



Our organization works every day to maintain a high quality of life by providing a safe and peaceful environment within the City of Pearland for all residents. Our desire is that every Pearland resident and visitors goes about their day as they choose without any unfortunate events, regardless of location within Pearland, or time of day. In the instance when criminal, traffic, medical, fire, natural disaster or any other emergency occur, it is our responsibility at the City to have properly trained and equipped professionals who can quickly respond to any scene with empathy and judgment, aided by communications and technology structures in place.

Prevention, preparation, and planning take the majority of any given day, and properly so. Education, information, presence, good design and maintenance, and a culture of awareness and responsibility all play a key role in that effort. For instance, traffic crashes take lives and impose costs. With well-designed traffic flows, ongoing road maintenance, and effective awareness and enforcement of traffic laws, crashes can be reduced. When traffic emergencies do occur, a coordinated response from Police and Fire professionals is critical to control traffic and protect lives. Similarly, there are unavoidable natural weather threats that must be prepared for with staff training and awareness, with contingency plans for a resilient community and City government that can get back on firm ground once high waters subside. The response to such events requires a coordinated effort between all City Departments, each of whom have a different role. In all these areas of our function as a local government, we are responsible to provide independent and coordinated levels of service that protect lives and property, for our citizens and those that do business in Pearland.

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FY21 White Paper

To: Clay Pearson, City Manager
From: Vance Riley, Fire Chief
CC: John McCarter, Interim Finance Director
Date: January 3, 2021
Re: Implementing the Citygate Fire Service Plan

This memo entails an update on progress made toward outcome goals established by the FY17 Citygate Standards of Cover and Staffing Utilization Study. Specifically, this paper will quantify what has been done, what is currently in progress, any future planned projects, and what the end goal of the Fire Department's multi-year build-out looks like. Specifically, it will discuss the number of remaining stations, apparatus, and staff that will be needed to complete the build-out to allow planning of these expenses within future budgets.

In addition, the Fire Department is in the process of requesting a quote from Citygate to update specific portions of their study now that almost 4 years have passed. Once this quote has been received, we will be submitting as a supplemental in the FY22 budget request.

Background

The purpose of this paper is to outline progress made since the 2017 Citygate Fire Service Plan was presented and approved by City Council.

It is important to have a historical perspective to gain understanding of the context of the findings and recommendations of the Citygate Report. Appendix D recounts that history. The last thirteen years have brought rapid and substantial changes to improve Pearland's fire and emergency medical services provided by the City to our community, businesses, and visitors. Not resting on any achievements or satisfied with *status quo*, we remain committed to continuous improvement and change through addressing the remaining significant and critical opportunities for improvement yet to be achieved.

Appendix A provides information on Fire Station 7 and 8 progress. **This white paper serves as a four-year update as to the current status in implementing the recommendations of the Citygate Final Report as follows:**

10.2 DEPLOYMENT RECOMMENDATIONS

Recommendation #1: With the recent change in dispatch centers, the City should monitor, on a monthly basis, the dispatch processing times, including the PSAP transfer times from the Pearland Police Communications Center.

COMPLETE

The Fire Department receives monthly statistical reports from the Cypress Creek EMS Communications Center in compliance with

NFPA 1221 standards. Additionally, Pearland PD provides call transfer time reports upon request. Can you elaborate on what is done with the data to improve response times?

Recommendation #2:

NOT STARTED

Adopt City Council Deployment Measures Policies: The City's elected officials should adopt updated, complete performance measures to direct fire crew planning and to monitor the operation of the Department. The measures of time should be designed to save patients where medically possible and to keep small but serious fires from becoming greater-alarm fires. With this in mind, Citygate recommends the following measures:

IN PROCESS

2.1 Distribution of Fire Stations: To treat medical patients and control small fires, the first-due unit should arrive within 7:30 minutes, 90 percent of the time, from the receipt of the 9-1-1 call in the fire dispatch center. This equates to a 1:30-minute dispatch time, a 2:00-minute company turnout time, and a 4:00-minute drive time in the most populated areas.

The Department agrees with this recommendation. To date, Council has not formally adopted a standards of cover or performance measures.

IN PROCESS

2.2 Multiple-Unit Effective Response Force for Serious Emergencies: To confine fires near the room of origin, and to treat up to five medical patients at once, a multiple-unit response of a minimum of two engines, one quint, one medic unit, one Fire Captain—EMS, and one Battalion Chief, totaling 16 personnel, should arrive within 11:30 minutes from the time of 9-1-1 call receipt in fire dispatch, 90 percent of the time. This equates to a 1:30-minute fire dispatch time, a 2:00-minute company turnout time, and an 8:00-minute drive time spacing for multiple units in the most populated areas.

The Department agrees with this recommendation; however, we are not currently able to meet this goal with our existing quantity and distribution of resources. After the aerial ladder apparatus is staffed at Station 8 in early spring 2021, this goal should be met for approximately 1/3 of the geographic area of the city (western 1/3).

NOT STARTED

2.3 Hazardous Materials Response: Provide initial hazardous materials response designed to protect the community from the hazards associated with uncontrolled release of hazardous and toxic materials. **The fundamental mission of the City response is to protect the public by isolating them from the event and waiting for additional trained personnel for mitigation.**

It can achieve this with a first company capable of investigating a hazmat release at the operations level within 11:30 minutes total response time, 90 percent of the time. After assessment and scene evaluation is completed, a determination will be made whether to request additional resources from the City's multiple-agency hazardous materials response partnership.

The Department agrees with this recommendation. However, to operate at the Operations Level at a Hazardous Materials incident will require the purchase and maintenance of additional detection and protective equipment, in addition to associated training time at significant expense. Some of this equipment includes consumables and disposables with shelf-life limitations. The Department has not made progress on this recommendation.

NOT STARTED

- 2.4 Technical Rescue: Respond to technical rescue emergencies as efficiently and effectively as possible with enough trained personnel to facilitate scene security and community safety until a trained Technical Rescue team from mutual aid companies can arrive. Deliver a first-due company for assessment of the rescue within 7:30 total response time minutes, 90 percent of the time. Assemble additional resources for technical rescue capable of initiating a rescue within a total response time of 11:30 minutes, 90 percent of the time. Safely complete rescue/extrication to ensure delivery of patient to a definitive care facility.

The Department agrees with this recommendation. However, a large portion of the Operations Division is not currently trained to the Operations Level for Trench, High Angle, Confined Space and Collapse Rescues. Due to the rarity of these types of incidents and the availability of other agency specialized teams, Department training, to-date, has been prioritized to include more frequent types of emergency response incidents. The Department has not made progress on this recommendation.

The Department has made significant process in the development of a water rescue team, including training additional employees in multiple city departments, vehicle and equipment purchases. We believe this training significantly assists our department in being prepared to respond to high water incidents, which are prevalent in Pearland and surrounding areas during hurricane season.

IN PROCESS

2.5 ALS Medical Services: The City should provide ALS services in all neighborhoods within 8 minutes travel time and thus 11:30 minutes total response time, 90 percent of the time.

The Department agrees with this recommendation. The Department currently has 6 Mobile Intensive Care Unit (MICU) ambulances and as well as a Fire-Captain EMS that provides Advanced Life Support (ALS) services to the City. Fire apparatus also have the capability to provide ALS services until the arrival of an ambulance, depending upon the EMS qualifications of those staffing the fire apparatus.

The Department agrees, in general, with Recommendation #2, as it presents excellent best practice targets; however, due to budget growth limitations, the Department realizes that it will take several years to attain these targets.

Recommendation #3:

IN PROCESS

Pearland needs three additional fire stations, with engines, as soon as funding permits in the northwest, southwest, and southeast areas of the City to better meet best outcome-based travel and response times.

Fire Station #8 (northwest) was awarded to Joiner Architects in March 2018, construction began in May 2019 and was completed in August 2020.

In late 2019, the Boards of Brazoria County MUDs 21 and 22 requested a termination of the contract to provide fire and EMS services. Council agreed to end the contract effective as of midnight on December 31, 2019. A fully staffed station (southwest) will not be necessary until that area of the ETJ is incorporated within the city limits.

The design for Fire Station #7 (southeast), originally planned for opening in October 2020 is now anticipated to begin in FY2023, with construction completion in FY 2024.

Fire Station #11 will need to be constructed based upon the buildout of the Massey Subdivision south of Brazoria County Road 100.

Please see Appendix B for most recent response time data.

Recommendation #4:

IN PROCESS

To improve aerial ladder unit coverage, Pearland should convert to staffing three dedicated aerial ladder trucks over time as the City continues to grow.

The Department agrees with this recommendation and plans to staff its' first dedicated ladder truck in March 2021. Until the completion of

continuous onboarding, Ladder 8 will remain as the only dedicated ladder truck in the city.

Recommendation #5:

NOT STARTED

To improve Battalion Chief coverage, Pearland could consider a second supervising chief unit in the western City.

The Department agrees, in general, with this recommendation and is proposing the addition of a 2nd Battalion Chief / Shift Commander in FY22.

Recommendation #6:

COMPLETE

As the four busiest ambulances maintain 30 percent unit-hour utilization for multiple hours during the day, the City will need a sixth ambulance on a peak-hour schedule from 10:00am to 7:00pm at least Monday through Saturday.

The Department agrees with this recommendation. Current demand for emergency medical service west of 288 required the addition of the sixth ambulance (Medic 8). This was completed in FY20.

Recommendation #7:

IN PROCESS

As the Department adds full-time firefighters, the goal should be to increase the number of paramedics to the point that every fire engine always has one paramedic with equipment to provide first responder paramedic care if the ambulance is not immediately available.

The Department agrees with this recommendation. As staff increases with a continuous onboarding program, fire fighters with paramedic certification will be hired until this goal is obtained.

10.4 HEADQUARTER PROGRAMS RECOMMENDATIONS

Recommendation #8:

COMPLETE

As soon as possible, the City should fill the vacant Operations Chief position, allowing the Fire Chief to concentrate his time on implementing strategic initiatives from the Department Strategic Plan.

The Department agrees with this recommendation. This position was not funded in FY2017, FY 2018 and FY2019. In October of 2018, the Assistant Chief of Training was transferred to the position of Assistant Chief of Operations. However, this left the position of Assistant Chief of Training vacant, which was highly undesirable and made implementing training recommendations very difficult. See all Recommendations #24 and #25. An Assistant Chief of Training would ensure a thorough training program, compliance with the training mandates of the Texas Commission on Fire Protection and the Texas Health and Human Services Commission, in addition to the recommendations of ISO and NFPA. Through internal reorganization, the Assistant Chief of Administration and the Assistant Chief of

Training were combined into one position with plans for a Battalion Chief (lower rank) of Training. This request was not fulfilled in the FY2020 budget. The Department chose to reorganize upon the retirement of the Assistant Chief of Community Risk Reduction into two Divisions, each lead by an Assistant Chief. This netted a Battalion Chief of Training, a Training Officer (unfilled due to COVID financial restrictions), an Assistant Fire Marshal promotion and a Senior Code Officer promotion. The Training Officer position is being submitted as a high priority in the FY2022 budget.

Recommendation #9:

COMPLETE

The Department should dispatch the on-shift Fire Captain—EMS(s) on all Battalion Chief responses for incident safety and communication roles.

This practice is already in place.

Recommendation #10:

COMPLETE

The Department should review both the Clinical Manager and Fire Captain—EMS position descriptions to reduce redundancy for clinical oversight tasks and improve training and safety oversight on shift.

This recommendation is complete as stated. In October 2018, the Battalion Chief of Logistics was transferred to the position of Battalion Chief of EMS. The position of Clinical Manager was split into an Office Assistant for the Training Division and an Internal Customer Service Representative for the Logistics Group. An internal promotion was made to allow a Logistics Supervisor as the head of the Logistics Group. A need for the return of the stand-alone position of Clinical Manager is being requested for FY2022.

Recommendation #11:

COMPLETE

As attrition allows, the Fire Captain—EMS position should change to that of a fire-suppression qualified Fire Captain, then the three Captain—EMS positions become overall shift training and Quality Assurance officers for both suppression and clinical programs. They will be shift training officers during the day and Battalion Chief aids for safety whenever needed.

Aside from some minor nuances, much of this recommendation is complete. In addition to Quality Assurance, the Fire Captain—EMS positions have been assigned to help with EMS training on the shifts as well as becoming incident safety officers and infection control officers for the shift.

Recommendation #12:

COMPLETE

The Department should complete a cost analysis of the training, safety equipment, and overhead burden for many part-time employees

against slowly replacing these positions with permanent, full-time employees.

The Department has set a fixed number of part-time employees at 30. This number is an effective, efficient and manageable number of part-time employees, while continuous onboarding takes place. No additional part-time employees will be hired for Fire Stations 8, 7, 11 and 10. Part-time employees are not being replaced as they leave the Department. Over time, the part-time employee program may need to be phased out due to the staffing complications of a much larger department.

Recommendation #13:

IN PROCESS

The Department should begin overstaffing the personnel needed for an additional fire station at least a year before the station opens. Doing so will accommodate recruit training and probation, staff retirements or separations, and will lessen the daily burden of scheduling so many part-time employees.

The Department began the process of continually onboarding new firefighters with a target rate of three personnel every 90 days. A SAFER grant was received in FY20 along with additional firefighters in the Fire Department budget. By March 2021, the Department will have caught back up and will be back on schedule with the continuous onboarding plan.

Recommendation #14:

IN PROCESS

The Department should develop and adopt a formalized Risk Management Health and Safety Program for its members.

The Department has taken initial steps towards this recommendation but has not formalized a Health and Safety Program. This recommendation falls in conjunction with Recommendation #15 to appoint a dedicated Health and Safety Officer. Since the Department now has a Battalion Chief of Training/Health & Safety Officer, we will be able to make progress toward this recommendation.

Recommendation #15:

COMPLETE

The Department should appoint a dedicated Health and Safety Officer for the organization.

Health and Safety responsibilities were previously held by the Assistant Chief of Training. As the position of Assistant Chief of Training is no longer part of the organization, these responsibilities have been re-assigned and currently reside under the Battalion Chief of Training/Health & Safety Officer.

Recommendation #16:

IN PROCESS

The Department should develop or purchase a formal set of policies and procedures that are tailored to Pearland's needs and organizational structure.

Initially, the Department did not agree with this recommendation. However, the Department has purchased the Lexipol policy management system and standardized policy set at relatively minimal expense. Implementation is in progress and is almost complete.

Recommendation #17:

COMPLETE

The Department should acquire a spare set of PPE for each employee and assure proper fit.

The Department has issued a second set of PPE to all firefighters. This was completed in October 2017.

Recommendation #18:

COMPLETE

On an annual basis, the Community Risk Reduction (CRR) Division should monitor the workload and work hours of all fire inspection personnel to assure that all inspections are being accomplished.

The CRR Division has improved tracking of work hours in the Firehouse (Fire) and TRAKiT (Code Enforcement) record management systems.

Recommendation #19:

COMPLETE

The CRR Division should develop a permit and fee schedule for occupancy use to help recover cost for operating the Division.

Modest fee increases were adopted within the FY2018 budget.

Recommendation #20:

NOT STARTED

Every two years, the CRR Division should rotate the Fire Inspectors/Investigators between areas to improve cross-training and depth in the Division.

The Department somewhat disagrees with this recommendation and has not implemented a process of rotating Inspector/Investigators. We believe that our current program and assigned districts allow continuation of an effective level of cross training of fire inspectors. The Department is using the recommendations from [NFPA 1730: Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation and Public Education Operations](#) for inspection frequencies, depending on type of occupancy and hazard.

Recommendation #21:

COMPLETE

The Department should consider adding one Business Manager position to the Administration Division.

The Department hired a Business Manager in July 2017.

Recommendation #22:

IN PROCESS

The Department should add, as soon as practical, two Administrative Assistant positions, one in Administration and one in the Training/Clinical Oversight Division.

One Office Assistant was added to the Training Division (now Administration Division) (see #10 above). An Administrative Assistant position was requested in both the FY2018 and FY2019 budgets but was not funded. A conversion of two part-time Office Assistants to two full-time Office Assistants for the Administration and Operations Divisions, respectively, was requested, yet unfunded, in FY20, and will be requested again during the FY2022 budget process.

Recommendation #23:

IN PROCESS

The Department should assign EMS patient care Quality Assurance to the Clinical Manager, relieving the on-shift Fire Captain—EMS of this responsibility unless specific training of personnel is required. Time permitting, the Fire Captain—EMS could still conduct quality assurance for low-acuity patient incident reports and to determine that all types of incident reports are completed appropriately and on time per policy.

This recommendation was not initially implemented as it was beyond the capabilities of a single Clinical Manager to review nearly 7,000 EMS incidents per year. The Clinical Manager reviews all high acuity incidents for patient care compliance; however, *all* incidents need to be reviewed for completeness and billing compliance, which is best done at the shift level to ensure timely response. The Clinical Manager duties are now divided up among the Battalion Chief—EMS and three Fire Captains—EMS (see PFD response to Recommendations #10 and #11. We believe this recommendation has been completed. However, since achieving this recommendation we believe that the need for a Clinical Manager still exists and will be proposing to restore this position in the FY22 budget.

Recommendation #24:

IN PROCESS

The Department should complete the development of a Pearland specific Career Development Guide to assist employees in preparing for promotions and ensure the requirements are stipulated in the plan and policies.

The Department agrees with this recommendation for the need to complete the creation of a Career Development Guide for the department. This plan is based on the current job descriptions and the Officer Development Handbook 2nd Edition from the International Association of Fire Chiefs. *This work is still in progress. The addition this year of a Battalion Chief of Training as well as work by the PFD*

HPO Leadership Team will assist in completion of this recommendation.

Recommendation #25: The Department should develop a plan to deliver, enforce, and track its training requirements to ensure all personnel fully comply with the training goals and objectives of the Department.

IN PROCESS

This plan is still in development and has been limited due to multiple roles and responsibilities of the Administration Division with limited staff. Due to filling the recent vacancy of the Battalion Chief of Training, we will be able to complete this recommendation soon.

The Department responds to high-risk fire and emergency medical services incidents. However, many of these high-risk incidents occur at very low frequency, thus making proficiency difficult to always maintain. To prevent firefighter injury and death it is necessary to train as realistically as possible on these high-risk incidents. With minimal capacity staffing in the Administration Division, an inadequate live fire burn building and no training field for other high-risk incidents, it was next to impossible to train to high proficiency. The citizens of Pearland approved the construction of a new live fire training building in May 2019. Construction is expected to be completed by October 2021. We believe this addition, once completed, will be largely beneficial to assisting our department in completing this recommendation soon.

Overall, the Pearland Fire Department has plans to complete most of these recommendations as budget and staffing capacity allows. Though many are not yet complete, many are in progress. We look forward to continuing that progress with these recommendations from Citygate. If you have any questions, please do not hesitate to contact me.

APPENDIX A Fire Station #7 and #8 Progress

BACKGROUND

Fire Station #8 is in the northwest part of the city, on Shadow Creek Parkway, just west of Reflection Bay. The station was constructed on property already owned by the City, adjacent to the Reflection Bay wastewater treatment plant.

Fire Station #7 is a planned fire station to be constructed on Bailey Road west of the railroad overpass. The station is planned to be built on property recently obtained from Pearland ISD. This fire station will fill in the gap between the coverage areas of Fire Stations 1, 2 and 3. It will provide first-due response to several PISD campuses and athletic facilities, as well as subdivisions such as Towne Lake Estates, Canterbury Park, Westwood Village and Cabot Cove, to name a few.

The need for additional stations to provide coverage across the City was initially outlined in the Master Fire Station Location Plan performed by Mike Pietsch Consulting Services in 2011. The plan called for two additional stations in the western part of the City; one in the Shadow Creek neighborhood in the vicinity of Regents Bay Drive and Kingsley, and another in the vicinity of McHard Road and Country Place Parkway. Due to lack of available tracts of land in these areas, the Fire Department and Projects Department worked together to find suitable alternative locations to cover this area. The availability of City-owned property adjacent to the Reflection Bay wastewater treatment plant proved to be an ideal location for a Fire Station, as it was located between the two locations identified in the study. The plan moving forward was to combine the proposed Fire Stations #8 and #9 identified in the study into one station.

In early 2017, the Fire Department, in conjunction with Citygate, LLC, completed a Standards of Cover and Staffing Utilization Study. Among the priorities of this study was to review the adequacy of Fire Department deployment from current fire station locations. The entire western portion of the City (west of Highway 288) is currently serviced by Fire Station #5, located on Kirby south of Broadway. Station #5 has both the highest demand for service and, due to the size of area covered, traffic congestion, and road network design, response times of over ten minutes at the 90th percentile. This response time is significantly above the desired best-practice goal of seven minutes and thirty seconds at the 90th percentile. Fire Station #7 will be situated to improve response times in the southeastern portion of the City. Stations #1, #2, and #3 that currently cover the southeastern part of the City all have 90th percentile response times at or above ten minutes.

Fire Station #8 will ultimately house two engine companies, one ladder company, and one ambulance. This will require an ultimate staffing of 42 personnel, as well as relief personnel to account for sick and vacation time. The resources that will be housed at this station are expected to cover the workload of two fire stations.

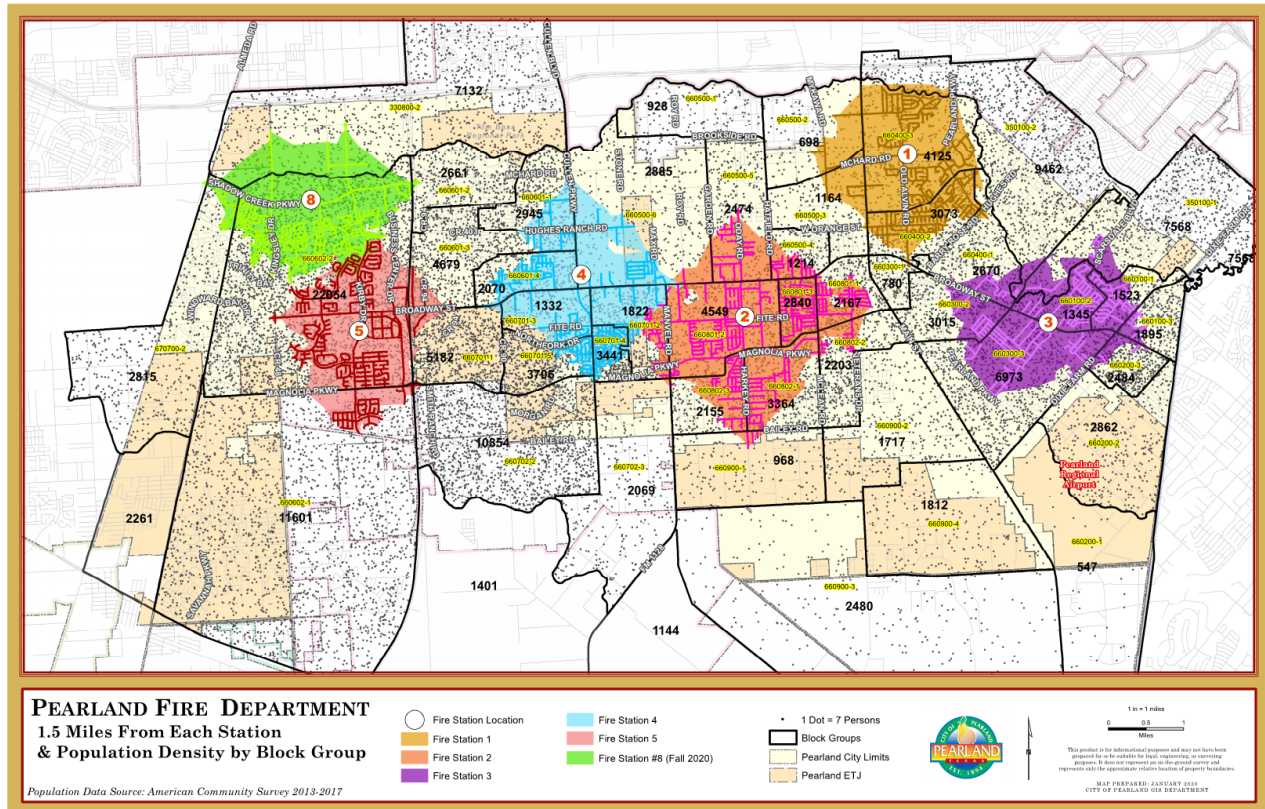
The design of Fire Station #7 will be similar in scope to new Fire Station #1, being approximately 11,000 square feet. Initially, this station will only house a single engine company and 12 personnel. This station will be built with the capacity to add an ambulance and associated additional staffing once service demand dictates the need in that portion of the City.

CURRENT STATUS

Fire Station #4 – Construction of approximately 14,000 sq. ft. station east of current location on existing site. Station will be outfitted to house one – 4-person Engine Crew, one – 2-person Ambulance Crew, 1 Shift Commander, and 1 Fire Captain – EMS. This station has been designed to house the Police Department Mobile Command Post and reserve fire apparatus. In the future this station could also house a rescue truck due to central location. Station will include 10 sleeping rooms, restrooms with showers, kitchen area, dayroom, and three offices. Equipment area will consist of 4 – 80-foot-deep apparatus bays, bunker gear storage area, medical supply storage, and EMS decontamination area. The station will support a separation of dirty/clean areas for firefighter health which will include shower area for decontamination. This project will also design the renovation of the existing station to accommodate the fitness area for fire department staff.

Fire Station #7 - The design was originally scheduled for FY2019 but is now slated for FY2023, with completion 4 years behind baseline. It is anticipated that Joiner Architects will be the designer. This contract will also follow the CMAR process with construction completion estimated in FY2024. Land negotiations with PISD for an approximate 3 acres on the northwest corner of the intersection of Bailey Rd and Wells Road were finalized in 2019.

**Pearland FD Fire Stations
(and 1.5 Mile Travel Distance with Population Density by Census Tract)**



FISCAL IMPLICATIONS

Construction costs for Fire Station #8 were \$11.9 million. This cost included the total construction, furnishings and equipment, as well as the emergency response vehicles. The capital costs for the building and equipment are funded with interim financing provided by the City that will be reimbursed by TIRZ #2 prior to the conclusion of the TIRZ in 2029. Personnel costs to staff the station are forecasted to be approximately \$3.2 million per year once the station is fully staffed.

Construction costs for Fire Station #7 are estimated to be \$9.3 million, with \$1.4 million budgeted in FY2023 for engineering and design. Additionally, about \$1.2 million will be needed for capital outlay for the purchase of a fire engine pumper, future ambulance and associated equipment. Personnel costs to staff the station are forecasted to be approximately \$1.1 million per year.

STAFFING

The Fire Department began a process of continuous onboarding in FY2018. This process, based upon recommendations of the Citygate study, is designed to add three firefighters every fiscal quarter, for at least the next six years, to bring the Fire Department up to full staffing and begin staffing for future stations. Based on the 6 firefighters hired in FY2018 and 6 firefighters planned to be hired in FY2019, we were expecting to be 24 firefighters short when Station #8 opened in FY2020. However, due to the award of a SAFER grant, plus additional funding in FY2021 we will be allowed to fully staff the station in March 2021.

APPENDIX B

5.3.1 Citywide Response Time Performance

A resident or visitor of a city measures the speed of fire department response from the time assistance is requested until the time assistance arrives. This measurement is called “Call to First Apparatus Arrival” (or “Call to Arrival”). Police and sheriff’s departments act as PSAP for 9-1-1 calls. All 9-1-1 calls for fire service in the City are received at the Pearland Police Department and dispatched from the Cypress Creek Communications Center.

Based on national recommendations, **Citygate’s response time test goal is for 90 percent Call to Arrival to be 7:30 minutes**. This response time is comprised of three components:

- Call Processing:** 1:30 minutes (receive, determine need, and alert crew)
- Turnout:** 2 minutes (notify, don required protective gear, and begin traveling)
- Travel:** 4 minutes (travel time)

The following is the breakdown of 9-1-1 call received to first apparatus arrival for the overall City, and by station area by year for **fire and emergency medical** incidents.

Table 23—Call to First-Unit Arrival – 90 %Performance

| Station | RY 13/14 | RY 14/15 | RY 15/16 | RY 16/17 | RY 17/18 | RY 18/19 | RY 19/20 |
|-----------------|----------|----------|----------|----------|----------|----------|----------|
| Department-Wide | 13:23 | 13:19 | 13:03 | 11:49 | 11:36 | 11:02 | 11:23 |
| Station 1 | 14:08 | 13:41 | 13:30 | 12:04 | 11:06 | 10:32 | 11:42 |
| Station 2 | 12:35 | 14:03 | 13:41 | 13:13 | 12:14 | 12:06 | 11:44 |
| Station 3 | 13:25 | 13:39 | 12:31 | 10:37 | 10:17 | 9:49 | 10:36 |
| Station 4 | 13:07 | 12:17 | 12:12 | 11:38 | 11:25 | 10:41 | 11:18 |
| Station 5 | 13:09 | 13:26 | 13:22 | 11:44 | 12:05 | 11:25 | 11:26 |

* RY = Report Year (August 1 to July 31 of following year)

One factor particularly acute during RY 19/20 and the prior year was extreme construction activity on SH 288 and Broadway which affects the whole system, particularly as that was before FS #8 was built and occupied as the demand and travel times has a cascading affect on operations. That completion plus near-term McHard Road and Smith Ranch Road will only further improve travel times.

One positive to not take for granted is the fact that there are two robust hospital operations in Pearland now in the SH 288 corridor and a third close by on the east side that has been long-standing. That proximity assists with transport times on most cases.

RY 19/20 times are slightly higher due to a change in resource deployment for EMS incidents. The decision was made to not send fire apparatus to EMS incidents unless extremely necessary.

This was done to reduce possible exposure to citizens and patients as well as minimize employee exposure risk on medical calls, in relation to the COVID-19 pandemic. We attribute this to be the reason for some increases in 90% performance response time for call to arrival. In addition, RY 20/21 will provide run numbers which include a full year of having Station 8 open and available.

Responses of one fire engine pumper and one ambulance began out of Fire Station 8 after the RY for this update. Preliminary data from the 4th Quarter of calendar year 2020 shows 10:10 as the 90th percentile response for Station 8. Pending resolution of the COVID pandemic and the addition of a staffed ladder company at Station 8 we should see improved, decreased response times out of most of the fire stations, particularly those on the western half of Pearland.

All the 9-1-1 call to arrival times to 90 percent of emergent incidents referred to in Table 23 are well past the Citygate-recommended 7:30 minutes.

Finding #7: The call to arrival times, in all fire station areas, are significantly longer than best-practice and Citygate recommendations to deliver desirable urban area outcomes to serious fires and medical events.

Appendix B is page 68 from the original Citygate report. We have added the three far right columns with data, as the Citygate report only included three years of data with first RY having partial data due to Station 3 beginning operation in January 2016, and Station 2 beginning operation in October 2016. It should be noted that starting with RY16/17 the department reviewed the data to determine response times versus the earlier years that was provided by Citygate. Although it is the same software, we point out there were discrepancies in recreating the data produced from Citygate. Nonetheless, the consistency in fire department produced data results for the last four reporting years are held in confidence.

The most important considerations from this data is that it demonstrates:

1. *Response time improvements when fire stations are constructed and staffed in areas previously without a staffed fire station (reducing the domino effect), and*
2. *Department-wide response times are improved when increasing capacity, and*
3. *Existing fire station response times are improved when new stations are constructed and staffed, which decreases the primary response area of that existing fire station.*

These response time improvements will continue as staffed fire stations are added per the Pietsch Study and Citygate Study recommendations.

APPENDIX C

Pearland Fire Department

Citygate Standards of Cover and Staffing Study

Recommendations Proposed Schedule January 2021

| Baseline | Current | Actual | Days |
|--|-----------|--------|-------|
| July 2017 | | | |
| Start New Business Manager | Completed | Jul-17 | 0 |
| Start 6 New Fire Fighters for Backfill/OT Reduction | Completed | Sep-17 | -62 |
| October 2017 | | | |
| Start Design of Fire Station 8 | Completed | Mar-18 | -151 |
| Start 3 New Fire Fighters | Completed | Jan-18 | -92 |
| Start 6 New Fire Fighters for Fire Station 6 | N/A | N/A | N/A |
| Start 1 New Assistant Chief--Operations | Oct-19 | Reorg | -730 |
| Start Training Division Administrative Assistant | Completed | Oct-18 | -365 |
| January 2018 | | | |
| Start 3 New Fire Fighters | Completed | Oct-18 | -273 |
| April 2018 | | | |
| Start 3 New Fire Fighters | Completed | Apr-19 | -365 |
| July 2018 | | | |
| Start 3 New Fire Fighters | Completed | Jul-19 | -365 |
| October 2018 | | | |
| Start Design of Fire Station 7 | Oct-22 | | -1461 |
| Start Construction of Fire Station 8 | Completed | May-19 | -234 |
| Start 3 New Fire Fighters | Completed | Nov-19 | -413 |
| Start New Health & Safety Officer | Completed | Jul-20 | -639 |
| Start Administration Division Administrative Assistant | Oct-20 | | -731 |
| Start Planning Officer | Oct-20 | | -731 |
| January 2019 | | | |
| Start 3 New Fire Fighters | Completed | Nov-19 | -321 |
| April 2019 | | | |
| Start 3 New Fire Fighters | Apr-20 | Jan-20 | -299 |
| July 2019 | | | |
| Start Construction of Fire Station 7 | Oct-23 | | -1553 |
| Start 3 New Fire Fighters | Apr-20 | Jan-20 | -275 |
| October 2019 | | | |
| Start 3 New Fire Fighters | Completed | Jan-21 | -550 |

Pearland Fire Department

Citygate Standards of Cover and Staffing Study

Recommendations Proposed Schedule January 2021

| | Baseline | Current | Actual | Days |
|--|----------|-----------|--------|-------|
| Fire Station 8 Completion | | Completed | Aug-20 | -305 |
| January 2020 | | | | |
| Start 3 New Fire Fighters | | Completed | Jan-21 | -366 |
| April 2020 | | | | |
| Start 3 New Fire Fighters | | Completed | Jan-21 | -275 |
| July 2020 | | | | |
| Start 3 New Fire Fighters | | Jul-20 | Jan-21 | -184 |
| Fire Station 7 Completion | | Oct-24 | | -1553 |
| October 2020 | | | | |
| Start Design of New Fire Station 4 | | Completed | Nov-19 | 335 |
| Start 3 New Fire Fighters | | Apr-23 | | -912 |
| Start 3 New Battalion Chiefs | | Oct-23 | | -1095 |
| January 2021 | | | | |
| Start 3 New Fire Fighters | | Jul-23 | | -911 |
| April 2021 | | | | |
| Start 3 New Fire Fighters | | Oct-23 | | -913 |
| July 2021 | | | | |
| Start 3 New Fire Fighters | | Jan-24 | | -1005 |
| October 2021 | | | | |
| Start Construction of New Fire Station 4 | | Completed | Oct-20 | 365 |
| Start 3 New Fire Fighters | | Apr-24 | | -913 |
| January 2022 | | | | |
| Start 3 New Fire Fighters | | Jul-24 | | -912 |
| April 2022 | | | | |
| Start 3 New Fire Fighters | | Oct-24 | | -914 |
| July 2022 | | | | |
| Start 3 New Fire Fighters | | Jan-25 | | -915 |
| October 2022 | | | | |
| Fire Station 4 Completion | | Oct-21 | | 365 |

Appendix D

Historic Milestones of Pearland FD

1946: The Pearland Volunteer Fire Department, Inc. was initially formed in 1946 to serve the City of Pearland by providing service to a population of less than 1,000. The Department remained entirely volunteer for over 60 years.

October 2007: The City of Pearland hired its' first full-time group of fire fighters (1 Chief and 18 fire fighters) to supplement PVFD, Inc. An exponential growth in population brought on a corresponding increase in emergency incidents, while the number of available volunteer fire fighters was declining. Not including the ETJ, the population had reached 78,000.

April 2010: McGrath Consulting Group, Inc. completed a Fire and EMS Departments Staffing, Scheduling, and Resource Deployment Alternatives Study. This study considered a focus on consolidation of the Fire and EMS Departments, among numerous other items, to meet the growing emergency incident demands of the City. City Council chose, due to several factors, not to consolidate the departments at that time. The population had reached 94,000 by this point, not including the ETJ.

January 2011: The City hired 9 additional fire fighters in January 2011 to staff the newly constructed Fire Station 5 located at Kirby Drive. At that time the Department decided to transition all full-time fire fighters to a 24-hour shift schedule. A few part-time fire fighters were also hired to supplement the full-time staff and volunteers. The Pearland population had now reached 96,000, not including the ETJ.

October 2011: The City used a Staffing for Adequate Fire & Emergency Response (SAFER) grant from FEMA to hire a part-time Recruiting and Retention Coordinator. This was completed in hopes of attaining more volunteer fire fighters, while still retaining the ones that were currently on staff. This program was further subsidized by the general fund for a small number of years after the grant expired.

November 2011: The City accepted another (SAFER) grant from FEMA. This grant funded 6 new full-time fire fighter positions for a period of two years. In addition to receiving funding, the City was required to employ these 6 full-time fire fighters for an additional year.

March 2012: Council adopted a Fire Station Master Plan after a study conducted by Mike Pietsch of P.E. Consulting Services, Inc. This plan outlined the best locations to reposition Pearland's 3 currently built fire stations and 5 future fire stations, as well as the emergency response vehicles to be placed in current and future fire stations.

May 2012: Fire Station 6 opened in the Lakes of Savannah development. Station 6, a volunteer fire station, was built by Brazoria County MUDs 21 and 22 as part of a 2002 agreement with the City. The City of Pearland does not own or maintain Fire Station 6. Despite a strong push for volunteers in that area from 2010 to 2014, only a couple of area residents volunteered. By May 2012, the population had reached 99,000, not including ETJ.

October 2013: Council approved the consolidation of the Fire and EMS Departments. This consolidation included a plan for voluntary cross-training of former EMS Department paramedics to become certified fire fighters by June of 2014. The population was 103,000, not including ETJ.

August 2015: Council ended the long-time contract with Pearland Volunteer Fire Department, Inc. and transitioned the existing volunteers into part-time employees of the City. As the demographics of the City changed, and as long-time volunteers retired or moved, it became increasingly difficult to recruit and retain volunteers. The population reached 111,000, not including ETJ.

January 2016: Fire Station 3 was relocated, constructed, and opened on Yost Road at Broadway. This site was previously comprised of a residential home, including one ambulance, staffed 24/7/365. The City hired 9 new full-time firefighter-paramedics to staff one fire engine pumper 24/7/365. The ambulance formerly located at the now demolished residence was relocated to new Fire Station 3. Approximately 9 part-time fire fighters were hired to supplement the full-time staff.

October 2016: Fire Station 2 was relocated, constructed, and opened at the intersection of Fite Road and Harkey Road. The City hired 15 new firefighter-paramedics to staff one fire engine pumper and one ambulance 24/7/365. Approximately 9 part-time fire fighters were hired to supplement the full-time staff. The City population had now reached 116,000, not including ETJ.

February 2017: Citygate Associates, LLC completed a Standards of Cover and Staffing Study for the Pearland Fire Department. With extensive use of response and traffic data, the study made 25 recommendations to improve the performance of the Fire Department to better meet the needs of the community. The Fire Department agreed with the vast majority of recommendations presented and began implementation of same during the last quarter of FY2017.

June 2017: Council accepted the findings of the Citygate Final Report for the Fire Department Standards of Cover and Staffing Study as well as the Fire Department's recommendations. (Please see Appendix C for a baseline chart status update). The population was 119,000 by June 2017, not including ETJ.

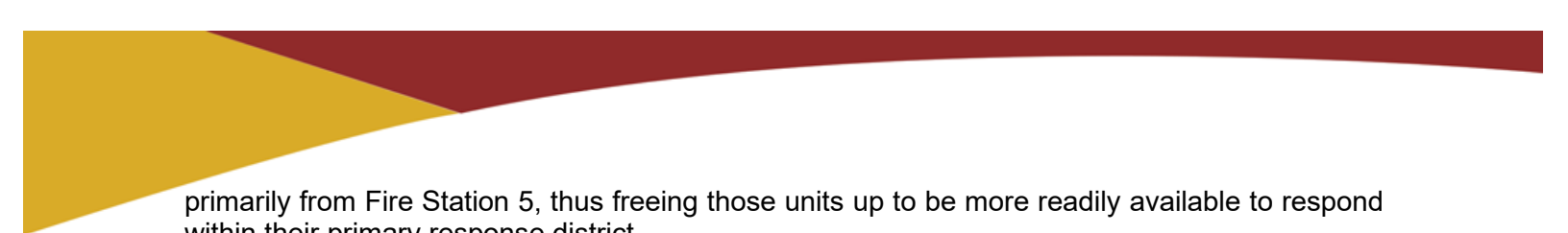
May 2019: Construction began on a new Fire Station 8 located on Shadow Creek Parkway, west of Reflection Bay Drive. This new facility will house one ambulance, one fire engine pumper and one aerial ladder platform. This station will require additional staffing of more than thirty employees.

Contracts to provide fire and emergency medical services were signed with newly created Emergency Services Districts #4 and #5. These ETJ areas were historically served by Pearland Fire Department with almost no compensation from Brazoria County.

September 2019: A new and relocated Fire Station 1 opened on Old Alvin at McHard Road. This station did not require additional staff as one ambulance and one fire engine pumper were simply relocated from the preceding Fire Station 1. The current population estimate is 125,000, not including ETJ.

October 2019: A design contract was signed for a new Fire Station 4 to replace the existing Fire Station 4. The current Fire Station 4 is the last of the Pearland fire stations originally designed for volunteer fire fighters. New Fire Station 4 will be immediately adjacent to old Fire Station 4 with construction completion expected in 2021. Current Fire Station 4 will be repurposed into a PD training facility.

November 2019: The contract to provide Brazoria County MUDs 21 and 22 (Lakes of Savannah) with fire and emergency medical services was terminated upon request of the Board of Directors of those MUDs. This termination will reduce the number of incidents which used resources



primarily from Fire Station 5, thus freeing those units up to be more readily available to respond within their primary response district.

August 2020: New Fire Station 8 began operating with one fire engine pumper and one ambulance.

December 2020: Groundbreaking ceremonies for new Fire Station 4 and the Live Fire Training Burn Building were held.

FY22 White Paper

To: Clay Pearson, City Manager

From: Mike Vance, Administrative Services Captain

VIA: Chad Randall, Asst. Chief of Police Support Bureau
Johnny Spires, Chief of Police

CC: John McCarter, Interim Finance Director

Date: January 13, 2021

Re: Police Academy White Paper



On August 22, 2019, at the annual Pearland Police Department Training Advisory Board meeting, Chief Johnny L. Spires announced the initiation of an ambitious project to create and operate the Pearland Police Academy. This was the culmination of the department's long-term plan to make Pearland the major training hub for mid-sized and small police agencies in the entire Greater Houston area. The creation of the law enforcement academy will be a substantial undertaking in keeping with overall City progress towards becoming a major suburban organization with its own capacity for more services.

Project work began immediately. Contact with TCOLE was made, and project initiation began laying the groundwork: filing applications, ensuring compliance, and meeting standards required to move from step to step in the TCOLE departmental approval process. Ofc. Nick Palomo was named the Pearland Police Academy Coordinator and he began the process of the new academy developmental approval process. A new Pearland Police Training Advisory Board was seated for year 2020. Our plans were presented to them on November 5, 2020 and accepted without objection. A COVID-delayed site review took place in December by TCOLE Statewide Academy Evaluator East District Director Mike Dickey who approved the Pearland Police Department to move from Police Training Provider to Police Academy. Based on Mr. Dickey's recommendation to the State of Texas Commission on Law Enforcement a **formal contract was extended and signed in a virtual ceremony on January 12, 2021.**

The first Basic Police Officer Certification class is likely to start in Summer 2021.

Capital Improvement Program Project # FA2102, the Police Training Center, is designed to repurpose Fire Station 4 into Pearland PD Training operations, the Police Academy and Fitness Center (Police and new FS #4). The renovation purpose is to house the Pearland Police Academy and related functions in order to increase the number of in-house training sessions provided by the Pearland Police Training Unit.

In *current* facilities, the Training Unit provided a COVID-limited 16,000 hours annual training and in a normal year could easily eclipse 20,000 hours as Pearland is already a highly desired training destination. The addition of the Police Training Center, with its 40+ seat teaching theater, 2,600 square foot fitness center, cubicle office space and associated shower/restroom facilities will create a law enforcement training complex that would take a backseat to none in the region.

Moreover, repurposing the existing space in the Public Safety Building, once renovated, will provide additional emergency berthing and an emergency health crisis center (centrally located) for staff during EOC operations such as hurricanes or other natural or emergency events.

Staffing for the Police Training Center will likely require two full-time Police Training Officers (Academy Coordinators already employed) and at least one civilian Administrative Professional (being requested FY 2022).

Projected Allocations for non-recurring Capital Project # FA2102 include:

\$ 510,000 FY 2021, and
 \$ 2,650,000 FY 2022
 totaling \$3,160,000 for project construction completion.

Initial classes will be limited to Pearland Police hires or others hired within the city's other law enforcement agencies (Fire Marshals, for ex.). The Academy will then be opened for attendance by those cadets of area agencies. Assuming one full class can be conducted per year it is reasonable to assume as many as 20-graduates can be produced annually at full operation.

| Estimated Recurring Academy Costs | |
|--|------------------|
| 2 Dedicated Academy Police Officers @ 50% | \$89,564 |
| Additional Instructor Overtime or Hours Worked | \$28,200 |
| Professional Instructors Contract | \$2,000 |
| Cost of manuals, materials, & equipment | \$2,600 |
| TOTAL | \$122,364 |
| Cost Savings Realized | |
| Current Outside Academy Budget | (\$15,000) |
| Current New Hire Orientation Instructor Costs | (\$14,382) |
| Current New Hire Orientation Costs | (\$34,428) |
| NET TOTAL | \$58,554 |

The opening of the academy to outside agencies could produce a revenue stream of \$20,000 or more for this service and is not included in the cost estimates above.

In addition, the Police Department plans to request an additional full-time Administrative Assistant for Professional Development in the Fiscal Year 2022 budget process. The position will be heavily involved in the record keeping required for the Police academy. The estimated annual recurring cost is reflected below.

| | |
|---|----------|
| Administrative Asst. Salary & Benefits @ 50% for mid-year hire; 2x for annualized costs FY 23 | \$26,256 |
|---|----------|

FY22 White Paper

To: Clay Pearson, City Manager
From: Vance Riley, Fire Chief
CC: Ron Fraser, Assistant City Manager
Johnny Spires, Chief of Police
Date: February 2, 2021
RE: Fire and Emergency Medical Services Dispatching



Background

When a person dials 911, the call is answered by a Public Safety Answering Point (PSAP). For callers within the City of Pearland, the primary PSAP is the Communications Center based inside the Pearland Police Department. For callers within the ETJ, the PSAP is usually the Brazoria County Sheriff's Department in Angleton. For callers calling from a cell phone, the PSAP could be any of the above-mentioned facilities, Harris County, or possibly the City of Houston, contingent upon which cell phone tower accepted the call. Such procedures are common throughout the country and have been improved over the years through the implementation of better technology and processes.

Beginning in early 2013, the City of Pearland contracted with a secondary PSAP (Harris County Emergency Corps) to provide fire department dispatching services (Fire, EMS, and Rescue). While 911 calls are still answered by the original PSAP, the caller is transferred to the secondary PSAP upon determination that the services of the Fire Department are needed. This transfer process is typically accomplished in a matter of seconds and is seamless to the caller. The role of the secondary PSAP is to determine the exact nature of the incident. Once this has been determined, the secondary PSAP then dispatches the appropriate units based upon incident type, incident location, and availability of Fire Department resources via GPS location. Critically, the secondary PSAP for the City of Pearland provides an expertise of real-time medical support to the caller, following established national protocols. Such expertise and higher-level service for emergency medical dispatch at the consolidated regional fire/medical dispatch center is typically more efficient for small- and mid-sized agencies. Emergency Medical Dispatch (EMD) protocols mandate that the call taker stays on the line with the caller, for specific types of medical emergencies, until a PFD unit arrives on the scene. Typically, this is 15% of the calls received at the secondary PSAP or approximately 1500 calls per year for Pearland. This number does not include calls when the call taker uses their discretion to remain on the line with the caller for reassurance (i.e., child callers, elderly needing reassurance.) Though fewer in number there are fire and other non-medical emergencies in which the call taker will stay on the line to gain critical information from or provide additional guidance to the caller. The total number of incidents has increased by approximately 10% in the last five years.

Prior Solicitations and Provision for Emergency Medical Service Dispatch

In March 2016 an RFP was published soliciting bids for contracted Fire and EMS dispatching services. Two vendors submitted bids: the incumbent (HCEC), and Cypress Creek EMS (CCEMS Comm Center). Upon reviewing the bids, the Fire Department recommended that CCEMS Comm Center be awarded a contract as our dispatch provider. In July 2016, City Council approved a

contract with CCEMS Comm Center to become the new dispatch provider for PFD, effective December 2016. As of October 2020, City Council approved the last of the annual renewal contracts available for CCEMS Comm Center.

The cost of the annual service per the current contract is \$228,000.

Over the past several years significant business disagreements have transpired between Harris County Emergency Services District #11 (HCESD #11) and CCEMS. CCEMS has been the sole provider of EMS to HCESD #11 for many years. Recently, CCEMS received a one-year termination notice from HCESD #11. CCEMS Comm Center is a Division of CCEMS. It is anticipated that this will have no interruption or effect on CCEMS Comm Center service to the City during the remainder of the current contract. All agencies currently being dispatched by Comm Center are working together on various options, to be prepared, should CCEMS Comm Center dissolve later next year. **Regardless, per City policy, PFD will be rebidding our dispatching contract in Spring 2021.** We will have a better idea at that time whether Comm Center will remain a viable option, or whether another dispatching agency will be awarded the contract.

POLICY/GOAL CONSIDERATION

Several options are available for consideration:

Option 1: Continue Outsourcing and Rebid

PFD will continue the contract with CCEMS Comm Center, with plans to rebid the service in spring 2021. CCEMS Comm Center is the current 9-1-1 and dispatch facility for sixteen agencies including nine fire departments, three EMS providers, the Harris County Fire Marshal's Office, and the Harris County Hazardous Materials Team. It is also the Regional Communications Center for the South East Texas Regional Advisory Council (SETRAC) and Emergency Medical Task Force Region 6 (EMTF6). The Comm Center serves as a Secondary Public Safety Answering Point (SPSAP) in the Greater Harris County 9-1-1 network. All dispatchers are certified by the International Academy of Emergency Dispatchers in Emergency Medical Dispatch (EMD) and Emergency Fire Dispatch (EFD).

Additional regional Fire and EMS Dispatching agencies in our area will be invited to bid in Spring 2021.

Option 2: Bring In-house (City Only)

Create a City-wide Communications Division located in the PD Communications Center or other City facility. Space may be available for FD dispatchers and call takers in the existing PD Communications Center. When this was reviewed in 2016, it was found to have an additional, ongoing City cost of at least \$600,000, excluding annual software licensing fees and \$1,100,000 in estimated one-time startup costs.

Option 3: Regional Fire & EMS Dispatching

Create a Regional Fire & EMS Dispatching Center in Pearland. It is uncertain if the current PSB has capacity for this option without expansion of the existing dispatching space.

FINANCIAL IMPACT & OPTIONS (OPERATIONAL, CIP, & REVENUE)

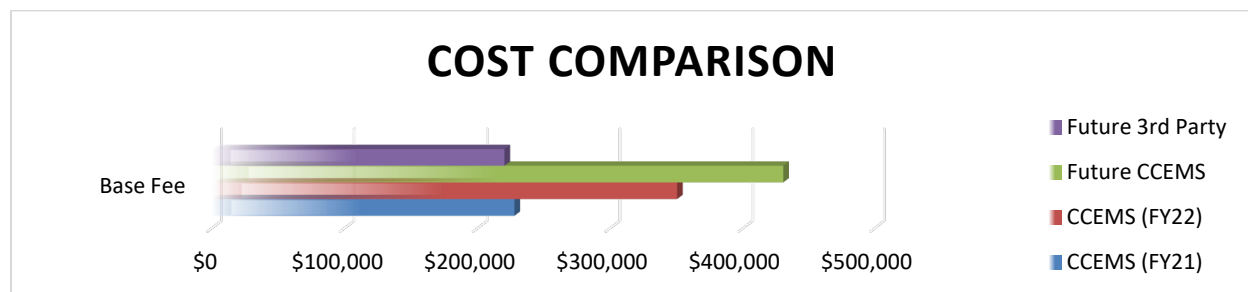
Option 1: Continue Outsourcing and Rebid

The fire department is currently in its last contract year with CCEMS Comm Center. The current contract prices, agreed to between Cypress Creek EMS and City of Pearland, are mentioned below. Cypress Creek charges \$21 per incident dispatched, but charges \$9 for both unfounded fire and medical alarms which are dispatched, as well as alarms which are processed but not

dispatched. In addition, CCEMS charges a \$2,000 annual base station fee, as well as \$500 for each additional station. Lastly, there is a charge of \$3,000 imposed for an annual technology fee.

CCEMS Comm Center has announced that a new fee structure will be available to all their users at the start of 2021. The new fee structure encompasses a base fee of \$25,000 (which replaces multiple station and IT base fees), and a per-call charge of \$31 for all calls. False alarms will be billed at a lower rate of \$15 each. Continuous discussions from CCEMS leadership indicate the possibility of another rate adjustment in 2022 to \$41 per call, for all calls. This fee structure and rates are higher than our current contract so it is our best guess that upon rebid, CCEMS Comm Center may bid these new rates or similar.

PFD responds to approximately 10,500 incidents per year. *As an example*, if a future third-party charges a rate of \$41 per incident, the annual cost to the city would be approximately \$430,500, an increase of \$202,500 from current. We have recently learned that another potential bidder to provide this service is currently charging rates of \$21 per incident and doesn't see a major rate increase in the near future.



| | CCEMS (FY21) | CCEMS (FY 22) | Future CCEMS | Future 3rd Party |
|----------|--------------|---------------|--------------|------------------|
| Base Fee | \$228,000 | \$350,500 | \$430,500 | \$220,500 |

**Cost comparison shown uses an estimate of 10,500 incidents per year, with no false alarms*

Option 2: Bring In-house (City only)

This would require the hiring of approximately 10 FTE dispatch personnel (excluding management and supervisory positions) at an annual recurring cost of *at least* \$700,000 in salaries and benefits. In addition, at least one full-time IT technician would need to be hired to maintain dispatch consoles, mobile units, technical difficulties, CAD systems and other inevitable needs related to keeping the technology up to date and working properly. Initial software start-up costs would surface at a minimum of \$500,000, plus annual software maintenance fees. Initial hardware costs for IT and radio console installations may be as high as \$200,000. Data migration, if necessary, from CCEMS Comm Center to a city facility could be as high as an additional \$100,000, in addition to a 20% contingency, which is recommended for data migration. The cost to install the Purvis fire station alerting system in-house is approximately \$200,000. In addition to salaries and benefits, personnel would require the added cost of annual training to maintain fire and EMS dispatching certifications.

In recent years, Sugar Land has created a separate public safety dispatching department which reports directly to the Assistant City Manager for Public Safety. This department dispatches for both Fire and Police Departments in Sugar Land. *For comparison, the FY21 annual budget for the City of Sugar Land Communications Department is \$3 million and has a total of 35 employees, including supervisory positions.* This includes approximately \$2.9 million in salaries. For comparison, the current estimated cost for Pearland PD dispatching is \$1.5 million per year.

Option 3: Regional Fire and EMS Dispatching

Includes the costs of Option 2 plus the costs of additional employees, radio equipment and software for other agencies. Conceptually, these costs would be offset by charging base fee in addition to a per incident fee, in similar fashion to CCEMS Comm Center. However, these other local agencies have low incident volumes and would not generate significant revenue to cover all the additional costs. We would need to hire a communications consulting firm to help with the transition to this option. Additionally, there are no guarantees that area agencies would participate, or remain in contract, to help fund this option.

CONTRACT/AGREEMENT IN PLACE

There is a current contract in place with CCEMS Comm Center. This contract is a 1-year renewal through December 15, 2021. Per this contract, 6 months' notice may be given by either City of Pearland or CCEMS to end the contract.

RECOMMENDATION

We believe that long-term, as budget allows, it is in the best interest of the City to create its own Emergency Communications Department to dispatch Fire and PD (like what Sugar Land has accomplished). This would entail significant start-up costs and time to develop the proper system. Personnel must be hired and, in some cases, trained. Hardware and software systems (CAD and Fire Station Alerting) would need to be purchased and installed. Although initial growing pains may be experienced, the City of Pearland would be in control of our own dispatching, without worry of intermittent changes to a third-party dispatching agency, business plan or disruption. Chief of Police Spires is also in concurrence with this recommendation.

COMPARATIVE INFORMATION—BENCHMARK CITIES

| | |
|----------------------|---|
| Cary, NC | Civilian Division of PD. EMD Certified w/ recertification every 2 years |
| Franklin, TN | FD Dispatchers in PD Dispatch |
| Frisco, TX | City Communications Division handles dispatching for Police, Fire and Animal Services |
| League City, TX | PD Dispatchers. No Fire or EMD Certification |
| McKinney, TX | PD Dispatchers all certified as EMD but not Fire certified |
| Olathe, KS | County Dispatching Agency, Fire and EMD certified |
| Plano, TX | Separate City Public Safety Communications (PSC) Department |
| Rancho Cucamonga, CA | Regional Fire Communications Center |
| Sugar Land, TX | Separate City Communications Department |

FY22 White Paper

To: Clay Pearson, City Manager

From: P. F. Martin, Emergency Management Coordinator

CC: Ron Fraser, Assistant City Manager

Date: February 5, 2021

Re: Emergency Management Preparedness – FY22 Budget Proposal

Texas annually leads the nation in quantity of natural disasters and is more vulnerable to non-natural disasters than many states due to its prominent role in the petrochemical market and the frequency with which hazardous materials (hazmat) are transshipped throughout the state. The City of Pearland must be prepared to respond to, and recover from, a variety of disaster scenarios, natural or otherwise; particularly given its proximity to the Gulf of Mexico. Our citizens expect nothing less.

Major disasters expose both strengths and weaknesses in an organization's preparedness, response and recovery efforts. Hurricane Harvey, for example, showed the organization and staff dedication and readiness while it also produced an abundance of lessons for the City of Pearland, the vast majority of which have since been addressed. Harvey-lesson improvements increased our resilience and better positioned the City to successfully respond to the numerous threats of 2020. Still, much work remains.

A variety of threats, hazards and events since Harvey have similarly produced lessons worthy of our attention and further investment. Prominent examples include the ongoing Coronavirus pandemic, the June 2020 George Floyd entombment, and an extremely threatening 2020 Atlantic hurricane season. Other examples include Pearland's January 2018 water outage that induced a boil water directive for the western part of the City and the tragic case of a deadly microbe (*Naegleria fowleri*) that contaminated the City of Lake Jackson's municipal water supply, which lead to a state disaster declaration. Other examples include a myriad of rail and highway hazmat incidents that occurred throughout the state as well as a significant hazmat facility incident that recently occurred here in Pearland.

Self-Reliance Advancements Made

Hurricane Harvey demonstrated that when disaster strikes the Houston Metropolitan Region, Pearland should have no expectation that external resources will be readily available to provide timely relief to City residents. The reality that disasters typically affect large areas taxing all resources highlighted the City's need for greater self-sufficiency.

In response to this lesson, City staff took tangible action to enhance the City's ability to respond safely, effectively and efficiently in the absence of external support.

- To address the need for high water response capability, **the City acquired eight surplus, high-profile military cargo trucks (LMTV).** These vehicles were excess U.S.

Department of Defense (DoD) property made available through its law enforcement support (LESO) program; the cost to the City was shipping only, approximately \$30K

- Acquisition of the equipment was only the start, ongoing training, and support continues. To staff these vehicles, interdepartmental high-water response teams comprised of Police, Fire and Public Works were established and funding was invested to acquire personal protective equipment (i.e. life jackets, helmets, etc.), and team equipment, such as throw bags, pike poles, etc. The teams have also undergone swift-water rescue training, to enhance their safety and effectiveness in high-water response operations. Additionally, Public Works staff installed depth markers throughout Pearland's repetitive loss communities to aid first responders in judging flood water depth.
- **To address the need for sheltering Pearland residents, the Parks and Recreation Department partnered with the American Red Cross (ARC) to conduct shelter and mass care training and 'hardened' our facilities.** A recent capital improvement project also expanded emergency power in the Recreation Center so that it is better equipped to serve as a shelter of last resort and provide mass care to displaced community residents in large-scale disaster scenarios, particularly those involving prolonged power outages such as Hurricane Ike and catastrophic flooding as experienced during Hurricane Harvey.
- **A need to expand emergency power in the Public Safety Building (PSB) to facilitate disaster response was also identified and improved.** City Engineering recently initiated a capital improvement project to provide emergency power to the entire building, whereas previously, generator power was largely confined to the Emergency Operations Center (EOC) and police dispatch. The contract was awarded in FY21 Q1; project completion is anticipated in Q2.
- **To improve the operability of the City's Emergency Operations Center (EOC), updated audio-visual (AV) equipment was acquired to replace the obsolete technology which had been installed when the Public Safety Building was constructed in 2010.** Due to decreased reliability and difficulty locating vendors willing to service it, it was impractical to maintain this equipment any further. The EOC AV equipment, which must be operational on demand, 100% of the time, was recapitalized in FY20 via mid-year budget reallocation. The updated equipment served us well during the many EOC activations of 2020.
- Overarching priorities in the aftermath of Hurricane Harvey also included the **establishment of an incident management team (IMT) intended to organize and oversee the City's preparation for, and response to, threatening events.** Organized in accordance with the internationally recognized Incident Command System (ICS), the IMT is currently comprised of ~ 110 City staff from a variety of departments. IMT positions typically have multiple individuals assigned to provide redundancy and accommodate periodic absences such as vacations, illness, unexpected resignations, etc. This redundancy proved its worth when the City found itself responding to three simultaneous emergencies during summer 2020 (i.e. virus pandemic, George Floyd entombment, threatening hurricanes). IMT staff are targeted for position-specific ICS training (i.e. planning section chief, situation unit leader, logistics section chief, etc.), to facilitate their success in their disaster response and recovery roles.

Criticality of Ongoing Training and Time Investment

IMT Training. While the City has made great progress building and staffing its IMT, it has yet to achieve an optimal level of training. Basic ICS and advanced position specific training is indispensable to a safe, effective, well-coordinated response.

Unfortunately and oddly, *position-specific ICS training* is rarely offered in the Houston area. The City has funded travel in recent years to enable staff to attend the necessary training to develop effective skill sets. The Coronavirus pandemic, however, has further frustrated access to training, making it almost impossible to acquire the pre-requisite ICS courses necessary to meet eligibility requirements for position specific training.

Therefore, in addition to funding travel for position specific training, when necessary and appropriate, *it would be advantageous to the City to fund and host in-house training via contract training providers.* This is especially cost effective when there are a large number of City staff requiring a particular course. Contracting in-house training allows us to have training tailored to the unique threats and hazards confronting the City of Pearland. Failure to fund ICS training will compromise preparedness and lead to frustration among staff attempting to master unfamiliar duties and responsibilities, typically in the midst of crisis.

Near-term training priorities include IMT logistics section course, incident commander and disaster finance, the latter of which is critical to the timely reimbursement of City disaster response and recovery costs. EM staff anticipate hosting and funding two training courses in FY22 at an estimated cost of \$30,000. In addition, staff anticipate funding travel to permit 8 City staff to attend position-specific ICS training at an estimated cost of \$2,200 per person (\$17,600 total).

Recommendations for Upcoming City Budgets

IMT Incentive Pay. Since Hurricane Harvey, Emergency Management staff have worked diligently to staff and train an IMT capable of organizing and overseeing the City's response to, and recovery from, disasters and threat of disaster (i.e. all-hazards). *In this process of developing an IMT, the most productive, most reliable or high potential employees were recruited for this important work.* It has been noted by many involved in IMT development that these "superstar" employees are often "rewarded" with more work each time an important project arises; which creates little incentive or desire to participate in this important initiative.

To recognize the valuable contribution of these employees, motivate their participation and commitment, it would be advantageous to develop a graduated monthly IMT incentive pay program, based on ICS training levels and continuous professional development. The objective is to provide regular and recurring incentive to our highest-performing staff and partially compensate them for their contributions and commitment to enhanced City preparedness. Failure to offer incentive for IMT participation risks demoralizing our highest-performing staff, who are repeatedly recruited for the most important projects, duties and responsibilities. A conceptual framework is offered below merely to frame the proposal.

Tier 1: 50 IMT staff @ \$50/Mo. = \$2,500/Mo. = \$30,000/Yr.

Tier 2: 40 IMT staff @ \$75/Mo. = \$3,000/Mo. = \$36,000/Yr.

Tier 3: 20 IMT staff @ \$100/Mo. = \$2,000/Mo. = \$24,000/Yr.

Minimum = \$90,000 Maximum (110 @ \$100/Mo.) = \$132,000¹

¹ This assumes all IMT members each achieve the highest level of qualification as a command or general staff officer.

Shallow-Draft High-Water Rescue Boats. The City should fund a shallow-draft high-water rescue boat program in order to provide a reasonable degree of disaster response self-sufficiency with maximum safety. Based on historical analysis, future projections, and consultation with the City's floodplain administrator, it is anticipated that multiple areas of the City will experience flood waters in excess of 30" depth during a 100-year flood event. Such depth exceeds the capability of the City's high-profile response vehicles and creates unnecessary risk to first responders and those citizens they seek to aid. In a scenario, where water depth exceeds 30 inches, first responders are currently expected to wade through flood waters in excess of two and a half feet in order to reach flood victims and then wade back to their vehicles potentially carrying children, elderly victims, pets, and personal effects. The required transit in water is particularly problematic for those residents who rely on durable medical equipment; such as oxygen tanks, wheelchairs, LVAD machines, etc.; that would also require transport. The risks in this environment to first responders and victims alike are considerable. The higher the water, the greater the risk. In addition, the City's high-profile response vehicles are at increased risk of leaving the pavement in higher flood waters, driving into one of Pearland many drainage ditches and overturning. In 30" or more of water, this life-saving mission is more safely and easily accomplished via shallow-draft rescue boats.

As Pearland Fire is the lead agency for flood response (i.e. search & rescue), it would be responsible for maintaining the boats proposed. Recurring boat maintenance funding would be provided annually via Emergency Management to ensure capability sustainment. Annual training requirements anticipate quarterly refresher training for those PFD staff that are already trained and certified Swiftwater Rescue Technicians (current state). Implementation of a rescue boat program would require both initial and recurring boat operations training in order to achieve and maintain safety and proficiency. Initial training consists of two courses. The first (FAST Boat 1) is three days in duration and the second (FAST Boat 2) is an additional two days. Fast Boat 1 course provides instruction in basic boat operations in both standing and swift moving water along with basic instruction on rescue boat deployment, maintenance and stowage, etc. The FAST Boat 2 course is an advanced course that presents instruction on advanced rescue tactics and techniques such as tethering boats, helicopter operations, advanced search & rescue, etc. Upon conclusion of initial boat training, periodic refresher training is necessary to promote and maintain proficiency in rescue boat operations. Recertification is anticipated every 3 years to ensure competencies are current and that staff are familiar with emerging boat tactics, techniques, procedures and equipment. Certified rescue boat operators would undergo quarterly refresher training similar to that scheduled for certified Swiftwater Rescue Technicians and the two would likely be combined.

Boat operators will be drawn from among the pool of existing water rescue team members. Given that water rescue training expectations are already established, boat proficiency training will not require additional training time other than initial boat operations training described above. Consequently, there should be minimal impact on the duties and responsibilities of those water rescue team members assigned to boat operations.

Should the City decline to fund the shallow draft boat program, it should opt to forego emergency response in cases where flood waters exceed the 30-inch operating limit or resolve to rely exclusively on mutual aid, which may be delayed or unavailable in a regional flood disaster like Hurricane Harvey. This, however, risks that first responders would acquire boats "just-in-time," as they did in Hurricane Harvey, which creates an unacceptably high-risk by having untrained personnel operate unfamiliar boats that may or may not be suitable to the mission and may or may not be properly equipped.

The following options generally describe the alternatives available to the City to address this issue:

Option 1 - Status Quo. Forego shallow-draft rescue boat capability. Suspend emergency response in necessary areas when flood waters exceed LMTV operating parameters (30") and rely on mutual aid resources.

Advantages. This option averts the expense of establishing a boat program (e.g. acquiring boats, funding training, equipment, and recurring costs).

Disadvantages. This option forecloses emergency response or delays response by relying on the availability of mutual aid. Alternatively, boat capability would be acquired 'just-in-time,' similar to Hurricane Harvey, but utilized with greatly increased risk.

Option 2. Acquire 3 shallow-draft boats, trailers, outboard engines and associated equipment in FY22 at an estimated cost of ~ \$16,428 each (\$49,285 total). Acquire boat operations training at an estimated cost of \$775 per member (8 members \$6,200). Recurring annual boat maintenance costs are estimated at \$1,500 per platform (\$4,500 annually recurring).

Advantages. This option provides immediate capability and averts the risks associated with Option 1.

Disadvantages. This option incurs all costs in one fiscal year.

Option 3. Acquire 1 boat and the associated training and equipment each of three years commencing in FY22, at an approximate cost of \$16,428 + \$2,067 per year training costs (3 members per year for 3 years).

Advantages. This option provides some immediate capability, which is increased over time and averts the risks associated with Option 1. This option distributes costs over a longer timeframe.

Disadvantages. Near-term (year 1 and year 2), this option may not provide sufficient capability and relies on the continuous readiness of one – two platform(s).

Recommendation

Given the relatively modest material cost and the staffing and storage can be accommodated for the proposal and the immediate return on investment in terms of available response capability, recommend option 2: Acquire three shallow-draft rescue boats and associated equipment and training in FY22.

Hydraulic Lifts - LMTV. During Hurricane Harvey, local news channels documented many high-water rescues via reporters embedded with first responders. The difficulty experienced by first responders as they attempted to transfer victims from flood waters to awaiting high-profile response vehicles was evident. The risk of serious injury to both first responders and victims was equally apparent, particularly when rescues involved bariatric patients, non-ambulatory victims, and the elderly.

It would be advantageous to equip each of the City's 6 LMTVs with hydraulic lifts to reduce the risk of injury to both flood victims and first responders. It is recommended the City invest in

configuring these vehicles with hydraulic lifts to provide rescue/evacuation capability of non-ambulatory residents from flood-threatened communities with the least risk to first responders and victims. This capability would also be essential should one of Pearland's long-term care facilities require City assistance with evacuation. **Estimated costs fall between \$10K - \$19K per vehicle, depending on the vendor selected and desired options for total of \$60k to \$120k.**

As with the boat proposal, costs could be extended over multiple years, with similar advantages and disadvantages.

Portable CCTV Capability. To enhance the City's capability to monitor public safety incidents and special events such as the annual Christmas Tree-Lighting celebration and Christmas Parade, it is recommended that the City acquire portable, more-persistent closed-circuit television capability to monitor major events and incidents.

The City currently utilizes installed traffic cameras and sUAS for this purpose, but these capabilities are limited due to the fixed locations of the traffic cameras and limited duration and operating parameters of the sUAS platforms. The additional flexibility of portable CCTV coverage would enhance situational awareness in events such as the George Floyd entombment and flooding in repetitive loss communities. It offers direct observation of areas not covered by the City's existing traffic camera system and/or where intermittent drone coverage is inadequate.

CoP Continuity of Operations. The Coronavirus pandemic of 2020 highlighted the importance of Continuity of Operations Planning (COOP) within the City. COOP planning is necessary to explore, identify and develop viable plans to overcome various threats to the City's ability to deliver essential services and maintain continuity of government, thereby ensuring greater resilience and continuity of essential City services to the community. It would be advantageous to budget \$50,000 for a professional planning consultant to facilitate timely development of a master continuity of operations plan for the City.

Conclusion

As responsible public officials, we have an obligation to learn from and act on the many lessons derived from recent events, incidents and threatening disasters to increase our collective resilience and position the City to better withstand future threats and challenges.