehensive requirements for the design, installation, and maintenance of automatic fire sprinkler systems in various occupancies, including commercial buildings. The standard covers the types of sprinklers, system components, water supplies, and design criteria.
- NFPA 14 (Standard for the Installation of Standpipe and Hose Systems) – NFPA 14 focuses on the installation and maintenance of standpipe systems, which provide a means of delivering water for firefighting operations. Fire stations often have standpipe systems to supply water to the fire apparatus and hoses. The standard addresses the requirements for standpipe systems, including sprinkler connections.
- NFPA 25 (Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems) – NFPA 25 outlines the inspection, testing, and maintenance requirements for water-based fire protection systems, including sprinkler systems. The standard provides guidelines for periodic inspection, testing, and maintenance tasks to ensure the proper functioning of the sprinkler system.

In addition to NFPA standards, local building codes and regulations may also apply to fire rescue stations and specify additional requirements for sprinkler systems. Fire rescue departments should consult building authorities and other building code experts to determine the specific standards and codes applicable to a fire rescue station in the particular jurisdiction.

Of note: Standards and codes can be updated periodically, so fire rescue departments should refer to the most current editions of standards and comply with any local amendments or additional requirements.

Communications Infrastructure

Fire rescue department communications infrastructure plays a crucial role in facilitating effective and reliable communication among fire rescue personnel, other emergency responders, and dispatch centers. The following are some key components and considerations for fire rescue department communications infrastructure:

- Dispatch Center – The dispatch center serves as the central hub for receiving emergency calls, coordinating resources, and dispatching fire personnel to incidents. The dispatch center typically includes communication consoles, computer-aided dispatch (“CAD”) systems, and radio communication interfaces.
- Public Safety Answering Point (“PSAP”) – The PSAP is responsible for receiving emergency calls from the public and dispatching the appropriate emergency services, including fire rescue departments. It essential to have a well-established connection between the fire rescue department and the PSAP to ensure seamless communication during emergencies.

- Land Mobile Radio ("LMR") Systems – LMR systems, commonly known as two-way radios, are essential tools for communication among fire personnel. LMR systems operate on dedicated radio frequencies and provide direct, instant voice communication. LMR systems allow firefighters, incident commanders, and dispatchers to communicate critical information in real-time.
- Radio Infrastructure – The radio infrastructure consists of base stations, repeaters, and antennas that extend the coverage and reliability of the LMR system. The components of a radio infrastructure are strategically placed to ensure adequate signal strength throughout the fire rescue department's jurisdiction.
- Mobile Data Terminals ("MDT") – MDTs are mobile devices installed in fire and rescue apparatus that enable data communication and information exchange. MDTs provide access to real-time incident data, maps, pre-plans, and other critical information that assists firefighters in making informed decisions.
- Voice over Internet Protocol ("VoIP") and Telephony Systems – Fire rescue departments often utilize VoIP systems for internal and external voice communication. These systems leverage internet protocol networks to transmit voice calls, providing flexibility and scalability. Traditional telephone systems may also be utilized for specific purposes.
- Data Networks – A robust data network infrastructure is crucial for supporting various communication systems, including CAD, email, internet access, and data sharing among fire stations, administrative offices, and external agencies. A data network should be secure, reliable, and capable of handling large volumes of data.
- Backup Systems – Redundancy and backup systems are critical to ensure communication continuity during emergencies or system failures. Backup systems may include backup power supplies, backup communication channels, and redundant equipment to minimize downtime and maintain operational readiness.
- Interoperability – Interoperable communication systems allow fire rescue departments to communicate seamlessly with other emergency response agencies, such as law enforcement, EMS, and mutual aid partners. Interoperability includes ensuring compatibility of radio frequencies, standardized communication protocols, and coordinated incident command structures.
- Training and Protocols – Adequate training is essential to ensure fire rescue department personnel are familiar with the communication systems and protocols. Regular drills, exercises, and ongoing education on effective communication practices enhance the efficiency and effectiveness of communication during emergencies.

It is important for fire rescue departments to work closely with communication experts, IT professionals, and relevant stakeholders to design, implement, and maintain a robust and reliable communications infrastructure that meets the department's specific operational needs and complies with local regulations and standards.

Fire rescue departments often use alert tones or signals to dispatch units and alert personnel of an emergency. These alert tones serve as audible notifications that quickly grab the attention of Firefighters and indicate the type of emergency or response required. The following are some common methods and considerations related to alert tones in emergency response dispatching:

- Tonal Patterns – Fire rescue departments typically have different tonal patterns or sequences to represent various types of emergencies. For example, a different tone may be used for a structure fire, medical emergency, hazardous material incident, or a rescue operation. Each tone helps Firefighters identify the nature of the incident and the appropriate response.
- Tone Timing and Repetition – The duration and repetition of the alert tones may vary depending on the fire rescue department's protocols. Some departments use a single alert tone, while others may repeat the tone several times to ensure it is heard by all personnel. The timing and repetition of tones help distinguish between routine notifications and urgent emergency dispatches.
- Voice Dispatch – In addition to alert tones, fire rescue departments often provide voice dispatch over radio systems or intercoms. After the initial alert tone, a dispatcher will provide essential details about the incident, including the location, nature of the emergency, and any specific instructions for responding units.
- Clear and Consistent Tones – Alert tones should be clear, distinct, and easily distinguishable from background noise. Fire rescue departments ensure that tones are of sufficient volume and clarity to be heard even in noisy environments, such as stations or inside emergency apparatus.
- Training and Familiarization – Firefighters receive training on alert tones and their meanings during their initial training and ongoing professional development. Firefighters become familiar with the specific tones used by their department and understand the appropriate actions to take upon hearing each tone.
- Integration with Communication Systems – Alert tones are typically integrated into the fire rescue department's communication systems, such as CAD systems and radio networks. CAD systems automatically generate the appropriate alert tone based on the incident type and relay the information to the responding units' radios or MDTs.
- Compliance with Standards and Regulations – Fire rescue departments must comply with relevant local, regional, and national regulations and standards regarding emergency alerting and dispatching systems. These standards may dictate specific requirements for tone duration, volume, and protocols to ensure effective and standardized communication.

Fire rescue departments work closely with communication experts, dispatchers, and emergency management personnel to establish alert tone systems that best meet their operational needs and adhere to applicable regulations. Regular testing, evaluation, and feedback from personnel help refine and improve the effectiveness of the alerting process over time.

Security/Card Readers/Keypads

Ensuring the security of fire rescue stations is essential to protect the personnel, equipment, and sensitive information housed within the facility. The following are some considerations for fire rescue stations that address both general security measures and security measures for stations with previous security incidents:

- Access Control – Implementing effective access control measures is crucial to prevent unauthorized entry. Access control can include secure entrances with key card or biometric access systems, perimeter fencing, and surveillance cameras. Fire rescue departments should restrict access to sensitive areas such as storage rooms, communication centers, and equipment bays.
- Alarm Systems – Fire rescue departments should install an alarm system that includes intrusion detection sensors, motion detectors, and glass break sensors. The alarm system should be monitored 24/7 to alert authorities in case of unauthorized entry or suspicious activities.
- Video Surveillance – Fire rescue departments should deploy video surveillance cameras strategically throughout the fire station, both indoors and outdoors, to monitor activities and deter potential intruders. Departments should ensure that surveillance footage is recorded and stored securely for later review if needed.
- Lighting – Adequate exterior lighting is essential to enhance visibility and deter unauthorized individuals from approaching the fire station. Fire rescue departments should install motion-sensor lights to illuminate dark areas during nighttime hours.
- Perimeter Security – Fire rescue departments should secure the perimeter of the fire station with fencing or barriers to control access and deter unauthorized entry. Departments should consider installing security gates or barriers that can be controlled remotely.
- Security Personnel – Fire rescue departments should assign trained security personnel or hire security services, as necessary, to patrol the premises of stations, monitor surveillance systems, and respond to security incidents.
- Cybersecurity – Fire rescue departments should protect sensitive electronic information by implementing robust cybersecurity measures, including firewalls, regular software updates, strong passwords, and employee training on recognizing and reporting potential cyber threats.
- Emergency Planning – Fire rescue departments should develop emergency response plans specific to security incidents, including procedures for reporting threats, evacuating personnel, and coordinating with law enforcement agencies.
- Training and Awareness – Fire rescue departments should train station personnel on security protocols, including access control, reporting suspicious activities, and responding to security incidents. Departments should foster a culture of security awareness among staff members.

Of note: Specific security requirements may vary based on local regulations, jurisdiction, and the unique needs of each fire station. Fire rescue departments should consult with local law enforcement agencies, security professionals, and jurisdictional leadership to develop and implement comprehensive security measures tailored to the specific fire station.

ACFR has installed a key card reader in the front door of each fire station. The standard is that the remaining doors of the station are to remained locked and crews are to access the station through the secured door with a key card. ACFR restricts access to stations based upon role in the organization (command staff have access to all stations).

Observations and Recommendations

Observation 1: While Alachua County is not located on the coast, hurricanes are still a significant risk in the County. Only the newly constructed stations (Stations 24, 30, 33, and 40) have hurricane-rated bay doors and/or window shutters. Additionally, Stations 20 and 21 do not have auxiliary power sources, such as generators, that would allow the station to operate in the event that the power grid is disrupted.

Recommendation 1A: ACFR should develop and execute a plan to continue installing hurricane-rated bay doors and/or window shutters on all new fire stations. ACFR should develop and execute a plan to retrofit current stations with hurricane-rated bay doors and/or window shutters.

Recommendation 1B: ACFR should develop and execute a plan to ensure that all current stations have an auxiliary power source that can be operated from inside the station and will provide power during emergency conditions. New ACFR stations should include an auxiliary power source that can be operated from inside the station in the station's design.

Observation 2: Having individual sleeping quarters instead of shared bunkrooms both allows firefighters to have better sleep while on shift and provides firefighters with additional privacy. Not sleeping well enough can significantly impact job performance. The lack of privacy afforded by traditional bunkrooms has been a significant deterrent to many potential recruits, particularly women. Firefighters still sleep in shared bunkrooms in ACFR Stations 20, 21, 23, 24, 25, 41, 60, 62, 80, 81, and 82.

Recommendation 2: In order to promote higher quality sleep and provide personnel with additional privacy, ACFR should create and execute a plan to adapt all current stations with shared bunkrooms to have private or semi-private sleeping quarters. Additionally, new ACFR stations should be designed to provide all on-shift personnel with private or semi-private sleeping quarters.

Observation 3: Many of ACFR's stations use the apparatus bays as workout spaces and as storage areas for workout equipment. Working out in the apparatus bay exposes ACFR personnel to exhaust fumes, the combustion byproducts that are deposited on fire-exposed gear and equipment, and various hazardous chemicals and is not ideal for long-term personnel health and wellness.

Recommendation 3: ACFR should ensure that all stations have access to a clean and healthy environment in which station personnel can exercise. ACFR should additionally implement a policy that limits time spent in the apparatus bays to emergency response, practical training, equipment maintenance, and other activities that can only be reasonably performed in the apparatus bays. New ACFR stations should include a space in which staff can exercise other than the apparatus bays.

Observation 4: It is recommended that stations are fitted with carbon monoxide detectors. Station 30 is the only station inspected by the M&J Team that was fitted with a carbon monoxide detector.

Recommendation 4: ACFR should develop and execute a plan to install carbon monoxide detectors in all stations that do not currently have a carbon monoxide detection system. New ACFR stations should include carbon monoxide detectors.

Observation 5: The International Agency for Research on Cancer considers diesel engine exhaust to be a Group 1 carcinogen, meaning that it is known to cause cancer in humans. None of the ACFR stations examined by the M&J Team have any sort of exhaust capture and removal systems installed in the apparatus bays.

Recommendation 5: ACFR should pursue grants to fund the installation of exhaust capture and removal systems in station apparatus bays. New ACFR stations should include exhaust capture and removal systems.

Observation 6: The design and construction of fire stations shape how ACFR personnel go about their workdays, create the environment in which ACFR personnel work, and provide safety features to protect the health and safety of ACFR personnel from both acute and chronic hazards. Properly designed and constructed stations are important parts of protecting the physical and mental health of ACFR's employees.

Recommendation 6: When planning the renovation of current stations and the construction of new stations, ACFR should create stations that meet station construction standards and best practices, including the following, described in Appendix B:

- Automatic Sprinkler Protection
- Cancer Prevention Engineering
- Back-In Bays
- Hurricane Protection
- Facility Security
- Separate Sleeping Quarters
- Heart Safe Alert Tones
- Decontamination Area

Observation 7: The apparatus bay doors at ACFR stations have broken somewhat frequently over the past several years. Malfunctions to apparatus bay doors adds logistical hurdles to emergency responses and forces units to use bays as if they were back-in bays, which increases the risk of accidents. Alachua County's Facilities Management Department, which performs major maintenance tasks at ACFR stations, has recently started a preventative maintenance program in an effort to improve the reliability of the bay doors at the stations.

Recommendation 7: ACFR should support the bay door preventative maintenance program that Alachua County's Facilities Management Department is starting up and should track bay door downtime to evaluate the program's effectiveness. Additionally, ACFR should explore options for increasing the reliability of and/or reducing the wear and tear experienced by bay doors in future stations.

5.F Equipment/Vehicles

Introduction

Fire rescue stations need to have apparatus assigned to the station for them to be functional to provide emergency services to the citizens and visitors of Alachua County. Fire rescue departments also need reserve apparatus. Apparatus and vehicles will often need routine and preventive maintenance to keep the unit at peak operational readiness. In order to perform maintenance on a fire or rescue vehicle, the vehicle must be placed out of service and will not be available for emergency responses. To prevent vehicle maintenance from disrupting emergency services, ACFR maintains a reserve fleet of apparatus. Reserve units can also be staffed by additional personnel for major events such as natural disasters.

Performance Analysis

Age, Condition, Safety, and Serviceability

The M&J Team assigned a condition grade to the vehicles in the ACFR fleet using the criteria shown in Figure 97: Vehicle Condition Grade Criteria.

Figure 97: Vehicle Condition Grade Criteria

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 of operation.	
Service	1, 3, or 5 points are assigned based on the type of service unit. For instance, fire pumpers would be given a 5 because they are 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 points assigned.	
Reliability	Points are assigned as 1, 3, or 5 depending on the frequency that a vehicle is in the shop for repair. For example, 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 1	Excellent
18–22 points	Condition 2	Good
23–27 points	Condition 3	Fair
28 points or higher	Condition 4	Poor

In general, the ACFR apparatus are in good to excellent shape and appear to be well-maintained. The Alachua County Public Works Department's Fleet Management Division ("Fleet Management") conducts regular preventative maintenance on fire apparatus and rescues based on each vehicle's mileage. ACFR's front-line staffed apparatus (engines, trucks, and rescues) range in age from four to 17 years, with an average age of 13 years.

ACFR uses third-party contractors to perform paint work, bodywork, and aerial certifications, while Fleet Management performs other maintenance work and ACFR conducts pump tests. Fleet Management also services fire rescue vehicles for the High Springs and Newberry fire departments.

Many of ACFR's apparatus are still in good to excellent shape. The vehicles that the M&J Team evaluated and noted that were in condition 4 were not necessarily in the "must replace" stage of their usable life. ACFR's condition 4 vehicles were for the most part still in good working order and properly maintained. The ACFR vehicles listed as condition 4 were typically listed as condition 4 due to a combination of age and mileage. The age and mileage of these condition 4 vehicles puts the vehicles in the repair or replace category but does not necessarily mean the end of their workable life.

Figure 98: ACFR Frontline Response Units contains an inventory of ACFR's front-line fire and EMS apparatus and indicates each apparatus's condition rating.

Figure 98: ACFR Frontline Response Units

Apparatus	Type	Make/Model	Tank/ Pump Capacity	Year	Mileage	Condition
Engines/Pumpers						
3425	Engine	Freightliner FL80	750gal @ 1250GPM	1999	165,780	4
3613	Engine	E-One Typhoon	750gal @ 1250GPM	2006	133,834	4
3615	Engine	E-One Typhoon	750gal @ 1250GPM	2006	152,742	4
3617	Engine	E-One Typhoon	750gal @ 1250GPM	2006	155,385	4
3619	Engine	E-One Typhoon	750gal @ 1250GPM	2006	161,095	4
3815	Engine	E-One Typhoon	750gal @ 1250GPM	2013	107,344	2
3817	Engine	E-One Typhoon	750gal @ 1250GPM	2014	91,630	1
3819	Engine	E-One Typhoon	750gal @ 1250GPM	2012	103,796	2
3821	Engine	E-One Typhoon	750gal @ 1250GPM	2010	145,519	3
3822	Engine	E-One Typhoon	750gal @ 1250GPM	2015	107,645	1
FR1802	Engine	E-One Typhoon	750gal @ 1250GPM	2018	66,971	1
FR1908	Engine	E-One Typhoon	750gal @ 1250GPM	2019	39,963	1

Apparatus	Type	Make/Model	Tank/ Pump Capacity	Year	Mileage	Condition
FR1909	Engine	E-One Typhoon	750gal @ 1250GPM	2019	31,186	1
WA7366	Engine	Freightliner FL80	750gal @ 1250GPM	2001	91,588	4
Aerial (Trucks) Apparatus						
3616	75’ Ladder	E-One Typhoon	N/A	2009	162,020	4
Squads, Tankers, and Brush Vehicles						
FR2201	Heavy Rescue	E-One Typhoon	N/A	2022	9,344	1
3426	Tanker	Chevrolet WT4000	3,000-4,000 gal	1998	22,665	3
3630	Tanker	International 7600 SFA 6x4	3,000-4,000 gal	2009	14,474	1
3631	Tanker	International 7600 SFA 6x4	3,000-4,000 gal	2009	16,263	1
3823	Tanker	International 7600 SBA	3,000-4,000 gal	2016	8,196	1
MC17	Bus	Thomas/Sartin MAB	N/A	2006	26,669	2
3422	Brush Truck	GMC 3500 HD	250 gal	1998	30,252	3
3423	Brush Truck	GMC 3500 HD	250 gal	1998	29,934	3
3525	Brush Truck	Ford F250 4x4	250 gal	2006	37,340	2
Ar027	Brush Truck	Ford F450	250 gal	2002	20,006	3
B3917	Brush Truck	GMC Sierra	250 gal	2013	7,904	1
B3925	Brush Truck	GMC Sierra	250 gal	2013	8,110	1
WA2953	Brush Truck	Ford F350	250 gal	2006	25,669	3
Rescues (Ambulances)						
FR1801	Ambulance	Dodge 5500 HD	N/A	2018	157,171	2
FR1803	Ambulance	Dodge 5500 HD	N/A	2018	160,581	2
FR1804	Ambulance	Dodge 5500 HD	N/A	2018	125,028	2
FR1805	Ambulance	Dodge 5500 HD	N/A	2018	173,412	2
FR1901	Ambulance	Dodge 5500 HD	N/A	2018	144,823	2
FR1902	Ambulance	Dodge 5500 HD	N/A	2018	121,083	2
FR1903	Ambulance	Dodge 5500 HD	N/A	2018	123,624	2
FR1904	Ambulance	Dodge 5500 HD	N/A	2018	129,501	2
FR2002	Ambulance	Dodge 5500 HD	N/A	2019	107,560	1
FR2003	Ambulance	Dodge 5500 HD	N/A	2019	126,317	1
FR2004	Ambulance	Dodge 5500 HD	N/A	2019	89,239	1
FR2005	Ambulance	Dodge 5500 HD	N/A	2019	75,544	1
FR2012	Ambulance	Dodge 5500 HD	N/A	2020	107,019	1
FR2013	Ambulance	Dodge 5500 HD	N/A	2019	72,109	1
FR2014	Ambulance	Dodge 5500 HD	N/A	2019	93,922	1
FR2020	Ambulance	Dodge 5500 HD	N/A	2021	35,759	1
FR2121	Ambulance	Dodge 5500 HD	N/A	2021	29,708	1

Apparatus	Type	Make/Model	Tank/ Pump Capacity	Year	Mileage	Condition
FR2122	Ambulance	Dodge 5500 HD	N/A	2021	29,280	1
FR2123	Ambulance	Dodge 5500 HD	N/A	2021	37,692	1
FR2124	Ambulance	Dodge 5500 HD	N/A	2021	43,205	1

Fire Rescue Vehicle Replacement Fund (Fleet)

Fleet Management maintains the Fire Rescue Vehicle Replacement Fund on behalf of ACFR. While there is not an industry standard practice for funding vehicle replacement, fire rescue departments are recommended to include vehicle replacement costs in their planning and budgeting. ACFR uses the Fire Rescue Vehicle Replacement Fund to plan for future vehicle replacements.

Fleet Management builds the Fire Rescue Vehicle Replacement Fund by charging ACFR an annual fee that is proportional to both the vehicle's purchase cost and the vehicle's anticipated lifespan. Fleet Management's annual fee ensures that the Fire Rescue Vehicle Replacement Fund can afford to purchase a replacement vehicle as soon as the predecessor vehicle reaches the anticipated end-of-service. Additionally, ACFR receives the proceeds from the resale of former Department vehicles.

Equipment Replacement Cycle, Hardware Expiration and Tracking, and Funding

ACFR maintains a sizeable fleet of response vehicles that are generally new and well maintained. Generally, the apparatus fleet of ACFR is sufficient to meet departmental services needs and demands. As with any mechanical device, a fire apparatus possesses a finite life. Often, when a frontline apparatus reaches a certain threshold regarding age or wear and tear, or begins to require increasing maintenance costs, the apparatus is moved to reserve status or decommissioned. The decision to move an apparatus to reserve status or decommission it is a local decision and no definitive industry standards exist to make this determination.

Typically, apparatus replacement is based on multiple factors such as age, mileage or engine hours, increased need for maintenance, or financial considerations. Annex D of National Fire Protection Association ("NFPA") 1910 (Standard for the Inspection, Maintenance, Refurbishment, Testing, and Retirement of In-Service Emergency Vehicles and Marine Firefighting Vessels) states: "because the changes to [NFPA standards] have been truly significant, especially in the area of safety, fire departments should seriously consider the value (or risk) to firefighters of keeping fire apparatus more than 15 years old in first-line service. It is recommended that apparatus more than 15 years old that have been properly maintained and are still are in serviceable condition be placed in reserve status, be upgraded in accordance with this standard, and incorporate as many features as possible of the current fire apparatus standard." Annex D of NFPA 1910 goes on to recommend that "apparatus that were not manufactured to the applicable NFPA fire apparatus standards or that are over 25 years old should be replaced." NFPA does not issue a standard regarding the suggested lifespan of ambulances.

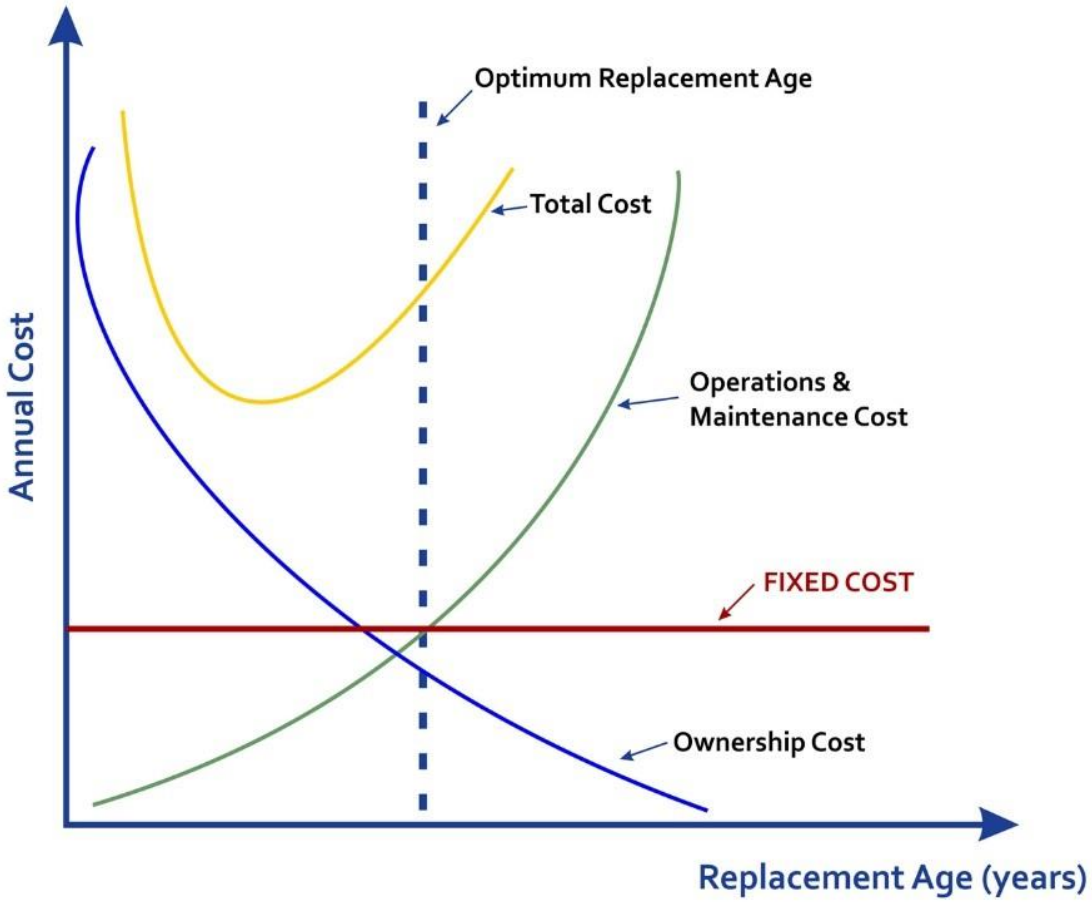
Apparatus replacement within ACFR is primarily based on the age of apparatus, with apparatus being moved to reserve status on a case-by-case basis. Engines (pumpers) are scheduled for replacement when they reach 12 years of age. ACFR's ambulance boxes have a 20-year warranty. With a five-year replacement cycle, ACFR aims to re-chassis each ambulance box three times. ACFR's 12-year replacement cycle for engines and five-year replacement cycle for rescues are shorter than the replacement cycles that might be expected for other departments with a similar workload and call volume. The average age of ACFR's fleet is 8.6 years.

ACFR tracks fleet information using the FASTER Fleet Asset Management Software. FASTER is a specific software solution designed to address the unique needs of managing fire apparatus and related assets.

Because of the large expense of a fire apparatus, most communities find the need to plan for the cost of replacement. To properly do so, agencies often turn to the long-accepted practice of establishing a life cycle for the apparatus that results in a well-anticipated replacement date. Forward-thinking organizations then set aside incremental funds during the life of the vehicle so that replacement dollars are ready when needed.

A conceptual model that may be used when a replacement cycle is considered is the Economic Theory of Vehicle Replacement (Figure 99: 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 a range over time. The flat spot at the bottom of the total curve in Figure 99 represents the replacement window.

Figure 99: Economic Theory of Vehicle Replacement



Shortening the replacement cycle to this window allows for an apparatus to be replaced at optimal savings to a fire rescue department. If the department does not routinely replace equipment in a timely manner, the overall reduction in replacement spending can result in a rapid increase in maintenance and repair expenditures. Officials who assume that deferring replacement purchases is a good tactic for balancing the budget must understand that two events may occur:

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

Regardless of its net effect on current apparatus costs, the deferral of replacement purchases unquestionably increases future replacement spending needs.

ACFR is above the industry standard by working to replace frontline fire apparatus every 12 years. With Alachua County Fleet's robust preventive maintenance program, it is recommended that each piece of fire apparatus and the related support equipment be analyzed with predictable expected useful service life, based on a practical balance of use and maintenance cost. By analyzing age, projected service life, and replacement costs with an inflation factor, a replacement schedule can be established that looks farther into the future than simply the annual budget process enabling the agency to forecast future financial demands and plan more effectively for them. It is also recommended to keep supply chain issues in mind as some fire rescue departments are now experiencing three-to-five-year lead times for apparatus. Appendix C contains a sample equipment replacement cycle table.

Distribution and Deployment of Equipment

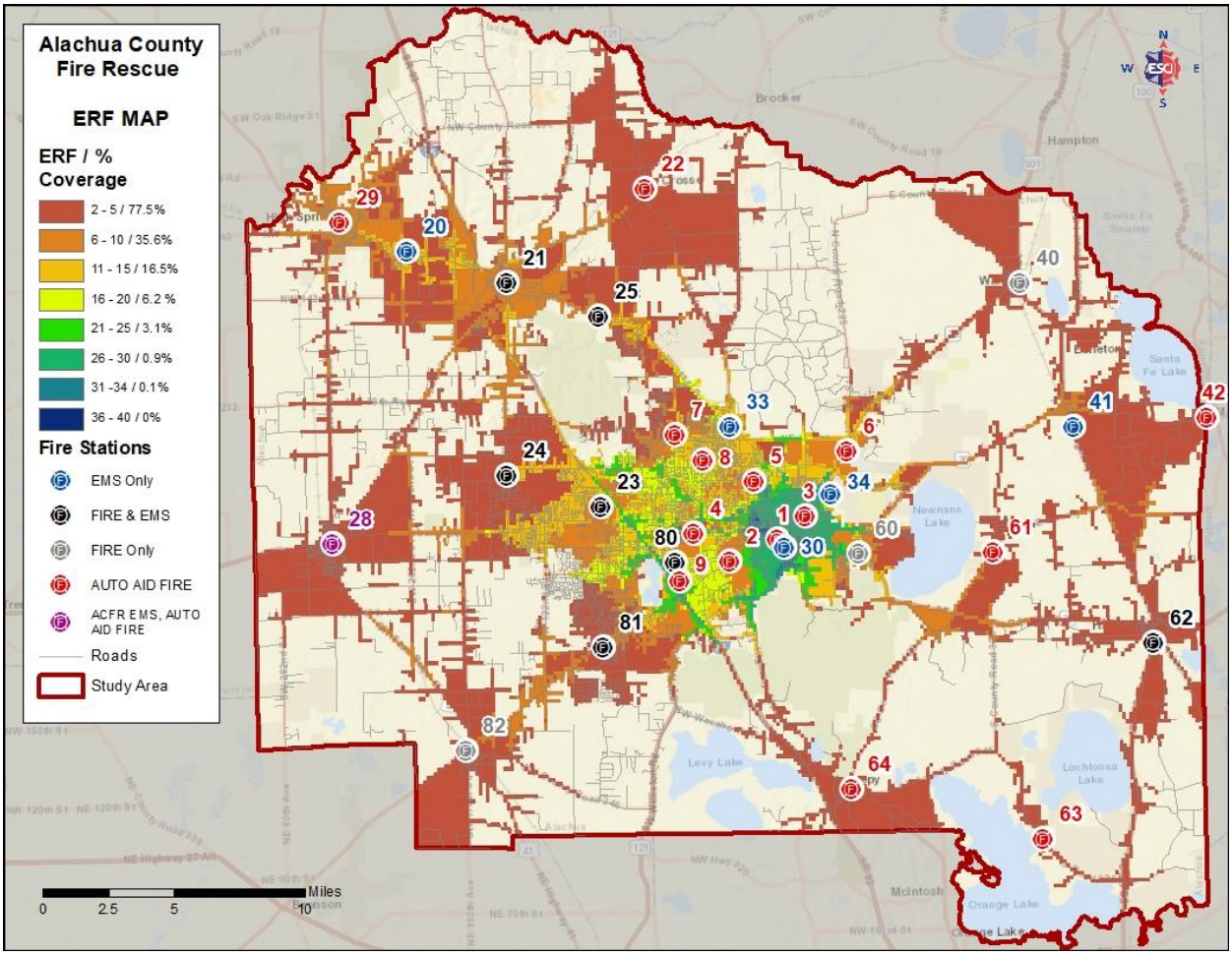
NFPA 1710 (Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments) recommends for moderate risk incidents or greater—such as a fire in a 2,000 square foot residential dwelling—the balance of the initially dispatched resources arrive on the scene within eight minutes from the time they started to travel to the scene. NFPA defines an effective response force ("ERF") 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." Figure 100: NFPA 1710 Recommended ERF Initial Assignment illustrates the ERF suggested in NFPA 1710 for a range of fires based upon the size and type of the structure.

Figure 100: NFPA 1710 Recommended ERF Initial Assignment

Functions/Tasks	Single-Family Residence (2,000 SF)	Open Air Strip Shopping Center (13,000–196,000 SF)	3-Story Garden Apartment (1,200 SF)
Command	1	2	2
Apparatus Operator	1	2	2
Handlines (2 members each)	4	6	6
Support Members	2	3	3
Victim Search and Rescue team	2	4	4
Ground Ladders/Ventilation	2	4	4
Aerial Device Operator (if ladder used)	(1)	(1)	(1)
Initial Rapid Intervention Team	4	4	4
Initial Medical Care Component	N/A	2	2
Total	**16 (17)**	**27 (28)**	**27 (28)**

Figure 101: ACFR ERF Map shows ACFR distribution of resources and ability to assemble resources (personnel and apparatus). Figure 101 shows that in 8 minutes, with automatic aid, ACFR can assemble at least 2 to 5 firefighters to 77.5% of the coverage area, at least 6 to 10 firefighters to 35.6% of the coverage area, at least 11 to 15 firefighters to 16.5% of the coverage area, at least 16 to 20 firefighters to 6.2% of the coverage area, at least 21 to 25 firefighters to 3.1% of the coverage area, at least 26 to 30 firefighters to 0.9% to the coverage area, and at least 31 to 34 firefighters to 0.1% of the coverage area. These calculations assume that all units are in service and available.

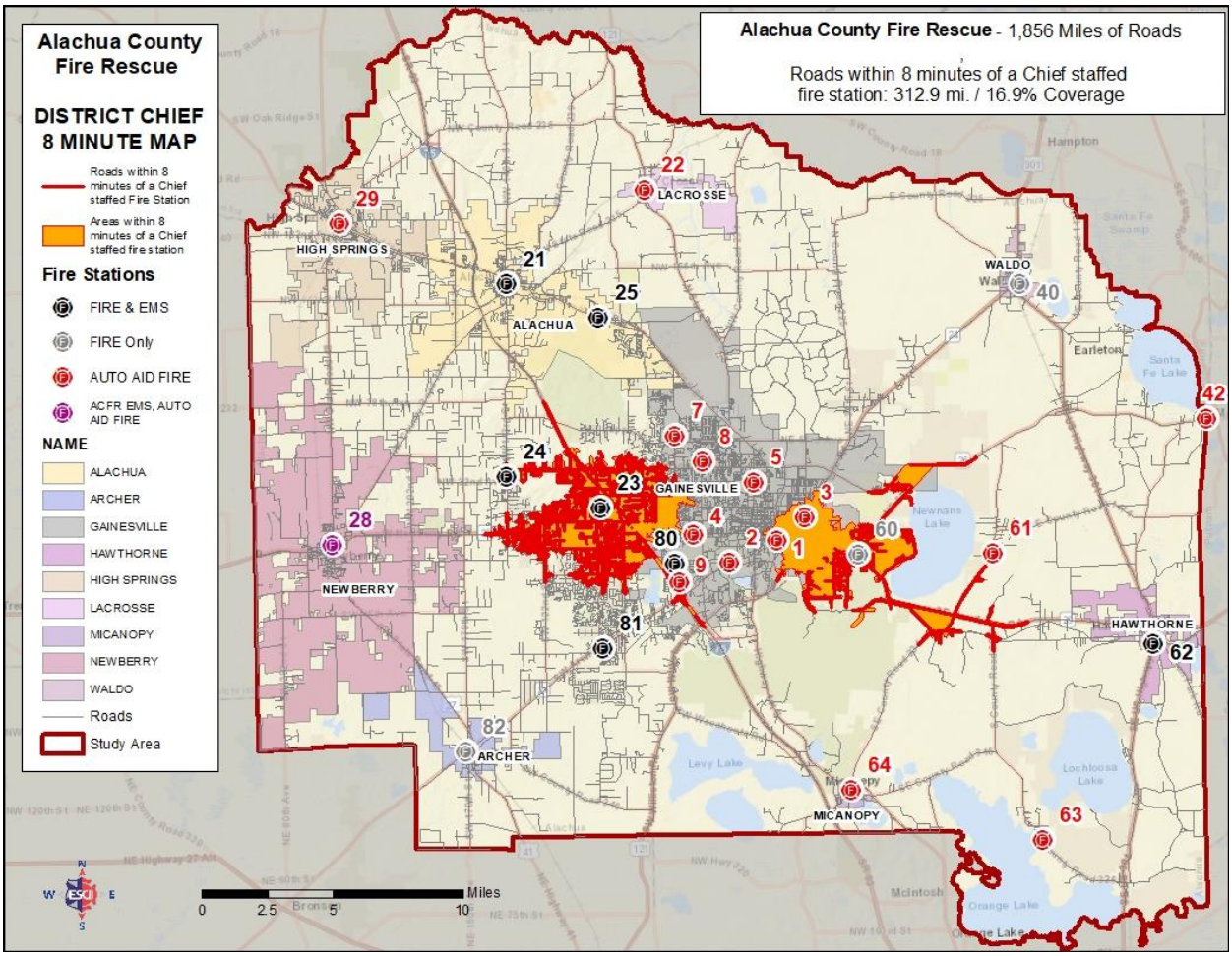
Figure 101: ACFR ERF Map



Due to minimum staffing and distribution across the geographical area, upon immediate dispatch, ACFR does not have the proper staff to commence interior firefighting a majority of the service area. These guidelines and industry standards require two firefighters to be on-scene and available outside the hazard area while two are inside ("two-in, two-out" policy).

ACFR operates various types of response vehicles to carry out the mission of the Department. The first type of response vehicles are command vehicles. Within command vehicles are the command vehicles assigned to District Chiefs. District Chiefs provide direction on multi-unit incidents in a command function with a primary task of ensuring incident mitigation, personnel safety, and accountability. Currently there are two 24-hour District Chiefs in ACFR, who are assigned at Stations 23 and 60. The NFPA standard recommends that a chief officer/incident commander arrives on scene of a major incident within eight minutes. Figure 102: ACFR District Chief 8 Minute Map shows that the two District Chiefs can only reach 16.9% of the service area in 8 minutes.

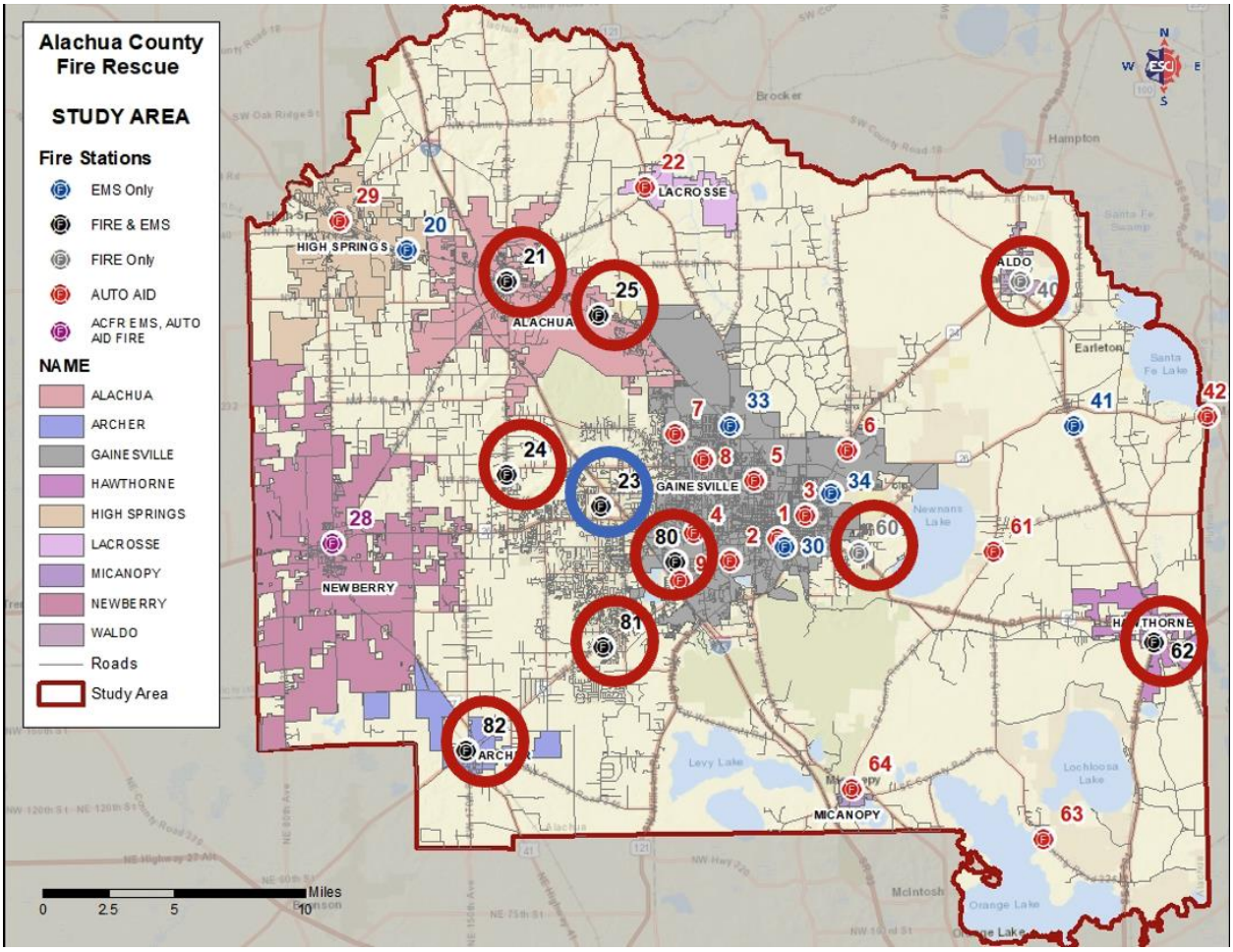
Figure 102: ACFR District Chief 8 Minute Map



Suppression units are the second type of apparatus utilized by ACFR. Engines carry hose and water to suppress fires. Ladder companies, also known as trucks or aerials, have a hydraulically operated aerial ladder that allows firefighters to reach high floors of buildings. ACFR utilizes a quint which combines the water pump functions of an engine with an aerial ladder. Most ground ladders can't reach past the third floor of a building; therefore, ladder trucks will be needed to access higher floors. Additionally, the aerial ladder can be used as an elevated master stream for large building fires to flow large amounts of water to suppress the fire. Ladder trucks also carry specialized equipment for forcible entry, ventilation, search, and rescue. ACFR operates one quint and relies on GFR for additional ladder companies. Both engines and quints within ACFR carry medical equipment to provide patient care.

Figure 103: ACFR Fire Vehicle Distribution shows the location of ACFR engines (circled in red) and the quint (circled in blue). With the addition of automatic aid units, suppression units are distributed appropriately throughout the County. This statement relies on efficient staffing of automatic aid units.

Figure 103: ACFR Fire Vehicle Distribution



Rescue units, also referred to as ambulances, provide medical and emergency hospital transport services to those in need. ACFR equips all rescue units with Advance Life Support personnel and equipment. Figure 104: ACFR Rescue Unit Distribution shows the location of ACFR rescues (circled in red). The map of rescue unit locations shows a hole in the southeast part of the County. However, analyzing the heat map of past performance (Figure 105: ACFR EMS Call Density) shows that there is not a huge EMS service demand in the southeast portion of the County that is not close to any rescue units. It is recommended to monitor these areas to see if a rescue should be placed in Micanopy or Cross Creek.

Figure 104: ACFR Rescue Unit Distribution

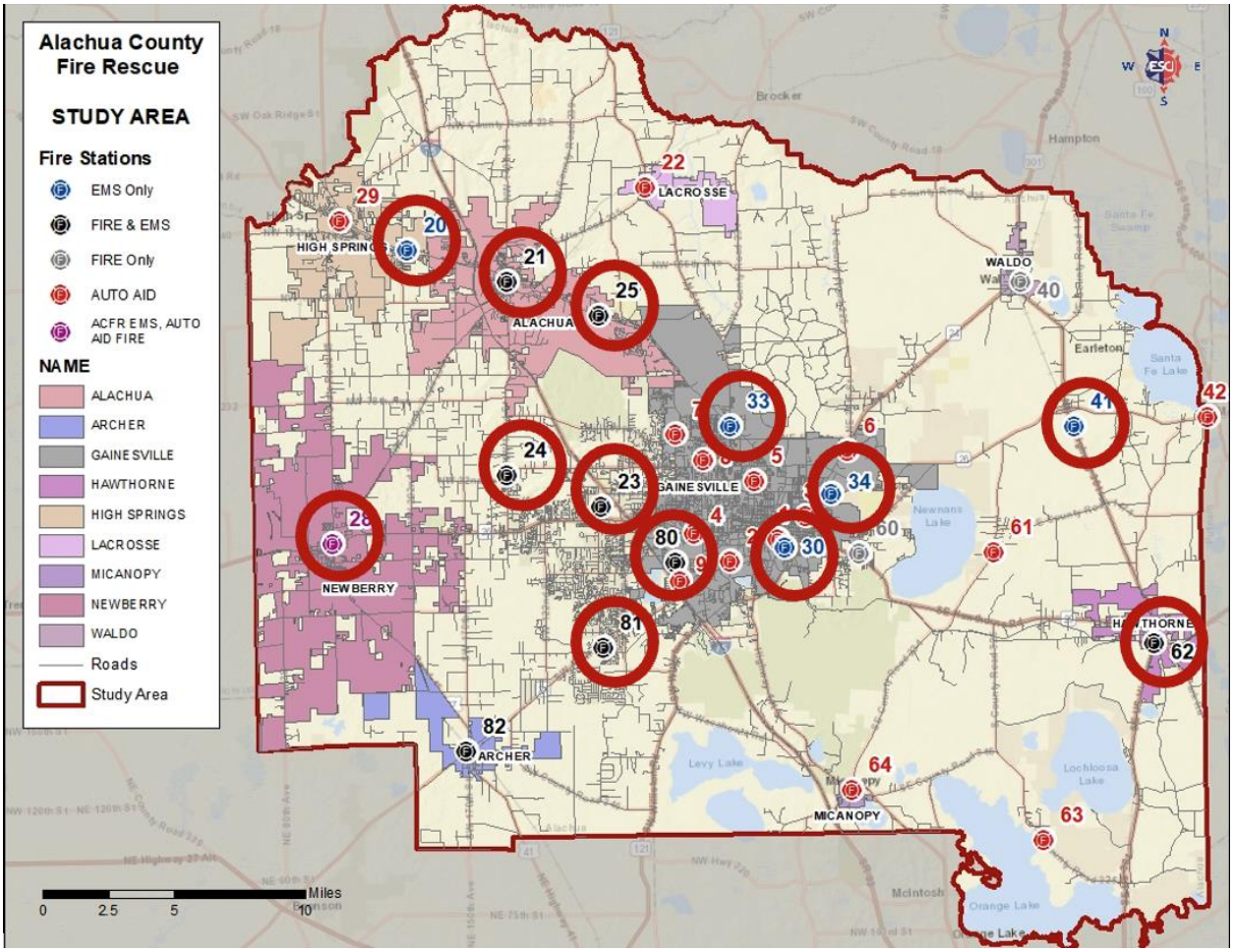
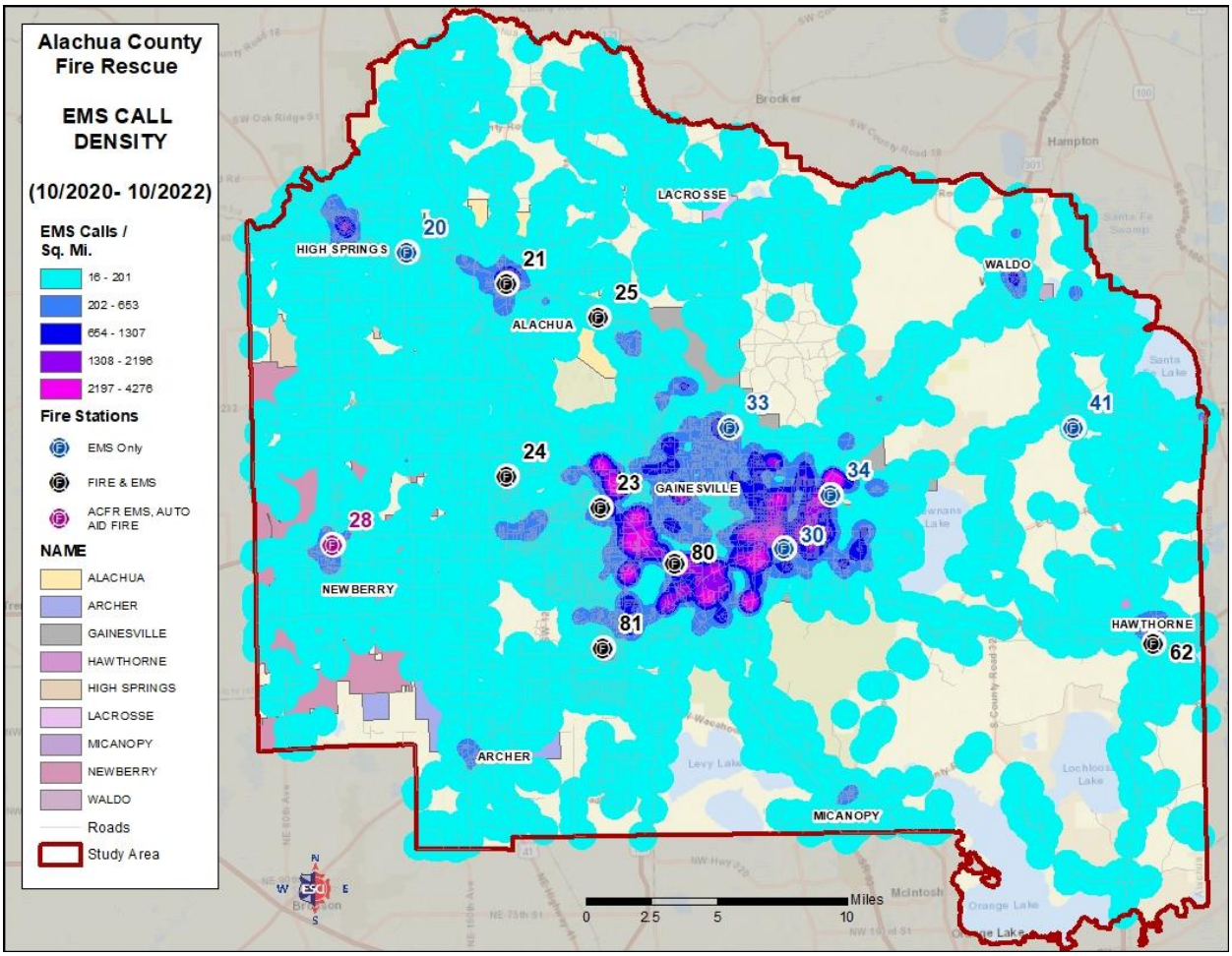
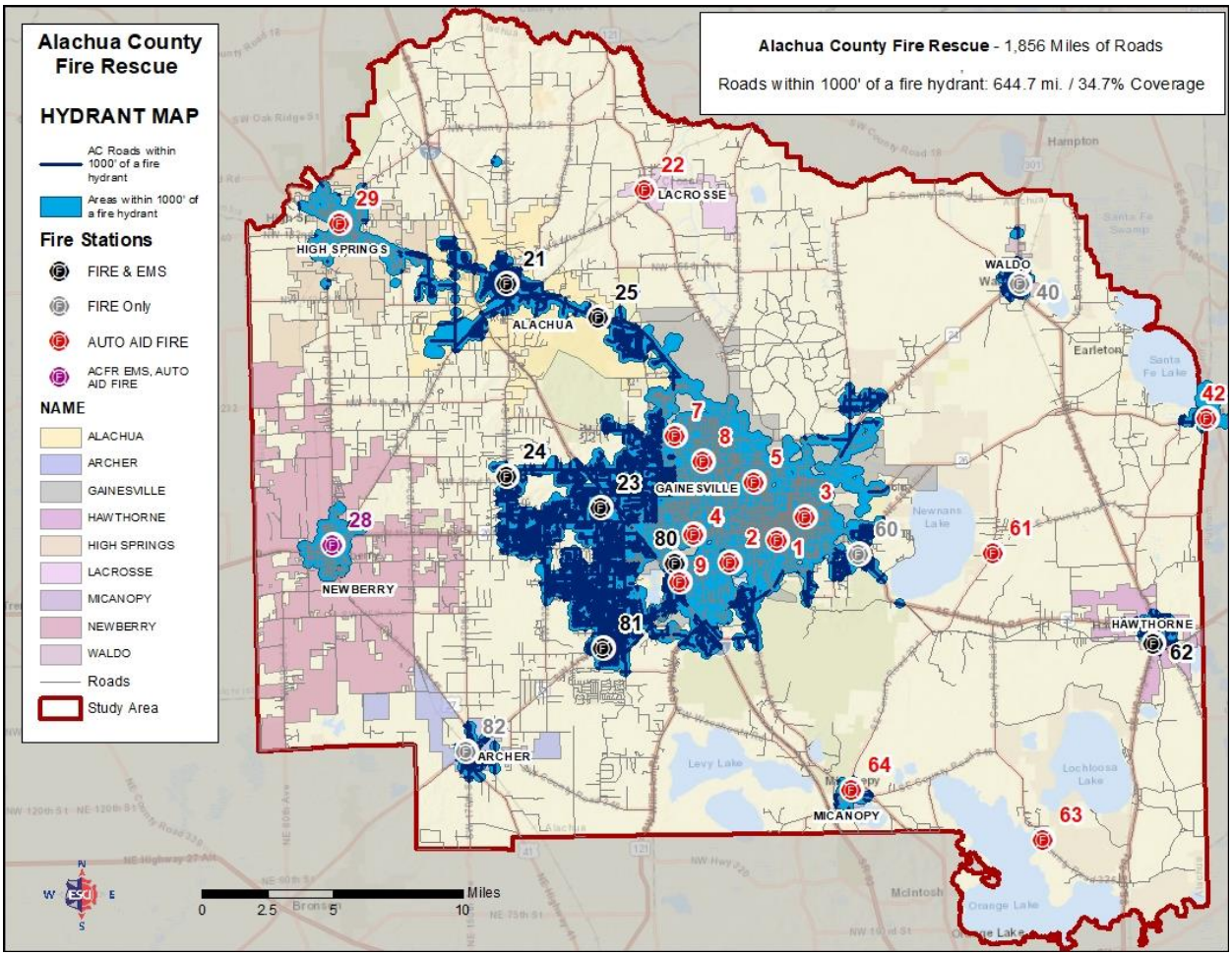


Figure 105: ACFR EMS Call Density



ACFR has specialized risks that require the use of specialty apparatus. One type of specialty apparatus are tankers, which bring a large amount of water to fires where hydrants are not available. For instance, Tanker 23 can transport 3,000 gallons of water and Tanker 21 can transport 2,500 gallons of water. Alachua County has many areas without fire hydrants. Tanker units are cross staffed, which means that one member is taken away from interior firefighting duties to operate the tanker. ACFR positions tankers at stations 21, 23, 25, 82. Automatic aid tankers are located at stations 22, 28, 42, 61, 63, and 64. Figure 106: ACFR Hydrant Map shows the location of hydrants within the ACFR fire response area. 34.7% of the road miles in the fire response area are within 1,000 feet of a hydrant. Figure 106 additionally shows that tankers are distributed throughout the County, serving as an important component of ACFR's hauled water system – the strength of which improves the County's fire protection rating (as determined by the Insurance Services Office) and can help lower property insurance rates for residents and businesses that are not located in a fire hydrant area.

Figure 106: ACFR Hydrant Map



Brush trucks are especially necessary for areas that are prone to wildfires with access issues for fire engines. Brush trucks are smaller than fire engines and can navigate terrain better. ACFR locates brush trucks at Stations 21, 24, 60, and 82. Automatic aid brush trucks are located at Stations 22, 28, 61, 63, and 64.

Observations and Recommendations

Observation 1: ACFR has a well-established vehicle replacement cycle and maintains a relatively new fleet. Some fire rescue departments are seeing lead times as high as five years on new apparatus orders. If the Department does not manage its vehicle replacement activities years in advance, the Department's vehicle replacement cycle may be delayed by supply chain issues or other problems with manufacturers

Recommendation 1: ACFR should review the upcoming years of their vehicle replacement cycle and communicate with vendors to ensure that the Department will be able to take delivery of vehicle orders on schedule. If vendors communicate that manufacturers will not be able to meet ACFR's scheduled delivery dates, ACFR should begin making plans to mitigate any delays to vehicle delivery.

Observation 2: ACFR does not have a rescue unit stationed in the southeastern portion of the County, in the area of Micanopy and Cross Creek. However, the area in question was not a high-demand area regarding EMS calls in FY21 and FY22.

Recommendation 2: ACFR should closely monitor response times and outcomes related to EMS calls in the southeast of the County. If EMS response times are particularly high or if EMS outcomes are particularly poor in the southeast of the County, ACFR should consider stationing a response unit in the area.

5.G Information and Technology Office

Introduction

The Information and Technology Office ("IT Office" or "ITO") is comprised of two filled budgeted positions and is responsible for a number of ACFR information technology ("IT") functions and serves as ACFR's liaison with the County's IT Department for functions not performed internally. Both of ACFR's ITO employees have public safety backgrounds.

The IT Office operates on a modified schedule, to ensure that the field has daily access to IT support. The two employees also split an on-call schedule for after-hours support needs.

For FY23, ACFR had approximately 344 approved full-time equivalent ("FTE") positions, which results in an IT staff to user ratio of approximately 172:1 for the Department. While County IT supports a number of IT functions, as noted below, this ratio is well outside of the standards identified in research by Gartner and Robert Half Technology, which found that industry "ideal standards" should be close to 70:1 for traditional help desk and support functions.

Key Functions

The Information and Technology Office has several main functions:

- Help Desk and End User Support
- Asset Management
- Unmanned Aircraft System Program Operations
- Liaising with County IT

In addition to these primary functions, the IT Office also supports other functions, such as assisting in developing custom Cristal reports and working with end-users to access and build queries or reports. For ESO, the Department's EMS reporting system, data reporting is also supported by the Training Lieutenant who serves as the system administrator.

Help Desk and End User Support

The IT Office provides the majority of asset management and initial help desk support for all of ACFR. The IT Office also provides desktop help desk support for E911 and the Emergency Operations Center. This includes both office and field-based computer equipment, mobile support, computer imaging, etc. For many systems and all physical hardware deployed through ACFR, the IT Office serves as all tiers of end user support.

Many users that are not field based and are authorized to work from home maintain two desktop computers, with two licenses for many systems and applications.

The IT Office does not currently utilize a helpdesk ticketing system; staff have worked to implement different options, but have noted challenges in identifying or developing workflows or systems that allow field and remote end-user access and request submission. Currently, the IT Office is primarily identifying needs through phone calls or emails from end-users, or drop-ins from end-users housed at the ACFR Headquarters.

In addition to the IT Office staff, a Training Lieutenant serves as the system administrator for ESO. This Lieutenant's ESO duties include, but are not limited to: ESO reporting development; ensuring field deployment of ESO changes and patches, including training and support; monitoring ESO integration with CAD for completeness and accuracy; and managing users and user groups. ESO utilizes five user groups, with each assigned a different set of access permissions: Field, District Chief, Assistant Chief, Supervisor, and Billing.

The IT Office is also responsible for ensuring all Departmental new hires are set up with the correct equipment and user access to a number of systems specific to ACFR. Communication about new hire classes may be relayed through monday.com, email, or through the County IT ticketing system.

Asset Management

In addition to software and application support, the IT Office is also responsible for mobile and desktop asset management throughout ACFR, including all truck and rescue-based computer equipment. This includes deployment of new equipment, troubleshooting and coordination of repairs of equipment, and liaising with County IT for replacement or ordering of new equipment. Most ACFR IT equipment is on a five-year replacement cycle.

For equipment and devices that the IT Office does not provide physical repair support, the IT Office coordinates with vendors for repairs and replacement as needed. The IT Office also has critical components, such as Mobile Data Computer and reporting tablets, staged for quick deployment to ensure consistent access in the field.

Unmanned Aircraft System Program Operations

The County introduced a multi-agency Unmanned Aircraft System ("UAS") Program approximately eight years ago. The County does not have a dedicated staff to support this program, so training, compliance with FAA regulations, and other administrative functions are handled primarily by the IT Office, with some support from other County agencies with trained employees. The IT Office staff are the County's primary UAS operators. The IT Office staff are on call for UAS support (and other IT-related needs), and can access the larger County team as needed. IT Office staff may also support Gainesville Police Department's UAS needs as well.

Liaising with County IT

Certain IT functions are maintained by the County's enterprise-wide IT Department, including security functions, enterprise-wide application and software support, etc. For some of these functions, the IT Office may provide initial troubleshooting and support to ACFR users, and then escalate issues to County IT when necessary. County IT will also send calls and other requests back to the IT Office when it is a function, device, application, or software that is supported internally at ACFR.

There is not a formal model that outlines all ACFR-related IT responsibilities and the relationship, ownership, handoffs, and dependencies between the IT Office and County IT. Current processes have been developed based on employees in both departments and their established working relationships. Currently, both departments relay that this organizational structure is working well.

Performance Analysis

The M&J Team considered performance analysis in two primary areas:

- Optimization of Newly Implemented Systems
- HIPAA/PHI Compliance within Software Systems

Optimization of Newly Implemented Systems

For systems that are specific or customized for ACFR's use, ACFR is typically responsible for the sourcing and implementation of the system. There is not a formal internal process for needs assessment through acquisition. The IT Office's involvement in the needs identification, specification development, and sourcing and negotiating with third parties for new systems, application, software, or equipment, is not formalized or consistent throughout the Department. End users or end-user groups may take the lead on sourcing and implementation of newly implemented systems, or may engage with the IT Office for support in needs development, sourcing, and evaluation. There is also not a formal process for engaging County IT during contract review, nor a formal process for evaluation of server capacity, system limitations, or security threats. The reviews and evaluations are often performed informally, but may vary based on the project specifications, the project lead, and the project timeline.

Additionally, ACFR does not have change management champions or department-level leads who coordinate with all potential units who can utilize a new system, or documents detailing how system changes or process changes may impact other end user groups or functions. The lack of change management leads and documentation may lead to inconsistent or inefficient use of new systems, and could create issues related to data entry, and in some instance may lead to secondary or subsidiary processes being performed outside of systems and not adequately captured.

HIPAA/PHI Compliance Within Software Systems

In order to evaluate HIPAA and PHI compliance within software systems, the M&J Team analyzed two primary elements of data security:

- Software System Contractual Terms and Requirements
- Internal Processes and Controls for accessing software systems and HIPAA/PHI-qualified data

Software System Contractual Terms and Requirements

The Health Insurance Portability and Accountability Act of 1996 ("HIPAA") is a federal law that established national standards for protecting sensitive healthcare information. HIPAA's data security provisions are specifically related to Protected Health Information ("PHI") that is being held by "covered entities." PHI includes information on an individual's health or treatment that either directly identifies the individual or could reasonably be used to identify the individual. Properly de-identified health information is not covered by HIPAA. Covered entities include health plans, health care clearinghouses, and health care providers who transmit electronic data. Covered entities must also sign a "Business Associate Contract" with any outside individuals or organizations that work with PHI on behalf of the covered entity, requiring the business associate to protect PHI in line with HIPAA standards. As a health care provider that transmits electronic data, ACFR must follow HIPAA's privacy and security rules and must sign Business Associate Contracts with any contractors who use or store PHI.

HIPAA requires that covered entities report any data breaches that expose or may expose unencrypted PHI. Covered entities are required to notify individuals whose unencrypted PHI was exposed or may have been exposed within 60 days of discovering the security breach. If a data breach may have exposed the unencrypted PHI of more than 500 individuals, the covered entity must notify the federal Department of Health and Human Services within 60 days of discovering the security breach. If a data breach may have exposed the unencrypted PHI of more than 500 residents of the same state or jurisdiction, the covered entity must notify prominent local media outlets within 60 days of discovering the security breach. If a covered entity's business associate experiences a security breach that exposes or may expose unencrypted PHI, that business associate must notify the covered entity within 60 days of discovering the security breach.

The Florida Information Protection Act of 2014 ("FIPA") requires businesses, government entities, and third-party agents contracted by businesses or government entities to report data breaches of personal information ("PI") that affect Florida residents. PI includes any unencrypted and personally identifiable government-issued identification numbers (Social Security number, driver's license number, passport number, etc.), bank account numbers, credit card numbers, medical history, or health insurance policy numbers as well as any unencrypted username/password combinations. Any business that stores the PI of Florida residents is subject to the law, regardless of where the business is located. Businesses or governmental entities are required to notify Florida residents whose PI was or likely was leaked of the breach as soon as possible, no longer than 30 days after the business learned about the breach. Businesses or governmental entities are required to notify the Florida Attorney General of any breaches of PI that are believed to have affected 500 or more Florida residents within 30 days of discovering the breach. Third-party agents contracted to maintain, store, or process PI on behalf of businesses or governmental entities are required to report any breaches that may have affected the PI of Florida residents within 10 days of the breach. It is the responsibility of the business or government entity to ensure that users and (if necessary) the Florida Attorney General are notified of the breach.

The M&J Team analyzed ACFR's contracts with third-party software providers to evaluate their compliance with HIPAA and FIPA privacy, protection, and notification standards. The following discussion does not include vendors whose software is not intended to store or process PHI or PI.

TargetSolutions

TargetSolutions is an online training platform for first responders and emergency personnel that allows Fire Rescue departments to provide continuing education and track employee certification status. ACFR contracted TargetSolutions Learning, LLC on May 11, 2017, to provide the TargetSolutions platform and associated support. The TargetSolutions Platform stores usernames and passwords and may store other information that is classified as PI. ACFR's contract with TargetSolutions Learning, LLC does not require the contractor to notify ACFR of data breaches or suspected data breaches. The contract does, however, include a clause that requires TargetSolutions Learning, LLC to "to comply with all laws, ordinances, [and] regulations" relevant to the agreement.

Everbridge

Everbridge, Inc. ("Everbridge") produces a vendor-hosted mass notification system that can provide statewide alerts for imminent or sudden hazards. The Florida Department of Emergency Management ("FDEM") contracted with Everbridge to use Everbridge's mass notification system. FDEM's contract with Everbridge also allows for FDEM to grant local emergency management agencies access to Everbridge's emergency notification system for use within their locality. FDEM entered into an agreement with Alachua County that allows Alachua County to use Everbridge's notification system for limited uses within the County's boundaries. Alachua County does not host any data as a part of this agreement, so Alachua County is not subject to any privacy or data security requirements involving this service.

Central Square/TriTech Software Systems

Central Square (formerly TriTech Software Systems) produces Respond Billing, a cloud-based medical billing platform. ACFR contracts with Central Square for use of Respond Billing and associated support. Central Square is responsible for hosting the Respond Billing service and all associated data storage. Operating Respond Billing requires Central Square to store and process PHI and PI. As per HIPAA, Central Square and ACFR have signed a Business Associate Contract that requires Central Square to handle PHI in accordance with HIPAA. The Business Associate Contract between Central Square and ACFR requires Central Square to report breaches in accordance with HIPAA's breach notification provisions. The contract between ACFR and Central Square does not include any other breach notification requirements. Compliance with HIPAA's breach notification requirements does not guarantee compliance with FIPA's breach notification requirements, as FIPA covers a broader range of data than HIPAA, and HIPAA requires that business associates report breaches to the organization that contracted them within 60 days of discovering the breach, not 10 days.

ESO Solutions

ESO Solutions, Inc. ("ESO") produces EMS patient care and EMS billing software. ACFR contracts with ESO for use of their EMS patient care and EMS billing software. ACFR is responsible for hosting some of the EMS patient care and EMS billing software provided by ESO, but ESO hosts any Software-as-a-Service ("SaaS") components of the software suite. Hosting SaaS portions of the EMS patient care and EMS billing software suites requires ESO to store and process PHI and PI. As per HIPAA, ESO and ACFR have signed a Business Associate Contract that requires ESO to handle PHI in accordance with HIPAA. The Business Associate Contract between ESO and ACFR requires ESO to report breaches within five days of discovery, much sooner than HIPAA's minimum requirements. The Business Associate Contract's breach notification requirements only cover security breaches that leak PHI, though, and do not cover breaches that only leak non-medical PI.

Evaluation of Internal Processes and Controls

ACFR has implemented a number of internal controls and processes to ensure user access and permission levels are appropriate for their role, and limit unnecessary or unauthorized access to data or records. For systems and applications that maintain data that qualify as PHI or PII, there are individualized user logins, and the County has introduced multi-factor authentication ("MFA") to help ensure authorized use. Separate MFA logins are required to access the domain account, remote access to servers, as well as the VPN, to create additional layers of security.

The County has a number of monitoring tools and resources to help review access and activity on County servers and networks. The County relies on automation, notices, and these monitoring resources to identify and triage incidents, with escalation to staff responses as necessary. The monitoring and response function is the responsibility of County IT, and is not contemplated within the scope of this Audit. The M&J Team was also informed of the County's plans to introduce additional vulnerability scans as well as additional internal and external penetration testing in the coming fiscal year.

ACFR users do not have rights to install anything on a local machine, and the County's monitoring tools include monitoring for unauthorized executables, such as programs or applications running locally, but there are no limitations on documents or data being placed on local drives, or limitations on using USB flash drives on machines.

For access to PHI/HIPAA records that are stored on network drives, ACFR maintains user permission groups that control the records that each staff can access. While permissions are designed to be administered based on role, there may be modifications based on specific assignments made to individuals in certain roles. The IT Office can make updates to individual users' assignments to groups based on requests from the Training Lieutenants, Assistant Chief, District Chiefs, or other members of ACFR Leadership.

While the County has a number of monitoring tools and resources to track for unauthorized access to County servers or networks, there are currently no consistent tools or internal audits to review for unusual or unauthorized access to PI or PHI.

The County has an Incident Response Plan developed for responding to threats, hacks, breaches, or other security incidents. The County does not currently perform formal testing of the Incident Response Plan.

Observations and Recommendations

Observation 1: The IT Office does not currently collect data related to service request counts, service request types, mean time to respond, first contact resolution rate, or other common IT data metrics. Without this data, it can be challenging to evaluate effectiveness of service delivery and determine an appropriate staffing model and staffing levels. M&J cannot identify a specific staffing need without performance data.

Recommendation 1: The IT Office should work to develop data collection practices, preferably formally documented, to better understand workload, peak demand, and current performance. ACFR, in working with the County, should leverage data collections to perform workload and staffing analysis to establish a staffing model and position count that better reflects the needs of ACFR and its priorities for response. Based on the results of the data collections and workload and staffing analysis, ACFR should determine the appropriate employee count and seek to add the needed additional positions.

This data will need to be utilized in conjunction with data about the non-traditional IT functions that are performed by the IT Office, particularly related to Unmanned Aircraft System program operations and UAS on-call service delivery.

Observation 2: The ACFR IT Office's functions overlap with the functions of the County IT Department. Current ACFR and County IT staff have a working understanding of how tasks are distributed between the two departments, but there is no documentation that lays out the division of responsibilities. The lack of a clear, formal division of responsibilities between the ACFR IT Office and the County IT department means that changes in personnel may result in unintentional redundancies or omissions in fulfilling ACFR's IT needs. Additionally, the current division of responsibilities may not fully leverage the County IT department's staffing and resources.

Recommendation 2: The IT Office should work with the County IT department to document and formalize how responsibilities are allocated between the IT Office and the County IT Department, including more formal documentation of handoffs and dependencies. The IT Office should evaluate the division of responsibilities and identify opportunities for adjusting the existing division of responsibilities to ensure consistent allocation of responsibilities in line with other departments with internal IT functions, and be based more on industry norms and not the skillsets and experience of individuals currently in positions.

Observation 3: ACFR does not have a formal process for developing business cases and working through the sourcing and implementation of technology solutions or new application acquisition. ACFR's current informal processes may result in inconsistent engagement in relevant stakeholders and may lead to acquiring of systems or technology that are not compliant with current ACFR assets, or may create changes or issues for other divisions or units' workflow or processes.

Recommendation 3: ACFR should work with the County's IT Department to develop a formal process for business cases related to new or upgrades technology systems, software, or other applications. This process should include identification and engagement of relevant stakeholders, both within ACFR and the County's IT Department, early in the process, and establishing a formal workflow for needs assessment, evaluation of existing resources, cost and capacity evaluations, and change management assessment. This process should also include identifying a project management champion who can lead the project and ensure that the project timeline and budget are maintained, and that all potential impacted units have an opportunity to review and provide feedback on the proposed solution.

Observation 4A: The Florida Information Privacy Act requires that businesses and governments give notice of data breaches that expose or may expose the personal information of Florida residents. FIPA requires third-party service providers to notify the businesses or governments with which they contract of security breaches that may expose the PI of Florida residents within 10 days of learning about the breach. ACFR uses several software platforms that require the vendor to process or store the PI of Florida residents. ACFR's contracts with software vendors that process or store PI of Florida residents do not require vendors to comply with FIPA's data breach notification requirements.

Observation 4B: Alachua County does not currently have specific terms and conditions developed for contracts with vendors that may collect or store HIPAA, PHI, or PI data.

Recommendation 4: ACFR should include a contractual clause that requires compliance with FIPA's breach reporting requirements in all future contracts with vendors who may process or store PI, as well as define notification procedures and timelines for notifying Alachua County of any breaches or other security incidents that may impact Alachua County data stored on third-party servers.

Observation 5: The County IT Department is responsible for managing the security of ACFR computer systems, monitoring access to ACFR's software systems, responding to security incidents. ACFR has established internal processes and controls to manage permission levels and limit unnecessary access to sensitive data or records. Alachua County plans to perform additional assessments of the County's data security and privacy practices, including vulnerability scans and penetration testing, during the upcoming fiscal year.

Recommendation 5: ACFR should support the County's plan to introduce additional vulnerability scans and conduct additional penetration testing during the coming fiscal year. The ACFR IT Office should collaborate with the County IT Department to ensure that ACFR's Protected Health Information and Personal Information is included in vulnerability scans and, as appropriate, subject to penetration testing. The ACFR IT Office should evaluate the results of vulnerability scans and penetration tests and make appropriate improvements to the Department's data security and privacy system.

Observation 6: Neither ACFR nor the County have policies in place to prohibit the use of USB flash drives, nor is there a policy or process related to limiting or prohibiting the local download of PI/PHI files or data. The lack of policy and limitations may expose the County to risk, as individuals could be accessing data in secure systems and applications and either saving locally in an unencrypted format, or transferring outside of ACFR networks or servers for personal or malicious use.

Recommendation 6: ACFR should work with County IT to develop a policy related to the use of USB flash drives and local downloads of protected data. As appropriate, the IT Office may need to work with County IT to implement tools and physical limitations to encourage and monitor compliance.

Observation 7: ACFR does not have any resources nor internal audit procedures to review for unauthorized or unusual access to PHI or PI. This lack of review may expose the County to undue risk, as staff could be accessing PHI or PI for personal interest or gain.

Recommendation 7: ACFR should work with County IT Department to develop a standard audit procedure, to include sampled testing of ACFR employee's access to ESO records, personnel files, and other sensitive data. This procedure should include testing of access by field staff, billing staff, and leadership within the Department.

Observation 8: Alachua County's IT Department does not currently perform formal testing of the Incident Response Plan.

Recommendation 8: ACFR should work with County IT Department to develop a standardized Incident Response Testing Plan related to the storage of and access to PHI and PI. The testing plan should include steps for testing, required roles, the criteria for a successful test, evidence requirements, and reporting.

ACFR and the County's IT Department should schedule formal standardized annual testing of the Incident Response Plan, record the exercise results and identify any action items to improve the process, track all action items to completion, and regularly provide updates on progress to leadership.

5.H Central Supply and Inventory Management Office

Introduction

The Central Supply and Inventory Management Office is responsible for ensuring an adequate supply of equipment, supplies, materials, and uniforms are maintained for the Department, including distributing replenishment to stations, trucks, and staff. The Central Supply and Inventory Management Office is housed in a building, known as the Central Supply Warehouse ("CSW," an acronym used to denote both the physical location and the Office) that is shared with County fleet staff that are primarily dedicated to supporting ACFR's fleet maintenance and repair needs.

The Central Supply and Inventory Management Office organizationally resides in the Division of Administration and Finance, and is overseen by a Program Manager, who supervises the Warehouse Manager. ACFR recently hired a second stock clerk, bringing the Department to two full-time stock clerks. All three CSW employees are civilians. CSW may get support from light-duty operations employees, but their availability and ability may vary greatly.

Key Functions

CSW has two primary functions:

- Inventory Management
- Uniform Management

In addition to these two primary functions, CSW also supports other roles for ACFR and the County. The Central Supply Warehouse houses the oxygen cylinder transfilling station for the County. The station was purchased using Alachua County Health Department funds, and is used by ACFR and the Health Department, and can also be used to refill cylinders for local hospitals and for local special events. The Department used to pay a third party for oxygen filling services. Currently, trained CSW employees are required to operate the station to refill the cylinders, and to ensure that adequate filled supply is available for swapping with empty cylinders during hours when CSW is closed.

CSW also coordinates maintenance and other repair needs for household appliances and exercise equipment at the stations. CSW staff will pick up the equipment needing repair and may either bring it back to the Warehouse to determine if it can be repaired internally, or coordinate with a vendor for repair as needed.

Inventory Management

ACFR utilizes Operative IQ as its inventory management system. Operative IQ is designed for public safety use and has a number of functionalities in addition to inventory management, such as apparatus checkouts, gear inspections, and fleet maintenance.

General inventory management is a combination of manual and Operative IQ based processes. All cycle counts are performed manually, and items selected for cycle count are haphazardly selected by the Program Manager.

Operative IQ also has maintenance tracking capabilities, but because it is not the system the rest of the County uses for equipment and vehicle management, ACFR is not utilizing this functionality.

Inventory levels are maintained based on Periodic Automatic Replacement ("PAR") levels to ensure adequate inventory is maintained at each station, truck, and kit, as applicable, with appropriate inventory in the warehouse for dissemination.

When ACFR orders new assets that require asset tagging and tracking by the County, the Program Manager typically emails staff in the Office of the County Clerk of the Court to notify them that there is a new asset to be tagged. Once the payment for the asset has been recorded, the Office of the County Clerk of Court completes physical asset tagging and records identifying details for entry into inventory management.

Disposition decisions are typically made by each Department, so long as the disposition follows the requirements established in of Chapter 274, *Florida Statutes* ("*F.S.*"), for surplus and/or disposal of property. CSW staff may pick up items from stations to store at the warehouse while making disposition or surplus decisions. The Warehouse does not have a designated area for these items, so they are placed wherever space is available.

Weekly Station Inventory Replenishment

Stations order needed inventory on a weekly schedule; busier urban stations can order two days a week; rural stations order once per week. This schedule has been informally developed over the preceding years and has not been formally analyzed or evaluated. Field staff at each station submit inventory restocking requests through Operative IQ. Field staff are responsible for reviewing and counting physical inventory at the station and updating Operative IQ with current inventory levels, so that each station can be restocked to established PAR levels for certain supplies and materials. Once the field staff have entered their current inventory count, Operative IQ will automatically update the inventory request with items that are under the PAR level. Field staff can also manually adjust the requested inventory, including requests that exceed PAR levels. Inventory can be requested for three different locations within the station: station, truck, and kit. The majority of stations only request at the station level, and use station inventory to replenish inventory to the truck and kit, as applicable.

The Warehouse Manager reviews each submitted order in Operative IQ. Orders are processed in the order that they will be delivered, based on a standard delivery route. Operative IQ automatically identifies requests where CSW does not have inventory, and also identifies low stock items, where the current CSW supply may not be adequate to fulfill all orders. The processing user must manually address each of these items and either send notice to the requester that the item is not available, or adjust the request level to ensure that all stations receive some quantity of the needed supply. For items that have an expiration date, Operative IQ requires the processing user to identify which expiration date the request should be filled from. The majority of requests are processed by distributing the item with the closest expiration date first, which helps reduce expired inventory. CSW does not have procedures for other proactive reviews of inventory expiration dates.

Once the Warehouse Manager has reviewed and modified the request as appropriate, the Warehouse Manager prints the revised request and places the physical order form on the counter in the CSW office. A Stock Clerk retrieves an order and begins to retrieve items from inventory. Currently, there is not a map or other guide to assist in locating where items are housed, although there are groupings of items by category, such as medical supplies, cleaning supplies, etc.

Stock Clerks gather all of the requested items for each station and begin packing them into available cardboard boxes. Once all of the items have been retrieved and packed, the boxes are sealed shut and the station number for the requesting station is written on the sides of the box. All packed boxes are loaded into a vehicle for delivery.

There are certain items that are not included in the eligible order list in Operative IQ; these items must be requested via direct email to the Program Manager who reviews and processes the request in Operative IQ. These items may be sent out in the weekly order, or may be picked up by the requester.

Ad Hoc Inventory Replenishment

Department staff may also come to CSW to request replenishment of items that have been used while in the field. These drop-in requests are manually processed. CSW staff speak with field staff at the front counter, and go to the stockroom to fulfill the request. Items distributed via in-person requests are written on a sticky note. Sticky note distributions are typically entered into Operative IQ on Fridays.

CSW also processes orders for Alachua County contract stations that have interlocal agreements with the County. The municipalities can fax in their order, or bring a physical form in to request inventory replenishment. CSW enters these requests into Operative IQ and prints a copy of the distribution report and physically files it at the warehouse.

District Chiefs have keys to access CSW, and can get necessary supplies for distribution during hours that CSW is not staffed. District Chiefs are expected to either leave a sticky note or send an email documenting what was taken. The Warehouse Manager will manually enter these pickups into Operative IQ. The Warehouse Manager stated that the goal is to enter manual pickups into Operative IQ each Friday, if not sooner in the week.

Uniform Management

The Warehouse Manager is responsible for overseeing uniform supply as well as ordering and distributing new uniforms to Department employees.

As uniforms are custom measured and fitted to each employee, CSW does not maintain PAR levels for most uniform components. Each station maintains a limited amount of bunker gear for use if an employee's assigned bunker gear is contaminated. There is limited new bunker gear and loaner gear inventory for emergent need uniform distribution.

Compliance

The M&J Team evaluated two primary compliance components:

- Internal Controls
- MSDS and Hazardous Materials

Internal Controls

Internal control procedures can be challenging in a physical environment that does not allow for complete control and security. The building has cameras, but due to levels of surplus items, materials stored for the EOC or other Alachua County departments, the cameras may not capture the entire area designed to surveil. Additionally, the building has multiple access points (including: two bay doors on the warehouse side; a bay door on the fleet side; a door between fleet and CSW that remains unlocked to allow fleet staff access to the restroom and their own inventory that is stored in the warehouse; and several other doors, both interior and exterior, that are not consistently locked) that are not consistently secured.

CSW lacks formal, written policies that include internal controls for several functions, including cycle counts and ad hoc inventory disbursement requests made by walk-in personnel. More detail about these concerns is provided in the Performance Analysis section below.

While ACFR follows County procedures for the disposition or surplus of assets that are on the County's inventory, there is not a formal internal policy related to tracking and disposition of smaller value assets or supplies. ACFR is not currently tracking supplies and materials once they are issued to stations and leave the warehouse. Stations do not report to CSW on the disposal or destruction of expired inventory. Staff reported anecdotally that they are not aware of any concerns with the disposition of expired inventory, but there has not been any data collection or analysis to support these statements.

MSDS and Hazardous Materials

To assess ACFR's compliance with requirements for MSDS and Hazardous Materials, the M&J Team considered the following processes:

- MSDS Tracking and Education Compliance
- Hazardous Materials Storage and Control

MSDS Tracking and Education Compliance

The United States Occupational Safety and Health Authority's ("OSHA") Hazard Communication Standards ("HCS") govern how employers plan for and communicate the risk posed by hazardous chemicals in the workplace. HCS requires that employers that store, distribute, or use hazardous chemicals in the workplace conduct "a comprehensive hazard evaluation and communication process, aimed at ensuring that the hazards of all chemicals are evaluated, and also requires that the information concerning chemical hazards and necessary protective measures is properly transmitted to employees." If hazardous chemicals may pose a risk to an organization's employees, the organization must develop a hazard communication program, ensure that employees have access to information on all relevant hazardous chemicals, and train employees on the hazardous chemicals in their workplace. In order to ensure that employees have information on hazardous chemicals in their workplace, HCS states that employers must retain and provide access to Safety Data Sheets ("SDS") for all hazardous chemicals in the workplace.

The most recent HCS revision, from 2012, uses the term "SDS" instead of the more traditional and familiar Material Safety Data Sheet ("MSDS") language. The 2012 HCS revision required that SDSs use a standard structure. Some MSDSs from before 2012 use this structure, but many do not. Firms that manufacture or distribute hazardous chemicals are required to make updated SDSs available to their customers. A chemical's SDS includes information on the properties of the chemical, the physical, health, and environmental hazards posed by the chemical, any protective measures required by the chemical, and safety precautions for handling, storing, and transporting the chemical.

Certain types of hazardous chemicals are exempted from HCS's SDS retention requirement. Exemptions particularly relevant to ACFR include exemptions for certain EPA-regulated pesticides, certain medical supplies and pharmaceuticals, and all consumer products that "are used in the workplace in the same manner than a consumer would use them." The SDS retention exemption granted for consumer products relies on employers to make a judgment call about how their employees will use a product. ACFR does not have any records showing if or how the Department has determined that any chemicals qualify for the consumer product SDS exemption. There are no quantity thresholds for HCS's SDS retention requirements; employers are required to make an SDS available for non-exempt hazardous chemicals that are present in the workplace in any amount.

At the time of the M&J Team's fieldwork, ACFR used Target Solutions to store SDSs and make them available to employees. HCS allows employers to maintain an electronic SDS database, so long as a non-electronic backup system is also present at the location and accessible to employees. ACFR maintains a binder that contains paper copies of SDSs in the CSW office.

ACFR uses Operative IQ to track the CSW's inventory. The CSW's inventory at the time of the M&J Team's audit includes at least 45 different chemicals. 35 chemicals in the CSW inventory appear to be hazardous, although occasional vague entries in the inventory make it difficult to give an exact number. Many of the hazardous chemicals stored at CSW may be exempt from HCS's SDS retention requirements. At least nine of the hazardous chemicals stored at CSW likely qualify for the EPA-regulated pesticide exemption, the medical supply and pharmaceutical exemption, or the consumer product exemption. An additional 14 hazardous chemicals stored at CSW may qualify for the consumer product exemption, depending on ACFR's intended use for the products. The remaining 12 hazardous chemicals stored at CSW do not qualify for any HCS exemption.

Figure 107: Hazardous Status and SDS Retention for Chemicals Stored at Central Supply Warehouse shows the hazardous status and SDS retention of all 45 chemicals identified in the CSW's inventory.

Figure 107: Hazardous Status and SDS Retention for Chemicals Stored at Central Supply Warehouse

		Hazardous			Non-Hazardous	Total
		Non-Exempt	Possibly HCS Exempt	HCS Exempt		
SDS Present	Correctly Formatted	1	4	2	3	**10**
	Incorrectly Formatted	1	1	1	1	**4**
SDS Not Present		10	9	6	6	**31**
Total		**12**	**14**	**9**	**10**	**45**

As Figure 107 shows, ACFR only partially complies with the OSHA's SDS retention requirements, for both the formatting and presence of the required SDSs. The Department retains a total of 14 SDSs at CSW for employees to reference. Of the 14 SDSs on Target Solutions and at the CSW, 10 SDSs use the standard SDS format introduced in the 2012 HCS revision and four use some other format. CSW staff can only reference an SDS for two of the 12 hazardous chemicals (17%) at the warehouse that clearly do not qualify for any exemptions and for five of the 14 hazardous chemicals (36%) at the warehouse that may or may not qualify for the consumer products exemption.

ACFR does not only store hazardous chemicals at the CSW. Hazardous chemicals are located at all ACFR stations, as well. While the M&J Team did not review station inventories to create an exhaustive list of the hazardous chemicals stored at the stations, each station stores and uses hazardous chemicals regularly. Hazardous or potentially hazardous chemicals stored and used at stations include vehicle fuel, cleaning and sanitizing chemicals, and fire suppressants.

ACFR uses Target Solutions to link to applicable SDSs for materials that may be stored at stations. The Health and Safety Captain is responsible for maintaining SDS records for hazardous chemicals stored at the stations and distributing paper copies to stations, as applicable. ACFR is currently in the process of filling the Health and Safety Officer position's long-term vacancy. It is unclear whether an ACFR employee is tasked with maintaining station SDS records while the Health and Safety Officer position is vacant. During inspections of ACFR's stations, only three stations could produce SDS books. Of the three books provided, the most recent updated SDS reflect a date of 2017. Members in the station advised the M&J Team that they understand that maintenance of SDS was a project of the former Health and Safety Officer, and that books have not been updated since the most recent incumbent left the position. Members of the station who were asked about the availability of updated information often were not aware if updated information was available.

ACFR largely does not comply with OSHA's SDS retention requirements for hazardous chemicals stored and used at stations. The 14 SDSs on Target Solutions do not cover all of the hazardous chemicals that are regularly stored and used at ACFR's stations. Additionally, stations do not maintain the required non-electronic backup of all digital SDSs, such as the CSW's binder, at each applicable station.

Hazardous Materials Storage and Control

Hazardous materials that are stored at CSW are maintained in metal lockers in the bay area. Hazardous waste from the stations is picked up once a month by a contracted vendor; currently there is no tracking on what day or time the waste is picked up, nor does CSW receive a receipt or other record confirming the date, time, and content of the waste. CSW handles the removal of expired meds and ensures that all needles are removed and deposited in a disposal container as part of the disposal process. When CSW has collected a large quantity of expired medication, the Warehouse Manager contacts the disposal contractor and schedules a pickup for all expired medication.

Performance Analysis

While there are a number of County policies and Finance & Administration Department policies and procedures that are followed by CSW, there are minimal formalized procedures or processes specific to CSW or ACFR operations. Many of CSW's procedures are informal and manual, and based on staff experience and knowledge in their roles, or based on activities that have organically developed over the years. Additionally, there are no procedures or guidance provided to operations personnel to govern their relationship with CSW and set expectations for how ordering, uniform management and distribution, or ad hoc inventory needs, should be handled, which creates inconsistencies in how staff interact with CSW.

The Department is not taking advantage of many functionalities offered through Operative IQ, instead relying on manual processes and institutional staff knowledge. Manual processes include cycle counts and Operative IQ entries for receipt of ordered goods as well as recording distribution of inventory through walk-in requests.

Operative IQ has automated certain functions related to inventory orders and supply distribution as well as recording received purchase orders and updating inventory, but is not used for processing walk-in requests or cycle count generation. Manual processing of walk-in item requests days after the request is physically distributed may create issues with inventory counts, and accuracy of distribution data. The ability of District Chiefs to select inventory and then manually record their items when CSW is not staffed may also result in inaccurate or untimely data entry. While there have been minimal noted issues during cycle counts or annual inventory reconciliation, the lack of issues is not the result of strong internal controls and processes.

Operative IQ also offers the ability to use radio frequency identification ("RFID") tags to track supply levels and usage, and create automated requests when on-hand supply is low; ACFR is not currently utilizing the RFID tag functionality, but is evaluating it for potential future rollout. Operative IQ also communicates with a supply vending machine at Station 33, which allows the vending machine to assess current inventory and submit supply orders through Operative IQ; CSW is still working to fully operationalize this feature.

Operative IQ provides some functionality related to tracking of expired and near-expiration items, but CSW is current performing this function manually as part of the inventory order process. Once items have been transferred to stations, trucks, and kits, there is no formal tracking by CSW.

While uniform inventory is maintained in Operative IQ, there is no formal use of technology for tracking orders or inventory relative to current sizes, common sizes, or other relevant data. When reviewing the inventory, the M&J Team noted inconsistencies in whether uniform components include sizes, or were just inventoried as a batch or in size ranges.

CSW is assessing implementation of RFID asset tags for certain items, such as fixed assets and mobile equipment that are often stored on a truck or rescue. The Department is also considering implementing RFID for narcotics tracking and management. RFID tags could reduce the time needed for cycle counts and inventory tracking, and could possibly be used to provide more real-time evaluation of PAR levels at stations, on trucks and rescues, and in kits.

Once items have left the warehouse and been distributed to employees, sections, or units of Fire Rescue, the Department does not have formal processes or controls in place to evaluate the distribution and use of ordered items – with the exception of controlled substances, as discussed in the Management and Administration section of Chapter 4 (Department Assessment) of the M&J report. Warehouse staff may informally note and review station orders for requests that appear to be in excess of normal patterns, but this review is dependent on the availability and knowledge of the Warehouse Manager or Program Manager to perform this analysis.

When asked about tracking of hazardous materials distributed to the stations, the Program Manager and Warehouse Manager reported that their understanding was that the Health and Safety Officer is responsible for managing activity and compliance at that level. As the Health and Safety Officer position was vacant during fieldwork, the M&J Team could not confirm the accuracy of that statement, or any procedures followed by the Health and Safety Officer. As noted in the SDS compliance section, stations did not consistently have updated SDS paper copies on hand.

Purchasing and Cost Savings

Operative IQ has a number of functions and features that could be utilized to more effectively track inventory management, trends and outliers, and the cost of expired inventory. Due to staffing limitations, many of these features have not been utilized for proactive review management, and procedure or order modifications.

CSW and the Finance and Administration Sections collaborate on supply and material orders to help ensure that there are adequate funds in the purchase orders (“POs”) and that pending orders are reflected in the available balance. The tracking is managed through the use of Google shared documents for each PO. CSW updates each PO with the order total at the time of order, and Finance and Administration staff monitor the posted orders and available PO balance and compare it to New World, the County’s enterprise resource planning system, to ensure that all completed and delivered orders are reflected on the Google documents and that the PO balance appears to be accurate.

Observations and Recommendations

Observation 1: Currently, all CSW employees are civilians. There are three FTEs dedicated to CSW, plus a Program Manager who has taken on CSW-related duties based on demand and staffing challenges.

Recommendation 1: ACFR should consider moving CSW to the Fire Rescue Operations Section, under the supervision of a sworn officer. The Program Manager position should remain in the Finance and Administration Section, to reflect that role's primary purposes.

If these changes are implemented, ACFR should assess if the Program Manager should continue to be housed at CSW, or if this position should be moved to Headquarters with the rest of the Finance and Administration Section.

Observation 2: The Department is not fully utilizing the functionalities available in Operative IQ.

Recommendation 2: ACFR should conduct fit-gap sessions to ensure it is maximizing use of features, and determine if CSW processes should be revised to better take advantage of availability technology and efficiencies.

Observation 3: Currently, line personnel may physically come to CSW to request additional items for stocking trucks or kits. CSW staff note the distribution of these items on sticky notes, which are then recorded in Operative IQ at a later date and/or time.

Recommendation 3: The Department should stop using manual inventory distribution processes for in-person distribution. ACFR should consider placing a tablet or other computer at the front desk of the warehouse and ask crews to make their requests in Operative IQ, to ensure that the distribution is recorded timely and that it is always reported as distributed to the accurate station, truck, or kit, as applicable.

Observation 4: ACFR's current uniform management procedures are manual, and there is not formal storage designed for long-term storage of uniform components.

Additionally, uniform components are recorded in Operative IQ in a haphazard fashion, with some components listed and counted at each individual size, and others stored in size ranges, or just listed by the description of the item with no details about size.

Recommendation 4: ACFR should consider creating a Quartermaster position who would be responsible for measurement, ordering, and distribution of uniform components. The Department should also ensure that all uniform components are clearly described and recorded by size in Operative IQ.

Observation 5: Some of the concerns noted during the M&J Team's evaluation of the warehouse facility, such as underutilization of space, potential security concerns, etc. have been noted throughout this section. The M&J Team does acknowledge that the Alachua County Facilities Master Plan includes potential upgraded and updated ACFR facilities space, which may remedy some of the physical space concerns noted in this Audit.

Recommendation 5: The County should ensure that space planning and design for a new space takes into account the current and future inventory space needs of the Department, including dedicated space for hazardous materials, dedicated space for uniform storage and management, as well as space safety and security concerns. The new space should be designed utilizing CPSE's Quality Improvement for the Fire and Emergency Services 10th Edition. Specific criteria can be found in Appendix A.4. The M&J Team's specific thoughts about space considerations may be found in Appendix A.5.

Observation 6A: OSHA's Hazard Communication Standards require ACFR to provide employees with access to properly formatted Safety Data Sheets for certain hazardous chemicals stored at the Central Supply Warehouse. Based on an inventory listing provided during the Audit, ACFR currently stores as many as 26 hazardous chemicals at CSW that are potentially subject to HCS's SDS requirements. ACFR maintains a properly formatted SDS for five of the 26 hazardous chemicals stored at CSW that may be subject to HCS's SDS requirements. ACFR maintains an improperly formatted SDS for an additional two of the 26 hazardous chemicals stored at CSW that may be subject to HCS's SDS requirements.

Observation 6B: While it falls outside of the scope of this Audit, the M&J Team observed that ACFR may not fully comply with other portions of OSHA's Hazard Communication Standards, particularly when it comes to hazard planning and employee training.

Observation 6C: CSW oversees the disposal of hazardous waste and medical waste. Currently, there is not a formal process for documenting scheduled pickups, or receipts confirming the locations of pickups.

Recommendation 6: ACFR should consider assigning an employee to coordinate the Department's HCS compliance, as recommended by OSHA. ACFR should also compile a list of all hazardous chemicals stored at CSW, as recommended by OSHA. The hazardous chemicals list should indicate each chemical's intended use and determine whether the chemical qualifies for one of the exemptions from HCS's SDS requirements. If ACFR designates someone as HCS coordinator, this individual should be responsible for compiling the hazardous chemicals list, as well as tracking disposal of hazardous materials and expired medication and medical supplies through receipts or other contractor reporting documents.

ACFR should obtain properly formatted SDSs for all non-exempt hazardous chemicals and make them available to employees, both on Target Solutions and as a paper copy at the CSW. If ACFR designates someone as HCS coordinator, this individual should be responsible for obtaining and storing all SDSs.

While the M&J Team has evaluated ACFR's compliance with the SDS requirements of HCS, ACFR should evaluate their compliance with the remaining sections of HCS, and develop policies and procedures that reflect the protocol for ensuring compliance with all HCS requirements.

Observation 7: CSW currently operates leveraging the institutional knowledge of several employees. There are limited formal processes and procedures in place, especially related to maintenance or disposition evaluation of assets not directly involved in fire rescue operation.

Recommendation 7: The Department should document and formalize procedures in place at CSW, and consider developing a full Standard Operating Procedures for the Office. This should include development of a process for consistent evaluation of the maintenance and repair costs and timeline of assets, as compared to surplus or other disposal means.

5.I Emergency Management

Introduction

Alachua County Emergency Management ("ACEM") is responsible for coordinating and overseeing the County's emergency response for a variety of emergency events and situations. ACEM liaises with County departments, municipal resources, the private sector, and other public sector resources to coordinate response and recovery in the event of an emergency situation. ACEM is also responsible for developing preparation, planning, and mitigation efforts for the County.

ACEM is led by a Director of Emergency Management, and is staffed by an Assistant Director and two Program Coordinators.

Key Functions

The Federal Emergency Management Agency ("FEMA") typically organizes emergency management functions into five mission areas:

- Prevention
- Protection
- Mitigation
- Response
- Recovery

Alachua County has adopted the Incident Command System ("ICS") and the National Response Framework for preparing for and responding to disaster incidents. The National Response Framework includes the use of Emergency Support Functions ("ESFs") that describe and organize coordinating structures that group resources and capabilities into functional areas that are most frequently needed during emergency response.

Underpinning the five primary emergency management mission areas are a number of reporting and data tracking responsibilities, including reporting to the Florida Division of Emergency Management ("FDEM") and FEMA, as applicable, to document outcomes of emergency events and disaster recovery efforts. This reporting may also include reporting on grant activities and outcomes.

Preparation and Prevention

ACEM is responsible for planning emergency response training exercises for the County and as well as other organizations who may assist the County in emergency response efforts, as well as participating in training exercises hosted by other local agencies as well as the state, such as the statewide hurricane exercises. While ACEM does not plan and implement other agencies' training exercises, ACEM may host their training sessions at the County's Emergency Operations Center ("EOC").

ACEM staff are also certified as ICS trainers. ICS is a management system recognized by FEMA for use in enabling effective, efficient incident management within a common organizational structure. ACEM staff regularly provide training to County employees and local agency staff, as applicable on ICS protocols and procedures.

ACEM is responsible for managing the EOC during disaster response, and provides annual refreshers to individuals who staff the EOC and other County resources, such as shelters, during response events.

ACEM maintains two Continuity of Operations ("COOP") Plans – one for ACEM operations and one for the EOC. The COOP Plans guide the County for relocation of operations should the ACEM facility, which also serves as the EOC, require evacuation or become unavailable for any reason. The COOP Plans also establish an order of succession for ACEM and EOC leadership.

ACEM is also responsible for the County's shelter management program. Alachua County currently has 21 government buildings designated as shelters which can be activated during emergency events and natural disasters. Annually, ACEM is responsible for a walk-through inspection of each location, including testing the generator and all applicable hookups, reviewing the layout, and confirming ADA compliance.

To help ensure County preparation for disaster response activation, ACEM develops and provides specialized training as needed for roles such as shelter manager.

Mitigation

Within the mitigation function, ACEM is responsible for developing local disaster mitigation strategies, including drafting plans as well as developing and hosting working groups, as needed, to provide input on plan development. ACEM is responsible for writing and maintaining the County's Local Mitigation Strategy ("LMS") and Comprehensive Emergency Management Plan ("CEMP"). The Alachua County LMS is a joint mitigation plan by the County, each municipal government, and various other governmental jurisdictions, such as water management districts and institutions of higher education. The LMS provides a comprehensive risk and vulnerability assessment of potential hazards and sets goals, objectives, and activities for mitigating potential incidents. The Alachua County CEMP provides a detailed description of the County's preparedness and response activities in relation to identified potential hazards. The CEMP includes an overview of the County's 18 ESFs, crisis management, and crisis communications during an emergency.

The hazard analysis of chemical facilities in Alachua County is the responsibility of two regional planning committees – North Central Florida Local Emergency Planning Committee ("LEPC"), and the East Central Florida LEPC.

Both the North Central Florida LEPC and East Central Florida LEPC work with first responders and emergency management staff to ensure that communities are prepared, and interagency workflows are refined during hazard events.

Healthcare facilities in Florida are also required to develop comprehensive emergency management plans for review and approval by the local emergency management office. ACEM reviews these plans for facilities with locations in Alachua County, reviewing for completeness and compliance with specific state criteria. ACFR's compliance with this requirement is discussed in the Compliance section later in this report chapter.

Response

The Director of Emergency Management is the County Coordinating Officer during EOC deployment and emergency response. The County Coordinating Officer is responsible for activating the CEMP and deploying the individuals assigned to the ESFs. ACEM staff are responsible for the engagement of all ESF points of contact and deploying them as needed based on the nature of the emergency. FDEM recognizes 20 ESFs; Alachua County's CEMP currently reflects staffing plans for 18. Of the 18 ESFs, as of the M&J Team's fieldwork, one ESF was not specifically staffed in Alachua County – ESF 15 (Volunteers and Donations) has previously been assumed by the County HR Director in addition to the HR Director's primary ESF assignment.

The County has a functioning EOC that meets the basic standards designated by FEMA, but lacks some of the features included in recently updated EOC recommendations, such as running water and a dedicated sleeping area. The County is currently working to retrofit a second building in the County to serve as a backup EOC. The County uses monday.com for the virtual EOC, which has been customized by and is managed by ACEM. All ESF points of contact are sent text form links through monday.com to allow for the collection and update of needed information. The County uses ResidentConnect to access cell data to enable push notifications to residents. The County also maintains a special needs registry, and uses text messages and phone calls to communicate with residents to identify the need for transport to a special needs shelter.

ACEM uses Everbridge for emergency notification; Alachua County residents can sign up to receive weather and emergency response notifications. ACEM also uses Everbridge to manage employee notifications, maintaining specific subgroups for deployable categories of County employees based on EOC assignment or duty-group assignment, such as shelter managers. ACEM is also using shape files to increase engagement and contact with socially vulnerable populations within Alachua County. Everbridge also offers geofencing capabilities, which allow for location-specific notifications for events such as boil water advisories, location-specific weather events, etc. ACEM does not frequently utilize this feature.

ACEM also utilizes AlachuaCountyReady.com as a standalone public information access point.

Recovery

ACEM is responsible for coordinating with ACFR Finance and Administration Section for submitting FEMA reimbursement and other recovery reimbursement needs. There are typically seven categories of FEMA Public Assistance funding available to local governments. ACFR is responsible for Category B cost recovery. These are the costs related to the emergency protective measures conducted before, during, and after an incident if the measures:

- Eliminate or lessen immediate threats to lives, public health or safety.
- Eliminate or lessen immediate threat of significant additional damage to improved public or private property in a cost-effective manner.

Some examples of Category B activities include:

- Transporting and pre-posting equipment and other resources for response
- EOC-related costs

- Supplies and commodities
- Medical care and transportation
- Evacuation and sheltering
- Security, such as barricades, fencing and law enforcement
- Dissemination of information to the public to provide warnings and guidance about health and safety hazards using various strategies, such as flyers, public service announcements, or newspaper campaigns
- Mass mortuary services

The County currently utilizes a decentralized model for FEMA cost capture and cost recovery, relying on ACFR to coordinate with all other County departments to document costs and submit Category B protective measures requests to FEMA for reimbursement, with the exception of Public Works, who compiles all of their own costs and documentation for reimbursement. County HR does support the calculation of staff costs tracked through FEMA's ICS Form 214 (Activity Log) to determine costs related to staff time. The County recently executed contracts with two external companies to assist in the data collection and cost recovery efforts.

For FEMA recovery, the County uses the standard ICS Form 214 to track time spent on disaster response efforts. This form is available to staff through the EOC website, and the EOC also maintains carbon copies in the event that the EOC loses power.

County staff who support response efforts must complete a Form 214. ACEM is responsible for coordinating and communicating with all applicable departments and employees who may be staffed at the EOC or other locations, such as public works or the shelters. This level of coordinating response personnel at a number of locations can create challenges in ensuring timely and accurate collection of information necessary to ensure full Category B cost reimbursement.

Compliance

The M&J Team reviewed ACFR compliance in the following areas:

- State of Florida Division of Emergency Management Plan Compliance Recommendations
- Health Care Facility Plan Review Requirements
- FEMA Category B Reporting Requirements

State of Florida Division of Emergency Management Plan Compliance Recommendations

Chapter 252 of the *Florida Statutes* ("*F.S.*") and Chapter 27P of the *Florida Administrative Code* ("*F.A.C.*") require County and local governments to maintain a CEMP and LMS in order to remain eligible for various Federal and State emergency management grants. In addition, FDEM provides guidance for the development and maintenance of COOP plans.

The M&J Team reviewed Alachua County's emergency management plans based upon written recommendations published by FDEM, FEMA, and in Chapter 27P, *F.A.C*. While the M&J Team address ways in which ACEM can strengthen various plans, it should be noted that FDEM and FEMA have approved the relevant plans as they are currently written, as required by the relevant codes and statutes. Written guidance is often general and can become outdated – ultimately, ACEM should rely upon guidance provided specifically to the Department during the plan review process with FDEM and FEMA to determine how to best develop the County's emergency management plans.

Comprehensive Emergency Management Plan

The current version of the Alachua County CEMP was published by ACEM in 2020; ACEM staff are currently in the process of updating the plan for the 2024 issuance, as required by FDEM. The M&J Team's review of Chapter 27P-6, *F.A.C.* (which sets required inclusions for CEMPs) and Form CEMP-001 (which FDEM adopted as a checklist of compliance criteria for CEMPs) found the Alachua County CEMP meets or partially meets the majority of the recommendations and requirements set by FDEM.

FDEM requires CEMPs include components for preparedness and response with annexes covering recovery and mitigation (the latter only if the political subdivision does not have an LMS) – all of which are present in the Alachua County CEMP. The CEMP also includes staffing, concept of operations, assignment of responsibilities, and general information for the 18 ESFs present in the 2020 edition of the State CEMP (ESF 19 [Fuels] and ESF 20 [Cybersecurity] were introduced after the adoption of the 2020 edition of the Alachua County CEMP). While each major section required by Chapter 27P-6, *F.A.C.* and Form CEMP-001 is present in the Alachua County CEMP, the M&J Team's review suggested the plan included limited details throughout.

In general, the CEMP is referential and frequently refers readers to other sections within the CEMP or to external documents, which are generally hyperlinked in footnotes. The language requires personnel to have significant institutional knowledge of policies, procedures, and processes (both County and State), as well as access to all other documents identified within the plan (*e.g.*, the LMS, the Integrated Preparedness Plan, the Statewide Mutual Aid Agreement, the Debris Management Plan, local agreements, etc.). The Recovery Annex, in particular, frequently refers readers to the Basic Plan component of the CEMP (the overview of purpose, scope, personnel, preparedness activities, concept of operations, administration, and authorities), the ESF sections of the CEMP, and other documents for details on processes, personnel, and functions. While substantial references are not inherently a problem, overreliance on references could require more frequent updates in order to maintain current hyperlinks and references. In general, though, the personnel who would be most frequently utilizing the CEMP during an emergency are familiar with the relevant reference materials related to their particular ESF.

Explanations of processes and procedures frequently note the County Coordinating Officer or other personnel will complete functions, however the explanations do not detail how the personnel will complete functions. Process descriptions often lack listing of discrete tasks or explanations of relevant policies, instead noting processes will be completed "in a manner consistent with the policies and procedures of the [relevant Alachua County department]." As a CEMP is rarely intended to be a living (or constantly updated) document, a plan might rely upon other resources to provide specific detail.

However, if the County does not have documentation providing further detail, ACEM can consider the following for the CEMP:

- The CEMP does not include sample forms, documentation, or other resources with which not all personnel utilizing the CEMP may be familiar.
- In numerous instances, when the CEMP notes personnel from a specific department or ESF team are responsible for a particular function, the plan does not indicate the specific position or job title identified to perform that function or, when a responsible party should be designated, how a responsible party is selected.
- The CEMP provides limited details regarding resources – for example, instead of the plan identifying primary and redundant communications systems utilized, the CEMP only identifies which ESF team will staff the communications systems.

FDEM recommends county CEMPs include descriptions of how the plan interfaces with contiguous, regional, and municipal jurisdictions. While the CEMP addresses some interfacing with State resources, references are limited and do not include coordination with contiguous counties or regional offices and organizations, though some of the coordination details can be found in the Statewide Mutual Aid Agreement. Municipalities and other local jurisdictions within Alachua County, however, are included on the ESF teams and therefore the CEMP does include descriptions of how the County will interface and interact with local jurisdictions (though the CEMP refers readers to local agreements for specifics on processes and procedures).

In addition to the details which are missing from the CEMP, the plan also includes outdated information. All demographic information included in the CEMP utilizes the 2010 U.S. Census and other outdated surveys – the operational draft reviewed by the M&J Team in advance of the 2024 CEMP edition did not update the demographic information based upon more recent datasets, but are expected prior to the publication of the updated plan. The updates planned for the 2024 edition of the CEMP at the time of the M&J Team's review were mostly limited to changes in agency names and the lead agencies for specific ESFs.

Local Mitigation Strategy

The current version of the Alachua County Local Mitigation Strategy was adopted by the Alachua County Board of County Commissioners and each local jurisdiction's governing and/or emergency management authority in early 2021. The M&J Team's review of Chapter 27P-22, *F.A.C.* (which sets required inclusions for LMS plans) found the Alachua County LMS meets or partially meets the majority of the requirements set by FDEM. The M&J Team additionally reviewed the LMS against Title 44 Part 201 of the *Code of Federal Regulations* ("*CFR*"), which establishes FEMA requirements for mitigation planning. To conduct the review of 44 *CFR* 201, the M&J Team utilized the Local Mitigation Plan Review Tool included in FEMA's Local Mitigation Planning Policy Guide. While the M&J Team addresses ways in which ACEM can strengthen the LMS plan's compliance with FDEM and FEMA standards, it should be noted that FDEM and FEMA approved the plan as it is written, as required by 44 *CFR* 201.3 and 27P-22.004, *F.A.C.*

FDEM guidance (27P-22.004(2), *F.A.C.*) for local mitigation strategies recommends counties include the Working Group responsible for developing the LMS representation from various county agencies; representation from municipal governments; and representation from "interested private organizations, civil organizations, trade and commercial support groups, property owners associations, Native American Tribes or authorized tribal organizations, water management districts, regional planning councils, independent special districts, and non-profit organizations." While the Alachua County LMS Working Group does include representatives from multiple County agencies, each of the municipal governments, other local jurisdictions (*e.g.*, library districts, institutes of higher education, water management districts), and a couple State/regional bodies (FDEM and the Florida Forest Service), the Working Group does not include any non-governmental organizations, such as non-profits or local private organizations. Both FDEM and FEMA require the Working Group provide members of the public opportunities to provide input on the LMS. The Working Group solicited public participation through press releases issued by Alachua County, however, received limited feedback from members of the public. FDEM requirements include an expectation that the Working Group will not only provide an opportunity for public participation, but actively seek to engage private sector participation (27P-22.005(2), *F.A.C.*). The LMS did not include a narrative describing how the Working Group engaged private sector participation or will continue to engage the private sector and the public in mitigation activities.

Similar to the CEMP, the LMS provides limited details in several sections. For example, while the LMS analyzes a series of relevant hazard categories, the hazard discussions do not completely address all details recommended by FDEM and FEMA guidance. FDEM and FEMA recommend the LMS include forecasting of potential (and likely) hazard occurrences, with analyses detailing probability, costs, and the effects of future conditions (such as climate change). The Alachua County LMS lists the likely frequency of occurrence of each type of hazard, however, does not fully discuss the impacts of potential future hazard occurrences and how future conditions may affect hazards. Additionally, the LMS does not fully communicate how hazards may disparately affect different parts of the County – the LMS addresses most threats as they pertain to the County as a whole, rather than identifying how, for example, the effects of a tropical cyclone may differ between the City of Gainesville and the Town of LaCrosse. The plan includes a limited number of maps and similar graphics helping illustrate the extent of potential hazard impacts.

While the M&J Team's review primarily focused on how the LMS addressed the capabilities, responsibilities, and operations of the Alachua County government, and especially ACEM, the M&J Team did note that the LMS included limited discussion of the various jurisdictions' abilities to address and achieve the mitigation goals and objectives identified in the plan. Certain jurisdictions, particularly Alachua County and the City of Gainesville, were more frequently mentioned in terms of mitigation capabilities and activities, however FDEM and FEMA codes require comprehensive overviews of each included jurisdiction's capabilities to support the mitigation strategy. The lack of comprehensive detail for smaller jurisdictions, though, is not uncommon in LMS documents when jurisdictions have limited resources.

The LMS additionally includes limited details on processes and methodologies. The LMS mentions what development is occurring in the County, but does not address how current development or community priorities affected the mitigation strategies and activities included in the plan. Similarly, while the LMS identifies the personnel responsible for monitoring mitigation activities, the plan does not include details as to the method or schedule for monitoring.

Continuity of Operations Plans

ACEM currently maintains two COOP plans – one for the operations of ACEM and one for the EOC. The State of Florida only requires State executive agencies to maintain a COOP plan – counties are not required to maintain a COOP plan. However, FDEM provides guidance to both State executive agencies and local governments for the development and maintenance of COOP plans. The M&J Team reviewed ACEM's COOP plans against the Continuity of Operations Compliance Checklist developed by FDEM for State executive agencies and the Continuity Planning Checklist included in the Continuity Guidance Circular issued by FEMA.

As with other Alachua County emergency management plans, the COOP plans include limited detail for many of the processes and procedures listed in the plans. Some examples of limited details include:

- The plans list the order of succession for key leadership who will assume authorities during COOP activation, however the plans do not detail what those authorities are, nor the circumstances under which the authorities would be exercised or the limitations of the delegations of authority.
- The plans do not provide any requirements or capabilities for ensuring alternate sites are fully operational within a particular time frame, nor do the plans detail deployment procedures for employees when personnel are required to travel to alternate facilities or begin teleworking.
- The COOP plan for ACEM does not identify a specific in-person alternate facility, should ACEM's primary facility be inaccessible or unusable. The COOP plan does, however, indicate ACEM staff will telework as an alternative to using the primary facility.
- The COOP plan for ACEM does not include discussion of backups for vital records and databases, only listing the location of one digital copy of all vital records and databases. The COOP plan for the EOC does include a hard copy in addition to the digital copy. However, neither plan addresses backups for the singular digital and hard copies of each vital record or database. Furthermore, the plans do not address maintenance of vital records and documentation of actions taken at an alternate facility.
- The plans do require annual exercise of all or part of the COOP plans, however, no details are provided as to how the exercises will occur or what resources will be utilized. The only mention of a regular schedule for plan maintenance is tied to exercises and activations, with limited description of how exercises and activations will be reviewed in order to direct changes to the COOP plans.

The COOP plans for ACEM and the EOC were the only two COOP plans provided to the M&J Team as part of the evaluation of ACEM's prepared plans. The M&J Team is not aware of any other COOP plans for the Alachua County government or any Continuity of Government ("COG") plans for Alachua County, though the latter was not part of the scope, and therefore not requested. Similar to COOP plans, COG plans are not required for county governments.

Post-Disaster Redevelopment Plan

The State of Florida introduced an initiative after the 2004 and 2005 hurricane season to help five coastal counties and one inland county develop Post-Disaster Redevelopment Plans ("PDRPs"). By 2012, numerous other counties and municipalities throughout the State had developed PDRPs, including Alachua County, which issued a PDRP in 2010. The *F.A.C.* chapter for the Florida Department of Community Development and Sections 163.3177 and 163.3178, *F.S.*, required that coastal communities prepare PDRPs, while recommending non-coastal communities also prepare PDRPs. With the dissolution of the Department of Community Development and legislative changes to Chapter 163, *F.S.*, no communities are currently required to maintain an updated PDRP, and no guidance has been provided by the State of Florida for PDRPs since approximately 2010.

With no governing statutes or recent guidance, the M&J Team was unable to review Alachua County's 2010 PDRP against FDEM standards. The Florida Department of Economic Opportunity's online links toolkit for PDRPs, however, includes Alachua County's PDRP as an example other communities can follow in the development of non-coastal community plans.

Of note: Each of the other Alachua County emergency management plans reviewed as part of this Audit referenced the 2010 PDRP as a resource for recovery activities and procedures, even though some of the information included in the PDRP is outdated and no longer correct for the County. The plan does, however, include a comprehensive set of hazard analyses, maps, and graphics that support the analyses presented in the LMS and CMEP.

Crisis Management

While the scope of work for the M&J Audit included evaluation of a "crisis management plan," standalone crisis management plans are not commonplace in the emergency management industry. As is generally accepted practice, ACEM does not maintain a plan specifically addressing or titled "crisis management," however crisis management as a topic is included in both the CEMP and COOP plans. The CEMP addresses crisis management through the response activities undertaken by the 18 ESFs, while the COOP plans address crisis management through the policies and procedures related to activation of non-standard operations for ACEM and the EOC.

Crisis Communication

While the scope of work for the M&J Audit included evaluation of a "crisis communication plan," such plans do not commonly fall under the jurisdiction of emergency management organizations. The Alachua County Communications Office heads ESF 14 (Public Information), as detailed in the CEMP. While FDEM does not provide guidance or standards on developing a crisis communication plan beyond ESF 14, many private organizations in the communications and public relations industries provide guidance for crisis communications. However, as any crisis communication plan beyond the information detailed in ESF 14 falls within the jurisdiction and responsibility of the Alachua County Communications Office (which was not part of this Audit), the M&J Team cannot provide in-depth analysis of any plan that may exist.

Health Care Facility Plan Review Requirements

The Florida Agency for Health Care Administration ("AHCA") or Florida Department of Children and Families ("DCF") require that the following types of facilities have their county's Emergency Management Agency ("EMA") approve a set of CEMPs as a part of the licensure process:

- Adult Day Care Centers
- Ambulatory Surgery Centers
- Assisted Living Facilities
- Hospitals
- Intermediate Care Facilities
- Nursing Homes
- Residential Treatment Centers for Children & Adolescents
- Transitional Living Facilities

Either AHCA or DCF are responsible for maintaining standards for CEMPs for each type of facility. County EMAs review CEMPs based on the standard maintained for the relevant type of facility. AHCA requires Assisted Living Facilities and Nursing Homes to also have their county's EMA approve an Emergency Power Plan ("EPP") in addition to their CEMP.

ACEM maintains a detailed Healthcare Facility Emergency Plan Review Standard Operating Guide that provides a step-by-step walkthrough of the review process. All reviews begin when a facility submits plan documents on the Healthcare Facility Emergency Plans page of the Alachua County website. monday.com, the County's workflow management tool, notifies plan review staff of the submission and sets a due date 60 days out. At the time of the M&J Team's fieldwork, ACEM had not configured monday.com to provide notice of the opportunity to review facility plans to applicable state agencies and appropriate volunteer organizations, as required by Section 27P-20.007(2), *F.A.C.*

The processes for reviewing CEMPs and EPPs are similar. The reviewer uses the timer built into monday.com to track the time that they spend on each review. After confirming that all documents are complete, legible, and for the correct facility, the reviewer validates the facility type and finds the appropriate checklist of criteria. The reviewer checks off all criteria that the plan meets and makes notes about any criteria that the submitted plan does not meet. If the plan requires edits, the reviewer sends an email to the facility representative with detailed edit requests. State law allows for ACEM to set a suggested deadline for revisions but does not provide a method to compel facilities to submit revisions. Facilities may submit plans via either the monday.com submission portal or email. If revisions are sent via email, the reviewer forwards those emails to the review's file on monday.com. The reviewer then checks the revised documents against the checklist, repeating the process until no further edits are required.

The reviewer generates an invoice by entering facility information and the hours logged by monday.com's timer into an Excel template, which calculates the total charge. Section 27P-20.003(3), *F.A.C.*, establishes a maximum fee structure for healthcare facility plan reviews, determined by both the number of beds in the submitting healthcare facility and the submitted plan's similarity to pre-existing plans. While the M&J Team did not review ACEM's healthcare facility plan review billings and did not identify any instances where ACEM charged fees in excess of the State maximum, the healthcare facility plan review fee schedule posted on the ACEM website may lead to certain submitters misunderstanding the fees that can be charged. Figure 108: Emergency Management Healthcare Facility Plan Review Fee Schedule, State Law vs. ACEM Website compares the maximum fee schedule established in Section 27P-20.003(3), *F.A.C.*, to the healthcare facility plan review fee schedule posted on ACEM's website.

Figure 108: Emergency Management Healthcare Facility Plan Review Fee Schedule, State Law vs. ACEM Website

		State Law		ACEM Website	
		Similar plan on file?		Similar plan on file?	
		Yes	No	Yes	No
Beds	> 16	$31.25/hour Max. 8 hours	$31.25/hour Max. 16 hours	$31.25/hour Max. 8 hours	$500 Flat Fee
	≤ 16	$31.25/hour Max. 8 hours	$31.25/hour Max. 8 hours	$31.25/hour Max. 8 hours	$31.25/hour No limit on number of hours

The fee schedule on the ACEM website fully agrees with state law for all plan reviews where the facility already has a similar plan on file. ACEM typically spends more than 16 hours, the maximum number of billable hours under State law, on plan reviews for healthcare facilities with more than 16 beds and no similar beds on file, but the fee schedule on ACEM's website does not account for the rare occasions when ACEM completes reviews in fewer than the maximum billable hours. Similarly, ACEM typically completes plan reviews for healthcare facilities with 16 or fewer beds and no similar plans on file in fewer than eight hours, the maximum number of hours that can be billed for under State law, but the fee schedule on ACEM's website does not account for the rare occasions when it takes ACEM longer to complete the review than the state allows them to bill for.

The reviewer sends the invoice to the facility representative, informing them that ACEM will not issue an approval letter until the fee is paid. Facilities may pay via cash, check, or electronic payment. If the facility pays electronically, monday.com automatically notifies the plan reviewer. If the facility pays with check or cash, the ACFR Finance and Administration Section should notify the reviewer of payment receipt, but the reviewer may need to reach out to confirm payment has been received. Once the reviewer confirms that the facility has paid the fee, they use a template to generate an approval letter and email this approval letter to the facility.

Compliance with FEMA Category B Requirements

Currently, FEMA requires that local organizations track and report their costs by category. Emergency protective measures should be directly related to the prudent measures as provided by public health guidance.

FEMA eligible emergency work cost eligibility must be:

- Directly tied to the event
- Work must be legal responsibility of the eligible applicant
- Adequately documented (typically using Form 214s)
- Reduced by all applicable credits, such as insurance proceeds and salvage values

In the event of an emergency in Alachua County, all response personnel will utilize a Form 214. The Form 214 serves as an activity log which records details of notable activities at any ICS level. The Form 214 provides basic incident activity documentation and a reference for any after-action reports. Each person that fills out the Form 214 will complete the following information:

- Incident Name
- Operational Period (date/time and from/to)
- Personnel's Name
- ICS position
- Home Agency
- Activity Log
    - Date/time and notable activities

This form is available through monday.com; the EOC also maintains physical copies for use during periods when monday.com is not accessible. After each operational period in the EOC, once Form 214s have been completed in monday.com, the completed forms are routed to EOC position called the Center Documentation Specialist. This person has been trained to review the Form 214s and may send back the Form 214 to anyone whose Form 214 is not complete or does not appear to be accurate. Once the Center Documentation Specialist has reviewed the Form 214s and confirmed they are complete and accurate, the Center Documentation Specialist changes the Virtual EOC status of the Form 214 to "confirmed."

For ACFR personnel that are on duty during a period when the EOC is activated, they must complete Form 214s for each operational period, and send the completed Form 214s to their District Chief. The District Chief compares completed Form 214s with the daily roster, and then follows up on personnel that do not submit a Form 214. After all Form 214s for the applicable period are reviewed by the District Chief, the completed Form 214s are sent to an Assistant Chief to be checked for accuracy and signed by the Assistant Chief.

It was noted that the county is compliant in filling out Form 214s for incidents, as numerous personnel review the forms for accuracy and appropriate signatures. Once all Form 214s are collected throughout the County, ACFR's Finance and Administration ensures that, for declared disasters, all forms are submitted to FEMA for reimbursement.

Performance Analysis

The M&J Team evaluated performance in three categories:

- Mitigation
- Preparedness
- Recovery

Mitigation

Emergency Management Plans in General

Two common themes emerged during the review of Alachua County's emergency management plans, beyond the plans including limited details of processes and procedures. First, the plans rarely identified opportunities for inter-county coordination and cooperation. None of the plans reviewed discussed how Alachua County would interface with contiguous counties or regional bodies, and the plans rarely addressed interactions with state offices.

Second, the plans reviewed contained few to no references to cybersecurity, in terms of mitigation, preparedness, response, or recovery. Most Alachua County emergency management plans addressed remote work to some extent, and the LMS indicated loss of critical infrastructure due to cyberattacks is a possibility, however, efforts to appropriately address cybercrime and cyberattacks were not included in the current drafts of the plans. Introduced after the 2020 edition of the State CEMP, ESF 20 establishes functions and procedures for addressing cybersecurity during an emergency situation. While FDEM has not yet issued guidance on how local governments can incorporate ESF 20 into local plans, FDEM does recommend addressing cybersecurity and critical infrastructure failures due to cyberattacks. It should be noted, though, that while FDEM recommends addressing cybersecurity, emergency management organizations do not always take the lead on developing guidance on preparing for or reacting to a cyberattack – information technology offices are more commonly charged with developing strategies to address cybersecurity.

Preparedness

ACEM tracks and utilizes the number of trainings held and the number of incidents/exercises completed as performance measures.

- FY20: 18 trainings, 8 incidents/exercises
- FY21: 37 trainings, 8 incidents/exercises
- FY22: 47 trainings, 8 incidents/exercises
- FY23 (through 3/31): 19 trainings, 7 incidents/exercises

FEMA recommends several National Incident Management System trainings for EOC staff. All of the current ACEM staff are ICS trainers, which means that ACEM staff are able to provide ICS trainings in-house and as needed, on-demand. Annually, ACEM also provides a refresher training course on the use of the EOC and monday.com in the event of incident response.

In addition to the training and exercises that are hosted by ACEM or through the EOC, ACEM staff also participate in exercises hosted by other organizations. In the Fall of 2022, for example, ACEM staff participated in the airport's full-scale exercise.

For exercises conducted by ACEM, the Department completes after-action reports and improvement plans ("AAR-iPs") to evaluate the effectiveness of the exercise and identify opportunities for improvement moving forward. The AAR-iPs follow a specific structure, and include a performance rating for each of the exercise objectives, as well as an evaluation of the strengths and areas of improvement for each exercise objective. The improvement plan component of the AAR-iPs reflects of the areas for improvement identified by exercise objective as well as recommendations for mitigation or remediation of the potential challenges identified during the exercise. The M&J Team reviewed copies of nine AAR-iPs for exercises conducted from 2018 – 2023. The M&J Team noted variety in the type of exercises conducted as well as in the organizations included. The exercise types were aligned with the hazards identified in the LMS.

In reviewing the observations and some of the participant feedback included in the AAR-iPs, there were opportunities noted that are consistent with the potential opportunities the M&J Team noted in evaluating the local plans. Specifically:

- Opportunity to enhance and expand the engagement of non-public partners and resources
- Opportunities related to technology knowledge, access, and familiarity

Currently, ACEM leverages college volunteers to assist in both functional and full-scale exercises. ACEM also hosts a local Amateur Radio Emergency Services ("ARES") ham radio network within the EOC. ARES is able to offer licensed, trained, amateur radio operators to support communication efforts during emergencies and disaster events. The radio operations are typically governed by memoranda of understanding ("MOUs") with the U.S. Department of Health and Human Services, the National Weather Service, and the Association of Public Safety Communications Officials. Some ARES groups also have MOUs with the American Red Cross and Salvation Army. Because ARES operates on different frequencies from regular emergency dispatch, ARES can provide additional infrastructure and manpower during emergency events. Alachua County ACEM has used ARES in tabletop exercises and can utilize ARES during emergency operations. Alachua County ARES volunteers are registered County volunteers, but there is not currently an MOU in place between the local ARES group and the County to govern utilization of ARES personnel and equipment during emergency response events. There are not currently other volunteer organizations coordinated or hosted through ACEM. ACEM previously hosted a Community Emergency Response Team, but the program was ended due to lack of staff resources to support and administer the team. Many counties and municipalities in Florida host Citizen Corps Councils and/or Community Emergency Response Teams to provide additional resources during emergency response events.

Benchmarking emergency management responsibilities can be challenging, as not only are there geographical and population differences between Alachua County and many same sized peers, but there are also often differences of strategy, priority, and motivation. Generally, ACEM's responsibilities are comparable to emergency management functions in other counties across Florida and the Southeast. The placement of emergency management within the Fire Rescue Department is one that is not uncommon, although there is not a single industry or governmental norm. Emergency management functions are found in police departments, fire rescue departments, within a more centralized government department (such as a County Clerk or County Manager's office) or may be stand-alone departments, depending on the size of the emergency management staff and the authority and responsibilities they are given.

Embedding emergency management within a public safety department may help with access to deploy and utilize certain resources, but can also create challenges in working across the local government, developing and maintaining relationships with other governments or non-governmental partners, and/or accessing other departments' resources. Within ACFR, the physical separation between ACEM and ACFR's Headquarters means that communications must be more intentional, as there are less organic opportunities to strategize and collaborate.

Recovery

ACEM's use of monday.com for a virtual EOC and workflow for capturing Form 214s is an effective way to ensure timely and accurate data capture, as well as create a visible process for review and acceptance of these forms.

As the Response and Recovery phases of emergency response and disaster recovery may be prolonged, many governments do not assign responsibility for data collection and cost reimbursement tracking within emergency response agencies, as the assignment of two critically important functions to a single individual or team may create competing priorities for staff. It is more common to see cost recovery responsibilities assigned to a more centralized government function, such as finance, budget, or grants management. Staff in these more centralized functions typically have broader access to financial and timekeeping systems, and can more holistically review systems for potential costs and ensure adequate supporting documentation to maximize eligible cost recovery and cost reimbursement efforts. Additionally, centralized government functions typically have more authority or access to compel support or assistance from other county departments, or directly access needed records.

ACEM's recent decision to establish contracts with DCMC Partners and Innovative Emergency Management to support FEMA reimbursement may help streamline collections and provide additional support to relieve staff of some of these duties, but will still rely on other departments taking ownership of reviewing, identifying, and providing documentation related their costs and time.

Observations and Recommendations

Observation 1: The current Emergency Operations Centers meets basic FEMA requirements for EOC space, but the space is outdated and does not have the capacity or functionality to meet some of the newer FEMA recommendations, such as dedicated sleeping spaces, a full kitchen with running water, and multiple meeting rooms and secure communications areas. The Alachua County Facilities Master Plan includes recommendations and options for moving the EOC, to allow for expanded and enhanced operations.

Recommendation 1: The County should ensure that the designer and planners tasked with the new Emergency Operations Center consult with the Emergency Management Director, as well as review FEMA guidelines, checklists, and recommendations for EOC design and space utilization.

Observation 2: Section 27P-20.007(2), *F.A.C.*, requires that County Emergency Management Agencies "establish a procedure to provide written notice to applicable state agencies and appropriate volunteer organizations of the opportunity to review [CEMPs and EPPs]." The emergency plan review procedure documented in ACEM's Healthcare Facility Emergency Plan Review Standard Operating Guide does not currently include any instructions to provide written notice of the opportunity to review CEMPs and EPPs to applicable state agencies and appropriate volunteer organizations. ACEM has implemented several other automations in monday.com to provide reminders and notifications, both to ACFR employees and third parties.

Recommendation 2: ACFR and ACEM should revise the Healthcare Facility Emergency Plan Review Standard Operating Guide to include a procedure to provide the notice required in Section 27P-20.007(2), *F.A.C*. ACEM should explore using monday.com's automation feature to ensure that the required notifications are sent automatically, without requiring additional work from plan reviewers.

Observation 3: ACEM charges fees to healthcare facilities that submit emergency plans for review. Section 27P-20.003(3), *F.A.C.*, establishes maximum fees that county EMAs may charge for healthcare facility plan reviews. While the M&J Team did not identify any instances where ACEM charged a healthcare facility fees in excess of the State maximum, the healthcare facility plan review fee schedule posted on ACEM's website may lead to certain submitters misunderstanding the fees that can be charged.

Recommendation 3: ACFR and ACEM should review the healthcare facility plan review fee schedule on ACEM's website and revise the fee schedule as needed to ensure that submitters clearly understand the fees that ACEM may charge for healthcare facility plan review under Section 27P-20.003(3), *F.A.C*. Additionally, ACEM should inspect the Excel template used to prepare healthcare facility plan review invoices to verify that the invoice fully complies with the healthcare facility plan review fee maximums established in Section 27P-20.003(3), *F.A.C*.

Observation 4A: The emergency management plans meet State and Federal requirements for mandatory plans by identifying key personnel, responsibilities, functions, processes, and procedures. However, discrete details for these functions, processes, and procedures (such as tasks or resources), or information on how to find details in reference materials, are limited in the plans. Without sufficient detail on how functions, processes, and procedures should be accomplished, the County risks loss of institutional knowledge and succession planning should current staff leave or become indisposed.

Observation 4B: The emergency management plans are referential, with each plan referring to other emergency management plans, operational plans, policies set by various Alachua County departments, or local agreements between participating jurisdictions. While many of the reference documents are hyperlinked within footnotes, not all referenced documents are not readily available to all users and documents are not always maintained at permanent hyperlinks. The CEMP is also very self-referential, with many sections referring to information introduced earlier or later in the plan.

Recommendation 4: During the next update of each emergency management plan, ACEM should consider enhancing the details for all information included in each emergency management plan, as appropriate relevant to other reference materials. ACEM and the LMS Working Group should consider identifying how personnel and designees are identified, selected, or appointed; listing discrete tasks and timelines for processes and procedures; and describing the County's capabilities for performing key functions and achieving State and Federal requirements. ACEM should avoid relying too heavily on references to other plans and documents that may not be kept at permanent hyperlinks, or should include additional information on how to access documents if hyperlinks stop working. ACEM should consider repeating information and details across sections and documents, when appropriate, in order to provide ease of reading and understanding for all users of the plans. ACEM should review FDEM- and FEMA-issued checklists and guidelines to best understand what details and competencies should be demonstrated in each respective emergency management plan.

Observation 5: ACEM maintains two COOP plans – one for ACEM and one for the EOC. The M&J Team did not receive any other COOP plans governing other departments or the County as a whole as part of the relevant information request, and the M&J Team did not request any COG plans in use as the scope focused on COOP plans. While the State of Florida does not require COOP or COG plans for county governments, FDEM recommends county governments implement COOP and/or COG plans to ensure key operations, functions, and authorities are maintained throughout an emergency.

Recommendation 5: If a County-wide COOP and/or COG plan is not already in place, ACEM should work with County leadership to develop a COOP and/or COG plan that ensures continuity of key operations, functions, and authorities across Alachua County during an emergency. ACEM should ensure any COOP and/or COG plans developed include high levels of details regarding processes, procedures, resources, and responsibilities.

Observation 6: Alachua County's emergency management plans rarely identify opportunities for inter-county coordination and cooperation. None of the plans reviewed discussed how Alachua County would interface with contiguous counties or regional bodies, and the plans rarely addressed interactions with state offices. FEMA and FDEM recommend local jurisdictions recognize hazards are not constrained by jurisdictional lines and prepare plans to communicate with and share resources with contiguous and regional jurisdictions.

Recommendation 6: ACEM should consider incorporating detailed descriptions of how Alachua County will interface and interact with all levels of government during an emergency, ranging from local municipalities to contiguous counties to regional, State, and Federal agencies.

Observation 7: Alachua County's emergency management plans include little to no detail on the mitigation, preparedness, response, and recovery for cyberattacks and other cybersecurity breaches. Most plans address remote work to some extent, and the LMS indicated loss of critical infrastructure due to cyberattacks is a possibility, however, efforts to appropriately address cybercrime and cyberattacks were not included in the current drafts of the plans. Cyberattacks are becoming increasingly prevalent and can critically impact governments' information infrastructure and ability to deliver key services.

Recommendation 7: ACEM should continue to support the Alachua County Department of Information and Telecommunications Services ("ITS") in matters related to cybersecurity and analysis on critical infrastructure vulnerabilities due to cybersecurity breaches. When FDEM issues guidance on State ESF 20 (Cybersecurity), ITS should review the guidance and provide recommendations on incorporating ESF 20 into the Alachua County CEMP if ITS and ACEM deem it appropriate.

Observation 8: ACEM has an active working relationship with the local ARES group, but does not utilize other formal volunteer groups common within emergency management. There is not currently an MOU in place between the local ARES group and the County to govern utilization of ARES personnel and equipment during emergency response events.

Recommendation 8: The County should formalize their relationship with ARES through an MOU that defines deployment of ARES personnel and equipment during emergency response activation. ACEM should work with the County to determine if staffing and resources are available to promote and then support the development of other emergency response volunteer groups, such Citizen Corps Councils or Community Emergency Response Teams.

5.J Enhanced 911/Communications

Introduction

The Enhanced 911/Communications Section ("E911 Section") provides geographic information services ("GIS") and telecommunications support to the County's emergency dispatching service and supports radio communications services used by ACFR field units. The Alachua County Combined Communications Center ("CCC") provides police, fire, and rescue dispatching services both to County-level first responders, including ACFR, and to municipal first responders within the County, such as the Gainesville Police Department. The CCC's "24/7/365" dispatching operations are managed by the Alachua County Sheriff's Office ("ASO"). ACFR's E911 Section serves ASO's dispatch operations purely in a support role. The E911 Section additionally provides and maintains the portable and mobile radios that ACFR uses to communicate over the trunked radio system. The E911 Section's operations are entirely funded by a State-managed E911 fee, which is a small fee added to every Florida resident's monthly landline, cellular, and VOIP phone bill.

The E911 Section is overseen by the Bureau Chief, who reports directly to the ACFR Chief. A Staff Assistant and 911 Specialist report directly to the Bureau Chief. The 911 GIS Coordinator, who also reports directly to the Bureau Chief, manages the one GIS Analyst and two GIS Specialists that make up the E911 Section's GIS team.

Key Functions

Key functions of the E911 Section include the following:

- GIS and Addressing
- Combined Communications Center Technology and Communications
- Radio Support

GIS and Addressing

The E911 Section is the addressing authority for unincorporated Alachua County, the Cities of Gainesville, Waldo, Alachua, Newberry, and Archer and the Town of LaCrosse. Additionally, the E911 Section routinely performs addressing services and responds to related information requests for the City of Hawthorne and the Town of Micanopy, although the County does not have any formal agreements with these municipalities that establish the E911 Section as the municipality's official addressing authority. The E911 Section's GIS staff are responsible for assigning new addresses, documenting new roadways in the GIS database, and maintaining the records of existing roadways and addresses in the County GIS database. The CCC uses the addresses and road centerlines created and maintained by the E911 Section's GIS staff to ensure that emergency services are correctly dispatched and routed. The E911 Section maintains a comprehensive policy manual that standardizes the E911 Section's addressing policies and procedures.

Other Alachua County departments, including Public Works, Environmental Protection, and Growth Management, use the E911 Section's contributions to the County GIS database as part of their own GIS processes. There is no centralized GIS function within the Alachua County government, although the departments that frequently access and update the County's GIS records do conduct regular collaborative meetings. The County's decentralized GIS staffers regularly communicate with each other and collaborate when needed to respond to collective problems or assist with GIS software troubleshooting.

Although the County's GIS function is decentralized, the County consistently leverages Esri's ArcGIS suite of GIS software throughout the County. The E911 Section recently upgraded to the current generation of Esri software, including ArcGIS Pro and ArcGIS Online. The server that houses Alachua County's GIS database is operated by Alachua County Growth Management and is maintained by the County IT Department. The ACFR IT Office provides limited, basic tech support to the E911 Section, making the E911 Section responsible for supporting GIS software and databases, procuring specialized computer hardware, and performing other E911-specific computer support tasks.

The E911 Section processes two types of addressing data: road centerlines ("RCL") and addresses. RCLs are digital representations of highways, roads, and rights-of-way and are the cornerstone of the addressing system. CCC dispatchers use RCLs to help first responders quickly navigate to the scene of an emergency. Addresses are points that represent a wide variety of manmade features, such as houses, stores, schools, hospitals, water towers, or electric poles. Dispatchers at the CCC use addresses to find and communicate the location of an emergency and to determine how to access that location from the road.

Creation of New Addresses and Roads

The E911 Section assigns new addresses and creates new road centerlines at the request of a municipality, the University of Florida, a utility service provider, or another County department. The E911 Section maintains both a shared email address and an online Survey123 Connect form to receive addressing requests. Survey123 Connect is a data collection tool created by Esri that allows users to create and manage forms and surveys that are integrated with the ArcGIS software suite. The Survey123 Connect form automatically sends an email to the E911 Section's GIS staff to notify of new requests. In order to create a new address, the requestor must provide the E911 Section with the parcel number, a description of the feature to be addressed, and a sketch that illustrates the feature's location and access point. In order to create a new road centerline, the requestor must provide the E911 Section with a map showing the new road in relation to surrounding roads, a spreadsheet with various information on the new road, including details of the subdivision that includes the new road (if applicable). Upon receiving a request and the required information, one of the E911 Section's GIS staff will review the submitted information for accuracy and create the new address or road centerline. If the E911 Section's GIS staff determines that the submitted information is inaccurate or incomplete, the staff will coordinate with the submitter to receive the necessary and correct information.

The E911 Section's GIS staff use several parallel systems to track progress on fulfilling addressing requests. Upon receiving an addressing request email or a notification email from the Survey123 Connect form, the E911 Section's GIS staff creates tickets and track the requests in three methods:

- The primary tracking system involves creating a physical tabbed folder that contains all relevant documentation and is tied to the relevant entry in the GIS database by a tracker number stored in a hidden field. Staff store any updates or progress reports in this folder in order to maintain a record of the request's status.
- The E911 Section uses the GIS database itself as a tracking system by creating fields on each object that records the date that the request was accepted, approved, and implemented.
- The E911 Section uses the project management platform monday.com to track the status of each request.

Maintenance of the Addressing Database

If an error is discovered or if a change is made to the feature represented by an existing address or road centerline, the E911 Section must update the corresponding entry in the County GIS database. Errors may be discovered either during regular use of the County GIS database by the E911 Section's GIS staff, by GIS staff within other County departments, or by CCC dispatching staff and first responders when they experience misroutes during the dispatching process. Common errors in the GIS database include addresses marked in the wrong location, addresses with inaccessible modes of ingress and egress, and CCC dispatchers' reports of conflicts or irregularities with the Master Street Address Guide ("MSAG") and/or Automatic Location Information ("ALI") data sources referenced by telecommunications providers and support software as part of the emergency dispatching process.

In addition to error corrections initiated by the CCC or GIS staff, the E911 Section makes changes to the database at the request of a municipality, the University of Florida, a utility service provider, or another County department. Requestors submit change requests using the same methods used to submit new addressing requests. Commonly requested changes include parcel annexation, parcel joins or splits, and changes to the mode of ingress and egress to an address.

The 911 Specialist and Staff Assistant respond to most reports of errors involving the MSAG or ALI systems on the day on which they are received. The E911 Section receives error reports from CCC dispatchers via email and requests corrections on the AT&T Public Sector Platform ("PSP"). The 911 Specialist and Administrative Assistant use a variety of resources to investigate errors and develop suggested corrections, including ArcGIS, the Alachua County Property Appraiser's website, Google Maps, and personal communications with property owners.

The E911 Section's GIS team responds to reports of errors that do not involve the MSAG or ALI systems and to change requests. The E911 Section's GIS team tracks the status of change requests and error corrections using the same three tracking procedures that the GIS team uses to track the status of new address or road requests.

Communication

The E911 Section responds to requests for addressing information and proactively communicates with organizations that regularly use addresses and RCLs. Property owners or developers, utilities, municipalities, other County departments, or others occasionally submit requests for addressing information or address verification. The E911 Section communicates with the requestor to determine exactly what information is needed and how to best deliver the information to the requestor. The E911 Section then researches and provides the information to the requestor.

The E911 Section sends regular updates to organizations that use the County's addressing information. The Staff Assistant maintains lists of email addresses that are used to update organizations about updates to the types of GIS data that the organizations regularly use. Organizations that are contacted in this way include municipalities, utilities, the Alachua County Property Appraiser, United Parcel Service, the United States Postal Service, ASO, local boards of elections, the County Public Works Department Sign Shop, and other departments within the County. The E911 Section emails information on all new or changed addresses and RCLs to the relevant mailing list.

Combined Communications Center Technology and Communications

The E911 Section provides and maintains the technology and communications infrastructure used by dispatchers at the CCC. The E911 Section is on-call 24/7/365 to respond to any disturbances to the CCC's telecommunications service that interfere with 911 call answering and dispatching. The 911 Specialist and 911 GIS Coordinator are the staff members primarily tasked with responding to E911 disruptions. The 911 Section maintains a number of plans and backups to respond to various types of disruptions that may occur. The Bureau Chief works closely alongside the ASO in managing operations at the CCC and takes part in a monthly planning and coordination meeting with the Sheriff and representatives from both the County and the City of Gainesville.

The CCC's dispatchers currently receive 911 calls using an AT&T telephone service. AT&T's telephone service provides the CCC's computer aided dispatch ("CAD") system with location information on landline and mobile callers. Dispatchers at the CCC currently use the Solacom Guardian 911 Emergency Telephone System, which was installed in November 2018. The State of Florida awarded a 911 Grant to ACFR in January 2023 to upgrade the major components of the CCC's emergency telephone system. ACFR expects the upgrade to the CCC's emergency telephone system to take place in November of 2023. ACFR is exploring moving away from traditional copper-based phone lines to a digital, VOIP-based system and has a contract with Indigital to upgrade the E911 answering system. Alachua County was one of the first counties in Florida to implement text-to-911 when they did so in 2014. The CCC continues to support text-to-911, although the feature is not widely used.

The CCC's CAD system uses address and RCL information from the County GIS database to assist dispatchers in routing first responders to emergencies. Additionally, the E911 Section manages contracts with vendors of digital services that integrate with the CAD system to provide additional information on emergency callers. RapidSOS integrates data provided by individuals or (with user consent) by third-party sources such as Apple's iOS, Google's Android, Uber, and Grubhub. Depending on the caller, RapidSOS provides data that can include improved location information, identification, and background medical information. Smart911 provides dispatchers with additional information from user-created safety profiles, including information on household composition, medical information, gate codes, information on hidden driveways, information on vehicles, and information on pets or service animals.

Radio Support

The E911 Section supports ACFR's radio communications by procuring, configuring, and maintaining ACFR's radios. ACFR uses a trunked radio communications system provided by Motorola for communications with emergency response personnel in the field. All public safety organizations within Alachua County use the same radio system, GRUCOM. The backbone of the GRUCOM radio system is space leased from the trunked radio system owned and operated by Gainesville Regional Utilities ("GRU"), a branch of the City of Gainesville's government. GRU's trunked radio system focuses on covering the immediate Gainesville area. Alachua County and the City of Gainesville have reached an agreement for the County to purchase the GRU trunked radio system, which is scheduled to become effective October 1, 2023. As part of the purchase agreement, Alachua County authorized ACFR to hire a Radio Systems Manager that will manage the County's radio systems. The proposed organizational chart included with the relevant item in the Alachua County Board of Commissioners' agenda places the Radio Systems Manager within the Fire Rescue Operations Section, under the command of the Deputy Chief, not within the E911 Section.

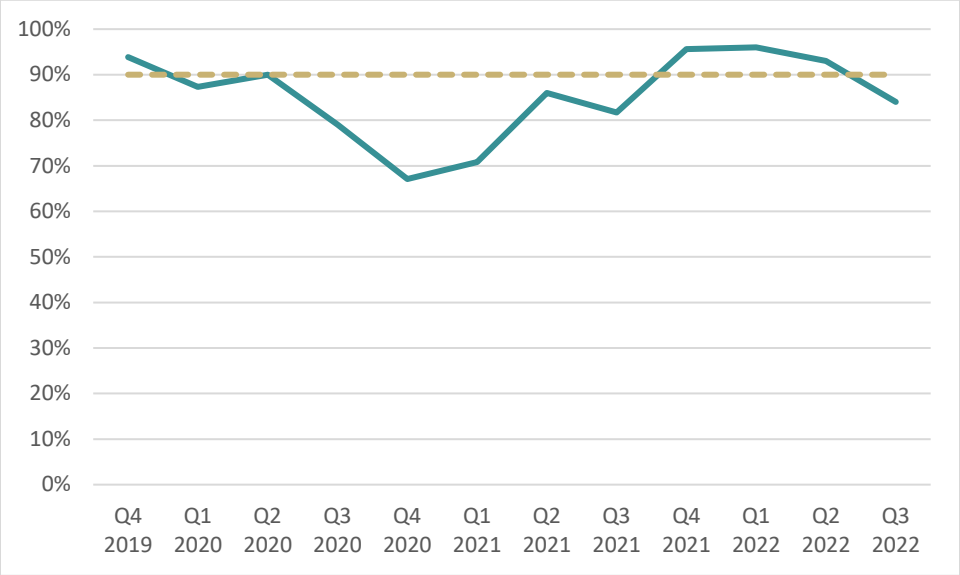
Alachua County contracts with NexTower and TowerCom and allows GRUCOM to install GRUCOM-owned radio equipment on broadcast towers to extend the range of the GRUCOM trunked radio communications system outside of the immediate Gainesville area. Alachua County's radio contracts take a variety of different forms. In some contracts, ACFR simply leases space on an existing radio tower. In other contracts, the County allows the vendor to construct a new tower on County land and rents space on that new tower. Vendors that build new towers on County land are allowed to lease space on the towers to other companies and organizations, such as cellular providers, which results in a reduction of the County's monthly rent. During interviews, ACFR staff reported concerns about radio coverage in certain outlying parts of the County. In 2020, the Alachua County Commission considered implementing a surtax to fund the expansion of the trunked radio system by building additional towers but ultimately decided against having the public vote on the proposal.

Performance Analysis

Addressing and Error Correction

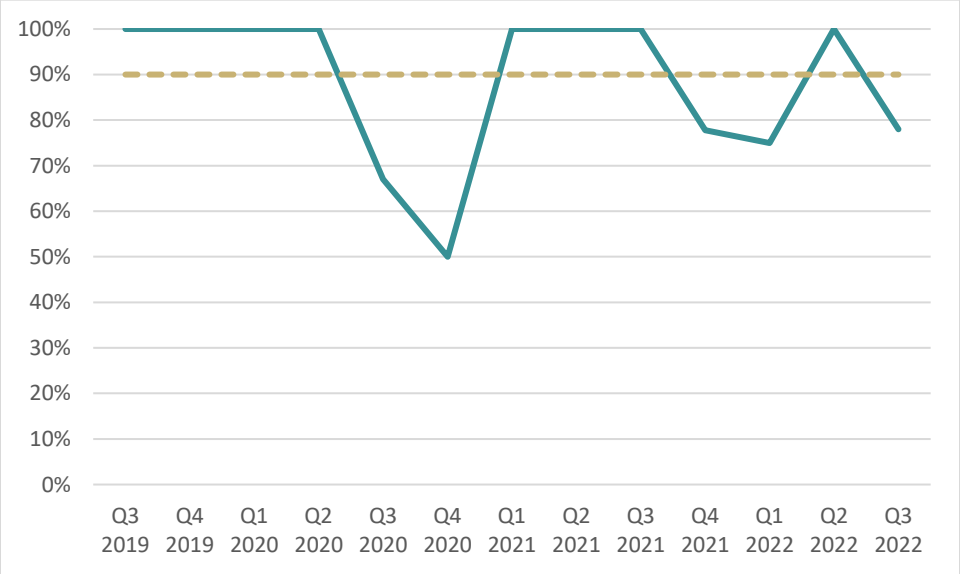
ACFR tracks several performance metrics related to the creation of new addresses and RCLs. ACFR's goal is to fulfill at least 90% of all new individual address requests within three days of receiving the request. As Figure 109: Percent of New Address Requests Fulfilled Within Three Days of Request shows, the E911 Section's GIS team is generally quite responsive to new individual address requests, although the COVID-19 pandemic did pose some challenges during 2020 and 2021.

Figure 109: Percent of New Address Requests Fulfilled Within Three Days of Request



ACFR's goal is to fulfill at least 90% of all new road requests within eight days of receiving the request. The E911 Section's GIS team is generally fairly responsive to requests for the creation of new RCLs, as shown in Figure 110: Percent of New Roadway Requests Fulfilled Within Eight Days of Request although the COVID-19 pandemic also caused delays here.

Figure 110: Percent of New Roadway Requests Fulfilled Within Eight Days of Request



ACFR treats subdivision requests, which typically involve the creation of several new roads and multiple addresses, differently than they treat requests for individual addresses or roads. ACFR's goal is to fulfill at least 90% of all new subdivision requests within four days of receiving the request. As Figure 111: Percent of New Subdivision Requests Fulfilled Within Four Days of Request shows, the E911 Section's GIS team can struggle to complete subdivision requests within the goal.

Figure 111: Percent of New Subdivision Requests Fulfilled Within Four Days of Request

The roads created as a part of the subdivision process are typically shorter and less complex than those created during standalone road requests, but it is still notable that ACFR aims to complete subdivision requests in half the time of standalone road requests. The E911 Section attributes their difficulty meeting the four-day goal to both staffing concerns and a high workload. There have been staffing concerns within the E911 Section's GIS team. In interviews, ACFR employees reported that it is difficult to find employees that are experienced with the particular type of GIS work that the E911 Section is responsible for performing. Three employees in GIS positions have left the Department since the start of FY18. The E911 Section's GIS positions saw particularly high turnover rates during 2022 and were vacant for significant portions of the year. The 911 GIS Coordinator position and the GIS Analyst position were each vacant for over 30 weeks during 2022, including at least 15 weeks where both positions were vacant simultaneously. Additionally, one of the E911 Section's GIS Specialist positions has been vacant since late in December 2022. ACFR does not regularly track performance metrics that directly correlate to the workload of the E911 Section's GIS team.

ACFR does not track any performance metrics related to the maintenance of the addressing database or to addressing-related communications. The E911 Section aims to respond to all reports of errors that involve MSAG or ALI information and could cause E911 misroutes on the day that the error report is received. Although data is not formally tracked, interviews with ACFR staff indicate that the E911 Section typically meets this target. The E911 Section has created a tool to automate parts of the MSAG or ALI error correction process.

E911 Call Answering Equipment

In 2018, ACFR contracted with Kraus Associates, Inc. to install and maintain the CCC's Solacom Guardian Emergency Telephone System. In 2020, ACFR extended their contract with Kraus Associates, Inc. for maintenance and service of the Solacom Guardian Emergency Telephone System to run through September 2024, with options for annual renewals. The maintenance and service contract with Kraus Associates, Inc. is comprehensive and includes 24/7/365 remote emergency maintenance, technical support and preventative maintenance provided by a technician that is on-site several days per week, labor for scheduled upgrades, equipment tracking, and support with the implementation of new technologies. The E911 Section is planning to upgrade the CCC's telephone system around November 2023. ACFR's contract with Kraus Associates, Inc. provides maintenance and support coverage throughout the anticipated upgrade period.

Observations and Recommendations

Observation 1: Alachua County's GIS functions are spread across several different departments within the County government, including ACFR, Public Works, Environmental Protection, and Growth Management. Neither the County nor ACFR have a centralized GIS management and support function. The County IT department and ACFR's IT Office are minimally involved in supporting the E911 Section's GIS operations. The E911 Section's GIS team are responsible for configuring, supporting, and maintaining much of their specialized hardware and software.

Recommendation 1: The County should consider creating a GIS Manager or GIS Coordinator position, either within ACFR or at the County level. The GIS Manager would manage the technical and administrative aspects of ACFR's GIS functions and allow the E911 Section's current GIS staff to focus on their addressing functions. Having a GIS Manager could also encourage greater County-wide collaboration regarding the County's various GIS functions.

Observation 2: The E911 Section's GIS team currently uses three different systems to track progress on addressing requests, both for new entries and changes to existing entries. The three tracking systems are only minimally integrated with one another. Employees must update all three tracking systems separately. The three tracking systems are not redundant, as all three systems track slightly different data. The use of three fairly independent systems could result in incorrect entries or could result in a datapoint not being captured in one of the systems.

Recommendation 2: ACFR should explore options for creating a unified ticketing system that is integrated with Esri's ArcGIS suite of software. Several other divisions within ACFR use monday.com, which is one of the three current addressing tracking systems, to organize files and monitor the status of various tasks. Alachua County Emergency Management, for example, uses monday.com to collect and store documents and track the status of plan review requests. monday.com is highly customizable and it is possible to integrate monday.com with Esri systems. This ticketing system could also be used to track the progress of information requests that the E911 Section receives.

Observation 3: The E911 Section does not currently track any performance metrics other than time-to-complete information for new address requests, new road requests, and subdivision requests. Without additional information on the resolution of error reports, ACFR cannot identify trends in any inaccuracies that may be present in the County's GIS database and the E911 Section's responsiveness to misroutes.

Recommendation 3: The E911 Section should evaluate their primary functions and begin tracking additional performance metrics that provide a more complete picture of the E911 Section's performance. Performance metrics to consider tracking include time to respond to error reports, frequency of error reports, radio outages, frequency of interruptions to the CCC's answering and dispatching service, and time to resolve interruptions to the CCC's answering and dispatching service. This data should be reviewed regularly for themes or trends in issues or errors, to ensure that root causes are identified and addressed.

Observation 4: The E911 Section is currently responsible for providing and maintaining the radio system used by ACFR's units in the field. As part of Alachua County's purchase of GRU's trunked radio telecommunications system, ACFR is hiring a Radio Systems Manager. The Alachua County Board of County Commissioners agenda item that created the Radio Systems Manager position references a proposed organizational chart that places the Radio Systems Manager in the Fire Rescue Operations Section. A decentralized radio management function, divided between the E911 Section and the Radio Systems Manager position in the Fire Operations Section, may create confusion regarding the exact distribution of radio-related responsibilities and lead to duplication of work.

Recommendation 4: ACFR should assess the distribution of radio-related responsibilities throughout the Department as part of the process of assuming management of the GRUCOM trunked radio system. If supported by the assessment of the Department's distribution of radio responsibilities, ACFR should consider consolidating all radio-related functions into a single organizational unit.

6. Department Leading Practices and Accolades

During the Audit of ACFR's operations and performance, the M&J Team identified the following leading practices employed by the Department.

Leading Practice 1: ACFR has introduced numerous innovative EMS technologies, practices, and initiatives aimed at improving patient care and the customer experience. Resources and initiatives that allow ACFR to provide top-quality pre-hospital medical services include:

- Utilization of Tele911 virtual consultations with licensed physicians;
- Installation of Stryker Power-PRO ambulance cots (*i.e.*, hydraulic stretcher lifts) in each rescue unit;
- Introduction of a Mobile Stroke Treatment Unit ("MSTU") in conjunction with University of Florida Health Shands Hospital ("UF Health Shands");
- Accreditation through the Commission on Accreditation of Ambulance Services ("CAAS") and adoption of CAAS standards;
- Maintenance of a medical services unit ("MSU"), or medical ambulance bus, which is able to respond to mass casualty incidents in Alachua County and around the State (ACFR's MSU is one of the few such units in the State of Florida);
- Utilization of partnerships with local medical facilities, including the introduction of the MSTU and employment of a medical director through UF Health Shands; and
- Participation in the Florida Infectious Disease Transport Network as the regional program coordinator.

Leading Practice 2: Members of ACFR's leadership participate in Statewide boards and industry associations, bringing innovative ideas back to the Department, and including ACFR in discussions of leading practices. For example, the Fire Chief serves as Fire Vice President of the Florida Fire Chiefs' Association Board of Directors, the Assistant Chief of EMS Ops serves as an At-Large Representative for the North Central Florida HealthCare Coalition, the Bureau Chief of E911 sits on the Florida E911 Board, and the Medical Director is an active member of the Florida Association of EMS Medical Directors.

Leading Practice 3: ACFR leadership maintains a strong relationship with the local chapter of the International Association of Fire Fighters – the local firefighter union. In addition to regularly negotiating the collective bargaining agreements for field personnel, ACFR leadership communicates regularly with union leadership through in-person meetings every six weeks and *ad hoc* phone conversations as needed. Union representatives are present for interviews as part of internal investigations and ACFR leadership encouraged the M&J Team to meet with union leadership for the Audit. A strong relationship between the Department and the union allows ACFR to respond to concerns early and avoid situations that could endanger the Department's ability to provide key services.

Leading Practice 4: ACFR is in the process of reclassifying the Rescue Lieutenant position as a Lead Medic role. While Rescue Lieutenant is a completely separate job class and promotional path than Driver/Operator and Lieutenant, the Lead Medic role will be filled on rotation by any field personnel with paramedic licensure. Removing the Rescue Lieutenant promotional path will create a single ladder for promotion, with all field personnel promoting from Firefighter to Driver/Operator to Lieutenant, with those attaining paramedic licensure serving as Lead Medic on a rescue unit at one or multiple points during their promotional journey. The single ladder approach provides staff with a clear process and pathway for promotion and provides additional opportunities for cross-training and a wider understanding of operations for field personnel.

Leading Practice 5: ACFR has reintroduced an emphasis on technical rescue training for field personnel, including the reintroduction of a technical rescue team and heavy rescue vehicle at Station 23. More Firefighters at Station 23 are certified for technical rescue, and ACFR has reintroduced vehicle machinery rescue training courses – a key technical rescue specialization, especially for jurisdictions with heavy motor vehicle traffic patterns.

Leading Practice 6: ACFR maintains strong relationships with several other Alachua County departments, improving interdepartmental processes and creating efficiencies for the County. For example, the Fire Marshal works closely with the Growth Management Department ("Growth Management") during development review and permitting process; the E911 Section works closely with Growth Management's Geographical Information Systems ("GIS") Services; and Department leadership work closely with the Budget and Fiscal Services Department's Risk Management Division on internal investigations, incident claim responses, and health and wellness testing for employees.

Additionally, ACFR maintains strong relationships with Gainesville Fire Rescue ("GFR") leadership. ACFR has worked with GFR to implement Tele911 and the ACFR Fire Marshal and GFR Fire Marshal consult regularly on fire investigations.

Leading Practice 7: ACFR makes effective use of many of the Department's software platforms and advanced technologies. The Department's implementation of the Telestaff scheduling program automates much of the difficult process of filling open spaces in the Department's complex schedule and provides employees with an easy-to-use system for picking up and trading shifts. The transparency and flexibility of ACFR's deployment of Telestaff helps to ensure that Department staff have the opportunity to pick up overtime if desired and minimizes the amount of mandatory overtime that has to be assigned.

The Unmanned Aircraft System ("UAS") Program, operated by the ACFR IT Office, provides the Department and the County with a number of abilities that could not reasonably be provided without UAS technology. In addition to standard cameras that help units get an aerial view of an emergency situation, some UAS are equipped with infrared cameras that can show "hot spots" and allow for nighttime operation.

Leading Practice 8: ACFR and Alachua County currently provide County employees with mental and physical health resources that are accessible at any point during and individuals employment with the County. ACFR currently contracts with Life Scan Wellness Center to supply annual Lifescans to each employee within the Department. These Lifescans include important medical tests including cancer screenings and cardiac assessments. In addition to Lifescans, the County offers a variety of physical health services such as Peer Fit, an external fitness and wellness online system. ACFR also provides each station with workout equipment such as weightlifting equipment and cardio machines.

Alongside the physical health resources provided, ACFR and the County provide employees with resources to assist County employees with their mental health. ACFR has a Peer Support Group which provides post-incident mental health assistance for personnel that have experienced a critical incident. Members of the Peer Support Group receive training through the University of Florida. The Department also is beginning to test the implementation of station dogs. These dogs are provided through an organization called K9s for Warriors, and provide emotional support to personnel within the Department. In addition to programs provided by the Department, Alachua County provides multiple mental health related resources to employees including Headspace, a meditation software, and the employee assistance program which offers employees of Alachua County the opportunity to see mental health specialists provided by the County.

Leading Practice 9: ACFR leadership has implemented a series of alternative staffing models, initiatives, and policy changes to address staff retention concerns.

ACFR has recently implemented Kelly Days into the Department's staffing methodology. Kelly Days are designated days throughout the month that a line-personnel employee does not have to work. Kelly Days are implemented in order to prevent burnout and overworking.

The Peak Load Division, within the EMS Operations Section, utilizes *Pro Re Nata* ("PRNs") employees that are able to pick up vacant shifts within the critical care rescue units ("RCCs") when a full-time employee is not able to take work the shift. PRNs must work at least one shift every two months to stay active as a part-time employee within the Department.

Within ACFR, administrative staff, with the exception of the chiefs, are only required to work Monday through Thursday, 10 hours a day. This schedule gives administrative staff a three-day weekend from Thursday to Sunday. The Fire Chief, Deputy Chief, and Assistant Chiefs work Monday through Friday.

Leading Practice 10: ACFR leadership has implemented a series of initiatives and policy changes to improve recruitment and growth efforts for the Department. Previously, ACFR required new hires to be certified as both a firefighter and paramedic. Now, the Department has expanded the applicant pool by also hiring trainees with single certifications (either as a firefighter or a paramedic) or without any certifications. The Department sponsors single-certificate or non-certified trainees through technical training classes. The Department also provides an education stipend of $800 a year for employees who wish to take college courses that enhance their career within the ACFR.

The Department utilizes the Recruitment and Mentoring Program ("RAMP") to target local recruitment. RAMP consists of volunteers from within the Department who offer advice and knowledge to prospective applicants of the Department.

Leading Practice 11: As a part of communication efforts within the Department, the Chief of Fire Rescue puts together a monthly podcast that is sent to all employees within the Department. The podcast includes employee acknowledgements, celebrations, and recognitions of time in service. The Chief also provides general updates on Department activities. Stations are able to watch the podcast together within their respective quarters. The average view count from March 2022 to February 2023 was 170.8 viewers per podcast.

7. Enterprise-wide Observations and Recommendations

In the course of our fieldwork, we identified several themes and trends that were represented in multiple ACFR services, or require resolution at the Department level, rather than individual department level. We aggregated these themes and trends to develop the following enterprise-wide observations and recommendations. These recommendations reflect issues or opportunities that may exist at either the enterprise level or may exist in multiple departments, requiring more holistic solutions. These recommendations should be considered for Department-wide evaluation and implementation.

Observations and Recommendations

Observation 1: ACFR began as a rescue-only department which expanded beyond Emergency Medical Services ("EMS") to include fire protection and fire prevention services as the need in the County grew. To date, much of the Department's innovation and focus is geared to EMS operations, leaving limited resource allocation available for fire protection, fire prevention, non-medical training, and other services. While the Department has introduced technologies, resources, and initiatives to improve service delivery in EMS operations, similar technologies, resources, and initiatives have been limited for other Departmental services. EMS-focused resources, such as ESO, have not consistently met fire protection industry standards or requirements, resulting in duplication of work during fire incident responses. And while the Department emphasized instituting leading EMS practices in order to achieve accreditation for ambulance services, ACFR has not made the same efforts to implement leading practices in fire protection or fire prevention services, regardless of accreditation initiatives.

Recommendation 1: ACFR leadership should regularly review the resources allocated to each service offered by the Department (EMS, fire protection, fire prevention, training, etc.) and ensure the resources allocated are meeting the needs of the personnel conducting those services. When identifying new systems and resources, the Department should ensure systems and resources meet the needs of all services and do not hinder one service while providing benefit to another.

Observation 2: The Department encourages staff pursue continuing education opportunities and provides incentives for achieving specific certifications, however, the Department does not require certifications for personnel (especially field personnel) fulfilling certain functions, such as instructors or fire safety inspectors. Oftentimes, the Department's specialized personnel, such as Training Lieutenants or Fire Prevention Officers, have the recommended certifications, but line personnel performing similar duties in an *ad hoc* manner do not consistently have the same recommended certifications. While certifications are not always required for the fulfillment of certain functions, leading practices and industry standards encourage certification when available.

Recommendation 2: ACFR should encourage and incentivize certification for personnel (especially field personnel) who fulfill certain functions, such as instructors or fire safety inspectors. As the Department allocates resources to strengthen training and fire prevention services, ACFR should consider requiring certifications, such as Fire Instructor, Live Fire Training Instructor, and Fire Inspector, for field personnel fulfilling functions other than incident response. ACFR can consider State certifications, as well as certifications from industry associations. ACFR should also consider State certifications for field and non-field personnel serving in health and safety positions, including Incident Safety Officer and Health and Safety Officer.

Observation 3A: In an effort to address succession planning and improve employee retention efforts, the Department has begun to introduce leadership training opportunities for mid- and senior-level officers within the Department's command structure.

Observation 3B: Active members of fire rescue departments are eligible for a stiped reimbursement to attend the National Fire Academy in Emmitsburg, Maryland. The National Fire Academy offers multiple leadership course opportunities each year, including the Executive Fire Officer Program intended for senior fire officers and the Managing Officer Program for mid-level officers. Courses are offered online, at the National Fire Academy, and at the Florida State Fire Academy in Ocala, with opportunities for local fire rescue departments to host courses as well.

Recommendation 3: The Department should continue to investigate opportunities to strengthen leadership and management skills among staff members. ACFR should consider enrolling senior Departmental leadership in the Executive Fire Officer Program offered through the National Fire Academy in Emmitsburg, Maryland. ACFR should further consider enrolling mid-level officers in the Managing Officer Program offered through the National Fire Academy.

Observation 3: While ACFR is committed to identifying and obtaining leading technology for use throughout the Department, the lack of a formal process for business case development, fit gap analysis, and department-wide engagement of stakeholders and end-users has resulted in underutilization of available technologies, as well as the acquisition of technologies that may require additional cost and time for the technology to be deployed in the Department.

Recommendation 3: ACFR should work with the County's IT Department to develop a formal process for business cases related to new or upgrades technology systems, software, or other applications. This process should include identification and engagement of relevant stakeholders, both within ACFR and the County's IT Department, early in the process, and establishing a formal workflow for needs assessment, evaluation of existing resources, cost and capacity evaluations, and change management assessment. This process should consider whether or not potential technologies can be leveraged for a variety of purposes throughout the Department, or if a tiered rollout and change management process is necessary to optimize functionality.

This process should also include identifying a project management champion who can lead the project and ensure that the project timeline and budget are maintained, and that all potential impacted units have an opportunity to review and provide feedback on the proposed solution.

Observation 4: The Department does not have an organized, complete set of policies and procedures, rules and regulations, or standard operating procedures/standard operating guidelines that reflect industry standards for content, organization, and detail, nor capture non-fire rescue operations processes or protocols.

The Department also lacks formal guidance or procedure for the appropriate chain of command and interaction protocols for how Fire Rescue Operations Section personnel should interact with non-sworn personnel in other divisions, such as Finance and Administration, Central Supply Warehouse, and IT.

Recommendation 4: The Department should utilize National Fire Protection Association ("NFPA") standards, along with the Center for Public Safety Excellence's "Quality Improvement for Fire and Emergency Services, 10th Edition Accreditation Model" to develop and organize its policies and procedures. Updated standard operating procedures/standard operating guidelines should be organized into categories (such as Operations, EMS, Fire Prevention) and should be accompanied by Rules and Regulations.

Once a complete set of policies and procedures has been established, all staff should be briefed on the revised documents, and instructions should be provided on how to access and review these documents. The Department should also ensure that it develops a process for regular review and revision of the policies and procedures. This review process should include reviews for compliance with applicable industry standards and regulations, whether the process can be revised or enhanced to reflect leading practice, and whether the procedures reflect current operating practices.

Observation 5: Currently, ACFR does not have formal succession planning processes put into place for personnel above the Lieutenant rank. In lieu of a formal succession plan for upper-level management, the Department encourages and offers to pay for individuals to attend various conferences and symposiums to further their education. The lack of formalized succession planning within the Department hinders the current Department personnel from promoting into upper-level management positions by not providing them with position specific information or training to be able to step into the role if it becomes available. Not having formal succession planning also creates the risk that there would be no one able to fill a position if the individual leaves said position unexpectedly.

Recommendation 5: The Department should develop a succession plan process for each position above the Lieutenant rank. The succession plan policy should include clear training goals for the current employee who wishes to take on the specific role, as well as clear steps for the individual currently within the management-level role on how to train the employee reporting to them in regard to the management-level position.

Observation 6: ACFR only collects limited performance data on the Department's various functions. Some metrics are tracked for most of the Department's functions, but the Department typically only tracks the metrics that are easiest to track, not the metrics that allow for the most productive analysis. Additionally, ACFR does not regularly analyze tracked metrics as part of the Department's performance evaluation and planning processes.

Recommendation 6: ACFR should evaluate the Department's functions and develop a data collection and usage strategy. The Department should build its data collection and usage strategy around a list of questions that data can help to answer, not around a list of data that the Department currently collects. Department management should work with the ACFR IT Office, the County IT Department, and technical experts in the Department's various Sections to use technology to automate data collection wherever possible. The Department's data strategy should cover using data both retrospectively, to evaluate past performance, and prospectively, to determine how to best meet future needs. Finally, the Department's data strategy should be transparent and allow for ACFR personnel to become engaged in the data collection and analysis process.

8. Conclusion

We commend the leadership of Alachua County and ACFR for commencing this Operational and Performance Audit as the process has been in-depth and brought to light the numerous positive accomplishments of ACFR as well as numerous opportunities for improvement. This Audit demonstrates the County's and the Department's emphasis on continuous improvement and its commitment to providing effective fire rescue services.

ACFR is operating efficiently in many ways, but also has significant opportunity to improve. ACFR now has an understanding of its current state, suggested recommendations, and an Implementation Roadmap to help enhance operations. Now the real challenge is here – implementing the detailed Audit Reports' recommendations and systematically enhancing ACFR operations and performance.

We strongly encourage the County and ACFR to maintain a dedicated focus of internal and external resources (if needed) to assist in the implementation of the recommendations contained in this Audit Report with specific attention to change management and implementation management throughout the Department.

Appendix A. Policy Creation and Plan Development Leading Practices

The following items provide recommended guidelines and consideration for creating new policies and procedures, as well as developing new plans and initiatives as discussed in the following sections of the report:

- Department Assessment
- Central Supply and Inventory Management Office

Department Assessment

A.1

According to interviews conducted with ACFR staff, the Department is currently creating a new diversity and recruitment strategy. The following criterion within the "Center for Public Safety Excellence: Quality Improvement for the Fire and Emergency Services; 10th Edition Accreditation Model, Category 7" should be used as a resource to the Department while creating a new diversity and recruitment plan.

- Criterion 7B: Recruitment, Selection, Retention and Promotion
    - 7B.4 – The agency's workforce composition is reflective of the service are demographics, or the agency has put forth a reasonable effort by instituting an effective recruitment plan to achieve the desired workforce composition.
    - 7B.8 – The agency's working conditions and environment accommodate diverse and qualified applicants and retain a tenured workforce that is reflective of the community.

A.2

The Department does not have an organized, complete set of policies and procedures, rules and regulations, or standard operating procedures/standard operating guidelines that reflect industry standards for content, organization, and detail. The following sections of the "Quality Improvement of Fire and Emergency Services, 10th Edition Accreditation Model" include relevant rules and regulations to assist in designing policies and procedures.

- Criterion 9C: Administrative Support Services and Office Systems – Administrative support services and general office systems are in place with adequate staff to conduct and manage the agency's administrative functions such as organizational planning and assessment, resource coordination, recording keeping, reporting, business communications, public interaction and purchasing efficiently and effectively.
    - Core Competency 9C.3 – Organizational documents, forms, standard operating procedures or general guidelines, and manuals are reviewed at least every three years and updated as needed for all agency programs.
- Criterion 7C: Personnel Policies and Procedures – Documented personnel policies are in place to guide both administration and personnel behavior.
    - Core Competency – 7C.1 Personnel policies, procedures and rules are current, documented and communicated to all personnel.

- Core Competency – 7C.2 The agency has a policy that defines and prohibits harassment, bias, and unlawful discrimination of employees/members based on sex, race, disability, or other legally protected characteristics, and describes the related reporting procedures. The policy and organizational expectations specific to employee behavior are communicated formally to all members/employees and are enforced.
- Core Competency 7C.4 – An internal ethics and conflict of interest policy is published and communicated to employees/members.

A.3

The ACFR FY17-FY20 strategic plan does not reflect a proactive community engagement element. The following is a detailed community-driven strategic planning process:

- Define the programs provided to the community.
- Establish the community's service program priorities and expectations of the organization.
- Identify any concerns the community may have about the organization, along with aspects of the organization that the community views positively.
- Revisit the mission statement, giving careful attention to the services and programs currently provided, and which logically can be provided in the future.
- Revisit the values of the organization's membership.
- Identify the internal strengths and weaknesses of the organization.
- Identify areas of opportunity or potential threats to the organization.
- Identify the organization's critical issues and service gaps.
- Determine strategic initiatives for organizational improvement.
- Establish a realistic goal and objectives for each initiative.
- Identify implementation tasks for the accomplishment of each objective.
- Determine the vision of the future.
- Develop organizational and community commitment to accomplish the plan.
- Utilize SMART objectives (specific, measurable, attainable, realistic, time-bound).

Central Supply and Inventory Management Office

A.4

The M&J Team noted concerns with the current utilization of the warehouse facility. The M&J Team does acknowledge that the Alachua County Facilities Master Plan includes potential upgrades to the space. The new space should be designed utilizing the following criteria from the CPSE's Quality Improvement for the fire and Emergency Services 10th Edition:

- Criterion 6B: fixed facilities – The agency designs, maintains and manages fixed facility resources that meet the agency's goals and objectives.
- 6B.1 – Each function or program has adequate facilities and storage space (*e.g.*, operations, prevention, training, support services and administration).

- Core Competency – 6B.3 – Facilities comply with federal, state/provincial, and local codes and regulations at the time of construction; required upgrades for safety are identified and, where resources allow, addressed. For those items that warrant further attention, a plan for implementation is identified in the agency's long-term capital improvement plan (*i.e.,* fire alarm system, sprinkler system, seismic, vehicle exhaust system, asbestos abatement, etc.).
- 6E.4 – Inventory control and maintenance tracing systems are in place and current.
- Core Competency – 6F.1 – Safety equipment is identified and distributed to appropriate personnel.

A.5

The following are specific thoughts about Central Supply Warehouse space considerations:

- Locate Central Supply to a much larger building under air.
- Ensure that the new location is secured by a fence placed in a gated area with access control for entry.
- Install cameras on the outside and inside to monitor personnel entering and exiting.
- Install access control on the doors of the new location to monitor personnel entering and exiting.
- Install an alarm system (burglar and fire) and ensure that it has sprinklers inside the building.
- Remove mini fleet shop from Central Supply, or create separate storage areas to limit personnel access to inventory.
- O2 bottle refills need to be in a much larger area and need a separate space to place Public Health and hospital O2 bottles so that they are not mixed in with ACFR's.
- Emergency Operations Center ("EOC") supplies/stock needs to be removed and sent to the EOC for storage or have the EOC maintain a storage facility.
- In new building ensure to have a loading dock with a forklift.
- Install an intercom system.
- Utilize better organization for medical supplies, station supplies and equipment by having more shelves and space.
- Separate medical supplies from station supplies and equipment.
- Utilize hubs at stations to distribute medical supplies and drugs to cut down on Monday County-wide deliveries.

Appendix B. Facilities Health and Safety Leading Practices

The M&J Team recognizes fire rescue station design leading practices have changed significantly within the last 10 years due to research and new technology and understands that it is not possible or financially practical to incorporate all new or updated best practices within existing fire rescue stations. However, the M&J Team recommends that ACFR consider current best practices when designing new facilities and remodeling existing facilities.

ACFR stations that were visited by the M&J Team showed a range of differences in age and condition. The reviewed stations included newer built stations that are in great shape and older stations that are in need of repair and or replacement.

Station 21 (which is maintained by the City of Alachua instead of the County) has separate living quarters behind the apparatus bay that was initially meant for temporary housing. ACFR provides the crews and the apparatus that run out of Station 21, but the building does not belong to ACFR. The crew on duty at the station on the day of the site visit expressed that they had been advised they would be getting a new station built at a different location. The crew had a vague idea of where the station would be located, however, they did not have a defined timeline of when the project to build their new fire station would begin. This poses a challenge to all involved due to their being separate government entities managing the facility. Oftentimes the crew stated that their requests to replace or repair something in the station would take a longer time than it would at other stations throughout ACFR. The funds for a new Station 21 are in ACFR's capital budget.

When designing fire stations, it is crucial for fire rescue departments to consider recommendations that incorporate leading practices and Federal Emergency Management Agency ("FEMA") considerations.[22] Following leading practices and FEMA considerations can help create functional, efficient, and safe facilities for firefighters and the community they serve. The following are some leading practices departments should consider during the design and construction of fire rescue stations:

- Adequate Space – Fire rescue departments should design the fire station with sufficient space to accommodate all necessary functions, including apparatus bays, administrative areas, training rooms, living quarters, and storage areas. Departments should ensure that the layout allows for efficient circulation and clear separation of public and private areas.
- Apparatus Bays – Fire rescue departments should provide adequately sized and configured apparatus bays to house fire trucks, ambulances, and other emergency vehicles. Departments should consider factors such as ceiling height, door size, exhaust extraction systems, and equipment storage within the bays. Departments should incorporate features that facilitate quick response and safe vehicle movements, such as drive-through bays or angled bays.

[22] Safety and Health Considerations for the Design of Fire and Emergency Medical Services Stations, US Fire Administration, 2018

- Functional Living Quarters – Fire rescue departments should design comfortable and functional living quarters for firefighters. Include individual sleeping quarters, restrooms, showers, kitchen and dining areas, fitness facilities, and quiet rooms. Departments should ensure compliance with applicable building codes and standards for sleeping quarters to prioritize firefighter health and well-being.[23]
- Training Facilities – Fire rescue departments should allocate dedicated space for training activities, including classrooms, drill towers, and practical training areas. Departments should design these spaces to accommodate various training scenarios, such as search and rescue exercises, ventilation training, and ladder operations. Incorporate technology and equipment to enhance training effectiveness.[24]
- Functional Support Spaces – Fire rescued departments should include administrative offices, conference rooms, workspaces, and storage areas to support the operational and administrative functions of the fire rescue department. Facilities should include adequate space for records management, equipment maintenance, and apparatus maintenance.
- Security and Safety Measures – Fire rescue departments should incorporate security features to ensure the safety of personnel and equipment. Security features may include controlled access points, video surveillance systems, alarm systems, and appropriate lighting. Departments should implement fire protection systems, such as sprinklers and fire alarms, in compliance with applicable codes and standards.[25]
- Sustainable Design – Fire rescue departments should incorporate sustainable design principles to reduce the environmental impact of the fire station. Departments should consider energy-efficient lighting, HVAC systems, and building materials. Departments should integrate renewable energy sources, such as solar panels, where feasible. Departments should implement water conservation measures, such as rainwater harvesting and low-flow fixtures.[26]
- Flexibility and Future Expansion – Fire rescue departments should design the fire station with flexibility in mind to accommodate future growth and changing needs. Departments should anticipate potential expansion requirements and plan for the integration of additional apparatus bays, living quarters, or support spaces. Departments should incorporate adaptable spaces that can be repurposed as needs evolve.
- Accessibility and Universal Design – Fire rescue departments should ensure that the fire station is designed to be accessible for people with disabilities. Departments should incorporate features such as ramps, elevators, wider doorways, and accessible restrooms. Departments should adhere to applicable accessibility codes and standards to promote inclusivity.
- Community Engagement – Fire rescue departments should consider incorporating spaces that allow for community engagement and education, such as public meeting rooms or designated areas for fire safety presentations. Departments should design elements that foster a positive and welcoming image of the fire station to the public.

New design technology of fire stations is ever changing.

[23] "Sleep On It: Incorporating Private Dorm Rooms in Fire Stations," Firehouse, 2017
[24] "Fire Stations as Mindfulness Spaces," Fire Engineering, 2017
[25] *Risk Management Practices in the Fire Service*, US Fire Administration, January 2018
[26] "10 ways to make your existing station 'green.'" firerescue1.com

Automatic Sprinkler Protection

NFPA 1 (Fire Code) states that "new buildings housing emergency fire, rescue, or ambulance services shall be protected throughout by approved supervised automatic sprinkler systems." The requirement for sprinkler protection not only protects the emergency services personnel occupying the facility, but also reduces the risk of disrupting the provision of emergency services to the community because of a fire.

Cancer Prevention Engineering

The occupation of a firefighter is recognized as one where those working in the industry are more likely to be diagnosed with cancer than the public. Firefighters have a 9% higher risk of being diagnosed with cancer and a 14% higher risk of dying from cancer than the typical American.[27] The danger for firefighters does not stop when the fire is extinguished, but returns to the fire stations through their gear, equipment, and vehicles that were exposed to, and contaminated by, smoke or other vapors. When contaminated gear and equipment are returned to the station via their respective response apparatus, the potential for cross-contamination occurs.

To limit/reduce firefighter exposure to toxic products of combustion which occur *after the fire*, turnout gear should be stored in well-ventilated rooms to prevent additional firefighter exposure to off-gassing of chemicals absorbed into turnout gear during a fire. To that end, the ACFR should take additional steps to protect firefighters from cancer including but not limited to, relocating any current fitness areas that are housed within apparatus bays to locations where firefighters can exercise without exposure to the toxic products of combustion, pressurizing corridors to keep contaminates out of designated clean areas, and private showers. The M&J Team understands that space within the current public safety station is limited and options for a fitness area are not ideal.

Additionally, the International Agency for Research on Cancer rates diesel engine exhaust as a Group 1 carcinogen, which means it is known to cause cancer in humans.[28] ACFR does not have a vehicle exhaust capture and removal systems located within the public safety stations station. This is a hazard to the long-term health of personnel as their fitness area is located within the apparatus bays. Many grants are available to provide fire stations with exhaust systems.

Back-In Bays

Back-in bays are a serious safety concern as many firefighter injuries and accidents occur when emergency vehicles are being backed into the fire station. Fire rescue departments should consider designs for new stations that allow for drive-through bays that are large enough to accommodate all frontline and reserve apparatus.

[27] "Registry aims to track firefighters' higher cancer risk."
https://www.cancercenter.com/community/blog/2019/11/firefighter-registry
[28] "Fire Station Design: Best Practices to Reduce Exposures."
https://www.iaff.org/wp-content/uploads/FFCancer_FireStationDesign.pdf

Hurricane Protection

While Alachua County is not located on the coast, hurricanes are still a significant risk in the County. ACFR personnel play a significant role in the County's hurricane response plans and ACFR's stations must be able to operate before, during, and after a hurricane impacts the County.

Leading practices suggest fire rescue stations should be equipped with hurricane protection equipment, such as hurricane-rated bay doors and/or window shutters, that can protect the stations during severe weather and allow emergency response crews to perform emergency response tasks. Stations should also be equipped with auxiliary power sources, such as generators, that allow the station to continue to operate during a disruption of the power grid.

Currently only the newly constructed stations (Stations 24, 30, 33, and 40) include hurricane-rated bay doors. All Alachua County-maintained stations have auxiliary power sources, except Stations 20 and 21.

Facility Security

Fire rescue stations have typically been open environments where residents and visitors from the community have been allowed access to any part of a station with very few limitations. The current social environment requires emergency services providers to implement specific security measures limiting and controlling access to public safety facilities. Limited access is driven by the need to protect firefighters, expensive equipment, and sensitive data from inadvertently being accessed by individuals desiring to harm the community. ACFR utilizes key fobs that are assigned to individual members.

Fire rescue department leading practices include incorporating the following security measures into current and future fire stations:

- Dedicated secure parking – Dedicated parking areas for staff are a start, while fenced or walled secure parking areas are even better, providing physical and visual separation from the public.
- Protection of building infrastructure – Facility infrastructure like emergency generators, fuel storage, transformers and communications equipment are often outside the building enclosure. It is best to locate these items out of public view in a secure portion of the site, which might be within the secure parking area, as recommended previously. This keeps infrastructure from being tampered with and avoids the possibility of children playing on sensitive or dangerous equipment.
- Secure building zones – While most facilities want to project a friendly and welcoming atmosphere at the entrance, lobby, and reception desk, it is advantageous to create distinct control points with restricted access doors, solid walls, and lockable transaction counters. This can be accomplished at the lobby zone, enabling the public to enter the lobby, pick up literature, view antique rigs or historical photographs and gear, access a community room or restrooms, and even speak with someone at a reception desk without entering secure staff-only areas.
- Community room access – When developing a dual-purpose training/community room, consider having two means of entry: one adjoining the lobby where the public can enter and a second from the secure portion of the facility. This strategy enables staff to come and go from training without having to circulate through the unsecure portion of the facility. This maintains visual and physical separation of staff from the public.

- Video monitoring and access control – Digital and/or electronic security measures add a higher level of security and can reduce theft and vandalism. Cameras and electronic locks can serve as an added deterrent against thieves and vandals, and, if the situation arises, provide evidence in the prosecution of suspects. This includes video monitoring in parking areas and at entrance points. This allows crews to see who is at the door without having to walk to the door.
- Secure apparatus bay access – Overhead doors are frequently left open to aid in ventilation, cooling, or access with the apparatus bay. This reduces security for the staff, equipment, and building. Implementing a means to mitigate the doors being left open will improve security. Consider securing all doors off the apparatus bay by electronic means (electric lock, electric strike, or magnetic lock). This enables staff to gain access to the apparatus bay from secure portions of the building without any restriction, and limits potential unauthorized personnel to the bay itself.

Separate Sleeping Quarters

Even though common sleeping quarters are common among many fire rescue departments across the U.S., it is not ideal for various reasons. Many departments are now designing fire stations with individual living quarters. Improved and effective sleep is a major benefit of having individual living quarters. Firefighters work a 24-hour shift and the need for sleep to keep firefighters alert during their shift is paramount for them to be at their best when they respond to an emergency. Studies have shown that being awake for a period of 17 hours straight can impair cognitive abilities that are equivalent to a person with a blood alcohol level of 0.05 percent.[29] Individual living quarters limit sleep interruptions with proper alerting systems allowing members to only be alerted for responses for the specific unit they are assigned to during that shift. Other distractions that are found in common living quarters such as snoring and cell phones are eliminated with individual living quarters. Recent research has increased understanding of the importance of effective sleep hygiene environments relative to mental and physical health. Sleep deprivation has been linked to cardiovascular disease, cancer, Alzheimer's disease, and immune system malfunctions.[30] Ultimately, individual living quarters can help improve the ability of ACFR members to perform on emergency incidents and improve their long-term physical and mental health.

[29] "EMS: Sleep-Deprived on the Job." firehouse.com
[30] "The Dangers of Sleep Deprivation." firehouse.com

Another important reason for individual sleeping quarters is that it provides privacy. As ACFR seeks to improve the number of women within the department, moving towards individual living quarters can help the ACFR recruit and retain women firefighters, making them feel more comfortable in the workplace.[31] In an International Association of Women in Fire & Emergency Services survey, almost half of women reported that they had problems with privacy within a firehouse.[32] Sharing sleeping facilities can be uncomfortable not just for women, but for all genders. A 2020 Civil Grand Jury of Santa Clara County, California, report highlights the justification for gender-separate accommodations in fire rescue departments moving forward.[33] Individual sleeping quarters can also meet the requirement of a suitable private location for a lactation room. Many of the older stations do not have individual bunkrooms, however, the newer stations have been designed and built with the idea of each responder getting their own sleeping space. Stations 20, 23, 24, 41, 60, 80, 81, and 82 still have common bunk rooms. This does not allow for the units that are not getting calls in the night to continue sleeping without being interrupted by the other members going on calls. On the other hand, Stations 30, 33, and 40 have individual bunk rooms for each responder with the appropriate alert system to let them know when they have calls. This allows those who are not assigned to the call to continue sleeping.

Heart Safe Alert Tones

The tones that alert firefighters of a response in the fire stations are another concern. Historically, fire rescue departments have used a loud and quick tone to alert firefighters of the need to respond. This tone causes a tachycardic response in firefighters, which means it makes their heart rate spike. Studies have shown that ramp-up tones are better for the heart health of firefighters. Experts say ramp-up alerting could be an effective way to deal with fatigue, tachycardia, and potentially long-term physical and psychological disorders.[34] Ramp-up tones gradually increase the volume of alert tones.

Decontamination Area

A facility layout can encourage the proper decontamination process a firefighter must follow when returning from a call. Placement of the decontamination room, turnout cleaning, and turnout storage in a linear circulation pattern on the way to the apparatus bay supports the process of decontamination and turnout cleaning prior to entering the apparatus bay. The addition of handwashing sinks and boot cleaning stations at any entrance to the living area in addition to the decontamination zone helps firefighters maintain a clean-living area called the “Clean Zone.” This “Clean Zone” should be separated from the “Hot Zone” of the apparatus bay and support area. A facility also should provide air lock vestibule “Transition Zone” at the connection points of the “Clean” and “Hot” zones to assure the vehicle exhaust from the apparatus bay does not enter the area where firefighters live and sleep. These processes will protect the long-term health of the firefighters living at the station. A layout that features these zones can embed healthy practices into the culture of the department.

[31] “Breaking the 'brass ceiling': Women face unique obstacles in the fire service.” firerescue1.com
[32] “Women in the Fire Service.” powerdms.com
[33] “Why Aren’t There More Female Firefighters in Santa Clara County?” Civil Grand Jury of Santa Clara County. scscourt.org
[34] “Ramp-up tones cut firefighter, paramedic rapid-heart response to station alarms.” ems1.com

Appendix C. Sample Equipment Replacement Cycle

Figure 112: Sample Equipment Replacement Cycle provides a useful guide for ACFR by providing a formulaic approach to apparatus replacement. Figure 112 is not intended to represent the exact costs, but to provide a basic perspective of capital apparatus replacement. In preparing Figure 112, replacement costs were based on the current industry estimates for each type of vehicle plus 5% inflation for each of the vehicle's remaining years of expected service. The M&J Team used a life expectancy of 20 years for engines, 25 years for ladder trucks, 20 years for brush trucks, seven years for ambulances (rescues), and 25 years for tankers. The M&J Team used a base price of $750,000 for engines, $1,200,000 for ladder trucks, $300,000 for ambulances, $160,000 for brush trucks, and $400,000 for tankers.

Figure 112: Sample Equipment Replacement Cycle

Unit	Year	Base Replacement Cost	Replacement Cost w/ Inflation	Current Cash Requirements	Annual Cash Requirements	Current Age (Years)	Life Expectancy (Years)	Replacement Year	Years to Replacement
FR 2201	2022	$525,000	$1,326,649	$66,332	$66,332	1	20	2042	19
3817	2014	$750,000	$1,005,072	$603,043	$67,005	9	15	2029	6
3819	2012	$750,000	$911,630	$668,528	$60,775	11	15	2027	4
3821	2010	$750,000	$826,875	$716,625	$55,125	13	15	2025	2
3822	2015	$750,000	$1,055,325	$562,840	$70,355	8	15	2030	7
FR1802	2018	$750,000	$1,221,671	$407,224	$81,445	5	15	2033	10
FR1908	2019	$750,000	$1,282,755	$342,068	$85,517	4	15	2034	11
FR1909	2019	$750,000	$1,282,755	$342,068	$85,517	4	15	2034	11
WA7366	2001	$750,000	$750,000	$750,000	N/A	22	15	OVERDUE	-7
3616	2009	$1,200,000	$2,052,407	$1,149,348	$82,096	14	25	2034	11
3426	1998	$400,000	$400,000	$400,000	N/A	25	25	2023	0
3630	2009	$400,000	$684,136	$383,116	$27,365	14	25	2034	11
3631	2009	$400,000	$684,136	$383,116	$27,365	14	25	2034	11
3823	2016	$400,000	$962,648	$269,541	$38,506	7	25	2041	18
3422	1998	$160,000	$160,000	$160,000	N/A	25	20	OVERDUE	-5
3423	1998	$160,000	$160,000	$160,000	N/A	25	20	OVERDUE	-5
3525	2006	$160,000	$185,220	$157,437	$9,261	17	20	2026	3
AR027	2002	$160,000	$160,000	$160,000	N/A	21	20	OVERDUE	-1
B3917	2013	$160,000	$260,623	$130,312	$13,031	10	20	2033	10
B3925	2013	$160,000	$260,623	$130,312	$13,031	10	20	2033	10
WA2953	2006	$160,000	$185,220	$157,437	$9,261	17	20	2026	3
FR1804	2018	$300,000	$330,750	$236,250	$47,250	5	7	2025	2
FR1803	2018	$300,000	$330,750	$236,250	$47,250	5	7	2025	2
FR1804	2018	$300,000	$330,750	$236,250	$47,250	5	7	2025	2
FR1805	2018	$300,000	$330,750	$236,250	$47,250	5	7	2025	2
FR1901	2018	$300,000	$330,750	$236,250	$47,250	5	7	2025	2
FR1902	2018	$300,000	$330,750	$236,250	$47,250	5	7	2025	2
FR1903	2018	$300,000	$330,750	$236,250	$47,250	5	7	2025	2

Unit	Year	Base Replacement Cost	Replacement Cost w/ Inflation	Current Cash Requirements	Annual Cash Requirements	Current Age (Years)	Life Expectancy (Years)	Replacement Year	Years to Replacement
FR1904	2018	$300,000	$330,750	$236,250	$47,250	5	7	2025	2
FR2002	2019	$300,000	$347,288	$198,450	$49,613	4	7	2026	3
FR2003	2019	$300,000	$347,288	$198,450	$49,613	4	7	2026	3
FR2004	2019	$300,000	$347,288	$198,450	$49,613	4	7	2026	3
FR2005	2019	$300,000	$347,288	$198,450	$49,613	4	7	2026	3
FR2012	2020	$300,000	$364,652	$156,279	$52,093	3	7	2027	4
FR2013	2019	$300,000	$347,288	$198,450	$49,613	4	7	2026	3
FR2014	2019	$300,000	$347,288	$198,450	$49,613	4	7	2026	3
FR2020	2021	$300,000	$382,884	$109,396	$54,698	2	7	2028	5
FR2121	2021	$300,000	$382,884	$109,396	$54,698	2	7	2028	5
FR2122	2021	$300,000	$382,884	$109,396	$54,698	2	7	2028	5
FR2123	2021	$300,000	$382,884	$109,396	$54,698	2	7	2028	5
FR2124	2021	$300,000	$382,884	$109,396	$54,698	2	7	2028	5
Total			**$22,826,543**	**$11,883,304**	**$1,793,246**				

Addendum A. Strategic Roadmap

The following pages detail the more than 100 recommendations for all in-scope services. The recommendations are categorized by applicable owner (enterprise-wide or service), are assigned a prioritization level for implementation, and include a typical timeframe for implementation. The detailed report should be read in its entirety to better understand the context for the identified observations and recommendations. The County and the Department have the ultimate responsibility to determine the prioritization level and timeline for implementation of any of the recommendations in this report.

The County and the Department should dedicate resources and engage external specialists where needed to assist with implementation.

Section	Recommendation	Priority/Sense of Urgency: 1 = High 2 = Medium 3 = Low	Suggested Time for Implementation: 1 = <90 days 2 = 91-180 days 3 = >180 days
Department Assessment	**Recommendation 1:** ACFR should continue their Firefighter recruitment efforts and explore using additional strategies to recruit additional Firefighters. ACFR should review the results of past hiring drives in order to find strategies that have proved successful historically and consider reimplementing these strategies.	**1**	**1**
Department Assessment	**Recommendation 2A:** ACFR should continue their existing Firefighter recruitment efforts and explore additional strategies for reducing vacancy rates.	**1**	**1**
Department Assessment	**Recommendation 2B:** ACFR should begin retaining additional vacancy data, such as regular vacancy "snapshots." Retaining more detailed vacancy data will allow ACFR to conduct more thorough analyses on overtime usage, scheduling trends, recruitment efforts, and employee retention.	**2**	**1**

Section	Recommendation	Priority/Sense of Urgency: 1 = High 2 = Medium 3 = Low	Suggested Time for Implementation: 1 = <90 days 2 = 91-180 days 3 = >180 days
Department Assessment	**Recommendation 3:** ACFR should explore options for encouraging the development and advancement of employees who are members of underrepresented groups. It may be possible for ACFR to adapt programs that have proven successful in improving the diversity of ACFR's recruitment practices to support diversity in the development and advancement of current employees. For example, ACFR could adapt the mentoring component of the Department's Recruitment and Mentoring Program ("RAMP") to not only allow current employees to mentor prospective applicants but to also allow for current employees to mentor employees of lower rank that may be eligible for promotion. Employees from underrepresented groups may see significant benefits from receiving additional assistance in navigating the promotion process. As ACFR continues to create programs that help to develop underrepresented groups within the Department, ACFR should consider developing programs that elevate more individuals in underrepresented communities to leadership positions within the Department. Increasing diversity within the Department command staff has the potential to attract a more diverse applicant pool. A more diverse applicant pool gives ACFR the opportunity to increase diversity within the Department.	**2**	**2**

Section	Recommendation	Priority/Sense of Urgency: 1 = High 2 = Medium 3 = Low	Suggested Time for Implementation: 1 = <90 days 2 = 91-180 days 3 = >180 days
Department Assessment	**Recommendation 4:** ACFR should begin tracking information on the interaction between employee demographics and the promotion process. Employee demographic information should only be used for retrospective analysis and should not factor into any promotion decisions. Information that may be useful to analyze in relation to employee demographics may include the following: • Promotion application rates • Promotion test scores • Promotion list placement • Promotion rates • Usage of development or advancement programs, such as a potential adaptation of the RAMP mentoring program To better capture the effect of future development or advancement programs, ACFR should collect more detailed data on several promotion cycles prior to introducing new programs or requirements.	**2**	**3**
Department Assessment	**Recommendation 5:** In order to provide a better way to search for prior internal investigation case files that are relevant to potentially new internal investigations, the Department should consider researching an alternative to Microsoft Access to act as an internal investigation report management system. The current system, Microsoft Access, does not include a feature to search each case by type and content. Adopting a new report management system for internal investigations would provide the Deputy Chief and Chief of Fire Rescue the ability to research past internal investigations more efficiently.	**3**	**2**

Section	Recommendation	Priority/Sense of Urgency: 1 = High 2 = Medium 3 = Low	Suggested Time for Implementation: 1 = <90 days 2 = 91-180 days 3 = >180 days
Department Assessment	**Recommendation 6A:** ACFR should work with area hospitals to decrease time rescue units are waiting to transfer care to the hospital. Decreasing this time with reduce unit hour utilization ("UHU") values allowing units to be available for additional incidents and have more time for nonemergency functions.	**2**	**2**
Department Assessment	**Recommendation 6B:** ACFR should determine why peak units have experienced a decrease in UHU values while 24-hour rescue units have seen an increase, and consider the potential need for additional rescue units within the Gainesville area to assist with workload of these units. If decreased UHU values for peak load units are determined to be a result of lack of consistent staffing on a daily basis, ACFR should consider hiring additional personnel to fill the peak load positions.	**2**	**2**
Department Assessment	**Recommendation 6C:** ACFR should explore a community paramedicine program with public and private partnerships to reduce Emergency Medical Services ("EMS") call volumes. Community paramedics can work in rural areas and work in a primary care role to address the needs of non-urgent EMS calls that do not require transport services.	**3**	**2**
Department Assessment	**Recommendation 6D:** ACFR should explore the ability to rotate personnel working on 24-hour rescue units with personnel working on 24-hour fire suppression units during a 24-hour shift (*i.e.*, rotate at eight or 12-hour intervals) to reduce fatigue and allow for training and physical fitness.	**2**	**1**

Section	Recommendation	Priority/Sense of Urgency: 1 = High 2 = Medium 3 = Low	Suggested Time for Implementation: 1 = <90 days 2 = 91-180 days 3 = >180 days
Department Assessment	**Recommendation 6E:** ACFR should consider adding additional rescues in areas where existing rescues exhibit consistently high UHU values. Elevated UHU values indicate a heightened demand for emergency medical services, potentially leading to delayed response times and compromised patient care. The addition of more rescues is essential to address a surge in demand, enabling quicker response to emergencies and reducing the strain on existing resources.	**1**	**2**
Department Assessment	**Recommendation 7:** ACFR should create a single Fire Prevention Officer job description that encompasses all of the position's responsibilities, including the responsibilities of both the former Plans Reviewer Inspector position and the former Fire Inspector position.	**3**	**1**
Department Assessment	**Recommendation 8:** ACFR should complete the reclassification of the EMS Lieutenant position to the EMS Attendant position and should ensure that the job description for the EMS Attendant position accurately describes the position's duties.	**3**	**1**
Department Assessment	**Recommendation 9:** The Department should focus more recruiting efforts on the local high schools within Alachua County. Recruiting in local high schools allows ACFR to reach a demographic of potential applicants that have ties to the community and are more likely to stay in the area. Receiving more local applicants could positively effect staff retention at the entry-level once they are hired.	**2**	**3**

Section	Recommendation	Priority/Sense of Urgency: 1 = High 2 = Medium 3 = Low	Suggested Time for Implementation: 1 = <90 days 2 = 91-180 days 3 = >180 days
Department Assessment	**Recommendation 10:** ACFR should explore establishing a Recruitment Committee that represents the Department to recruit in communities that are underrepresented. The Recruitment Committee should be comprised of a diverse group of people within the Department. The goal of the Recruitment Committee should be to assist the Captain of Recruitment and Public Education in organizing recruiting visits and events within local schools and community organizations.	**3**	**2**
Department Assessment	**Recommendation 11:** In trying to create a more inclusive and employee friendly workplace for all personnel within ACFR, the Department should utilize resources from the "International Association of Fire Chief: Volunteer & Combinations Officer Section/Volunteer Workforce Solutions – Guide for Creating a Diverse and Inclusive Department," as well as the "Center for Public Safety Excellence: Quality Improvement for the Fire and Emergency Services; 10th Edition Accreditation Model, Category 7 – Human Resources." Specific criterion of this model can be found in Appendix A.1.	**3**	**3**

Section	Recommendation	Priority/Sense of Urgency: 1 = High 2 = Medium 3 = Low	Suggested Time for Implementation: 1 = <90 days 2 = 91-180 days 3 = >180 days
Department Assessment	**Recommendation 12:** While developing the new diversity and recruitment plan, the Department and the new Captain of Recruitment and Public Education should consider the following strategies. The M&J Team discusses the following strategies further in the Diversity and Recruitment section of this report: • If possible, eliminate financial barriers by paying for the physical tests rather than placing that burden on the applicant • ACFR should consider providing in-house training to women and underrepresented individuals to prepare for the physical test as well as tutoring or coaching for candidates on the written exam • The universality of social media, especially for younger generations, makes it an effective tool for reaching multiple communities and communicating the department's values • Review all physical tests to ensure that they only include job-related skills and look at how the test is administered and weighted • Review all written tests to ensure that they are written with the educational level necessary and focus on the basic skills for the job • Reassess oral boards to ensure that a diverse group of interviewers are used and have been trained in implicit bias • Review anti-discrimination and anti-harassment training schedules and provide more opportunities to express the County's Equal Employment Opportunity Commission adopted policies.	**2**	**3**
Department Assessment	**Recommendation 13:** The Department should explore purchasing a program to assist with data collection and Quality Assurance ("QA").	**2**	**3**

Section	Recommendation	Priority/Sense of Urgency: 1 = High 2 = Medium 3 = Low	Suggested Time for Implementation: 1 = <90 days 2 = 91-180 days 3 = >180 days
Department Assessment	**Recommendation 14:** The County should assess the current assignment of geographic information services ("GIS") layer maintenance throughout all County departments with GIS responsibilities, and realign GIS layer responsibilities based on which Department is primarily reliant on that data. This realignment of responsibilities may also require analysis of current workload.	**3**	**3**
Department Assessment	**Recommendation 15:** ACFR should work with HR and the County to evaluate the Employee Action Form ("EAF") process for new hires in critical positions, to determine if approved, budgeted positions can be moved through an expedited or streamlined workflow, to assist ACFR in making timely offers to quality candidates. The EAF process should also be evaluated to determine if contractually required human resources ("HR") changes could be modified to reduce the number of approvals required before the change can be applied, or if alternative documentation of approvals could be utilized to support the submission of the EAF.	**2**	**3**
Department Assessment	**Recommendation 16:** The Department should utilize NFPA standards, along with the Center for Public Safety Excellence's "Quality Improvement for Fire and Emergency Services, 10th Edition Accreditation Model" to develop and organize its policies and procedures. Updated standard operating procedures/standard operating guidelines should be organized into categories (such as Operations, EMS, Fire Prevention) and should be accompanied by Rules and Regulations. Relevant criterion within the Center for Public Safety Excellence's "Quality Improvement for Fire and Emergency Services, 10th Edition Accreditation Model" can be found in Appendix A.2.	**1**	**2**

Section	Recommendation	Priority/Sense of Urgency: 1 = High 2 = Medium 3 = Low	Suggested Time for Implementation: 1 = <90 days 2 = 91-180 days 3 = >180 days
Department Assessment	**Recommendation 17:** The Department should develop an updated strategic plan, and ensure that time is dedicated to reviewing and updating this plan on a regular basis, taking into account new and future themes and concerns relevant to the Department. The Department's next strategic plan should also include a community-driven development effort. For many successful organizations, the voice of the community drives their operations and charts the course for the future. A community-driven emergency service organization is one that seeks to gather and utilize the needs and expectations of its community in the development and/or improvement of the services provided. A detailed community-driven strategic planning process is outlined in Appendix A.3.	**2**	**3**
Department Assessment	**Recommendation 18:** The Department should build out a schedule and ensure adequate funding is allocated to support the regular review and, as appropriate, update or development of revised strategic plans, Master Plans, fee studies, and other applicable analysis.	**1**	**3**
Department Assessment	**Recommendation 19:** The Department should develop a clear communications protocol that includes consistent messaging styles and methods for different types of information. This should include processes for documenting and retaining information to be shared with future employees, and ensure that communications include sworn and civilian personnel.	**3**	**2**

Section	Recommendation	Priority/Sense of Urgency: 1 = High 2 = Medium 3 = Low	Suggested Time for Implementation: 1 = <90 days 2 = 91-180 days 3 = >180 days
Department Assessment	**Recommendation 20:** ACFR should develop a comprehensive grants management strategy. This should include criteria evaluation of grant opportunities for alignment with strategic priorities of the Department, as well as evaluate the grant value relative to the costs of managing the grant, and any long-term costs related to asset maintenance, maintenance of effort requirements, and other costs that may be sustained after grant funding ends. The County should also consider adopting a County-wide grants management strategy.	**1**	**2**
Department Assessment	**Recommendation 21:** The Department should develop formal procedures for purchasing and receiving assets that have been purchased in part or in whole with grant dollars. The procedures should include formal communication methods between the grant program liaison, the Administration and Finance Section, and CSW to ensure that all required documentation is maintained, and accurate inventory information is recorded for grant reporting and inventory purposes. When grant-purchased assets are being evaluated for disposal or surplus, grant award documents and corresponding regulations should be reviewed to ensure that the disposal method is in compliance with grant requirements.	**2**	**3**
EMS	**Recommendation 1:** ACFR should consider providing critical care rescue units with personal protective equipment, such as a protective jumpsuit, that protects staff in the event a unit without turnout gear encounters and has to serve as first responders to a vehicle accident.	**2**	**2**

Section	Recommendation	Priority/Sense of Urgency: 1 = High 2 = Medium 3 = Low	Suggested Time for Implementation: 1 = <90 days 2 = 91-180 days 3 = >180 days
EMS	**Recommendation 2:** ACFR leadership should work with the Alachua County Communications Office and/or the Information and Telecommunications Services Department to include the Commission on Accreditation of Ambulance Services accreditation logo on the ACFR homepage.	**3**	**1**
EMS	**Recommendation 3:** ACFR should actively encourage patients and other Alachua County residents and visitors who use ACFR's services to provide feedback – either through the digital satisfaction survey or other means – regarding the Department's service delivery. The Department can include a note in billing statements, encourage participation through social media and outreach, or request feedback during community events. ACFR leadership should consider customer feedback when evaluating whether programs are meeting intended purposes and community needs.	**3**	**1**
EMS	**Recommendation 4:** ACFR leadership should evaluate how the Community Health Team ("CHT") is currently being utilized and determine how the Department wants to use the CHT to address changing needs within the community. Some considerations for ACFR leadership include: • Seeking public and private partnerships for the CHT, such as the University of Florida; • Researching grant funding for the CHT; • Preparing a budget for the CHT; • Increasing participation in the CHT, utilizing internal and external recruitment efforts; and • Expanding the scope of the CHT to include services such as delivering intravenous ("IV") antibiotics and vaccinations.	**2**	**3**

Section	Recommendation	Priority/Sense of Urgency: 1 = High 2 = Medium 3 = Low	Suggested Time for Implementation: 1 = <90 days 2 = 91-180 days 3 = >180 days
EMS	**Recommendation 5:** ACFR leadership should perform an annual cost-benefit analysis of community paramedicine programs (including Tele911, the Community Health Team, and any future initiatives) to measure effectiveness and efficiency of each program.	**2**	**3**
EMS	**Recommendation 6:** ACFR should conduct a cost-benefit analysis to determine whether the current system of permitting all vehicles and as many field personnel as possible at the Advanced Life Support ("ALS") level is efficient and effective for the Department, or if ACFR should consider a two-tier system with both ALS transport units and Basic Life Support ("BLS") transport units.	**2**	**2**
EMS	**Recommendation 7:** ACFR should work with a third-party vendor that specializes in emergency response to update the Department's master plan, which can address ways to improve response time and overall service delivery.	**2**	**3**
Fire Protection	**Recommendation 1:** ACFR should designate an incident safety officer where personnel are working in an immediately dangerous to life or health atmosphere. ACFR can consider the addition of a shift incident safety officer or can designate a specific member of each shift to function as the incident safety officer. For example, on structure fires, the Lieutenant on the third-arriving engine could be designated the incident safety officer. The Department should follow through on plans for the Health and Safety Officer ("HSO") to provide incident safety officer training to response personnel.	**1**	**1**
Fire Protection	**Recommendation 2:** ACFR should consider establishing a third district and third 24-hour District Chief position to ensure field leadership can continue to meet the needs of the Department and the County.	**1**	**2**

Section	Recommendation	Priority/Sense of Urgency: 1 = High 2 = Medium 3 = Low	Suggested Time for Implementation: 1 = <90 days 2 = 91-180 days 3 = >180 days
Fire Protection	**Recommendation 3:** ACFR leadership and the HSO should develop policies establishing and maintaining a comprehensive health and safety program that comply with the requirements set by the State Fire Marshal. The policies should include a temporary transition plan which ensures the program does not lapse in the event of a vacancy in the Health and Safety Officer position.	**1**	**2**
Fire Protection	**Recommendation 4:** ACFR leadership should work with a representative from ESO to ensure all technical requirements and expectations are being met by the system. If the system continues to lack the promised integration and capabilities, ACFR leadership should work with the County Attorney to seek a solution, such as reimbursement of funds for services not provided.	**2**	**1**
Fire Protection	**Recommendation 5:** The HSO and ACFR leadership should conduct regularly scheduled reviews of the State Fire Marshal's Employer Cancer Prevention Best Practices – Self-Assessment Tool and determine whether the Department's policies and practices meet the leading practices included in the guidelines. Department leadership should ensure all policies are up-to-date and complete, and practices are meeting set policies.	**1**	**3**
Fire Protection	**Recommendation 6:** ACFR leadership should investigate whether grant opportunities exist for the purchase of backup turnout gear for frontline employees. ACFR leadership and County leadership should develop budgets that progressively add more backup gear to the Department's inventory over the next five to 10 years.	**2**	**2**

Section	Recommendation	Priority/Sense of Urgency: 1 = High 2 = Medium 3 = Low	Suggested Time for Implementation: 1 = <90 days 2 = 91-180 days 3 = >180 days
Fire Protection	**Recommendation 7:** The HSO and Fire Marshal should develop policies for the Department that govern the reporting of on-the-job injuries, both that occur during and outside of fire incident responses, including provisions identifying the party or parties responsible for reporting when either the HSO Officer position and/or Fire Marshal position is vacant.	**1**	**1**
Fire Protection	**Recommendation 8:** ACFR leadership, especially the Assistant Chief of Fire Operations, should consider working to attain accreditation for fire protection services from the Commission on Fire Accreditation International ("CFAI"). At a minimum, ACFR leadership should review the standards set by CFAI to guide enhancements for fire protection operations in the Department.	**3**	**3**
Fire Protection	**Recommendation 9:** The ACFR Fire Rescue Operations Section should host and participate in more regular inter-departmental and inter-agency training with a series of volunteer and career fire rescue services, including local municipalities and jurisdictions, contiguous counties, and regional and State agencies and partnerships. Beyond traditional fire and EMS incident response training, ACFR should also host and participate in more regular inter-departmental and inter-agency training with non-fire rescue departments, such as law enforcement agencies and public safety dispatchers.	**2**	**3**

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Fire Protection	**Recommendation 10:** ACFR should work with a third-party vendor that specializes in emergency response to update the Department's master plan, which can address ways to improve response time and overall service delivery. The updated master plan should include a standards of document cover, which divides the County into response zones based on population density, risk, and target hazards, and develops response targets for each response zone.	**2**	**3**
Fire Protection	**Recommendation 11:** ACFR should establish response standards based upon the population and area served, while prioritizing safety, legal compliance, and community needs.	**2**	**2**
Fire Prevention	**Recommendation 1:** The Life Safety/Internal Affairs Division should consider implementing a formal succession plan for the Fire Marshal position. The Fire Marshal would be able to use the designed succession plan to train the Fire Prevention Officers in case that the Fire Marshal is not able to perform their responsibilities.	**2**	**1**
Fire Prevention	**Recommendation 2:** ACFR should work with the City of Waldo to streamline the architectural drawing review process by making it so the Department does not need to send personnel out to the City to pick up physical copies of architectural drawings. ACFR could either ask that City of Waldo personnel deliver the plans to ACFR or develop a system for the City of Waldo to deliver plans to ACFR digitally.	**3**	**2**

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Fire Prevention	**Recommendation 3:** The Life Safety/Internal Affairs Division should develop a formal procedure for reviewing architectural drawings for compliance with the Florida Fire Prevention Code. Additionally, the Life Safety/Internal Affairs Division should consider creating job aide documents, such as checklists and step-by-step walkthroughs, which will help ensure that Fire Prevention Officers conduct reviews thoroughly and in a consistent manner. Job aides may be particularly useful when evaluating compliance with more technical parts of the Florida Fire Prevention Code that do not apply to every set of architectural drawings reviewed, such as sprinkler systems, fire alarm systems, and pre-engineered fire suppression systems.	**2**	**3**
Fire Prevention	**Recommendation 4:** ACFR should ensure that the Fire Marshal completes the ongoing formalization and digitization of the Fire Marshal's reference binders.	**2**	**2**
Fire Prevention	**Recommendation 5A:** ACFR should increase the number of State-certified Firesafety Inspectors within the Department so that the Department has sufficient staff to conduct fire and life safety investigations of County facilities. ACFR can meet this goal though some combination of hiring additional Fire Prevention Officers and certifying Lieutenants in the Fire Rescue Operations Section.	**2**	**3**
Fire Prevention	**Recommendation 5B:** ACFR should begin conducting required fire and life safety inspections of County facilities. ACFR should additionally begin to work with the Florida Agency for Health Care Administration, as appropriate and necessary, to conduct required fire and life safety inspections of hospitals within the County.	**1**	**2**

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Fire Prevention	**Recommendation 6:** Because of the importance of the interview notes from meetings with witnesses and employees under investigation, ACFR should look into working with a company that can create complete transcriptions of the recorded interviews. Having transcriptions of recorded interviews could be helpful if there is a complaint which requires a large number of interviews to be transcribed.	**3**	**2**
Fire Prevention	**Recommendation 7:** ACFR should review inspection fee schedules used by other comparable fire rescue departments once every three years and adjust the Department's fee schedules as needed to remain in line with industry trends.	**2**	**3**
Fire Prevention	**Recommendation 8:** The Fire Marshal should ensure that, as applicable, the Final Investigation Summary states relevant findings, violations of standard operating procedures, rules and regulations, the final disposition, and/or the Collective Bargaining Agreements ("CBA").	**2**	**2**

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Training Bureau and Health & Safety	**Recommendation 1A:** ACFR should evaluate and strengthen the overall infrastructure of the Department's training program, realigning positions and functions, and ensuring the training program has the necessary resources to meet State regulatory requirements and national standards. While the current model of on-shift Training Lieutenants ("TL") can be effective, the current model would function more effectively with the reintroduction of a Training Captain – a 40-hour employee who can bridge the gap between the Assistant Chief of Professional Standards and the TLs, and who can directly interface with the Captains of Health & Safety (the HSO) and Recruitment & Public Education. The Department should evaluate whether all of the responsibilities currently performed by the TLs are appropriate for a Lieutenant-level employee, or whether certain rote administrative tasks (such as entry of certifications into the Learning Management System) can be performed by non-certified personnel. As the Department continues to grow to meet the demands of the County, the Training Division's staff and infrastructure should proportionally grow in order to ensure the regulatory training needs of ACFR are met and to ensure Department employees are properly prepared to mitigate risk and liability.	**2**	**3**

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Training Bureau and Health & Safety	**Recommendation 1B:** The Department should formalize a position description or policy chapter for the Training Lieutenants ("TL") that outlines the specific number of years that a Lieutenant is able to serve in the Training Lieutenant position. The formalized position description should also include specific job responsibilities and criteria a Lieutenant must possess in order to be eligible to become a TL. The Department should strictly follow the formalized position description and its eligibility requirements in order to stay consistent in the selection of TLs and the duration that a Lieutenant may be allowed to be in the TL position. The Department should consider expanding the rotation among Lieutenants serving in the TL position beyond the one-year cycle currently implemented through informal policy.	**2**	**1**
Training Bureau and Health & Safety	**Recommendation 2:** The Department should ensure it is continuously evaluating functions, such as controlled substance management and administration, on-the-job injury tracking and reporting, and vehicle accident reporting, to ensure that these functions are adequately documented, and appropriately assigned to positions based on like functions and not the individual currently in the position. ACFR should develop specific policies that set the expectations and governance of the HSO role and overall health and safety program, rather than just provide a job description of the HSO role with a list of disconnected duties and responsibilities. Additionally, the Department should ensure functions assigned to the HSO are appropriately maintained and continued when there is a vacancy in the HSO role by ensuring appropriate staff are cross-trained and policies provide identification of the roles that are responsible for covering the HSO's duties during a vacancy.	**1**	**2**

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Training Bureau and Health & Safety	**Recommendation 3A:** The Health and Safety Officer ("HSO") should develop a policy chapter governing the responsibilities and operations of the Safety Committee to ensure all statutory requirements are met even in the absence of an HSO.	**1**	**1**
Training Bureau and Health & Safety	**Recommendation 3B:** ACFR should evaluate the current composition of the Safety Committee to ensure it is compliance with Florida requirements. Once the Department has met compliance standards, it should develop strategic goals and objectives to drive the mission and use of the Safety Committee. The County may also need to consider an appropriate authority level for the Safety Committee, which may include reporting directly to the County Manager or Risk Manager for certain performance metrics or reports.	**2**	**2**
Training Bureau and Health & Safety	**Recommendation 4:** ACFR should work with the HR Department and the County Attorney to determine whether the CBAs are compliant with *Florida Statutes* and the *Florida Administrative Code* regarding the inclusion or non-inclusion of the ACFR Safety Committee.	**3**	**2**
Training Bureau and Health & Safety	**Recommendation 5:** ACFR should encourage a culture of proactive communication regarding trends and behaviors that could lead to injury, loss, and property damage. The composition and functionality of the Safety Committee should encourage employees to raise concerns of unsafe behavioral trends and near-miss situations to the Safety Committee for discussion by employees of all levels on how to mitigate and avoid potential risk, liability, and dangerous situations. The Safety Committee should encourage a welcoming environment for general discussion and sharing of ideas rather than a forum to air complaints.	**2**	**3**

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Training Bureau and Health & Safety	**Recommendation 6:** ACFR should evaluate the current training needs of the Department and ensure training facilities meet the requirements set by the Insurance Services Organization, NFPA, and the Training Division. If ACFR leadership determines the current training facilities do not adequately meet Departmental needs, ACFR leadership should work with County leadership to identify opportunities to upgrade the Loften Training Center or opportunities for one or more new training complexes in the County (including possible joint facilities with other local municipalities). The Department should consider the following, at a minimum, when evaluating training facility needs: • Adequate equipment storage, including appropriate levels of security and a check-out system for equipment; • A full inventory of equipment of tools, including reserve apparatus, extrication equipment, hoses, and ladders; • Utilization of the burn building's third floor and regular reconstruction of the structure's burn box to avoid unsafe conditions due to excessive wear and tear; • Certification and recertification inspections by Department staff on an annual basis and by a licensed engineer on a five-year basis; • Accessibility to the facility for heavy apparatus, both in terms of travel time for remote units and road conditions leading to the campus; and • Inclusion of a concrete pad and driving course appropriate for training and testing on fire rescue apparatus.	**2**	**3**

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Facilities	**Recommendation 1A:** ACFR should develop and execute a plan to continue installing hurricane-rated bay doors and/or window shutters on all new fire stations. ACFR should develop and execute a plan to retrofit current stations with hurricane-rated bay doors and/or window shutters.	**1**	**2**
Facilities	**Recommendation 1B:** ACFR should develop and execute a plan to ensure that all current stations have an auxiliary power source that can be operated from inside the station and will provide power during emergency conditions. New ACFR stations should include an auxiliary power source that can be operated from inside the station in the station's design.	**1**	**3**
Facilities	**Recommendation 2:** In order to promote higher quality sleep and provide personnel with additional privacy, ACFR should create and execute a plan to adapt all current stations with shared bunkrooms to have private or semi-private sleeping quarters. Additionally, new ACFR stations should be designed to provide all on-shift personnel with private or semi-private sleeping quarters.	**2**	**3**
Facilities	**Recommendation 3:** ACFR should ensure that all stations have access to a clean and healthy environment in which station personnel can exercise. ACFR should additionally implement a policy that limits time spent in the apparatus bays to emergency response, practical training, equipment maintenance, and other activities that can only be reasonably performed in the apparatus bays. New ACFR stations should include a space in which staff can exercise other than the apparatus bays.	**1**	**2**

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Facilities	**Recommendation 4:** ACFR should develop and execute a plan to install carbon monoxide detectors in all stations that do not currently have a carbon monoxide detection system. New ACFR stations should include carbon monoxide detectors.	**2**	**1**
Facilities	**Recommendation 5:** ACFR should pursue grants to fund the installation of exhaust capture and removal systems in station apparatus bays. New ACFR stations should include exhaust capture and removal systems.	**2**	**3**
Facilities	**Recommendation 6:** When planning the renovation of current stations and the construction of new stations, ACFR should create stations that meet station construction standards and best practices, including the following, described in Appendix B: • Automatic Sprinkler Protection • Cancer Prevention Engineering • Back-In Bays • Hurricane Protection • Facility Security • Separate Sleeping Quarters • Heart Safe Alert Tones • Decontamination Area	**2**	**3**
Facilities	**Recommendation 7:** ACFR should support the bay door preventative maintenance program that Alachua County's Facilities Management Department is starting up and should track bay door downtime to evaluate the program's effectiveness. Additionally, ACFR should explore options for increasing the reliability of and/or reducing the wear and tear experienced by bay doors in future stations.	**2**	**3**

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Equipment/Vehicles	**Recommendation 1:** ACFR should review the upcoming years of their vehicle replacement cycle and communicate with vendors to ensure that the Department will be able to take delivery of vehicle orders on schedule. If vendors communicate that manufacturers will not be able to meet ACFR's scheduled delivery dates, ACFR should begin making plans to mitigate any delays to vehicle delivery.	**2**	**3**
Equipment/Vehicles	**Recommendation 2:** ACFR should closely monitor response times and outcomes related to EMS calls in the southeast of the County. If EMS response times are particularly high or if EMS outcomes are particularly poor in the southeast of the County, ACFR should consider stationing a response unit in the area.	**2**	**3**
Information and Technology Office	**Recommendation 1:** The Information and Technology ("IT") Office should work to develop data collection practices, preferably formally documented, to better understand workload, peak demand, and current performance. ACFR, in working with the County, should leverage data collections to perform workload and staffing analysis to establish a staffing model and position count that better reflects the needs of ACFR and its priorities for response. Based on the results of the data collections and workload and staffing analysis, ACFR should determine the appropriate employee count and seek to add the needed additional positions. This data will need to be utilized in conjunction with data about the non-traditional IT functions that are performed by the IT Office, particularly related to Unmanned Aircraft System ("UAS") Program operations and UAS on-call service delivery.	**2**	**2**

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Information and Technology Office	**Recommendation 2:** The IT Office should work with the County IT department to document and formalize how responsibilities are allocated between the IT Office and the County IT Department, including more formal documentation of handoffs and dependencies. The IT Office should evaluate the division of responsibilities and identify opportunities for adjusting the existing division of responsibilities to ensure consistent allocation of responsibilities in line with other departments with internal IT functions, and be based more on industry norms and not the skillsets and experience of individuals currently in positions.	**2**	**2**
Information and Technology Office	**Recommendation 3:** ACFR should work with the County's IT Department to develop a formal process for business cases related to new or upgrades technology systems, software, or other applications. This process should include identification and engagement of relevant stakeholders, both within ACFR and the County's IT Department, early in the process, and establishing a formal workflow for needs assessment, evaluation of existing resources, cost and capacity evaluations, and change management assessment. This process should also include identifying a project management champion who can lead the project and ensure that the project timeline and budget are maintained, and that all potential impacted units have an opportunity to review and provide feedback on the proposed solution.	**2**	**2**

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Information and Technology Office	**Recommendation 4:** ACFR should include a contractual clause that requires compliance with the Florida Information Protection Act's breach reporting requirements in all future contracts with vendors who may process or store Personal Information, as well as define notification procedures and timelines for notifying Alachua County of any breaches or other security incidents that may impact Alachua County data stored on third-party servers.	**2**	**2**
Information and Technology Office	**Recommendation 5:** ACFR should support the County's plan to introduce additional vulnerability scans and conduct additional penetration testing during the coming fiscal year. The ACFR IT Office should collaborate with the County IT Department to ensure that ACFR's Protected Health Information and Personal Information is included in vulnerability scans and, as appropriate, subject to penetration testing. The ACFR IT Office should evaluate the results of vulnerability scans and penetration tests and make appropriate improvements to the Department's data security and privacy system.	**1**	**2**
Information and Technology Office	**Recommendation 6:** ACFR should work with County IT to develop a policy related to the use of USB flash drives and local downloads of protected data. As appropriate, the IT Office may need to work with County IT to implement tools and physical limitations to encourage and monitor compliance.	**2**	**1**
Information and Technology Office	**Recommendation 7:** ACFR should work with County IT Department to develop a standard audit procedure, to include sampled testing of ACFR employee's access to ESO records, personnel files, and other sensitive data. This procedure should include testing of access by field staff, billing staff, and leadership within the Department.	**2**	**2**

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Information and Technology Office	**Recommendation 8:** ACFR should work with County IT Department to develop a standardized Incident Response Testing Plan related to the storage of and access to Protected Health Information and Personal Information. The testing plan should include steps for testing, required roles, the criteria for a successful test, evidence requirements, and reporting. ACFR and the County's IT Department should schedule formal standardized annual testing of the Incident Response Plan, record the exercise results and identify any action items to improve the process, track all action items to completion, and regularly provide updates on progress to leadership.	**2**	**2**
Central Supply and Inventory Management Office	**Recommendation 1:** ACFR should consider moving the Central Supply Warehouse ("CSW") to the Fire Rescue Operations Section, under the supervision of a sworn officer. The Program Manager position should remain in the Finance and Administration Section, to reflect that role's primary purposes. If these changes are implemented, ACFR should assess if the Program Manager should continue to be housed at CSW, or if this position should be moved to Headquarters with the rest of the Finance and Administration Section.	**2**	**2**
Central Supply and Inventory Management Office	**Recommendation 2:** ACFR should conduct fit-gap sessions to ensure it is maximizing use of features, and determine if CSW processes should be revised to better take advantage of availability technology and efficiencies.	**2**	**1**

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Central Supply and Inventory Management Office	**Recommendation 3:** The Department should stop using manual inventory distribution processes for in-person distribution. ACFR should consider placing a tablet or other computer at the front desk of the warehouse and ask crews to make their requests in Operative IQ, to ensure that the distribution is recorded timely and that it is always reported as distributed to the accurate station, truck, or kit, as applicable.	**2**	**2**
Central Supply and Inventory Management Office	**Recommendation 4:** ACFR should consider creating a Quartermaster position who would be responsible for measurement, ordering, and distribution of uniform components. The Department should also ensure that all uniform components are clearly described and recorded by size in Operative IQ.	**3**	**3**
Central Supply and Inventory Management Office	**Recommendation 5:** The County should ensure that space planning and design for a new space takes into account the current and future inventory space needs of the Department, including dedicated space for hazardous materials, dedicated space for uniform storage and management, as well as space safety and security concerns. The new space should be designed utilizing the Center for Public Safety Excellence's Quality Improvement for the Fire and Emergency Services 10th Edition. Specific criteria can be found in Appendix A.4. The M&J Team's specific thoughts about space considerations may be found in Appendix A.5.	**2**	**3**

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Central Supply and Inventory Management Office	**Recommendation 6:** ACFR should consider assigning an employee to coordinate the Department's Hazard Communication Standard ("HCS") compliance, as recommended by the U.S. Occupational Safety and Health Administration ("OSHA"). ACFR should also compile a list of all hazardous chemicals stored at CSW, as recommended by OSHA. The hazardous chemicals list should indicate each chemical's intended use and determine whether the chemical qualifies for one of the exemptions from HCS's Safety Data Sheet ("SDS") requirements. If ACFR designates someone as HCS coordinator, this individual should be responsible for compiling the hazardous chemicals list, as well as tracking disposal of hazardous materials and expired medication and medical supplies through receipts or other contractor reporting documents. ACFR should obtain properly formatted SDSs for all non-exempt hazardous chemicals and make them available to employees, both on Target Solutions and as a paper copy at the CSW. If ACFR designates someone as HCS coordinator, this individual should be responsible for obtaining and storing all SDSs. While the M&J Team has evaluated ACFR's compliance with the SDS requirements of HCS, ACFR should evaluate their compliance with the remaining sections of HCS, and develop policies and procedures that reflect the protocol for ensuring compliance with all HCS requirements.	**1**	**2**

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Central Supply and Inventory Management Office	**Recommendation 7:** The Department should document and formalize procedures in place at CSW, and consider developing a full Standard Operating Procedures for the Office. This should include development of a process for consistent evaluation of the maintenance and repair costs and timeline of assets, as compared to surplus or other disposal means.	**2**	**2**
Emergency Management	**Recommendation 1:** The County should ensure that the designer and planners tasked with the new Emergency Operations Center ("EOC") consult with the Emergency Management Director, as well as review Federal Emergency Management Agency ("FEMA") guidelines, checklists, and recommendations for EOC design and space utilization.	**2**	**2**
Emergency Management	**Recommendation 2:** ACFR and ACEM should revise the Healthcare Facility Emergency Plan Review Standard Operating Guide to include a procedure to provide the notice required in Section 27P-20.007(2), *Florida Administrative Code*. ACEM should explore using monday.com's automation feature to ensure that the required notifications are sent automatically, without requiring additional work from plan reviewers.	**2**	**2**

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Emergency Management	**Recommendation 3:** ACFR and ACEM should review the healthcare facility plan review fee schedule on ACEM's website and revise the fee schedule as needed to ensure that submitters clearly understand the fees that ACEM may charge for healthcare facility plan review under Section 27P-20.003(3), *F.A.C.* Additionally, ACEM should inspect the Excel template used to prepare healthcare facility plan review invoices to verify that the invoice fully complies with healthcare facility plan review fee maximum established in Section 27P-20.003(3), *F.A.C*.	**2**	**2**
Emergency Management	**Recommendation 4:** During the next update of each emergency management plan, ACEM should consider enhancing the details for all information included in each emergency management plan, as appropriate relevant to other reference materials. ACEM and the Local Mitigation Strategy Working Group should consider identifying how personnel and designees are identified, selected, or appointed; listing the discrete tasks and timelines for processes and procedures; and describing the County's capabilities for performing key functions and achieving State and Federal requirements. ACEM should avoid relying too heavily on references to other plans and documents that may not be kept at permanent hyperlinks, or should include additional information on how to access documents if hyperlinks stop working. ACEM should consider repeating information and details across sections and documents, when appropriate, in order to provide ease of reading and understanding for all users of the plans. ACEM should review Florida Division of Emergency Management ("FDEM") and FEMA-issued checklists and guidelines to best understand what details and competencies should be demonstrated in each respective emergency management plan.	**2**	**2**

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Emergency Management	**Recommendation 5:** ACEM maintains two Continuity of Operations ("COOP") plans – one for ACEM and one for the EOC. The M&J Team did not receive any other COOP plans governing other departments or the County as a whole as part of the relevant information request, and the M&J Team did not request any Continuity of Government ("COG") plans in use as the scope focused on COOP plans. While the State of Florida does not require COOP or COG plans for county governments, FDEM recommends county governments implement COOP and/or COG plans to ensure key operations, functions, and authorities are maintained throughout an emergency.	**2**	**2**
Emergency Management	**Recommendation 6:** ACEM should consider incorporating detailed descriptions of how Alachua County will interface and interact with all levels of government during an emergency, ranging from local municipalities to contiguous counties to regional, State, and Federal agencies.	**2**	**2**
Emergency Management	**Recommendation 7:** ACEM should continue to support the Alachua County Department of Information and Telecommunications Services ("ITS") in matters related to cybersecurity and analysis on critical infrastructure vulnerabilities due to cybersecurity breaches. When FDEM issues guidance on State ESF 20 (Cybersecurity), ITS should review the guidance and provide recommendations on incorporating ESF 20 into the Alachua County Comprehensive Emergency Management Plan if ITS and ACEM deem it appropriate.	**1**	**2**

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Emergency Management	**Recommendation 8:** The County should formalize their relationship with Amateur Radio Emergency Services through a Memorandum of Understanding ("MOU") that defines deployment of ARES personnel and equipment during emergency response activation. ACEM should work with the County to determine if staffing and resources are available to promote and then support the development of other emergency response volunteer groups, such Citizen Corps Councils, or Community Emergency Response Teams.	**2**	**2**
Enhanced 911/ Communications	**Recommendation 1:** The County should consider creating a GIS Manager or GIS Coordinator position, either within ACFR or at the County level. The GIS Manager would manage the technical and administrative aspects of ACFR's GIS functions and allow the E911 Section's current GIS staff to focus on their addressing functions. Having a GIS Manager could also encourage greater County-wide collaboration regarding the County's various GIS functions.	**2**	**3**
Enhanced 911/ Communications	**Recommendation 2:** ACFR should explore options for creating a unified ticketing system that is integrated with Esri's ArcGIS suite of software. Several other divisions within ACFR use monday.com, which is one of the three current addressing tracking systems, to organize files and monitor the status of various tasks. Alachua County Emergency Management, for example, uses monday.com to collect and store documents and track the status of plan review requests. monday.com is highly customizable and it is possible to integrate monday.com with Esri systems. This ticketing system could also be used to track the progress of information requests that the E911 Section receives.	**3**	**2**

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Enhanced 911/ Communications	**Recommendation 3:** The E911 Section should evaluate their primary functions and begin tracking additional performance metrics that provide a more complete picture of the E911 Section's performance. Performance metrics to consider tracking include time to respond to error reports, frequency of error reports, radio outages, frequency of interruptions to the Combined Communications Center's ("CCC") answering and dispatching service, and time to resolve interruptions to the CCC's answering and dispatching service. This data should be reviewed regularly for themes or trends in issues or errors, to ensure that root causes are identified and addressed.	**3**	**3**
Enhanced 911/ Communications	**Recommendation 4:** ACFR should assess the distribution of radio-related responsibilities throughout the Department as part of the process of assuming management of the GRUCOM trunked radio system. If supported by the assessment of the Department's radio responsibilities, ACFR should consider consolidating all radio-related functions into a single organizational unit.	**2**	**2**
Enterprise-wide	**Recommendation 1:** ACFR leadership should regularly review the resources allocated to each service offered by the Department (EMS, fire protection, fire prevention, training, etc.) and ensure the resources allocated are meeting the needs of the personnel conducting those services. When identifying new systems and resources, the Department should ensure systems and resources meet the needs of all services and do not hinder one service while providing benefit to another.	**1**	**3**

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Enterprise-wide	**Recommendation 2:** ACFR should encourage and incentivize certification for personnel (especially field personnel) who fulfill certain functions, such as instructors or fire safety inspectors. As the Department allocates resources to strengthen training and fire prevention services, ACFR should consider requiring certifications, such as Fire Instructor, Live Fire Training Instructor, and Fire Inspector, for field personnel fulfilling functions other than incident response. ACFR can consider State certifications, as well as certifications from industry associations. ACFR should also consider State certifications for field and non-field personnel serving in health and safety positions, including Incident Safety Officer and Health and Safety Officer.	**2**	**3**
Enterprise-wide	**Recommendation 3:** The Department should continue to investigate opportunities to strengthen leadership and management skills among staff members. ACFR should consider enrolling senior Departmental leadership in the Executive Fire Officer Program offered through the National Fire Academy in Emmitsburg, Maryland. ACFR should further consider enrolling mid-level officers in the Managing Officer Program offered through the National Fire Academy.	**3**	**3**

Section	Recommendation	Priority/Sense of Urgency: 1 = High 2 = Medium 3 = Low	Suggested Time for Implementation: 1 = <90 days 2 = 91-180 days 3 = >180 days
Enterprise-wide	**Recommendation 4:** The Department should utilize NFPA standards, along with the Center for Public Safety Excellence's "Quality Improvement for Fire and Emergency Services, 10th Edition Accreditation Model" to develop and organize its policies and procedures. Updated standard operating procedures/standard operating guidelines should be organized into categories (such as Operations, EMS, Fire Prevention) and should be accompanied by Rules and Regulations. Once a complete set of policies and procedures has been established, all staff should be briefed on the revised documents, and instructions should be provided on how to access and review these documents. The Department should also ensure that it develops a process for regular review and revision of the policies and procedures. This review process should include reviews for compliance with applicable industry standards and regulations, whether the process can be revised or enhanced to reflect leading practice, and whether the procedures reflect current operating practices.	**1**	**2**
Enterprise-wide	**Recommendation 5:** The Department should develop a succession plan process for each position above the Lieutenant rank. The succession plan policy should include clear training goals for the current employee who wishes to take on the specific role, as well as clear steps for the individual currently within the management-level role on how to train the employee reporting to them in regard to the management-level position.	**1**	**2**

Section	Recommendation	Priority/Sense of Urgency: 1 = High 2 = Medium 3 = Low	Suggested Time for Implementation: 1 = <90 days 2 = 91-180 days 3 = >180 days
Enterprise-wide	**Recommendation 6:** ACFR should evaluate the Department's functions and develop a data collection and usage strategy. The Department should build its data collection and usage strategy around a list of questions that data can help to answer, not around a list of data that the Department currently collects. Department management should work with the ACFR IT Office, the County IT Department, and technical experts in the Department's various Sections to use technology to automate data collection wherever possible. The Department's data strategy should cover using data both retrospectively, to evaluate past performance, and prospectively, to determine how to best meet future needs. Finally, the Department's data strategy should be transparent and allow for ACFR personnel to become engaged in the data collection and analysis process.	**2**	**3**