

June 2024 **Final Report** Leon Valley, Texas



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Standards of Cover and Utilization Study.

"The City of Leon Valley Public Safety and Public Works employees provide effective and responsive services to the residents and visitors of the City of Leon Valley." (Fitch-2024)

Background:

In 2023, the City of Leon Valley, Texas contracted with Fitch & Associates to analyze the workload and performance of Fire & EMS, Police and the Public Works Departments. This analysis was conducted by our team using data retrieved from the Computer Aided Dispatch (CAD) System, onsite and telephone interviews, and review of relevant and financial documents. Each department was assessed individually, however, the reports are consolidated into one master executive report for ease of reading and discussion. The Fitch Team would like to thank the City Council, City Manager and City Staff for their guidance and assistance during the process.



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Public Works

The process for the public works evaluation included an evaluation of historical call outs and projects, with the individual work assignments being categorized by type, priority, relevant work department, complexity and if the task is planned or reactive. Typically, Public Works Departments do not have the same level of CAD Data detail compared to Emergency Services. In order to yield a comprehensive picture of the current workload data about call outs and projects will be supplemented by interviews with members of the department themselves to add greater clarity and understanding about job-related tasks and workload.

Fire & EMS

The City of Leon Valley Fire & EMS Department completed a Community Risk Assessment and Standards of Cover (SOC) study in 2024. The completion of the SOC included the completion of a department review evaluating response time data and GIS mapping. This comprehensive assessment of risks and demand was completed for the purpose of providing department leadership and city officials with the necessary information to make informed decisions now and in the future. The Executive Summary highlights the most substantive options and alternatives for the department.

Police Department

City of Leon Valley Police Department underwent a comprehensive analysis of all aspects of their current workload using a data driven approach. The review examined proactive, reactive, and administrative workloads, response time, support and investigative workload and environmental impact factors. The findings and recommendations position the City to ensure the department is positioned for sustainable success, and meets or exceeds industry standards. The Executive Summary details the most critical next steps for the department to achieve their objectives.

Leon Valley, Texas **Public Works**



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Executive Report

he City of Leon Valley has contracted with Fitch & Associates (*FITCH*) to independently evaluate several functions within the city. This Executive Summary Report will cover the Public Works Department which includes utilities, fleet, construction, and maintenance. The Public Works Department is clearly trying to become a best practice operation. This was demonstrated through the Department's work to apply for accreditation through the American Public Works Association (APWA).

The Public Works Department is a multi-functional department whose mission it is to construct, operate, improve, maintain, and repair the facilities, infrastructure, and other assets, to include streets, sidewalks, curbs, drains, right-of-ways, traffic control systems and signage, city buildings and facilities, parks, grounds, vehicles and equipment, and the water and sewer system. The Department strives to provide excellent and efficient customer service to citizens and visitors. The Department assists with other city functions by providing support for activities such as subdivision, building, and utility construction plan review; code enforcement and animal control activities; janitorial services; traffic counts; and special events. The Department also administers Texas Department of Transportation (TxDOT) projects.

New responsibilities and/or services have been assigned to the Public Works Department over time. Significant changes in levels of service expectations have occurred and will require periodic review to determine the need for reorganization and/or additional personnel to fulfill the Public Works Department's mission and service demands.

Overall there were seven (7) priorities that the *FITCH* team has identified as additional recommendations for department wide improvement. There are also observations and recommendations listed throughout the report.

Top 7 Priorities

- 1. Reassess levels of service expectations for public works on a biennial basis.
- 2. Consolidate Customer Relationship Management Systems (CRMs) into a single cloud-based application.
- 3. Increase the Fleet Maintenance function by one (1) FTE.
- 4. Align the Department's strategic plan with the city's planning process.
- 5. Establish Department Key Performance Indicators (KPIs) for future planning and analysis (see examples on Page 14).
- 6. Consider adding additional FTEs or contracting options after establishing and reviewing key performance measures.
- 7. Support APWA accreditation efforts of the Public Works Department.

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City and Department Overview

eon Valley is a Home Rule City, with an area of 3.5 square miles, completely surrounded by the City of San Antonio, and located in the northwest sector of Bexar County. According to the 2022 U.S. Census, the current population is 11,429. The city is also a "full service" community, providing police, municipal court, fire, EMS, public works, community and economic development, and administrative services to its citizens. The Public Works Department supports the city's Master Plan objectives through each of the following planning elements:

- Transportation and Thoroughfare
- Community Services
- Environment
- Economic Development
- Housing/Neighborhood

Vision

The Department's Vision is to the be the "best maintained" and "best served" community in the San Antonio metropolitan area.

<u>Mission</u>

To construct, operate, maintain, and repair the city's infrastructure including streets, sidewalks, curbs, drains, right-of-ways, traffic control systems and signage, marquees, buildings, parks and other public structures and facilities.

he Public Works Department has 25 authorized positions. The Department is composed of a group of administrative personnel and three crews: Facilities and Grounds Maintenance, Construction, and Water Utility Services. Administrative personnel include the Director, Assistant Director, and Administrative Assistant/Utility Billing Clerk. The Department also has a mechanic that handles equipment and fleet maintenance. On-call personnel are available 24-hours every day to respond to emergency service needs.

Administrative offices are open each weekday from 7 a.m. to 4 p.m., with the exception of holidays. Public Works Crews work from 7 am to 3 pm every day.



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City and Department Overview

Project management is handled "in-house" by a Director, Assistant Director, and Water Utility Foreman. For larger projects that are contracted, the City Engineer provides assistance. Additionally, Public Works staff participates in providing assistance and support for special events and emergency operations.

The Department provides safety and risk management training coordinated by the Human Resources Department. All personnel are trained in accordance with their job descriptions, department, and state requirements.

It is the Public Works Department's goal to build each employee's skill set and knowledge level, build and maintain a true team environment, and become a full service department. This will reduce dependency on outside vendors and agents to perform required tasks, increase response time in resolving service requests from citizens, and reduce the number of service requests by the strategic planning of activities.

Observations

- 1. The Department is logically organized in accordance with industry best practices.
- 2. The leadership team and staff demonstrate a high degree of competence, and commitment to professionalism.
- 3. The Department is a good steward of city funds by careful management of the City Council-approved budget.



Public Works Department Organization





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Sustainability

he Public Works Department continues to work on sustainability efforts when they are reasonable and effective. Below is a list of some of the sustainability programs the Department oversees:

- Water conservation ordinances
- Planting 10,000 trees in the city by 2025- 7500 have been planted to date 04/2024
- Conservation kits
- Home energy audits
- Earthwise Event
- Recycle street milling materials
- Xeriscape rebate program
- Chip trees when removed
- Low flow toilet rebate program
- Rain barrels
- Energy efficient washing machine rebates
- Garbage recycling program

The Department has an opportunity to move toward the APWA best practices. Much of the improvement is about documenting the work that is already being accomplished by the Department. None of the environmental management systems fully met the best practice by APWA. In order to meet best practices in sustainability, the Department would be served well to create a sustainability strategic plan that identifies long term goals, stakeholders, measurements, and document the areas identified by the APWA accreditation process.

Observation

The city has an exemplary awareness of the need to preserve the environment and has invested in several successful sustainability initiatives.

Recommendation

The Department should develop a sustainability "strategic plan" in cooperation with policy makers, the chief administrator and the community and the Departments to ensure sustainability goals are being met.

		RES NO 07-019
		RES. NO. 07-019
	A RESO	LUTION
	ADOPTING "EL VERDE BY 2020" P SUSTAINABILITY FOR THE CITY O	LAN FOR ENVIRONMENTAL F LEON VALLEY
envir	WHEREAS, the City of Leon Valley w onmental sustainability for its citizens a	ishes to adopt a program to insure nd its future; and
ts he	WHEREAS, the Leon Valley commun eritage, its environment, and its future.	ity has long been committed to preserving
NOV LEO	V, THEREFORE, BE IT RESOLVED BY N VALLEY, TEXAS, THAT:	THE CITY COUNCIL OF THE CITY OF
1.1	It will be a goal for the City organization	on to become carbon neutral by 2020; and
2.	The City of Leon Valley is committed Leon Valley tree canopy by 2020; and	to the preservation and expansion of the
3.	The City of Leon Valley shall promote 2020 with the goal of 20% of its struct	green home and business construction by ures completely green by 2020; and
4.	The City of Leon Valley will commit to irrigation sources, and xeriscaping by	water consumption reduction, alternative 2020; and
5.	The City of Leon Valley will adopt me Leon Valley to become *EI Verde by 2	asures to reach the goal for the City of 2020."
PAS	SED and APPROVED on this the 5th da	y of November 2007.
		Omis Reley
ATTI	EST:	Mayor
	Marine faire -	
City	Sècretary	
	LON VALLA	
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,	* TEN	Res. No. 07-019

Creating a time bound plan in collaboration with policy makers, the chief administrator, the community, and other departments will position the Department to continue to be successful with sustainability initiatives.

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Technology

nformation technology and telecommunications are essential elements in delivering public works services. It is a best practice for technology and telecommunications platforms to be consolidated. At this time, the city has multiple Citizen Relationship Management (CRM) applications to track various community reported problems, which requires additional staff time to track and respond to community reported issues.

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Recommendation

 The city should consolidate their CRM systems into a single cloud-based application. This will reduce the need for duplicative data entry and allow a single dashboard of citizen and staff service requests.

Currently, the Department utilizes ShareNet, a software program for the reporting of internal and external service requests, fleet and other asset management, work orders, daily activities, and project management. This software is located on the Department's computer server, with each department computer having a desktop application. The information is entered into GoGov and then is input into Sharenet, which allows citizens to report any concerns or problems that require Public Works or other department intervention. The concern or request received via the website is either emailed to the appropriate department or entered into a queue based on priority, and is then attended to by the appropriate crew.

During FY-2023 there were 148 service requests via the current CRM with 135 being closed out by the end of the year: High priority (54), Medium priority (68), Low priority (13). Priority is determined by senior staff or the City Manager.

The Department uses Sharenet for asset management tracking. Asset Management Software (AMS) assists planning for future capital needs through an identified Repair and Replacement (R & R) schedule. Tracking assets can potentially round out large expenditures due to inconsistent preventative maintenance and replacement schedules. The Public Works Department does an excellent job at forecasting capital needs and may gain invaluable economies of scale by continuing to track both fixed and mobile capital assets service life.

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Utilities Department (Water and Wastewater)

The City of Leon Valley Public Works Department provides treated potable water for consumption and fire protection thru 38 miles of pipe to the over 2600 accounts. Sixty-six percent (66%) of the Leon Valley accounts receive their water directly from Leon Valley infrastructure and 33% receive their water from San Antonio Water Services (SAWS). The Texas Commission on Environmental Quality (TCEQ) conducts annual water quality testing and at the request of the city. Water is permitted to be drawn from the Edwards Aquifer by two city operated wells. The two plants are capable of drawing 2.5 Million Gallons per day with an average daily usage of 800,800 gallons per day. This provides adequate reserve capacity for major fire operations and increased demands on the system. The City also has an emergency interconnect with SAWS as a back up to the city's water system.

The City of Leon Valley also owns and maintains 45 miles of sanitary sewer mains and customer sewer laterals. The system is primarily 8" pipes and is gravity fed. Treatment services are provided by SAWS, who operates the wastewater treatment plant for the city.

Four (4) utility personnel provide required maintenance and operations for both water and wastewater systems as well as emergent services 24-hours per day. All utilities staff are required to maintain state required operating licenses and complete required training and safety classes.

Scheduled maintenance of the water and sewer system consists of flushing dead-end mains (~25), pumps/motors, hydrants, water tanks, televising (emergencies only), testing and replacing water meters, and chlorinator maintenance. Unscheduled maintenance includes main breaks, service line leaks, broken or inoperable water valves, replacing old fire hydrants (5-6 per year), sewer back-ups, and sewer main repairs.

The Fire Department is assigned hydrant flushing and testing duties. There are 1325 hydrants within the city limits; (~444) Leon Valley, (~405) Private, and (~476) SAWs hydrants.

Fire Department peak response activity is between 0700 and 2300 hours.



FITCH (2023) Leon Valley Fire Department data report.



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- 1. The city has invested in updating an aging infrastructure and ensured redundancy of the utilities system.
- 2. The Department has the proper standard operating procedures in place to ensure safe and effective operations.
- 3. Preventative maintenance tasks are not being completed on a regular basis including televising and cleaning sewer mains and exercising water system valves.

Recommendations

- 1. Explore separating the single "water fund" into separate Potable Water and Sewer funds. This would allow easier ability to bond as needed, and improve tracking of revenues and expenses.
- 2. Improve flushing, testing and documentation of testing the hydrant system throughout the city.
- 3. Consider outsourcing hydrant flushing and testing to a third party.

Note: Hydrant flushing and testing is best completed during normal business hours, which coincides with peak emergency response timeframes.

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Storm Water and Flood Protection

eon Valley is located in central Texas within Northwest San Antonio. With the rapid growth of urban cities surrounding Leon Valley, many small cities, such as Leon Valley, find they are experiencing more severe and frequent flooding problems along small creeks, streams, and other low areas. Urbanization leads to an increase in impervious cover, channel rectification that reduces channel storage, channel obstruction, and floodplain development.

Various studies have identified areas of drainage concerns, and localized flooding within the city. The most prevalent drainage concern for Leon Valley is Huebner Creek between Evers Rd. and Bandera Rd. The city's Engineer is currently designing improvements for these areas of concern.

The current stormwater system is permitted through the city's MS4 permit issued by the TCEQ and includes nine (9) miles of infrastructure and 64 inlet drains. This system includes drain pipes, inlet drains, bar ditches and creeks located through the city. The Department and city are prepared for flooding scenarios based on mitigation and preparedness efforts. In 2019, the city developed a Stormwater Management Plan. The purpose of the plan is to reduce or eliminating stormwater runoff pollution. Effective management of stormwater runoff will provide for improvement in the quality of the receiving water bodies, conservation of water resources, and protection of public health.

The city recently completed (January 2024) The Seneca West drainage project. The project was designed to develop the area, pull land out of the floodplain, and stop further erosion and damage to our streets. The Department also oversaw the Forest Meadow Drainage Project.

The city collects a stormwater fee that is solely being used for managing the stormwater management program.

The maintenance and upkeep is managed by the four (4) personnel also responsible for maintenance of roadways, curbs, sidewalks and trails.

The MS4 permit requires an annual report to the TCEQ. The city reports Best Management Practices that include public outreach, street sweeping (street sweeping is critical for aesthetics, environmental concerns, public health, and to prevent flooding) participation in the annual Basura Bash Creek clean-up event, inspection of construction sites, and maintenance of stormwater infrastructure.

Observations

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- 1. The Department has recognized the need for additional flood control measures and is addressing this in future projected capital needs.
- 2. Leon Valley has three flood monitoring stations including remote site equipment and a central Base Station. The system is capable of expanding to include hardware for high water detection to warn drivers that the road section ahead is flooded or impaired (via flashing lights and/or automatic barrier gate).
- 3. Since the city is vulnerable to flooding, Public Works is in need of a certified storm water inspector to conduct new construction inspections and to ensure the system is operating optimally. *Consider contracting this assessment out.*
- 4. The city should consider hiring a dedicated street sweeping technician over the next several budget cycles.

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Streets, Sidewalks and Right of Way

he City of Leon Valley has 42 miles of asphalt, 40 miles of sidewalks, and trails. The City also owns two bridges, the Huebner Bridge and the Evers Road Bridge. The Department recently completed its five-year Pavement Condition Index Study (PCI). The study scores roads and rank the roads on the need for repairs. Street are maintained by following the annual repair and maintenance plan. Additionally, the division is responsible for street signs, traffic control signs, and pavement markings at intersections in the city.



Over the last several years the Public Works Department has improved the walkability of the city and brought many crossings and sidewalks into Americans with Disability Act (ADA) compliance. The Department has also been proactive in repairing roadways and updating roads with mill and overlay in accordance with the Departments annual street repair and maintenance program. The Street Maintenance Fund yields approximately \$600,000 per year.

The construction crew is assigned to care for road repairs and construction less than 1000 feet, as well as curbs, sidewalks and driveway approaches. Any road work over 1000 linear feet is contacted out for service.

Observation

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- 1. A crew of four (4) personnel are responsible for the maintenance of 42 miles of asphalt, 40 miles of sidewalks and numerous trails.
- 2. The city has been successful at obtaining grants from different sources to offset city expenditures.
- 3. The current PCI average is 55% (2024), which is a significant improvement over the last assessment which was 44.8%.
- 4. The city has made considerable investment in roadway improvements since the last PCI study.

Recommendation

- 1. The city should consider renegotiating maintenance or outsourcing the task for maintaining state roads, which could garner additional revenue for additional staff or increase time for employees to accomplish other critical tasks.
- 2. Continue monitoring condition indexing of roadways.

Right of Way Maintenance (ROW) plays a crucial roles in the smooth operation of a city. The city currently has 37 miles of dedicated street ROW. Prompt maintenance of the ROW can ensure the efficient operation of city systems, such as transportation and stormwater systems. Over time, if not corrected, small maintenance issues can potentially evolve into larger and more costly problems. By being proactive, the city realizes money savings in the long term. Another benefit of ROW maintenance is that a well-maintained city may attract more tourists and investors, which could lead to the city's economic growth. The Public Works Department currently has four (4) authorized positions to ensure the ROWs are safe and well-maintained.

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Parks and Facilities

n 2020, the City of Leon Valley updated its (2014) parks, recreation, trails and open space master plan. This plan developed Department goals and objectives for implementation.

Parks enhance the quality of life in cities. There are numerous benefits of open space in urban areas, including physical and mental health improvements, social connections, and environmental sustainability. Urban parks offer opportunities for exercise, relaxation, and recreation, reducing the risk of chronic diseases and promoting overall well-being. They also serve as gathering spaces, fostering community engagement and social interaction. Furthermore, parks contribute to pollution reduction, biodiversity preservation, and climate change mitigation.

The parks crew should track the percentage of scheduled maintenance tasks completed on time and corrective maintenance response times. Tracking these measures will ensure that maintenance services are being delivered efficiently and effectively to maintain a clean, safe, and well functioning environment for city residents, visitors, and employees.

City	Park Acreage	Parks Employees	Population
Universal City	N/A	Outsourced	19,990
City of Live Oak	100	8	15,953
Fair Oaks Ranch	N/A	Operated by HOA	11,104
Leon Valley	120	4	11,429

Comparison of neighboring cities population, acreage, and staffing

Parks is currently staffed with one (1) crew leader, two (2) FT laborers, and one (1) temporary laborer.

The Facilities Division is responsible for the cleanliness, preventive maintenance and upkeep of city owned facilities. The crew is staffed with one crew leader and two laborers. The crew foreman is a certified pool operator and also a certified playground inspector. The Department should establish cleanliness standards and supervisors should conduct regular inspections to measure how many facilities meet or exceed standards. Other measures could include response times to cleaning requests or issues and customer satisfaction.

Observations

- 1. The Department has updated the parks, recreation, open space, and trails master plan (2020).
- 2. Over the last five years, the city has added 45-50 acres of additional park space bringing the total open spaces to 120 acres.
- 3. The parks appear well maintained and accessible to the public.
- 4. The Department has a 10 year capital plan for parks.

Recommendations

- 1. Review and update the parks, recreation, open space, and trails master plan.
- 2. Consider adding additional parks division performance metrics.
- 3. Consider developing performance metrics for custodial and maintenance services.
- 4. Consider adding additional full-time parks personnel to maintain current LOS due to added open space.

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Fleet Maintenance

The city maintains its fleet of over 150 vehicles and pieces of various specialized equipment. The Department has its own maintenance facility that is part of the Public Works Administration facility. The Department has an established 10-year capital outlay plan and vehicle replacement policy based on age, mileage and cost of repairs criteria. Fleet procurement is part of the annual budget process in cooperation with the Finance Department. Each department within the city is responsible for maintaining the asset. Additionally, fleet maintenance is proactive with preventative maintenance and is tracked in ShareNet.

The Fleet Division is staffed by one (1) Automotive Service Excellence (ASE) Technician. The repair facility is undersized and is not conducive to a productive and safe work environment. The Department completed a public works needs assessment and determined the same findings, see (Ardurra-LPA Report: July 2021).There are numerous vehicles and equipment left unprotected from the elements and vermin. There is no proper storage for vehicles and parts or proper ventilation during inclement weather.

Observations

- The Fleet Division has over 150 vehicles and pieces of equipment and is staffed with one (1) fleet/equipment mechanic. This does not include specialized fire / EMS equipment.
- 2. The fleet repair facility does not have adequate ventilation during inclement weather, space for vehicles and parts storage.

Industry best practices for fleet operations	Meets best practices	Criteria
Regular Vehicle Inspections by	No	Implement scheduled inspections to identify and address issues early.
operators		Conduct thorough checks on crucial components like brakes, tires, and fluids.
Preventative Maintenance	Yes	Develop a preventive maintenance schedule based on manufacturer recommendations.
		Perform routine oil changes, filter replacements, and fluid top-ups to prolong vehicle lifespan.
Software Management System	Yes	Utilize fleet management software to track maintenance schedules, work orders, and vehicle history.
Training and Certification	Yes	Provide training to fleet maintenance staff on new technologies and best practices.
Parts Inventory Management	Yes	Maintain an organized inventory of spare parts and supplies to avoid delays in repairs.
		Implement a system for tracking parts usage, reordering, and stock levels.
Data Analysis and Reporting	Development in Progress	Analyze maintenance data to identify trend and areas for improvement.
Emergency Preparedness	No	Contingency plans for unexpected breakdowns, accidents or disaster operations.
		Protocols for rapid response and recovery to minimize disruptions.
Continuous Improvement Processes	Partial- Accreditation process	Implement suggestions for improvement from stakeholders, staff, and industry benchmarks.

Staffing Analysis

The Department is organized into four divisions: utilities, construction, maintenance, and fleet. All divisions have a foreman that oversees the division. The utilities and construction foreman both have a crew leader and two laborers in their division. In the maintenance division there are three crew leaders and the division is further broken down into building, parks, and right of way (ROW). Each of those crew leaders in the maintenance division have three laborers in their work group. The building and parks maintenance workgroups have two permanent laborers and one temporary laborer* The Department is lead by a Director and Assistant Director. There is also a water utility billing position. It is notable that the fleet division is only staffed by a single mechanic for over 150 vehicles and pieces of equipment.

The organization of the Public Works Department is well thought out to ensure there is a logical arrangement of staff to supervision that aligns with the work that needs to be completed.

* Temporary employees become permanent after an initial probationary period.

Optimal span of control refers to the number of direct reports a supervisor can effectively supervise. Ideal span of control varies depending on the organization, complexity of tasks, and the skills of both the supervisor and employees. Leon Valley Public Works Department's span of control is in line with industry best practices and contributes to effective communications, employee development (training), and allows for more complex work to be accomplished, as well as, ensuring safe work practices. Subsequently, the city has allocated its limited staff to ensure the city is meeting its current service needs, but can improve effectiveness with some additions to staff over the next several years.

Public Works Staff participates in numerous "special events" that should be considered when determining needed staff. However, the number of hours and personnel should be tracked to determine time on task for these special events to make an objective assessment of the need for additional staff.

Assumptions

Without conducting extensive time-motion studies for each position, the assumption is made that each employee is making an honest and best effort to complete their assigned tasks and job duties.

Observations

- The Fleet Division has over 150 vehicles and pieces of equipment and is staffed with one fleet/equipment mechanic.
- 2. The city has allocated its staff to ensure the city is meeting its current service needs, but can improve effectiveness with some additions to staff over the next several years.



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Staffing Analysis

hen considering staffing needs, the Department, senior management, and the city should consider the following when requesting and authorizing positions:

- Population (service demand).
- Work load (volume and complexity of work).
- Budget analysis
- Level of Service (LOS)
- · Safety
- · Forecasted leave allocations (vacation, personal days).
- Unforeseen leave (FMLA, sick, military, workers compensation, etc.).

Based on population and a review of capital projects and the work orders it appears the Department is meeting service requests, and are currently meeting the city's needs. However, to be more effective, several additional positions need to be considered during the next several budget cycles (see recommendations sections). Across the industry, it is difficult to recruit and retain workers into public works organizations. The effect of this trend is an inexperienced workforce. The City of Leon Valley is not immune from this trend and has suffered the same setbacks in maintaining trained staff.

Comparison of PW Staffing- Cities in Bexar County Texas.

City	Sq. Miles	Population	PW Staffing
Universal City*	5.7	19,990	35
*Removed animal co	ontrol FTEs		
City of Live Oak	4.8	15,953	30
Fair Oaks Ranch	12	11,104	28
Leon Valley	3.5	11,429	25

Universal City- 2022 Annual Financial Report (AFR) Live Oak- 2023 AFR Fair Oaks Ranch 2023 AFR Leon Valley- 2024 Org. Chart

Observations

- 1. The Public Works Department appears to be currently meeting the service needs of the community.
- 2. The Department regularly participates in special events in the city.

Recommendations

- 1. Develop an employee recognition program.
- 2. Improve the consistency of task level and customer service training.
- 3. Establish performance metrics for the public works Department.



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Accreditation

eeking American Public Works Association Accreditation is a process where The City of Leon Valley Public Works Department measures itself against established industry best practices and will have a positive impact on the Public Works Department meeting its mission now and in the future.

The process includes the following elements:

- Self-Assessment
- Application
- Peer Review
- Evaluation by outside volunteer public works professionals
- Accreditation

The benefits of pursuing accreditation far outweigh the commitment and costs to pursue this elite status in the industry. "Noted benefits are significant improvement in productivity, employee morale from increased dialogue, cooperation, and teamwork to complete the process. The self-assessment process empowers employees through their involvement, therefore increasing employee satisfaction, improving communications and increasing effectiveness across the entire organization. The self-assessment process documents policies, procedures, practices, and programs that are valuable in capturing institutional knowledge when employees leave or retire. Additionally, the documents produced can be used for onboarding or training new employees of those who fill vacated rolls."

Substantial Compliance 26.5% Partial Compliance 22.9% Non-Compliance/None 3.8%

The Public Works Department should be commended of its efforts towards striving for APWA Accredited Agency Status. FITCH recommends that the city supports the continuing efforts to obtain accreditation. The most recent assessment fell short, however, significant ground was made toward the goal. The Department should work toward working on areas cited as "Substantially Completed," followed by "Partial Compliance" categories. This phased approach will create synergy to complete the process.

Recommendation

- 1. Garner support from the City Council, City Manager, the Departments and employees in accreditation efforts.
- 2. Consider providing funding and resources to complete accreditation process.
- 3. Used a phased approach to complete the accreditation process.





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Example Key Performance Measures

ey Performance Indicators (KPIs) are a quantifiable measure of performance over time for a specific objective. KPIs provide targets for organizations to strive for, milestones to gauge progress, and insights that elected officials, city managers, and the organization can use to make better decisions. Through the accreditation process, these should be readily identified and must be Specific, Measurable, Achievable, Realistic, and Time Bound (S.M.A.R.T). Every municipality is unique and requires introspection to determine the KPIs which demonstrate the effectiveness of a department.

The example KPIs provided are not intended to be overly prescriptive for the Department. The city and the Department should adopt the system performance objectives internally and update as needed.

1. Streets, Sidewalks, and Trails:

- Pothole repair times: Measures the average time it takes to repair a reported pothole.
- Road resurfacing: Percentage of city roads resurfaced or maintained in a year.
- Expansion goals

2. Water and Sewage:

- Water quality: Measure the percentage of water quality tests that meet health standards.
- Response time to water leaks or waste water issues.

3. Parks and Recreation (National Recreation and Parks Association) [NRPA]):

- Park maintenance: Measures the percentage of parks maintained to certain standards.
- Availability of recreational facilities: The percentage of recreational facilities available and operational.

4. Facilities and Custodial Services

- Overall cleanliness and hygiene of the facilities being cleaned.
- Response times on how quickly custodial staff respond to request for cleaning services.
- Overall customer satisfaction

5. Fleet

- Fleet availability- The amount of time the vehicle is in service and not in for repairs.
- Preventive maintenance goals met/not met.

6. Stormwater

- Compliance with stormwater regulations.
- Document a certain percentage (25%) of inlets you have inspected and repaired annually.
- 7. Special Events- Track the number of personnel and hours spent on special event tasks.

LEON VALLEY FIRE & EMS STANDARDS OF COVER



& ASSOCIATES

FITCH

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Executive Summary

he City of Leon Valley Fire & EMS Department completed a Community Risk Assessment and Standards of Cover (SOC) study in 2023. The completion of the SOC included the completion of a department review evaluating response time data and GIS mapping.

This comprehensive assessment of risks and demand was completed for the purpose of providing department leadership with the necessary information to make informed decisions now and in the future.

The Executive Summary highlights the most substantive options and alternatives for the department.

Overall, there were four main focus areas utilized to frame opportunities for system and performance improvement (see *"Focus Areas"*). Implementing necessary changes will done based on desired outcome and the probability of achieving the goal. he Department will benefit by requiring dispatch to track turnout and travel times separately. This will allow the department to accurately evaluate alignment with CFAI and NFPA guidelines.

The department may experience a shortage of personnel to meet the effective response forces (ERF) staffing needs depending on call volume and significance of incident.

The department should consider an alternative deployment model of one engine and two ambulances daily.

Introducing outcome measures to complement performance management strategies will provide a more holistic management of performance.

The department should develop a community focused three to five year strategic plan.

Focus Areas:

- Separate turnout and travel times to accurately evaluate alignment with CFAI and NFPA guidelines.
- 2. Consider committing to minimum daily staffing of (6) to ensure a dedicated deployment of one engine and two ambulances.
- Introduce outcome measures for future planning and decision making.
- 4. Develop a community focused three to five year strategic plan.





Observation

Leon Valley Fire Department provides high-quality fire

suppression, EMS, and fire

prevention.

Documentation of Area Characteristics

he Leon Valley Fire Department (LVFD) provides a range of services including fire suppression, EMS, fire prevention, hazardous materials, and technical rescue for the community of more than 11,500.

The City of Leon Valley is located in the northwest quadrant of Bexar County, 10 miles from downtown San Antonio. The heart of Leon Valley lies along State Highway 16, also known as Bandera Road, and is made up of approximately 3.5 square miles.

Leon Valley was developed in the 1940s as a farming community on Bandera Road between Helotes and San Antonio. The City of Leon

Valley was incorporated on March 31, 1952, when the local residents became aware that the City of San Antonio was preparing to annex the area.

The city is a full-service city with public safety departments including the Fire Department, Emergency Management Services, and Police Department. Operational departments include Administration, Community and Economic Development, Finance, Leon Valley Public Library, Municipal Court, and Public Works departments.

Residents as well as visitors find Leon Valley to be the gateway to San Antonio's leading attractions, Sea World and Six Flags Fiesta Texas, an equidistant nine miles between attractions. Bandera Road and Loop 410 are the primary arteries to these attractions and the employment base in the northwest sector. The City of Leon Valley is three miles from the Medical District, and eight miles to the San Antonio International Airport.



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Legal Basis

he City of Leon Valley is a Home Rule City operating under a Council-Manager form of government with a mayor and five City Council Members elected at-large. The Mayor and City Council Members hold two-year terms of office and are elected and serve on an at-large basis. [1]

he administrative and support functions provide direct support to the operations division. The office of the Fire Chief provides payroll and basic human resources, such as staffing and discipline. The Fire Chief reports to the City Manager who is appointed by a five member city council elected by the community. The City Council oversees the proper use of tax-payer dollars for the city.

11 https://www.leonvalleytexas.gov/community

Automatic/Mutual Aid

VFD has automatic aid agreements in place through the Alamo Area Fire Chiefs'. This agreement allows other departments to be dispatched simultaneously for calls involving fire of any kind. BCSO has the first through fourth alarm programmed into the dispatch console. This does not include Balcones Heights or Castle Hills due to them not being on the county dispatch system. These two agencies require telephone calls to alert their dispatch centers.

Leon Valley Fire Department adheres to the mutual aid agreement made under the authority of Leon Valley, Texas, Code of Ordinances, Article 5.03 Fire Department. The fire department of the city is hereby authorized to provide such firefighting, rescue, EMS and/or emergency equipment as is available in the

opinion of the chief of the fire department or other officer in charge of the fire department of the city, whenever firefighting or other type of emergency equipment or personnel is requested by the chief of the fire department or officer in charge of the fire department or the fire departments, emergency service districts or agencies that have approved the San Antonio Area Emergency Services Mutual Aid Agreement.

The department has mutual aid agreements with Shavano Park, Balcones Heights, Castle Hills, Bexar County Emergency Service District 7, Bexar County Emergency Service District 2, and Helotes.



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Community Risk Assessment

The Leon Valley Fire & EMS jurisdiction (i.e., Leon Valley, TX) was assigned a risk level based on a score composed of economicand demographic-related data (i.e., population density, square miles, median age of residents, median household income, unemployment rate, and percentage of homes ≥ 55 years old), and historic service data (i.e., community demand and call concurrency.

Data related to economic and demographic assessment variables, with the exception of square mile data, were exported from mySidewalk, and represent 2018-2022 data from the U.S. Census Bureau American Community Survey (ACS) 5-year estimates. Square mile information was also exported from mySidewalk, but was based on 2021 data.



Socioeconomic and Demographic Risks

A risk assessment process utilized socioeconomic variables such as median household income and unemployment, as well as demographic variables such as population density and median age. Other variables considered included square mileage, the number of moderate-, high-, and maximum-risk occupancies, and the percentage of homes older than 50 years old.

Variables of Risk

- Population density
- Square miles
- Median age of residents
- Median household
 income
- Unemployment rate
- Percentage of homes greater than 55 years old
- Number of moderate-, high-, and maximumrisk structures
- Community demand
- Call concurrency

Community risk levels are classified as low, moderate, high, or maximum, based on the resulting value of the risk matrices.

The jurisdiction was classified a moderate risk. A 3dimensional model was created to evaluate the unique risk profile.



FITCH

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Economic and Demographic Assessment

he population for Leon Valley, TX was defined using total population for 2018-2022 from U.S. Census Bureau data (i.e., 11,485), and the area of the jurisdiction in square miles from 2021 data (i.e., 3.47). As such, population density was calculated as the number of people per square mile in the jurisdiction.



For Example, older adults (e.g., 65 years and older) or the elderly (e.g., 85 years and older) have been found to experience higher rates of burns, falls, fires, and fire-related injuries or death, and have higher rates of ambulance transport and use of EMS, in general. The elderly are also one of the most vulnerable groups during and following disasters such as hurricanes, tornadoes, and earthquakes.



Research has demonstrated a relationship between age and the use of EMS and fire services or the events leading to the need for

Recommendation

It is recommended that the department continues to monitor socioeconomic and demographic variables correlated with changes in risk.

EMS and fire services. Both the use and need of services tend to be highest among older adults, as compared to those in younger age groups.The median age for Leon Valley residents is 39.2 years old.



Population alone is not the sole variable that influences demand for services, as socioeconomic and demographic factors can ultimately have a greater influence over demand.

Median household income was evaluated to determine the degree to which the community had underprivileged populations. According to the U.S. Census Bureau (2022), the Texas median household income is reported at \$72,284. The median household income for the city of Leon Valley was \$58,784.

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FITCH

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Critical Tasking and Staffing to Risk

ire, EMS, Hazardous Materials, Technical Rescue related critical tasking and personnel needs were analyzed for both risk classification and risk categorization by low, moderate, high, and maximum risks. The associated examples are provided to ensure that the staffing strategy would accomplish the critical needs for the risk level and the process of classifying and categorizing risks support the appropriate resource request at the moment of dispatch.

The Department's commitment to safety, after action reporting, and monitoring of real time events provides administration with the ability to manage

changes in a dynamic environment when needed. However, the department only staffs a minimum of six personnel per shift. Therefore, they are unable to meet National Standards for the majority of incidents.

To match the critical tasking needs of most moderate and higher risk incidents requires mutual or automatic aid from surrounding agencies.

Industry Standard: NFPA 1710- for Fire Calls

Occupancy Type: Single-Family Dwelling Deployment: Minimum of 16 members or 17 if aerial device is used

The initial full alarm assignment to a structure fire in a typical 2000 ft² (186 m²), two-story, single-family dwelling without a basement and with no exposures must provide for a minimum of 16 members (17 if an aerial device is used).

Occupancy Type: Open-Air Strip Mall

Deployment: Minimum of 27 members or 28 if aerial device is used

The initial full alarm assignment to a structure fire in a typical open-air strip shopping center ranging from 13,000 ft² to 196,000 ft² (1203 m² to 18,209 m²) in size must provide for a minimum of 27 members (28 if an aerial device is used).

Cccupancy Type: Garden-Style Apartment Deployment: Minimum of 27 members or 28 if aerial device is used

The initial full alarm assignment to a structure fire in a typical 1200 ft² ($111 m^2$) apartment within a threestory, garden-style apartment building must provide for a minimum of 27 members (28 if an aerial device is used).

Occupancy Type: High-Rise

Deployment: Minimum of 42 members or 43 if building is equipped with fire pump The initial full alarm assignment to a fire in a building with the highest floor greater than 75 ft (23 m) above the lowest level of fire department vehicle access must provide for a minimum of 42 members (43 if the building is equipped with a fire pump).

Fire Response Capabilities



* Note: Anything above a low risk fire incident will require additional resources from surrounding agencies.



Maximum Risk-High Rise Big Box Store

High Risk -Commercial building

Moderate Risk -Residential structure fire

Low Risk -Dumpster Mulch Vehicle Fire Unoccupied Refuse Fire

Unauthorized Burn Smoke Investigation

EXAMPLE Critical Tasks for Moderate Risk Fire Calls

(Single Family Residence < 2500 Sq-ft)

- Incident Commander
- Safety Officer
- Driver/Pump Operator
- Water Supply/Hydrant
- Attack Line
- Rapid Intervention Crew
- Search & Rescue
- Ventilation
- Forcible Entry/Support
- Back up line

Leon Valley Fire Department

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Critical Tasking and Staffing to Risk

EMS Response Capabilities

Leon Valley Fire & EMS	Maximum	High	Moderate	Low
Available Response Personnel	6*	6*	6*	3
Unit Count	3*	3*	3*	1

* Note: Anything above a moderate EMS incident will require additional resources from surrounding agencies.

Maximum Risk-

A hazardous materials incident requiring additional technical assistance and outside resources.

High Risk -

Incidents that require significantly more hazardous materials expertise and capabilities, large evacuations, and/or long duration events that necessity relief.

Moderate Risk -

Incidents that require hazmat technicians, Level A entry protection, and technical research capabilities for incidents that exceed first responder and operations level capabilities.

Low Risk -

Fuel Spill Smell of Gas

Technical Rescue Response Capabilities

Leon Valley Fire & EMS	Maximum	High	Moderate	Low
Available Response Personnel	6*	6*	6*	3
Unit Count	3*	3*	3*	1

* Note: Anything above a low risk technical rescue incident will require additional resources from surrounding agencies.

EXAMPLE Critical Tasks for Moderate Risk EMS Calls

- Command/Safety/ Communications
- Airway Management/Oxygen Therapy
- ECG Monitor/Cardiac-Shock/ Medications
- Chest Compressions

Maximum Risk-Mass casualty

- High Risk -MVA w/Injuries
- Moderate Risk -Cardiac Arrest Chest Pain Stroke

Low Risk -Lift Assist

HazMat Response Capabilities

Leon Valley Fire & EMS	Maximum	High	Moderate	Low
Available Response Personnel	6*	6*	6*	3
Unit Count	3*	3*	3*	1

* Note: Anything above a low risk Hazmat incident will require additional resources from surrounding agencies.

EXAMPLE Critical Tasks for Moderate Risk Hazardous Materials Calls

- Incident Commander
- Safety Officer
- HazMat Technicians (Entry Team & Backup Team

EXAMPLE Critical Tasks for Moderate Risk Technical Rescue Calls

- Incident Commander
- Safety Officer
- Technical Rescue
 Technicians
- Back Up TeamSupport

Maximum Risk-Structural Collapse

Research/Support

Decon

High Risk -Confined Space TRT Response Swift water rescue

Moderate Risk -Extrication

Low Risk -Elevator Rescue Page 8

Correlated Risks

Risks may be divided into correlated and uncorrelated risks. All previous risk analyses have been primarily based on uncorrelated risks such as single unique events for EMS or a single property structure fire. Risks were calculated based on socioeconomic and demographic factors that may contribute to unique events. All previous analyses utilized a robust quantitative approach using a 3-axis mathematical risk calculation using the Heron formula.

However, correlated risks occur with much less frequency and were assessed using a 2-dimensional probability and consequence model. Example of correlated risks would include more regional or system wide events such as natural hazards and pandemics.



Low Risk	Moderate Risk	High Risk	Max/Special Risk
Political & Growth Boundaries	Critical Infrastructure & Facilities	Flooding Events	Topography - Response Barriers
Construction Limitations	Transportation Network	Severe Weather/Tornadoes	Hazardous Materials
Wildfire	Fire Suppression	Contagious & Chronic Disease	Technical Rescue
	Emergency Medical Services		

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Historical Performance

The department recognizes the relative opportunity to improve the citizens' experience by maximizing the efficiency of the dispatch interval and turnout time. <u>Dispatch time</u> is measured from the point 911 receives a request for service to the point when the fire department is notified of an emergency. <u>Turnout time</u> is measured from the point the fire department is notified of an emergency to the point when emergency personnel leave the station.

The National Fire Protection Association (NFPA) 1710 and 1225, recommends a 1:04 (minutes:seconds) and 1:00 dispatch time, respectively. The dispatch time, defined as the time from call creation at the 911 center to the dispatching of units, was not available for this analysis. Although, most agencies have found that meeting the consensus standard for dispatch has proven challenging.

Similarly, the NFPA and the Commission on Fire Accreditation International (CFAI), recommend a turnout time of 1 minute for EMS incidents and between 1:20 and 1:30 for non-EMS incidents, respectively. Continue to work with STRAC to break out the turnout times from the travel times. It is reasonable for agencies to meet a 1:30 turnout time.

<u>Travel time</u> is measured from the point emergency personnel leave the station to the point they arrive on scene. NFPA 1710 recommends a 4:00 travel time at the 90th percentile. CFAI had historically provided for a 5:12 travel time at the 90th percentile. Overall, combined turnout and travel time was 5.06 or less for 90% of the incidents within the city. EMS-related incidents had a combined turnout and travel time of 5:06, and fire service-related incidents had a combined turnout and travel time performance of 5:54 or less for 90% of the incidents within the jurisdiction. Nationally, urban/suburban departments typically have a travel time between 5:00 and 9:00 minutes at the 90th percentile.

Recommendations

- Continue to evaluate the integrity of the dispatch time data to ensure accuracy.
- Require the dispatch times for turnout and travel time to be separated.

Observation

The department meets the historical CFAI performance objectives for all combined turnout and travel time.

2022 90th Percentile Response Time Performance

Priority	Program	Dispatch Time	Turnout and Travel Time	Response Time	Sample Size
	EMS & Rescue	2:24	5:06	6:30	1,749
	Fire Total	2:24	5:54	7:36	480
Priority 1 Total		2:24	5:12	6:42	2,229
0	EMS & Rescue	2:48	5:30	6:12	32
0	Fire Total	1:36	4:12	5:42	6
Pri	Priority 0 Total		5:30	6:12	38
A 11	EMS & Rescue	2:24	5:06	6:30	1,781
All	Fire Total	2:24	5:54	7:36	486
Grand Total		2:24	5:12	6:42	2,267

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Distribution Study

Gislandyses validated that 96.33% of the incidents could be responded to within an 5minute travel and turnout time from the current station configuration.



Optimized Station Location

Optimized location analyses utilize a whiteboard approach of allowing the data to suggest optimal placement. It is understood that it would be difficult to relocate stations in a short period as well as there may not be land available or the land may be cost prohibitive. However, these analyses may prove beneficial in longrange planning considerations.

Leon Valley optimized coverage would improve the response within the city to 98.41% at 5 minutes combined travel and turnout times.

Recommendations

- Consider adding one FTE per shift to ensure minimum staffing requirements are being met.
- Consider committing to a 6-person daily minimum staffing to ensure a dedicated deployment of one engine and two ambulances.



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Concentration Study

he number fire and EMS units needed to sufficiently respond to the frequency and duration of the community demand is utilized to evaluate the efficacy of the deployment strategy for the identified risk. The busiest hour was at noon with 154 calls occurring during that hour. The average number of calls per day for that hour is a daily average for the 154 calls if they were distributed equally across the year (i.e., 154/365 = 0.42). reveal that the department has an average hourly demand of approximately 0.42 calls per hour during peak periods.

LVFD made a total of 2,397 unit responses to all calls, averaging 6.6 unit response per day.

Considering the current performance of approximately 5:12 combined turnout and travel time, the minimum deployment required to meet community demands and maintain sufficient capacity for the desired performance, is two (2) staffed apparatus at all times.

The Effective Response Force (ERF) is the concentration or quantity of emergency personnel required to mitigate each class and category of risk. The required ERF was established during the risk-based critical tasking and risk categorization/classification process for each incident type group. NFPA 1710 suggests that the ERF should arrive in 8:00 travel time or less.



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Assessing System Resiliency

verlapped or simultaneous calls are defined as another call being received in a demand zone (or first due station's area) while one or more calls are already ongoing for the same demand zone (or first due station's area). For example, if there is an ongoing call wherein all units have not yet been cleared, and one or more requests for service subsequently occur, the subsequent call or calls would be captured as overlapping.

Understanding the percentage of overlapped calls may help to determine the number of units to staff for each station. In general, the larger the call volume for a demand zone, the greater the likelihood of overlapped calls occurring. The distribution of the demand throughout the day will impact the chance of having overlapped calls. Additionally, the duration of a call plays a significant role; the longer it takes to clear a request, the greater the likelihood of having an overlapping request.

Since there is only one demand zone in the city, all calls are used in this analysis. The percentage of overlapped calls in the 12 months period is 17.3%.

Program	Overlapped Calls	Total Calls	Percentage of Overlapped Calls
EMS & Rescue & Fire	414	2,397	17.3%



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Unit Hour Utilization

• ime on task is necessary to evaluate best practices in efficient system delivery and consider the impact workload has on personnel. Unit Hour Utilization (UHU) values represent the proportion of the work period (e.g., 24 hours) that is utilized responding to requests for service.

Historically, the International Association of Fire Fighters (IAFF) has recommended that 24-hour units utilize 0.30, or 30% workload as an upper threshold. In other words, this recommendation would have personnel spend no more than 7.2 hours per day on emergency incidents.

These thresholds take into consideration the necessity to accomplish non-emergency activities such as training, health and wellness, public education, and fire inspections. The 4th edition of the IAFF EMS Guidebook no longer specifically identifies an upper threshold. However, FITCH recommends that an upper unit utilization threshold of approximately 0.30, 0r 30%, would be considered best practice. In other words, units and personnel should not exceed 30%, or 7.2 hours, of their workday responding to calls. These recommendations are also validated in the literature.

For example, in their review of the City of Rolling Meadows, the Illinois Fire Chiefs Association utilized UHU threshold of 0.30 as an indication to add additional resources. Similarly, in a standards of cover study facilitated by the Center for Public Safety Excellence, the Castle Rock Fire and Rescue Department utilizes a UHU of 0.30 as the upper limit in

E159B Engine 1,872 671 21.5 35.6 M159 ALS unit 881 523 M159B ALS unit 695 420 36.2 M159C ALS unit 577 378 39.3 E159 Engine 150 80 32.1 L159 Truck or aerial 102 54 31.9 R159 Rescue unit 15 149.8 37 AC159 Chief officer car 13 11 53.0 Chief officer car CH159 6 12.6 1 S159 Support apparatus, other 6 4.4 0 MIH159 Medical & rescue unit, othe 4 43.4 FM159 Other apparatus/resource 14.1 Total Total 4,326 2,181 30.3

""Number of Responses" reflects the total number of records in the data file associated with responses made by valid units, regardless of calculated busy time.

Unit Hour Utilization (UHU) Table

Unit Id	Unit Type	Total Busy Hours	UHU
E159B/E159	Engine	751	8.6%
M159/M159B/M159C	ALS unit	1,321	15.1%
L159/R159	Ladder/Rescue	91	1.0%
Total		2,163	8.2%

their standards of cover due to the necessity to accomplish other non-emergency activities.

Every day, the agency staffs three units including one engine, one ALS unit, and one ladder truck. Fitch analysis combined the workload of two engines, and three ALS units, and ladder/rescue units to calculate UHU since only three units were staffed daily.

The busiest unit in the department was the ALS units with a UHU value of 15.1% (1,321 busy hours for 24 hours per day), followed by the engine unit with a UHU value of 8.6% (751 busy hours for 24 hours per day). The least utilized unit was the ladder with a UHU value of 1.0%. The three units combined had a UHU value of 8.2%.

Compliance and Management Directed Tasks

These duties are in addition to 911 responses and calls for service.

- Hydrant testing (520 hydrants)
- Fire hose testing (11,025 ft annually)
- SCBA compliance testing (monthly)
- Testing and inspection of ground ladders (monthly)
- Inspection of bunker gear
- Inspection/Testing water rescue PPE
- Company level training (2 hours/shift day)
- Focused checks and decontamination of EMS units (weekly)
- Narcotics inventory and supplies (daily)
- Yard maintenance (weekly)
- Basic station maintenance
- Life Safety Inspections
- Vehicle maintenance and basic repairs: (2 Engines, 1ladder truck, 4 medic units, 2 UTVs and 5 pick-up trucks).

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Commensurate Risk Model and Projected Growth

cident Den



The figure to the right depicts observed annual call volume from 2017 to 2022, and projected growth in annual call volume from 2023 to 2033. Projections were made based on the Compound Annual Growth Rate (CAGR; -1.0%), or annualized average, derived from six years of observed call volume data, as well as one lower and one higher hypothetical annual growth rate scenario to provide a plausible range around the CAGR.



Fire Station Location Study

5-Minute Travel Time

IS analyses confirms that the current station configuration LVFD responds with turnout and travel time combined to the jurisdiction 5:12 minutes 90% of the time.





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Adopting Outcome Measures

n addition to setting goals or benchmarks related to impact or outcome measures, organizations typically set goals or benchmarks related to outputs or process measures due to the presumed or evidence-based relationship between the two measures. For example, it is assumed that a faster response time would be beneficial for structure fires.

Outputs or process measures are typically more easily evaluated, as the organization exerts direct influence over their outputs and processes, and can oversee related data collection and management. Impact or outcome measures become more difficult to evaluate when data collection and management are outside the purview of the organization and interpretation of data must account for other intervening factors.

Beginning to consider outcome measures allows the agency to better evaluate some of the assumed output and process measures. For example, if structure fires are held to the room of origin at the desired percentage of time, then the department may not have to act immediately if the response time increased by 30 seconds over the previous year. It provides greater flexibility for the policy group to attempt to understand which variables are contributing and their root causes.

Recommendation

The department should adopt a system of measures based on desired outcomes.

Modern emergency response systems are encouraged to move beyond goal setting or benchmarking and evaluation related to outputs or process measures, and consider ways that impact or outcome measures can be evaluated (see examples below).

		17
Measure	Performanc	Current Performance
Fire Spread – Degree of Confinement – All Building Fires with Fire Spread		
Fire Confined to Building of Origin	95%	%
Fire Confined to Floor of Origin	75%	%
Fire Confined to Room of Origin	50%	%
Time to Fire Confined (from FD arrival)	10:00	mm:ss
Fire Spread – Degree of Confinement – Residential Structures with Fire Spread		
Fire Confined to Room of Origin		
Fires Controlled by Fire Suppression Systems		
Percentage of Fires Extinguished by Fire Suppression Systems in Protected Buildings	90%	%
Preventable Fire Incidents		
Percentage of Fires Unpreventable	%	%
Building Fires in Commercial Occupancies		
Confined to Room of Origin	%	%
Fire Loss as a Percentage of Total Protected Property Value with Fire Protection System	%	%
Fire Loss as a Percentage of Total Protected Property Value without Fire Protection System	%	%
Property Saved in Buildings with Fires		
Value of Property Saved in Dollars	\$	\$
Fire Loss as a Percentage of Total Protected Property Value	0.05%	%
Emergency Medical Services		
7. Cardiac Arrest Patient Management		
7.3 Percent of patients (in cardiac arrest before EMS arrival) with a witnessed collapse and found in an initially "shockable" rhythm, with survival to discharge from the acute care hospital	≥ 50%	%
7.4 Percent of overall cardiac arrest patients with survival to discharge from hospital	≥10%	%

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Adopting a System of Measures

t is important to measure and manage the efficiencies of a well-run operation using a system of measures as presented in the table below. In this manner, the daily management continues in place, but the strict adherence to system design performance is secondary to the outcome measures. For example, if response time increases and there is no change in outcomes then it would be purely a policy choice to act. Conversely, if the outcomes change, then the department leadership will turn to the system of measures and attempt to discern which of the variables or combination of variables may be contributing to the change in outcomes.

The summary of measures provided below include all aspects of time, apparatus staffing by type, relative risk ratings, and system resiliency measures such as reliability, call concurrency, workload, and unit hour utilization. For example, reliability should be at least 70% for each station and only if the reliability drops below the 70% threshold before considering a mitigation reaction. Similarly, call concurrency is credible until the call concurrency reaches 70%. In other words, only 30% of the calls are overlapping. Call concurrency is suggested as a per unit threshold unless the majority of calls are multi-unit responses. For example, if there are two units assigned to a station, the station level call concurrency can perform well at 60% or less for single unit responses.

Leon Valley currently have 17% of their calls are overlapping. Therefore, the department should consider fully staffing an additional EMS unit, rather than cross-staffing it from the ladder truck at least during peak hours.

Recommendations

- Consider staffing an additional EMS unit full time/not crossstaffed.
- To accurately track a system of measures, turnout and travel times need to be separated.

The system of measures provided are **not intended to be overly prescriptive for the department.** The department should adopt the system performance objectives internally and update as needed (**see examples below**).

Type of Measure	Performance Metric	Recommended Performance	Priority	Review Period
Station/Unit Performance	Turnout Time - EMS	≤ 1.0 Min at 90%	Emergent	Quarterly
	Turnout Time - All Other	≤ 1.5 Min at 90%	Emergent	Quarterly
	Travel Time (EMS)	≤ 5 Min at 90%	Emergent	Quarterly
	Travel Time (Fire)	≤ 6 Min at 90%	Emergent	Quarterly
	Minimum Engine/Quint Staffing	≥ 2 Firefighters	All Responses	Daily
	Minimum Modic Staffing	≥ 1 FF/PM	All Responses	Daily
	Winning Weak Stanling	≥ 1 FF/EMT		
System Design and Performance	Station Risk Rating	Increases in Risk		Annually
	Reliability	≥ 70%		Quarterly
	Call Concurrency	≤ 30% Per Unit		Quarterly
	Call Volume	3,000 -initial		Annually
		1,000 - Ongoing		Annuary
	Unit Hour Utilization	≤ 0.30 on 24-hour on EMS units		
		≤ 0.15 on 24-hour on Engines and		Quarterly
		Aerials		-
		≤ 0.50 on 12-hour units		
	Cross-Staffing at Unit Level	< 1,500 annual calls and 15% Call		Areastallas
		Concurrency		Annually



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Continuous Improvement and Annual Appraisal

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Compliance Team and Responsibilities

Discussion on Maintaining and Improving Response Capabilities as it Relates to Criterion 2D

Core Competencies - 2C.7, 2D.3, 2D.6, and 2D.7

Performance Indicators - 2D.2, 2D.4, 2D.8 and 2D.9

The Compliance Team will consist of the following department members (TBD) and will have the responsibility of continuously monitoring changes in risk, community service demands, and department performance in each program area, fire department demand zone, and/or risk category.

The Compliance Team will consist of the following department members (TBD) and will have the responsibility of abriting out in the complete the second secon

Chair- Fire Chief Member – EMS Member – Assistant Chief Member – Fire Prevention Member – Line Personnel

Pepformance evaluation and a complete a dipation ce

The compliance team will evaluate system performance by measuring first but with performance at the sum of the performance at the sum of the performance at the sum of the sum o

The Compliance Team will determine the strength, Weaknesses, opportunities, and challenges of the system Weaknesses, opportunities, and challenges of the system System and stimulate to the pile chief hereine in all of the feature system adjustments to the pile chief hereine is a session of will annually update and evaluate the risk assessment will annually update and evaluate the risk assessment risk. matrices for relevancy and changes in community risk.

Ultimately, it is recommended that a commended that adopted and serve as the printing very all all of option and that the traditional performance subjectives and as a serve presented previous verentificed printing its as a management tool. In Initian an appending its as a management tool. In Initian an appending its as a management tool. In Initian an appending its as a management tool. In Initian an appending its as a management tool. In Initian an appending its as a management tool of the analytic of the analytic of the analytic beneiting docing to management to be met.



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Community Risk Reduction Strategies

- City of Santa Fe. Fire, Departm

safety awareness and fire code enforcement programs through proper community awareness, fire and life safety inspections and vestigations.

The Deputy Fire Mar Sammunity Risk Reduction Strate

commercial businesses in the city, and also (by invitation) inspects homes. The Deputy Fire Marshal also checks building plans, conducts Certificate of Occupancy inspections, issues fire system and related permits, conducts safety classes and other educational offerings. The Deputy Fire Marshal conducts and coordinates fire scene investigations with the Fire Chief and ty and fire prevention prevention

Leon Valley Fire Department will conduct a fire safety survey of your hoineespon and property free of charge. They also provide a smoke detector program, fire extinguisher classes, safe drug disposal, and blessing boxes to in need.

R esearch has shown that the best opportunity to reduce loss of lifeforts, (su and property destruction is to prevent these events from occurringblic edu The term Community Risk Reduction (CRR) is an evolution and expansion of the core principles learned since the 1970s in fire prevention. In fact, it is the very concept that the department offers various programs to educate the public on risk reduction (**see example below**).

Recommendation

 The department should consider hiring or contracting a fire prevention employee.

 \checkmark

The new tasks would include fire inspections, some plan reviews, and fire prevention activities.This would require the purchase or assignment of a vehicle.

Community Risk Reduction and Other Preventative Process Efforts							
Measure	Benchmark Performance	Current Performance					
Fire Investigations Program							
Percentage of incendiary fire investigations that meet the elements for arson referred to the district attorney for prosecution	%	%					
Percentage of fire investigations resulting in a classification of accidental, incendiary, that meet the elements for arson	%	%					
Number of fire investigations conducted	#	#					
Number of juveniles referred to the Youth Fire-Setter Intervention Program	#	#					
Fire Code Compliance Program							
Percentage of fire protection system plan reviews completed within 5 business days of receipt	%	%					
Percentage of identified high-risk commercial locations inspected by renewal date	%	%					
Percentage of initial new construction inspections completed within 2 business days of request	%	%					
Number of identified high-risk commercial locations inspected by renewal date	#	#					
Number of requests for service completed (re-inspections, surveys, open records requests, training sessions, and monthly							
permits)	#	#					
Public Safety Education Services Program							
Percentage of elementary public schools in city limits participating in CRR activities	100%	%					
Percentage of youth referred to department that have previously attended the Youth Fire-Setter Intervention Program	%	%					
Number of Fire Department public safety education participants served	#	#					
Number of elementary students in the city limits participating in CRR activities	#	#					
Number of Health and Safety sessions provided	#	#					
Number of hours spent on CRR requests for service	#	#					
Number of smoke alarms distributed to residents	#	#					
Emergency Medical Services Program							
Number of MIH interventions completed	#	#					


A n integral part of the strategic planning process is the completion of a SWOT analysis. SWOT stands for Strength, Weaknesses, Opportunities, and Threats (SWOT).

The process is a broad-based stakeholder gap analysis where the Opportunities and Threats are more focused on external origins and Strengths and Weaknesses are more focused in internal origins.

The strategic planning process will assist the district in focusing on key initiative for the next three-year period.



FITCH

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Leon Valley Fire Department

April 2024

Appendices - Supporting Documents

he community risk assessment (CRA) is presented as a supporting document to provide greater detail and transparency into the risk assessment process.

This summary report provided the high-level substantive results of the community risk assessment. However, if greater detail is desired, please refer to the Community Risk Assessment report provided in the appendices.



he comprehensive quantitative data analysis is presented as a supporting document to provide greater detail and

transparency into the historical performance of the fire district.

This summary report provided the high-level substantive results of the comprehensive data analysis. However, if greater detail is desired, please refer to the Data Analysis report provided in the appendices.

he comprehensive geospatial analysis (GIS) is presented as a supporting document to provide greater detail and transparency into the response time and fire station location study.

This summary report provided the high-level substantive results of the comprehensive data analysis. However, if greater detail is desired, please refer to the GIS Analysis report provided in the appendices.







Executive Summary

he City of Leon Valley contracted Fitch and Associates LLC to conduct an independent assessment of staffing levels required for the Police Department to provide adequate public safety, and to make further recommendations based on best practices to increase the efficiency of police operations. A comprehensive review of the police workload was undertaken which included an assessment of the proactive, reactive, and general patrol functions of the police department and also accounted for the impact of lost productivity time occurring as a result of illness, occupational injury, parental leave, vacation and other administrative issues. This executive summary highlights the most substantive recommendations for the police department. Implementation of these recommendations will lead the department through the next five years with a clear sense of strategic direction and the resources to develop into a truly progressive agency that is responsive to the unique needs of the Leon Valley community.

Recommendations

- 1. Develop a system to track officer proactive activity.
- 2. Identify opportunities to engage in high visibility patrols.
- 3. Plan for the gradual or abrupt ending of the Red Light Camera Program.
- 4. Formalize all shared service and mutual aid agreements .
- 5. Increase the current minimum of two officers plus one supervisor on the frontline to three officers plus one supervisor on duty at all times.
- 6. Establish the new rank structure for the second in command on the squads (either corporal or OIC) and then identify members to permanently fulfill these backup supervisory duties on all squads.
- 7. Fully staff all of the authorized detective positions.
- 8. Add two officers to the frontline.
- Develop a strategic plan to set the direction and priorities for the next five years in alignment with City's planning porcess

Page 1



Page 2

The City of Leon Valley



Leon Valley 11,429 Residents 3.5 Square Miles 100,000 Commuter Vehicles travelling through the city every day

he City of Leon Valley was incorporated on March 31, 1952. The City of Leon Valley is a Home Rule City operating under a Council-Manager form of government with a Mayor and five City Council Members elected at-large. The Mayor and City Council Members hold two year terms of office with staggered turnover. The city is 3.5 square miles in area and serves a resident population of 11,429 according to the 2022 US Census. State Highway 16, Bandera Road, travels through the City Center, and it ,along with other major roadways including Loop 410, and Grissom Road, comprise a very busy commuter corridor that adds over 100,000 vehicles a day travelling through the area (Source:Texas Department of Transportation Traffic Count Maps) . In addition to the



commuters there is peripheral tourism, and traffic influx related to commercial and retail establishments.

he City is a full service city with public safety departments including the Fire Department, Emergency Management Services, and Police Department. Operational departments include: Administration, Community and Economic Development, Finance, Leon Valley Public Library, Municipal Court, and Public Works departments.



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History of the Engagement

The Leon Valley Police Department was establish through City Ordinance in 2006, replacing the City Marshal Service that had previously been in place. The Police Department currently has (1) Chief, (1) Assistant Chief, (2) Lieutenants, (4) Sergeants, (3) Corporals, (4) Detectives, (2) Red light camera hearing officers, (18) Patrol officers, (1) Property Room Technician, (2) DEA Task Force Officers, and (1) Civilian Administrative Assistant.

On April 3, 2023 the City of Leon Valley initiated a Request for Proposals for a company to conduct a utilization study for the City of Leon Valley 's Police Department, Fire/EMS Department and Public Works Department.

With particular respect to the Police component of the study, the City was interested in having an independent contractor determine if the Department had adequate staffing levels. The purpose of the study was to review current workload demands and make recommendations related to efficiency of deployment and effectiveness in keeping with best practices. Specifically, the contractor was also to review 3rd party services, and the Red Light Camera Program. The City wanted the contractor to identify a methodology for the calculation of police staffing needs that can be updated and replicated by city and police department staff for short and long-term strategic planning resource budgeting. Lastly, the study was also sought as a means to provide input into the strategic direction of the Police Department.

Fitch and Associates LLC was invited to make a presentation to City Council in May of 2023. Fitch was subsequently awarded the contract and a kickoff meeting in October 2023, marked the beginning of the study.

Data was provided and studied including CAD calls for service information, training records, shared service agreements, personal time summaries and the budget data, City Manager reports and personal interviews were conducted with members representing all of the rank strata and units of the agency.

The Police Workload





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Calls for Service: The Reactive Workload

The reactive workload is comprised principally of the calls for service information. Collecting objective data from CAD is a central element of this phase of the project. In examining the trend in overall calls for service over the past seven years we observe an increase of approximately 11% between 2018 and 2021. That increase in the overall calls has persisted throughout 2021, 2022 and 2023. Despite some year to year differences, the overall pattern is one of modest and consistent call growth with the more significant increases that took place in 2021 showing little signs of abating. This reactive calls for service workload can next be examined from a variety of perspectives using different variables to

yield a comprehensive picture of the workload and discover any patterns that might assist in determining the most efficient deployment of resources.





Yearly Total Calls for Service

Year	Calls	Moving Avg
2018	9474	9474
2019	10031	9753
2020	9314	9606
2021	11218	10009
2022	11006	10209
2023	10725	10295

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POLICE PO

Calls by Month of the Year

The Leon Valley Police Department employs, out of necessity, a very static model of personnel deployment with no variations to account for seasonal fluctuations in the workload. CAD Data from the time period 2018 to 2023 displaying the calls on a month to month basis shows a very stable pattern with only a 2-3% fluctuation in calls.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2018	721	669	841	756	857	846	820	787	801	833	708	835
2019	830	760	814	776	848	843	869	961	909	835	861	725
2020	683	718	777	693	700	771	853	881	871	835	759	773
2021	825	751	856	928	1000	1033	991	1014	989	985	911	935
2022	809	803	950	905	1004	927	999	1035	940	947	797	890
2023	769	709	926	881	1017	978	1014	891	834	867	943	867





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he month to month minor fluctuations and changes over time to overall calls are more easily depicted in this chart that compares just 2018 and 2023. For the most part, the same minor fluctuations are observable, with the month of November being the only anomaly, uncharacteristically seeing a increase in 2023. As a general pattern, the overall increase in calls in 2023 is apparent in almost every month of the year.

The single year pie charts that follow will display the relative monthly stability of the calls for

service by expressing the monthly calls as a percentage of the yearly total.





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Calls by Time of Day

hen examining the calls for service by hour of the day we begin by dividing , the day into three hour segments, commencing at 6 AM. It is notable that the period from 3 AM until about 9 AM is the guietest segment of that 24 hour period. The busiest portion of the day begins at noon and runs until about 9:00 PM. Coincidentally, in many police agencies, this is often the period when there are also other competing demands on the front line officer's time,



for example engaging in proactive activity, traffic enforcement, or attending community functions or meetings, lunch breaks or attending court on duty.



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his fluctuation in calls for service is a fairly typical one. The Leon Valley Police Department utilizes a 12 hour shift with the dayshift beginning at 6 AM and concluding at 6 PM and the night shift beginning at 6 PM and ending at 6 AM the following day. In some agencies, we see this shift pattern affected negatively by this particular pattern in the hourly workload.Because of the calls for service volume and other demands on the officer's time such as on duty court, proactive activities, traffic enforcement, training etc. officers begin to fall behind during the late morning, and calls start to queue during the afternoon. This can leave a backlog that may still be in place when the night shift arrives. Usually, this type of issue is reflected in prolonged queue times before calls are dispatched, and is evident of an imbalance between the work demands and the

available resources. The queue and response times for Leon Valley will be reviewed later in this report with that particular phenomenon in mind.

To display the pattern in a less convoluted way the next graph shows only the 2018 and 2023 calls by time segment and it is evident that aside from the small call increases in 2023 for most of the time segments, the main patterns in terms of the busiest and slowest portions of the day remains unchanged.







Day Shift vs Night Shift

aving reviewed the temporal pattern to the calls we next turn our attention to how the reactive workload based on the different shifts worked by the frontline officers. Leon Valley currently utilizes a 4 Squad System to provide 365 day a year 24 hour coverage. Officers work either a 12 hour day shift, 6:00 AM to 6:00 PM or a 12 hour night shift commencing at 6:00 PM and concluding at 6:00 AM. For the calendar year 2023, there is data for the majority of the calls indicating at what time the call was received by dispatch, there were 6188 calls received during the day shift hours and 4526 calls received during the



night shift hours. For the purposes of quantifying the officer workload, however, it is important to review the time the call actually was dispatched. We know at times if there are no officers available, or a call comes in very close to shift change, that it might be held for a time rather than being dispatched right away. In looking at the dispatch times for the Leon Valley calls we see that very little changes with just 1% of the day shift calls being deferred to the night shift.





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he deployment of officers is also an important factor to consider. In Leon Valley there are actually fewer officers deployed on the day shifts, one(1) Corporal/OIC and three (3) officers for a total of four (4), with one (1) Sergeant, one (1) Corporal/OIC and three (3) Officers deployed on the nights for a total of five (5).

This is not an unusual phenomenon for police agencies because the night shift is generally perceived as featuring more 'in progress' calls and dangerous calls where two or more officers are required to respond.

f the squads were fully staffed and no officers were off of work due to vacation, illness, occupational injury etc, there would be four officers on days 365 days a year for a total deployment of 1460, and five officers every night for 365 nights of the year for a total



deployment of 1825 officers. This means that there are 56% percent of the officers doing 43% of the work on night shifts, and 44% of the officers handling 57% of the workload on day shifts.



Calls by Priority

alls for service in Leon Valley are characterized with priority numbers based on call type. Priority numbers range from 0 to 7, with 0

seemingly related to onview calls generated by officers and Priority 1 and Priority 2 calls necessitating an urgent response. The data set that was the subject of this study did not include any calls that were priority type 5. There were a few Priority 7 calls all having to do with 'Judicial Service' and they were not included as the frontline workload dataset. In advance of examining response time data it is helpful to understand the frequency of the different call priority types and if those frequencies have changed over time. As depicted it evident that priority 1 and 2 calls are a relatively small proportion of the workload and this has not changed



significantly since 2018. The general increase in calls since 2018 is mostly related to increases in priority 3 and priority 4 calls.





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Calls Response Time

To obtain a comprehensive picture of the reactive workload it is important to consider how that workload affects response time for priority calls. Even in areas where the reactive calls for service demands are relatively low, it will still be necessary to maintain a certain number of resources to be able to respond to serious calls in a timely manner. Response time to 'in progress' priority calls has long been an important benchmark of adequate staffing. There are three related measures that must be taken into account.

First is queue time, which measures the amount of time it takes dispatch to receive process or partially process the call information, and then dispatch officers to the call. This may include call stacking time based on the Department dispatch processes.

The second component is the actual travel time that it takes for the officer who received the call to arrive at it. Many factors in the environment, including geographic features and traffic patterns influence travel time.

The sum of queue time and travel time is response time. This is the measure from the perspective of the caller that it took for the police to arrive at their call.

While there is no national standard of response time for police agencies, response time for priority calls serves as an important benchmark metric for police resource allocation studies. Response time compliance is an independent risk value for emergency services. It is predicated on having available vehicles strategically placed throughout the communities so that when an emergency call does occur in that community, the vehicle is available to respond and is close enough to the incident to have a positive outcome. Thus, the notion of emergency response is a sum value of vehicles required to respond to calls and vehicles required to achieve response time compliance.

he 2023 call response data indicates average travel times for the officer to arrive at the call once dispatched at approximately 4 minutes. In 80% of the cases for Priority 1 calls the officer travel time is 6:51 (6 minutes, 51 seconds) or less and for Priority 2 calls the 80th percentile time is 5:46. These are respectable travel times and to be anticipated in a relatively small geographic area such as Leon Valley.





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	Count of Calls	Queue time	Queue 80th Percenti Ie	Travel Avg	Travel 80th percenti le	Avg Respon se Time	Respon se time 80th percenti le
Priority 0	17	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00
Priority 1	32	0:02:48	0:03:21	0:04:18	0:06:51	0:07:06	0:10:12
Priority 2	153	0:04:02	0:03:33	0:03:57	0:05:46	0:07:52	0:09:16
Priority 3	5073	0:04:47	0:05:11	0:05:34	0:07:28	0:10:15	0:12:34
Priority 4	4891	0:06:49	0:08:13	0:06:57	0:09:27	0:13:43	0:18:03
Priority 5	0	n/a	n/a	n/a	n/a	n/a	n/a
Priority 6	555	0:09:09	0:10:09	0:05:42	0:08:49	0:14:51	0:19:08

2023 Call Response Times

A s mentioned previously, it is also instructive to consider queue times for lower priority calls as a possible indicator of an under resourced frontline, lower priority calls often get held if there are no units available. In the case of Leon Valley it appears that queue times even for priority 3 and 4 calls are reasonable with 80 percent of Priority 3 calls dispatched within 5:11 of being received and an 80th percentile call

received to dispatch for priority 4 calls of 8:13. None of this is indicative of unreasonable delay due to officer unavailability.

Next we compare the 2023 response times to those from 2018 to see if the higher call volumes since 2023 are having any effect on queue or travel times.



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	Count of Calls	Queue time	Queue 80th Percenti Ie	Travel Avg	Travel 80th percenti le	Avg Respon se Time	Respon se time 80th percenti le
Priority 0	2	0:00:42	n/a	0:00:01	n/a	0:00:48	n/a
Priority 1	21	0:02:25	0:02:43	0:02:20	0:03:53	0:05:18	0:06:28
Priority 2	207	0:03:11	0:03:38	0:03:20	0:05:04	0:07:22	0:09:47
Priority 3	4154	0:05:25	0:05:39	0:05:25	0:06:43	0:11:10	0:12:42
Priority 4	4486	0:07:27	0:09:12	0:06:41	0:08:41	0:35:31	0:23:36
Priority 5	0	n/a	n/a	n/a	n/a	n/a	n/a
Priority 6	603	0:09:12	0:11:37	0:06:43	0:08:44	0:17:10	0:24:36

2018 Call Response Times

The 2018 data reveals some interesting and somewhat contradictory insights into the data. There is a relationship between queue time and unit availability with longer queue times obviously suggesting lower officer availability. Average queue times in 2018 were for the most part slightly lower than in 2023 however the 80th percentile queue times were just the opposite, ie. slightly longer in 2018 and are significantly longer for the priority 4 and priority 6 calls.



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ith the exception of priority 1 calls where the queue time is about 30 seconds less than 2023, the balance of the queue times in 2018 were longer than in 2023 suggesting less officer availability.

However, when looking at the time it took officers to travel to the call once dispatched it is apparent that the travel times in 2023 are consistently longer for priority levels 1 & 2, than they were in 2018.

0:11:31 0:10:05 0:08:38 0:07:12 0:05:46 0:04:19 0:02:53 0:01:26 0:00:00 Priority 1 Priority 4 Priority 6 Priority 2 Priority 3 2018 2023





ravel time can be prolonged by a number of variables including increased traffic congestion, physical changes to the travel routes, inclement weather, or because the officer is clearing a current call to respond to the higher priority call because there is not a free unit available. The information, absent a contextual understanding of what is causing the increased travel times, is not conclusive of decreased officer availability due to workload. However, it is something that would benefit from increased scrutiny and study.



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Calls by Patrol Area



he proportion of calls in each patrol area in 2023 indicates that LV2 was the busiest patrol area and LV1 the least busy.

	LV1	LV2	LV3
2023 Calls	2214	5441	3071



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he ratio of calls in 2023 in the different patrol districts seems to be one that has held consistently from 2018 to 2023. LV2 is consistently the busiest and was at its peak in 2023 with 1441 more calls than its

LV1	LV2	LV3
2417	4017	2865
2446	4280	3105
2078	4000	3030
2462	4908	3546
2171	5357	3220
2214	5441	3071
	LV1 2417 2446 2078 2078 2462 2171 2214	LV1 LV2 2417 4017 2446 4280 2078 4000 2462 4908 2171 5357 2214 5441

low point in 2020. LV1 is consistently the least busy patrol area with a peak of 2462 calls in 2021 which is a difference of 384 calls from its low point in 2020. LV3 is the only patrol area not to reach their low point in calls in 2020 with 2 years of decline since their peak in 2021 resulting in 2023 being their lowest year in the study period with a difference of 475 calls between the high and low year. To add more contextual understanding to these raw numbers, the year by year changes in call percentages can be helpful.



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2020 Calls by Patrol Area

LV1 a 2% decrease from previous year and 3% increase from peak.

LV2 a 1% increase from previous year and remains the busiest

LV3 a 1% increase from previous year for the second year in a row







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he City of Leon Valley is divided into three patrol areas, LV1, LV2, and LV3. LV2 is by far the busiest with 51% of the calls in 2023 and LV1 is consistently the least busy patrol area. LV2 experiences the biggest change over the period 2018-2023 with an 8% fluctuation representing over 1300 calls, and LV1 has the lowest fluctuation rate at 3%. For most of the time period decreases in call percentage in LV1 resulted in corresponding increases in the other areas, principally LV2 but also LV3 in 2019 and 2020. In 2023 LV1 had it only increase for the period absorbing part of the 2% loss of calls from LV3.

Overall the area shows modest change year over year but it is also clear that the overall trend of increases to calls over the time period are not experienced by all three of the patrol areas but have had the most impact on LV2.



Selected Call Types

aving now looked at a number of aspects of the total workload we next review the calls in more granularity by examining a subset of them. This examination of the full range and variability of the types of calls that officers are responding to yields a number of possible benefits:

- it reveals changes in call type over time reflecting changes in the nature of the workload.
- it identifies frequent calls for service that might benefit from an alternative approach, alternate policy, in partnership with another agency (eg mental health), or being referred to a third party.
- it assists in evaluation the agency priorities and the strategic directions for the future.
- it may identify pervasive community problems or chronic calls that might be more effectively addressed by a more proactive approach, or a project based.
- it identifies trends in the data and offers information about what particular calls may be the key contributors to the trends in the full data.

For the purposes of this analysis we examine some of the most frequent calls, and also some selected call types that may be of particular interest to the community sense of safety.





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Call Type	2018	2019	2020	2021	2022	2023
911 Abuse ^	0	0	0	3	3	2
911 Check/ Hangup ^	705	824	1140	1595	1363	1757
911 Check/ Text ^	7	5	10	27	8	15
Total	712	829	1150	1625	1374	1774







- Overall a steady increase since 2018
- A frequent call mostly related to phone activity but text message 911 followups will become increasingly significant in the future

significant in the future





Call Type	2018	2019	2020	2021	2022	2023
Alarm/ Business	676	837	729	780	715	646
Alarm/ Business - Holdup ^	9	14	13	9	12	6
Alarm/ Business - Panic ^	22	22	33	25	29	29
Alarm/ Fire	25	16	6	8	9	7
Alarm/ Medical ^	6	9	3	6	1	2
Alarm/ Residence	275	354	191	233	225	171
Alarm/ Residence - Holdup ^	2	3	6	4	2	2
Alarm/ Residence - Panic ^	29	32	15	16	19	12
Alarm/ VPS ^	0	0	1	2	0	1
TOTAL	1044	1287	997	1083	1012	876

Alarm Related Calls





trequent call types



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			Assaults			
Call Type	2018	2019	2020	2021	2022	2023
Assault ^	116	81	74	118	118	83
Assault/ Aggravat ed ^	1	1	1	0	0	0
Assault/ IN PROGRE SS ^	9	14	14	15	14	11
Assault/ Report ^	28	16	18	25	31	23
TOTAL	154	112	107	158	163	117



Highlights

• Significant year to year variability but the overall trend is for incidents to continue to average at about 130 per year



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Call Type	2018	2019	2020	2021	2022	2023
Burglary/ Building ^	11	11	20	42	25	24
Burglary/ Business ^	23	19	18	19	26	16
Burglary/ Coin Op Mach ^	2	0	1	0	0	0
Burglary/ IN PROGRE SS ^	14	10	7	23	42	28
Burglary/ Residenc e ^	50	37	34	37	52	37
Burglary/ Vehicle ^	99	115	127	199	151	148
TOTAL	199	192	207	320	296	253

Burglaries





- Slight increase over the time period
- Overall numbers are significant although not one of the most frequent calls.
- Typically a statistic of particular concern for the communities subjective sense of safety
- typically requires substantial investigative followup

investigative followup

typically requires substantial



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Call Type	2018	2019	2020	2021	2022	2023
Civil Matter/ Custody ^	21	15	16	18	17	26
Civil Matter/ Keep Peace ^	111	103	104	141	107	104
Civil Matter/ Property ^	80	103	85	92	67	46
Civil Matter/ Visitation ^	51	50	51	51	44	35
TOTAL	263	271	256	302	235	211

Civil Matter Calls



Highlights

- Slight decrease over the time period
- Overall numbers are significant although not one of the most frequent calls.
- Likely a call type where alternative approaches could be considered to reduce officer workload depending on community expectations.

considered to reduce offic workload depending on community expectations.



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Crashes							
Call Type	2018	2019	2020	2021	2022	2023	
Crash/ Fleet-Injuries ^	0	0	0	0	1	1	
Crash/ Fleet-No Injuries ^	1	1	2	2	1	1	
Crash/ Injuries	90	89	50	60	65	64	
Crash/ No Injuries	753	755	502	626	651	594	
Crash/ PVT-Injuries ^	0	0	3	1	1	2	
Crash/ PVT-No Injuries	116	115	79	102	103	108	
Crash/ PVT-Unk Injuries ^	3	4	1	3	1	4	
Crash/ Report ^	46	48	56	66	60	80	
Crash/ Unk Injuries ^	173	144	143	174	166	161	
TOTAL	1182	1156	836	1034	1049	1015	



Highlights

- Slight decrease over the time period
- One of the most frequent call types and the commuter traffic on the major thoroughfares is perceived to be a significant impact or workload
- Notable that crashes are decreasing while other aspect of the workload increase

the workload increase



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Disturbances								
Call Type	2018	2019	2020	2021	2022	2023		
Disturb/ Barking Dog ^	64	62	33	30	22	28		
Disturb/ Child	31	23	15	26	21	19		
Disturb/ Family ^	147	165	140	178	140	145		
Disturb/ Family-Report ^	9	6	4	11	8	6		
Disturb/ Fireworks	19	15	20	35	17	6		
Disturb/ IN PROGRESS	103	75	56	72	48	68		
Disturb/ Neighborhood ^	92	120	147	235	200	162		
Disturb/ Neighborhood- Report ^	4	14	17	17	12	5		
Disturb/ Noise	205	219	167	258	218	209		
Disturb/ Shots Heard	53	63	75	83	150	98		
Disturb/ Verbal ^	421	404	397	489	499	376		
TOTAL	1148	1166	1071	1434	1335	1122		



Highlights

- Slight increase over the time period
- One of the most frequent call types
- One of the call types that mirrors the increases in the total workload year to year.



Call Type	2018	2019	2020	2021	2022	2023
Robbery / Business ^	3	1	2	1	6	0
Robbery/ Aggravat ed ^	3	4	0	0	1	0
Robbery/ Individual ^	4	6	5	6	7	3
Robbery/ In Progress	0	0	0	2	2	0
TOTAL	10	11	7	9	16	3





Highlights

- Decrease over the time period but with an anomalous and significant spike in 2022.
- Overall numbers are extremely low which exacerbates the variability in the data
- Typically a topic of concern for citizens and their sense of community safety

Typically a topic of concern for citizens and their sense of community safety





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	Shooting/Stabbing							
Call Type	2018	2019	2020	2021	2022	2023		
Shooting ^	7	2	2	16	28	20		
SHOOTIN G/ IN PROGRE SS ^	1	0	0	0	5	0		
Stabbing ^	1	0	1	1	4	1		
TOTAL	9	2	3	17	37	21		





Highlights

- Sharp increase over the time period
- Overall numbers are extremely low which exacerbates the variability in the data and makes it difficult to draw conclusions about patterns
- Typically a topic of concern for citizens and their sense of community safety
- These often represent some of the more time consuming and complex investigations despite the relatively low frequency

These often represent some of the more time consuming and complex investigations despite the relatively low frequency



Cuspicious Activity							
Call Type	2018	2019	2020	2021	2022	2023	
Suspicious/ Activity	218	239	185	262	353	316	
Suspicious/ Noise	23	21	23	17	18	19	
Suspicious/ Odor	8	4	13	11	10	8	
Suspicious/ Package	14	8	3	9	4	2	
Suspicious/ Person	461	530	495	564	680	656	
Suspicious/ Vehicle	238	264	212	242	263	213	
TOTAL	962	1066	931	1105	1328	1214	

Suspicious Activity



Highlights

- Steady increase over the time period
- One of the more frequent call types and mirrors the year to year increases in the total calls
- Typically a topic of concern for citizens and their sense of community safety
- In some cases another call type that might benefit from some more proactive strategies (high visibility patrols, CCTV cameras, environmental controls)

ope machight cenant nom some more proactive strategies (high visibility patrols, CCTV cameras, environmental controls)



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		Ihefts				
Call Type	2018	2019	2020	2021	2022	2023
Theft	223	322	279	315	392	358
Theft/ Bicycle ^	2	4	3	0	2	4
Theft/ ID ^	20	20	19	42	29	38
Theft/ IN PROGRESS ^	12	14	12	22	28	30
Theft/ Services ^	13	18	9	18	15	17
Theft/ Trailer ^	3	3	7	6	11	4
Theft/ Vehicle ^	72	71	89	134	199	166
TOTAL	345	452	418	537	676	617



Highlights

- Steady increase over the time period
- One of the more frequent call types and mirrors the year to year increases in the total calls
- Typically a topic of concern for citizens and their sense of community safety
- The increase in vehicle thefts is notable
- Often these incidents derive some positive benefit from proactive crime prevention programs

programs

some positive benefit from proactive crime prevention



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Call Type	2018	2019	2020	2021	2022	2023
Suicide ^	0	2	0	0	1	0
SUICIDE/ ATTEMPT ^	10	7	5	24	21	16
Suicide/ Threaten ^	21	9	16	54	45	28
TOTAL	31	18	21	78	67	44

Suicide Related



Highlights

- Significant increase over the time period however the numbers are small and increase confined to just the last 2 years
- Suicide attempts and suicides regularly require an intensive followup investigation to ensure no foul play
- The subset of these calls and others related to Mental Health issues are an area of continuing concern and increasing frequency for most police agencies

agencies

others related to Memal Mealur issues are an area of continuing concern and increasing frequency for most police



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Top 5 Calls 2018

- 1. Crash/No Injuries
- 2. 911 Check/Hangup
- 3. Alarm/Business
- 4. Information
- 5. Suspicious Person

Top 5 Calls 2020

- 1. 911 Check/Hangup
- 2. Alarm/Business
- 3. Welfare Check
- 4. Crash/No Injuries
- 5. Suspicious Person

Top 5 Calls 2022

- 1. 911 Check/Hangup
- 2. Welfare Check
- 3. Alarm/Business
- 4. Crash/No Injuries
- 5. Suspicious Person

Top 5 Calls 2019

- 1. Alarm Business
- 2. 911 Check/Hangup
- 3. Crash No Injuries
- 4. Information
- 5. Welfare Check

Top 5 Calls 2021

- 1. 911 Check/Hangup
- 2. Welfare Check
- 3. Alarm/Business
- 4. Crash/No Injuries
- 5. Suspicious Person

Top 5 Calls 2023

- 1. 911 Check/Hangup
- 2. Welfare Check
- 3. Suspicious Person
- 4. Alarm/Business
- 5. Crash/ No Injuries
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Geospatial Analysis

verlaying call response data with a geographic layer to cross reference call and officer availability information is the next step in the process. The geographic analysis determines the location of incidents to identify the most effective placement of resources for an effective response time, this is crucial for the analysis of deployment efficiency. Geographic analysis uses geography and mathematics in a combined approach to visually and thoroughly achieve analysis that cannot otherwise be accomplished. In specific terms, it allows for call data to be cross-

population density, trends in residential and commercial development, current deployment beats and other data to add context and insight into the calls for service patterns. Current and future development and population trends can also assist in predicting future demands and deployment needs.

The first map shows the City of Leon Valley by population density. In most cities population density is one of the variables strongly correlated with the workload volume.



so that some observations/conclusions can be drawn. The geographic analysis assists in depicting the total reactive workload and compares the demand to the way area patrol beats are organized and the available officers are deployed. The combined geographical and calls for service information may also suggest alternate patrol area layouts to respond to calls more efficiently.

referenced with geography

Further to this, the crime information can be overlayed with data about



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his map depicts all of the calls for service that occurred between 2018 and 2023 and maps them. Notable is the clusters of calls following all of the major thoroughfares, Bandera Road, Loop410 and Grissom road. The plotting of calls also indicates that calls have occurred in every populated part of the city and that the large majority of calls are priority 3 and 4.





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To more easily point out the relative density of the calls for service we next examine a heat map that shows the relative concentration of calls. The two main points illustrated in this map is again the fact that virtually all populated areas of the city are affected by calls, and the most frequent call areas occur along Bandera Road near the centre of the map, with another noteworthy call cluster in the southeast extremity of the City. That cluster also correlates with one of the most denselv populated areas of the city and features a number of commercial premises and retail outlets. The other cluster isn the southeast is in the area north of Bandera



road. This is a lightly populated area of the City of Leon Valley but does feature a number of commercial premises. These clusters also represent opportunities for areas of crime prevention initiatives either through environmental design, public education or operational practices. Depending on the nature of the areas these clusters are also areas that could benefit from directed patrol, or high visibility patrols to act as a deterrent to criminal activity.



Proactive Activity

eactive policing in response to calls for service, however, is only one part of the total frontline workload. In addition to the calls for service information, CAD and other data can also assist in depicting the proactive activities of officers. These can include traffic enforcement, citizen contacts, premise checks, foot patrol or any other selfinitiated policing activities that are captured in the CAD system or in other records. We know anecdotally that there are many proactive activities taken on by members of the Leon Valley Police Department, for example, neighborhood and business checks, however these activities are poorly tracked and quantified in the current system. Most deployment models will want to have time built in at appropriate times of the day for proactive activities to take place. The

International Association of Police identify uncommitted time measures as one of the most important and accurate indicators of police workload. Department expectations of what the role of the officer is in the community, and what the core job functions are, greatly impact the proactive activity workload. Police departments that emphasize community outreach, engagement, and problem solving as part of the core responsibilities of frontline police officers typically have an enhanced need for officers to be available during the times when those community engagement activities characteristically need to occur i.e., 9:00 a.m. to 9:00 p.m. Usually, these are proactive activities that allow officers to focus on Department and Community priorities.

he Leon Vallev Police Department had a small number of proactive calls quantified in their CAD data. In interviews with officers. most identified traffic enforcement as the main proactive activity they engaged in. The data provided by the LVPD shows the considerable efforts towards traffic enforcement and road safety.

Traffic Stops, Citations and Warnings

	Traffic Stops	Citations	Warnings	Total	Sworn	Per Capita proactive actvity
2018	no data available	1701	268	1969	40	49.2
2019	6476	7719	1846	9565	no data available	no data available
2020	2772	2933	1280	4213	46	91.6
2021	2618	2988	1067	4055	36	112.6
2022	3392	3971	1249	5220	38	137.4
2023	5746	6009	3153	9162	39	234.9



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Other proactive activities may be captured in a CAD category along with reactive activity. One example of this would be the "patrol by" call type. A "patrol by" call can be generated as follows:

 by a citizen, requesting one over the phone or by filling out an

online form initiated by the officers if there is knowledge of an insecure premise or safety concern for a member of the public,

initiated by a third-party on behalf of another person or premise by calling the police.

Because this mix of proactive and reactive activity would be all captured within the same call type, it is extremely difficult to quantify the proactive activities of the officers based on CAD alone. Proactive activities based on community expectations and department priorities are a key responsibility for police agencies, and one that often goes unrecorded either on CAD or the record management systems. In fact, the more typical scenario is for officers to engage in these proactive activities, such as property checks, while they are otherwise marked available on the CAD system. Maintaining better records to quantify and showcase proactive activities can be a powerful demonstrator to the public of all the things the agency does to keep the community safe and to meet expectations. One of the recommendations of this report is that the police agency developed some tracking

Recommendation

That the Leon Valley Police Department develop a system to exclusively track proactive activities undertaken by officers during their tour of duty. Variables to be captured should include officer ID, patrol area, location, time and date, nature of the proactive activity, and its duration. mechanism proactive activities, and the time spent on them. The City of Leon Valley does a extraordinary job of tracking, detailed data that is generally not tracked by police agencies via the city managers report, and some of the detailed information in there. It might be an ideal vehicle to

ensure the recording of proactive activities and the regular communication of them to city Council and the public.



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Patrol

ne of the important measures of workload and capacity utilized in the FITCH methodology is to also account for demands on officer time outside of calls for Service demands. As a baseline it is essential to have a sense of how many officers are engaged in general patrol (i.e., not assigned to a call, an administrative detail, or proactive selfinitiated police activity) at a given time. Available officers on undirected patrol are poised to respond to priority events, (as described in the response time section of this proposal). In addition to emergency response capacity, general patrol as a consideration in the workload provides visibility which contributes to creating a subjective sense of safety (especially important for City Centers, entertainment districts and tourist areas). Its is essential for such areas to be safe, but that the people frequenting them perceive that they are safe. There is a strong correlation between police presence and the subjective perceptions of an area as being safe. General Patrol also is desirable to provide a deterrent to public disorder and crime. The queue and response times (reinforced by Geospatial analysis) suggest that the Leon Valley Police Department generally has officers available and positioned for an effective response. Most of the non residential area is laid out along major roadways such as Bandera Road in such a way that it makes traditional vehicular patrols/ response ideal for the area. However, Leon Valley is also a fairly small area and has expanded parks and trails. Leon Valley should explore opportunities to provide targeted high visibility patrols such as bike or foot patrols in areas of the City where they might provide for opportunities for more interpersonal contact with the population and enhance the subjective

safety of residents in areas of more concentrated call activity. High visibility patrols provide opportunities for front line officers to have conversations with the public, engage in proactive activity, get to know business owners or neighborhoods and learn about chronic problems or issues important to them. Such interactions are at the core of the idea of community policing, and provided there are enough officers with patrol time available, they are ideal in a small community like Leon Valley.

Recommendation

That the Leon Valley Police Department consider opportunities to engage in high visibility patrols in targeted areas where they might provide community problem solving and community enragement opportunities and enhance the public's perception of subjective safety.

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Administrative Time and Optimized Relief Staffing Multiplier

here are several realities that take away from police officers being available at work to take calls, patrol and do proactive activities. These include lunches and breaks, vacation, training, sick time, on duty court appearances, on duty injuries, vehicle maintenance, meetings etc. A comprehensive picture of workload must include the impact of these administrative tasks on the deployed staffing to accurately gauge the efficiency of the work shift, and deployment pattern.

A Continuous Staffing strategy is utilized when the department hires additional personnel to cover the average lost time experience on the shifts to cover the time lost through the average administrative. In this manner the additional personnel are available as "relief" personnel who are utilized to cover vacancies at the straight time rate more frequently and thus reducing the

Minimum Squad Deployment (officers plus supervisor)	Staffing Multiplier	FTE Employees Required to Achieve over 4 Shifts	Current Staffing	Differential
3	4.97	14.91	18	3.09
4	4.97	19.88	18	-1.88
5	4.97	24.85	18	-6.85

overtime liability. A more optimized staffing model should serve to significantly reduce the current overtime costs that are associated to staffing the front line.

An optimized staffing analysis was conducted utilizing mathematical formulae to determine the most efficient allocation of personnel to maintain the desired staffing. Variables included in the calculation included the average use of personal time, training, Family and Medical Leave Act, on duty court appearances and modified duty hours. The result of the calculation indicated that every 24 hour staffing position required 1.244 officers. Multiplied over the 4 shift system it means that the Police Department requires 4.97 officers for each of the 24 hour staffing positions. The calculation would indicate that the Department is presently staffed with just enough to adequately cover the minimum deployment human resource levels (2 officers plus a supervisor) but understaffed to achieve anything beyond the bare minimum, and would need to add 2 officers to achieve the enhanced staffing minimum of 3 officer plus 1 supervisor that is being recommended in this workload assessment.

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Best Practices and Selected Areas of Review

Red Light Camera

eon Valley is one of the last cities in Texas with a red light camera program. Since its inception the red light program has generated significant revenue for the city and funds, at least partially, a number of police and city staff.

t is clear that there is a reluctance to continue the Red Light Camera program even though it brings in significant revenue and pays for a number of police positions. There are currently two officers assigned to proof and process red light camera full time with a Sergeant who oversees it in addition to a number of other functions. The contract runs to 2037 having been renewed in 2019 shortly before the state outlawed Red Light cameras. There is also some legal ambiguity over whether offenders are compelled to pay

Recommendation

That the Leon Valley Police Department establish contingencies to deal with the consequences of the Red Light Camera Program coming to a gradual or abrupt ending.

fines from red light camera convictions. The future of the program is uncertain and it should be in both the short and long range plans for the police department to have contingencies to deal with the program coming to a gradual or a sudden halt. The main two considerations are

- 1. How to replace the red light revenue, or what operational changes will need to be made to adjust to the new environment.
- 2. Dealing with the two officer positions currently dedicated to administering the red light program, whether that means eliminating them through attrition, repurposing them for the front line or another specialty unit.



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Data and Metrics

ne of the goals of the study is to establish a methodology with benchmark to assist the city in determining future staffing needs. This study considers, proactive, reactive, patrol, and administrative factors. The quality of the analysis is always a direct reflection of the data quality available. In many aspects of data collection (due to the requirement for regular reporting of data to the city manager as a component of the city managers report), the City of Leon valley has robust and well recorded information on a number of areas. There are however some areas where technical operational or policy changes might benefit in the future collection of guality data to better illustrate the changing workload. The first of these is when it comes to the use of incident. The incident that collected included two descriptive fields for the incident itself. One was the "type description" and the other was the "offence description" inconsistency in how these two fields were utilized, made gleaning any

useable data from the incident database rather difficult. It would be helpful in terms of enhancing this data source to look at any operational or procedure changes that might be put in place in order to ensure more structured coding of type description and defence description. These opportunities may be limited by the particular RMS software used and somewhat beyond the control of the Leon Valley Police Department, but any structures and supports that could be put in place as guidance for the officers entering data to promote mutual exclusivity of incident types would be helpful.

There has already been a recommendation surrounding the gathering of proactive activity data in order to help help illustrate more comprehensive picture of the total workload. In concert with this recommendation it would be assisted the department to consider procedural changes that could be made to help ensure more pro activities are captured in the CAD system

Shared Services and 3rd Party Providers

Recommendation

That the Leon Valley Police Department formalize any current shared services, third party services or mutual aid agreements through formal documentation to solidify mutual expectations. There are a number of arrangements including the partnership with the 911 Centre Bexar County Public Safety Communications Center., assistance from San Antonio Police Department and the Texas Rangers that exist and provide occasional assistance or expertise to the agency. Some of these arrangements are based on personal relationships with the police leadership team, and are not supported or articulated by a shared service agreement. It is recommended as a best practice that all of the mutual aid or shared service arrangement be formalized and documented to:

- · provide a solid idea of mutual expectations,
- · formalize the duration, renewal and procedure to terminate the agreements,
- ensure the continuity and sustainability of such agreement to allow for planning and budgeting decisions
- · identify the mechanism and circumstances where the mutual aid can be triggered



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Shift Staffing and Organizational Design

t present, the day shifts have four (4) officers and the night shifts have five (5) officers

A Shift (Days)

- One Corporal
- Three Patrol Officers
- B Shift (Days)
- One OIC
- Three Patrol officers
- C Shift (Nights)
- One Sgt
- One OIC
- Three Patrol Officers
- D Shift (Nights)
- One Sgt
- One OIC
- Three Patrol Officers

From a supervisory standpoint there are no sergeants on the day shifts and the Lieutenants and even the Assistant Chief or Chief, who work a consistent day shift are available to assist the frontline in addition to their other duties if required. On night shifts both C and D have a patrol sergeant to provide oversight. Squads A and B are supervised by a corporal and an OIC respectively. There are also OIC's on C and D Squad. From a organizational design and succession planning standpoint it would be advisable for the Department to decide which structure (OIC or

Recommendation

That the Leon Valley Police Department select the new rank structure for the supervisor/second in command on the squads (either corporal or OIC) and then identify members to permanently fulfill these backup supervisory duties on all squads.

Recommendation

That the Leon Valley Police Department increase the minimum staffing to be one supervisor plus three officers at all times.

Corporal) they want to use on the shifts as the second in command of the squad, and then designate or select members permanently to assume these important roles. The deployment model encourages Sergeants to remain available to provide guidance, make decisions, and complete the administrative tasks rather than get tied up on calls for service themselves, but due to the relatively small size of the shift teams it is not unusual for sergeants to become involved in calls.

The frontline officers work a modified Panama Schedule 12 hour shifts with the day shifts 0600-1800 and the night shifts 1800-0600. There are no overlapping shifts and some degree of overlap would be advisable to provide continuous coverage. The shift system employed is relatively recent as it was adopted during the pandemic but it enjoys considerable popularity with the officers working it. The 12 hour schedule appears to be functioning well and providing adequate coverage for the city. The police department when faced with the staffing inevitabilities such as occupational injuries, parental leaves, retirements, resignations, illness training etc, often have to resort to temporary transfers of personnel from one shift to another in order to provide balanced human resource supply. There is a minimum shift strength of having at least 3 officers (1 supervisor + 2 officers) on duty per shift. This practice was initiated by the Chief of Police as a mandatory minimum for community and officer safety and the consultant recommends this minimum be increased to 3 officers plus 1 supervisor for a total of 4.



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Specialty Unit Staffing

The Detective office has a Lieutenant, a Sergeant, 2 active detective investigators and another detective who assist and is in charge of the impound function. The authorized strength for the unit is 5 detectives and a sergeant but the unit often is short staffed because of shortages on the frontline. The City Manager's report contains detailed data about the time spent on investigations. For some other key indicators of workload for the frontline and detectives in terms of crimes that that need to be investigated, staffing studies often refer to crime incidents. For this we compare data provided by the Leon Valley Police Department with information from the FBI Uniform Crime Reporting (UCR) program.





In comparing different regions of different populations the rates of incidents are often expressed as the number of those crimes per 100,000 population. These graphs compare the rates of violent and property crime rates for Leon Valley with the rates across Texas, and the nation. With the exception of an aberrant spike in 2017 and another sharp increase in 2022 the rate of violent crime in Leon Valley for most years has been below the state and national average. It will be wise to monitor the 2022 increase to determine if it was an one time occurrence or indicative of a new trend. Conversely, property crime offences have consistently been significantly

higher than the state and national averages every year since 2012. The individual crime incident types reported in the UCR can also be compared across the state and nationally using the rate per 100,000 population statistic.



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Homicide

- Actual numbers are very small 0-3 per year so more volatility in the comparison.
- 2021 and 2022 rates are well above state and national average

Rapes

• 2018 to 2021 rate is well below average but there is a significant increase in 2022 and it appears the increase persisted in 2023





Robbery

 2018 to 2020 rate is well below average for Texas and USA but above average slightly in 2021, with a spike in 2022 that may be an anomaly.

an anomary



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Aggravated Assault

• 2018 to 2022 rate is below average for Texas and USA slightly above average in 2022 and the increasing trend continues in 2023.



Burglary

 Consistently slightly higher than state and national averages during the entire sample period.
 A significant rate increase in 2021 that seems to have abated in 2022 and 2023.



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Larceny

• 2018 to 2022 rate is fairly stable and significantly above average rates in Texas and USA.



Robbery

- 2018 to 2023 trend shows a steady and alarming increase in the Leon Valley rate per 100,000 population.
- Rate is slightly higher in 2018 and 2019, moderately higher in 2020 and 2021, and significantly higher in 2022 with the sharp increase in rate continuing in 2023

in 2022 with the sharp increase in rate continuing in 2023



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Caption



Another important metric when considering detective/investigative workload in particular is the crime clearance rate. As in most police agencies, the clearance rates for violent crime is consistently higher than the clearance rate for property crimes. The general trend in recent years however for both property crime and violent crime is a decrease in the clearance rate, perhaps suggesting additional resources may be required for followup investigations. Both property and violent crimes have increased since 2020, but the number of clearances for property crime have not increased with the increase in cases, and the number of clearances for violent crimes has increased only slightly at a time when the overall number of incidents has increased sharply. The incidents of property and violent crime are on the rise while the number of clearances remains stagnant.



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The clearance rates need to be put into context by comparing them with the experience of other departments. Unfortunately, the UCR data does not present clearance rates at the state and national data. To put the Leon Valley clearances into perspective the clearances from San Antonio were reviewed. While San Antonio is a much larger and more populous area, its geographical proximity to Leon Valley makes it an interesting comparator. The totals of each incident type from 2018 and 2022 were compared to the total number of clearances for the same time period. As the table indicates Leon Valley has a higher clearance rate for aggravated assaults, rapes, homicides, burglary, and larceny. It has a slightly lower clearance rate for auto thefts and robberies.

Offence	San Antonio PD # of Offences	Leon Valley PD # of Offences	San Antonio PD Clearance Rate	Leon Valley PD Clearance Rate
Aggravated Assault	39,316	116	23.85%	42.24%
Robbery	9330	42	18.72%	16.67%
Rapes	7112	881	12.39%	26.67%
Homicides	738	6	42.95%	66.67%
Burglary	42170	339	3.67%	5.01%
Larceny	237,394	2186	8.24%	14.68%
Auto Theft	42,160	432	9.07%	6.48%

Select Incidents 2018-2022 Clearance Rates

It is apparent that the unit would benefit from being fully staffed. In addition to the 2 detectives and impound officer, it would be beneficial in terms of succession planning and career development for the fourth position to be filled and used as a 6 month or 1 year training position. Officers from the frontline could be rotated in, and would have an opportunity to develop advanced investigative skills. At the end of the training period the officer returns to uniform patrol using their enhanced investigative knowledge to assist other officers and improve the quality of investigations in the first instance. For the program to fulfill it's potential it is crucial that the frontline be staffed appropriately so that the training detective does not need to be used as a stop gap for unexpected absences of the frontline.



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The complexity of investigations continues to increase for all police agencies across the country, and court challenges to the investigative process are the norm. The role of investigative units to support the front line and ensure quality followup to calls has never been more crucial. In the long term it may also be beneficial for the Leon Valley Police Department to consider civilianizing the impound lot functions currently being performed by one of the detectives, enabling that detective to be fully available to conduct investigations.

Recommendation

That the Leon Valley Police Department fully staff the 4 authorized detective positions.

Officer Compensation and Retention

There were mixed perspectives on how well paid the officers in Leon Valley were versus their area comparators. Salary comparisons are often a moving target based on what stage raise cycles are at. However, at least some of the officers interviewed believed that the combination of workload and financial compensation deterred experienced from outside the area to applying for Leon Valley vacancies. The city should explore non monetary options that would enhance the the desirability of Leon Valley as a destination for currently serving officers, and maintain good moral and organizational attachment for officers already working for the department. Examples of the non monetary options include, shift schedules, employee recognition programs, department awards, take home cars, improvements in equipment and uniform wear etc. Even when new officers are hired it generally takes 3 or more months before they can function independently. To address this gap in coverage more efficiently, some agencies have a "pre-hire" program where they hire new officers in advance of impending vacancies (resignations and retirements) so that the frontline is fully staffed with fully trained officers on a more continuous basis.

Fleet

One of the topics that arose during interview was a degree of inflexibility with the Police Department Fleet. The vehicle purchases are identified in the budget, and each year the police department is allocated funds to replace a finite number of vehicles. Once those replacements happen at the beginning of the year, there is no reserve or capacity to replace a vehicle that gets damaged during the course of normal police operations to the point where a replacement vehicle is required, or to replace a vehicle that experiences a catastrophic mechanical failure. It is best practise in most contemporary police agencies to have some marked police vehicles in reserve, or to have a contingency to replace a vehicle when necessary.



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City Advisory Committee

n May 17, 2016, the City of Leon Valley adopted a City Ordinance Article establishing the Police Department Citizen Advisory Committee. The committee serves as the liaison between the police department and the community on programs, ideas, and methods to improve the relationship between the department and our citizens. The committee has 13 members appointed by the Mayor and City Council, and come from residents and business owners in Leon Valley. The committee meets once monthly at City Hall.

As a matter of best practise Chief Of Police advisory committees are excellent sources of information and feedback about

- Chronic community problems/issues
- Community engagement programs being offered or considered by the police
- Other pervasive community issues as they relate to policing duties

In some instances these types of committees The committee should function as an advisory committee with no ability to dictate police deployment or operations. There work of the committee should be relayed to City Council on an annual basis via a formal report or presentation by the Chair of the Committee.

IT Infrastructure

There is only 1 person in the City who supports IT for all of the departments. There is a ticket system in use to request support. In the event of a failure of a mission critical system it would require a call in for the IT staff member. In dealing with the police specific software the administrative sergeant of the Leon Valley police department is well grounded in the features and nuances of the program and often works with the IT professional to resolve issues or install required updates. In this particular circumstance the department benefits from the unique knowledge of a particular senior officer and would not likely be in a position to replace that skill set if the administrative sergeant retired or resigned. The City does supplement IT support by having an ongoing contract with an outside vendor for additional technical support as needed.

While it is beyond the scope of this report to comment on other City departments, it may be wise to consider in the long run bolstering the IT department with another staff member dedicated to maintaining mission critical systems and software for the police, fire and public works departments in keeping with emerging best practices.



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Succession Planning

When the senior management team of the Leon Valley Police Department would be in a position where they were eligible to retire either at present or in the next few years. The agency would benefit from identifying current members with the capacity for future development and actively look for opportunities to provide relevant courses, job shadowing or acting experience and exposure to the unique responsibilities of the next level ranks in order to have officers prepared to assume positions of increasing responsibility and leadership.

Animal Control

he Leon Valley Police Department has animal control as one of their responsibilities. A significant challenge to the department is the lack of an animal shelter to house found and seized animals.

The Lieutenant in charge of support services, has animal control under his area of command along with the property room, red light unit and the detective unit. When that Lieutenant was asked which issues were of biggest concern or source of worry for him, identified the animal control responsibilities. It is not unusual for police agencies to assume responsibility for animal control, but it would be advisable to make sure there is sufficient infrastructure in place. This could most effectively be put in place through a shared service agreement with a municipality that has a facility or a private entity to ensure that the Leon Valley Police Department can effectively meet their responsibilities and needs when dealing with animal control



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Strategic Direction

he most progressive police agencies have several things in common. One of them is the use of strategic planning to make sure current activities and resource allocations are all done in alignment with longer-term goals and objectives. A strategic plan allows the ability to see how different projects and initiatives undertaken fit into the larger plan and help to fulfill strategic objective and to prioritize activities based on the strategic priorities, Strategic plans give the agency a sense of direction and purpose.

In most cases there is an important element of community consultation as part of the strategic planning exercise to gain the perspective of the customer and understand the communities perceptions and priorities. Strategic plans that are developed without customer input put agencies in danger of losing touch with what the end-user wants, which could have negative political ramifications later on.

An additional benefit of completing a strategic plan is the advantage it would provide administrative staff in developing budgets and annual reports. The basis of the strategic plan is to determine the outcomes the community desires and alignment with the City's strategic goals and objectives and overall planning process. A strategic plan encourages the Police Chief to function in a strategic manner, planning and preparing the organization for future opportunities and threats, and ensuring that all activities have a focus on fulfilling the goals of the strategic plan.

The strategic planning process also requires that the agency identify time bound objectives and metrics to quantify progress.

Recommendation

That the Leon Valley Police Department develop a strategic plan outlining the strategic direction of the agency in harmony with the City's planning process, and identifying specific, sequential measurable and time-bound strategic objectives that will be achieved.

The Leon Valley Police Department should develop a strategic plan and involve staff who will likely be in leadership positions in the future so that there is "buy in" and commitment to the plan's goals. The strategic planning process also requires a detailed implementation plan laying out

- The strategic goals of the agency and how they fit into the mission and values of the organization.
- Who is responsible for achieving particular goals, what metrics will be used to depict what success in achieving the objective will look like, what order will the objectives be completed in and what is the deadline to achieve the objective within the scope of the overall plan.

Through evaluation of the department's current state, the strengths, weaknesses, threats and opportunities in the future, and the input gleaned through community and stakeholder input, the Police Department can develop a framework for the future that illustrates the path forward to a preferred future.



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Staffing Recommendation

comprehensive review of all of the available information leads the consultant to the conclusion that the Leon Valley Police Department would benefit significantly from adding 2 additional officers to their frontline complement. Factors that

contributed to this conclusion include:

- City expansion including the added parks and trails that the officers are responsible to police.
- The expansion of transient and low income housing.
- The volume of vehicular traffic on the main roadways that adds over 100,000 vehicles that run through the area
- Increase in some violent crime types as indicated in the data, as well as continual increases in some of their most frequent call types.

Recommendation

That the City of Leon Valley Police Department increase their frontline staffing by adding two officers and assigning them to the two day shift platoons.

- The current numbers of frontline officers give Leon Valley very little flexibility in dealing with staffing inevitabilities of illness, occupational injury, vacation, training courses and parental leave. If there is a duty injury or training opportunity the Department has to continually move people from platoon to platoon to balance human resources, the added officers would add more ability to absorb illness, duty injury, maternity leave, training, etc
- There is somewhat of a mismatch with the staffing proportions on day and night shift with 46% of the frontline staff dedicated to day shifts handling 57% of the reactive workload.
- Added officers will assist in the perception of safety. One of the things citizens often do when selecting a
 new neighbourhood to live in, is to consult public web sites to see if the community is "safe". Here is a
 sample of what some of those sites had to say about Leon Valley
 - Area Vibes scores Leon Valley a grade of F on crime despite good rankings in cost of living (A+) Housing (A+) and schools (B-)
 - Niche scores Leon Valley a C for Crime and Safety citing rates of assault, murder, rape Theft and motor vehicle theft higher than the national average.
 - Crimegrade.org gives Leon Valley an overall crime grade of D, with an F in Vehicle Theft
 - <u>Neighborhoodscout.com</u> reports that Leon Valley is safer than 1% of US neighborhoods with a rate of violent crime at 5.6 victims per 1000 households, compared to the Texas Average of 4.32 and a national median of 4. It also says Leon Valley has a property crime victimization rate of 64.05 per 1000 compared to the Texas rate of 23 and the national of median of 20.



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While one could argue the veracity of these conclusions they do have some nexus to FBI crime data and they certainly would color a prospective resident's impression of the area. Additional resources to increase visibility, proactivity, and deterrence would assist with the area being safe and almost as importantly being perceived as being safe.

The optimized staffing analysis indicates that at current staffing levels, Leon Valley likely has only 2 officers plus one supervisor on duty at any particular time. In order to reach the minimum frontline staffing numbers recommended by the consultant of 3 officer plus 1 supervisor, it is necessary at a minimum to have 5 officers in total on each platoon to cover personal time, occupational injury, Family Medical Leave Act absences, and other eventualities that take away from officers being available for frontline duties.

The frontline is currently at 18 members and needs to get to 20 to reach the level recommended. Achieving 20 members on the frontline would put the police department in position of having enough staff to absorb the inevitable administrative demands and lost time that take away from operational availability, and still be able to deploy 4 officers on the majority of day and night shifts. Thus reducing overtime, and providing valuable opportunities to engage in more proactive activities, rather than be in a perpetual call response reactive policing mode.

Staffing Methodology

ne of the requirements of the study was for the consultant to recommend a methodology for the calculation of police staffing needs that can be updated and replicated by city and police department staff for short and long-term strategic planning resource budgeting. Taking into account daily staffing needs, training needs, and personal time off

The following benchmark metrics should be monitored for significant changes and should trigger a staffing review. Some of these metrics will require new tracking systems to accurately track and quantify

- 1. more than a 20% increase to the 80th percentile of response times for priority 1 and 2 calls
- 2. the 80th percentile queue time for any call priority level begins to exceed 60 minutes
- 3. officer proactive time and patrol time between the hours of 8:00 AM and 10:00 PM falls below 3 hours.
- 4. more than a 15% increase in annual calls for service in a time span of 3 years or under, or when there is a cumulative net increase of 20% of reactive calls over any time period
- when the annual review of Optimized Relief Staffing Model Calculation updated with the yearly Administrative/Lost productivity data indicates that the Police Department is not achieving optimal staffing
- 6. if for any reason the Police Department changes shift schedules, minimum staffing levels, patrol area or annexes territory



A Final Word

The City of Leon Valley is a unique community. Surrounded by the City of San Antonio, Leon Valley has carved out an independent, self-sustaining, diverse and progressive community with a commitment to providing outstanding public services to its citizens including extraordinary public safety services. Many progressive communities across the nation have experienced calls for police reform and modernization while maintaining traditional services. At its fundamental level, policing is characterized by individual interactions between officers and citizens. Having those interactions take place in an environment where the parties have some level of previous familiarity with one another, and ongoing community issues, can promote trust and understanding. Having these interactions take place in a setting where the parties know one another as individuals rather than as stereotypical members of a particular group, does much to humanize the police to the citizens, and citizens to the police, and to promote mutual respect and equity of treatment. This type of community policing is especially effective in condensed, tight knit communities such as Leon Valley. If frontline officers are expected to be consistently visible and accessible to build trust and transparency with the community, it has staffing implications for frontline and/ or specialty units. There has to be sufficient human resources to

- · have an effective emergency response capacity,
- to effectively handle reactive calls for service within a reasonable time after they are called in,
- to have sufficient time available to engage the community, build relationships and problem solve, during the particular times of the day and night when it will be most effective for that community.
- and to have adequate staffing to provide timely and effective investigative support.

To achieve sufficient human resources this study recommends that the City hire additional officers to achieve a total of 20 Officers on the frontline inclusive of supervisors, and fill the existing vacancies in the Detective Office to achieve a total of 6 Detectives (1 Detective Sergeant plus 5 Detectives). These staffing increases. along with the other recommendations in this report, support the City of Leon Valley to continue their wise stewardship of city finances, their commitment to economic diversity and sustainability, their capacity to provide modern and effective public safety services, and the ability to demonstrate by their actions, that they are truly a city of "deep roots and big ideas".