Environmental Assessment
FEMA Grant Number: EMW-2009-FC-02220R
PROPOSED FIRE STATION #5
1905 McDermott Drive
City of Allen, Collin County, Texas
GME Project No. 07.03.0336

Prepared For:

City of Allen
305 Century Parkway
Allen, Texas 75013

Attention: Angela Mosley

March 10, 2010

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APPENDICES

ACRONYMS AND ABBREVIATIONS

amsl	above mean sea level
ARRA	American Recovery and Reinvestment Act
BMP	Best Management Practice
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	carbon monoxide
CWA	Clean Water Act
dB	decibels
EA	Environmental Assessment
EDR	Environmental Data Resources Inc
EIS	Environmental Impact Statement
EMS	Emergency Medical Services
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
GME	GME Consulting Services, Inc.
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NHPA	National Historic Preservation Act
NO_2	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRCS	National Resources Conservation Service
NRHP	National Register of Historic Places
NTMWD	North Texas Municipal Water District
O_3	ozone
OSHA	Occupational Safety and Health Administration
PM_{10}	particulate matter less than 10 microns
RCRA	Resource Conservation and Recovery Act
SCG	Fire Station Construction Grant
SHPO	State Historic Preservation Office
SO_2	sulfur dioxide
SWPPP	Stormwater Pollution Prevention Plan
TCEQ	Texas Commission on Environmental Quality
THC	Texas Historical Commission
THPO	Tribal Historic Preservation Office

ACRONYMS AND ABBREVIATIONS

TPWD	Texas Parks and Wildlife Department
TXNDD	Texas Natural Diversity Database
USACE	U.S. Army Corps of Engineers
USCB	U.S. Census Bureau
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank

1.0 INTRODUCTION

1.1 PROJECT AUTHORITY

The City of Allen, Texas has applied to the Federal Emergency Management Agency (FEMA) for financial assistance through the American Recovery and Reinvestment Act (ARRA), Assistance to Firefighters, Fire Station Construction Grant under application number EMW-2009-FC-02220R. FEMA's Fire Station Construction Grant (SCG) under ARRA, signed into law by President Obama on February 19, 2009, provides funds to create or save jobs in recession-hit areas, stimulate the economy, and achieve goals of firefighter safety and improved response capability/capacity based on need through the construction, renovation or modification of fire stations.

In accordance with 44 Code of Federal Regulation (CFR) for FEMA, Subpart B, Agency Implementing Procedures, Part 10.9, this Environmental Assessment (EA) has been prepared pursuant to Section 102 of the National Environmental Policy Act (NEPA) of 1969, as implemented by the regulations promulgated by the President's Council on Environmental Quality (CEQ); 40 CFR Parts 1500-1508. The purpose of the EA is to analyze the potential environmental impacts of the proposed project, and to determine whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

1.2 PROJECT LOCATION

The City of Allen is located in southeastern Collin County in north Texas, approximately 22 miles north of Dallas, Texas. The site for the proposed fire station is currently a vacant tract of land located on the north side of McDermott Drive, approximately 0.20 mile east of Custer Road (see Figure 1 in Appendix A). The physical address for the site is 1905 West McDermott Drive, Allen, Texas.

1.3 PROJECT DESCRIPTION

The proposed project will provide an additional fire station to improve emergency response times, enhance interlocal assistance to neighboring communities and increase fire department staffing levels in the western portion of the City of Allen, Collin County, Texas.

2.0 PURPOSE AND NEED

The objective of the ARRA-SCG is to stimulate the economy, create and maintain jobs, and build new or modify existing fire stations. The purpose of the proposed project is to enhance emergency response capability, enhance interlocal assistance to neighboring communities and protect the City of Allen from fire and fire-related hazards. The City of Allen determined that a fire station located in the western portion of the community is necessary to provide fire and emergency medical services (EMS) response in compliance with National Fire Protection Association (NFPA) 1710 and other industry standards. The proposed fire station is needed to enhance firefighter and resident safety by providing staffing levels and response times that are compliant with these national standards. The addition of Fire Station #5 will decrease the current response times for the western portion of the City of Allen from more than nine minutes to the recommended five-minute time frame.

Over the past eleven years (since the construction of the City of Allen's last new fire station), the City of Allen's population has increased approximately 144%, resulting in an annual double-digit volume increase in emergency incidents. During this period of growth, the City of Allen's suppression resources have remained unchanged. Due to this strain on available resources, in 2007, the City of Allen had the unfortunate occurrence of a fire emergency when all of their response resources were already committed to existing emergencies. No mutual aid was available to respond to this new structure fire. The fire loss from that incident exceeded $360,000. The City of Allen Fire Department currently maintains just enough suppression resources to dispatch an NFPA 1710 compliant first alarm assignment. If one of the City of Allen Fire Department's apparatus is assigned to a different emergency incident, the City of Allen must rely on mutual aid to meet the standard. The addition of Fire Station #5 will increase firefighter and resident safety by helping to ensure an adequate first alarm assignment is dispatched to reported structure fires.

3.0 ALTERNATIVES

Two alternatives were considered to address the purpose and need stated in Section 2.0 above. These include: the No Action Alternative, and the Proposed Action Alternative. The Proposed Action Alternative is to construct a fire station (Fire Station #5) on a vacant tract of land located on the north side of McDermott Drive, approximately 0.20 mile east of Custer Road, in the City of Allen. The City of Allen considered several locations in the western portion of the community. The proposed location was selected based upon several selection criteria.

3.1 No Action Alternative

Under the No Action Alternative, no additional fire station will be constructed in the City of Allen. The City of Allen's existing fire stations will continue to be overextended due to the growing increase in call volume and population. Without a new fire station, the City of Allen firefighters will continue to run the risk of not having an NFPA 1710 compliant structure fire response. Response times in the western portion of Allen will continue to exceed 9 minutes. An increasing number of the Allen residents will be dependent on mutual aid from neighboring communities, when and if it is available during an emergency. Current fire suppression resources, combined with an increasing emergency call volume, will continue to expose the firefighters and citizens to an increased risk of injury and property loss without adding emergency response facilities and resources.

3.2 Construction of Fire Station #5 (Proposed Action Alternative)

Under the Proposed Action Alternative, the City of Allen proposes to construct a fire station on a 2.8 acre site located on the north side of McDermott Drive, approximately 0.20 mile east of Custer Road, in the City of Allen, Texas (see Figure 1 in Appendix A).

The City of Allen Fire Department analyzed a variety of pertinent data to determine the best location for a new fire station. This analysis included an assessment of the City of Allen Thoroughfare Plan to fully understand the response routes and traffic patterns, utilization of computer based mapping programs to evaluate travel distances and response times from several possible station locations, and consulting with neighboring fire departments to coordinate fire station locations (optimizing response coverage without duplicating efforts and wasting scarce resources). The result of this analysis, combined with an approximate savings of one half million dollars to the City of Allen, resulted in the decision to purchase this particular parcel of land in the western portion of the City of Allen. This location will provide the best possible response coverage for current and future residents.

The proposed Fire Station will be a 10,600 square foot facility. It is designed with three 60-foot apparatus bays, which will house one engine company and an ambulance. The third bay will be utilized to park a reserve apparatus or for a future front line apparatus. Since Fire Station #5 will be staffed continuously (24/7/365), it will contain a kitchen,

sleeping quarters for eight personnel, emergency power and office space for personnel to complete required fire and EMS reports. There will be a "day room" which will double as an in-station training location and will be used to host fire station tours and other public education activities. The station will include a NFPA compliant decontamination area for EMS equipment, vehicle exhaust removal system, fire protection and detection system and personal protective equipment storage for individual firefighters gear. There will also be a workout room so the firefighters can participate in their mandatory workout programs while on-duty. Separate male and female staff restroom and shower facilities will be included in the proposed project. There are currently no plans for a communication or siren tower at the proposed fire station site.

The proposed project will utilize the southern portion (approximately 1.7 acres) of the 2.8-acre site for the fire station, parking spaces and drives (see Appendix F for current site plans). Access to the site will be from both McDermott Drive and Shallowater Drive (currently under construction). The proposed fire station site is currently covered with trees and dense vegetation. The proposed fire station site is bordered on the north and west sides by a small, intermittent drainage feature or tributary to Rowlett Creek. Various quantities of surface debris (wood, plastic, paper, old carpet, etc.), an abandoned car, a natural gas BBQ grill and associated gas line, tires, several soil mounds containing debris, a cistern, a water well and some form of large diameter steel vertical riser pipe were observed on the property during the site assessment (Appendix B: Photographs 12 and 15 through 30). The soil mounds on the property appeared to contain a variety of municipal debris. Overhead electrical power lines cross portions of the proposed fire station site and partially border the eastern perimeter of the property. Evidence of underground water, sanitary sewer and storm water utilities was observed along the easement of McDermott Drive. A power pole and electrical box (possibly associated with the water well pump power supply) was observed on the site.

Shallowater Drive and associated underground utilities were under construction on the east-adjacent property on the day the site visit for this assessment was performed. The contractor for the Shallowater Drive project was using a small portion of the proposed fire station project site (southeast corner) for storage of construction equipment and supplies. (Appendix B: Photographs 32 and 34). The Shallowater Drive project is a separate capital improvement project located adjacent to the Fire Station #5 project. The Shallowater Drive project includes the construction of a 300 linear foot two-lane street that is terminated just north of the proposed Fire Station #5 driveway. That project also includes median reconstruction along McDermott Drive and the installation of underground water, wastewater and storm water utilities.

A copy of the proposed fire station site plan is provided in Appendix F to this report. Construction of the proposed fire station and associated site improvements will require minor site grading, construction of the building, drives and parking areas, and installation of associated underground utilities (water, sewer, electric, etc.).

3.3 Alternatives Considered but not Carried Forward

The City of Allen considered several locations within the western portion of the city. The City of Allen Fire Department applied several criteria to determine the best location for the proposed fire station. These criteria included:

- Central location in the western response district in order to minimize emergency response time to this area.
- Easy access to East/West and North/South thoroughfares, again minimizing response times to the service area and other areas of the City.
- Location, if possible, must provide a reasonable noise "buffer" between the fire station and nearby residential properties to minimize disturbance due to the occasional sirens that occur during an emergency call.
- Property should be available for procurement without having to utilize eminent domain.
- Site, if possible, should be immediately adjacent to a City park, or an area that could be converted to a park, to allow common sharing of parking and encourage citizen visits to the fire station.

The City of Allen determined a target area in the western portion of the city due to proximity to other fire stations and to neighboring communities to help with mutual aid response when necessary. Within this target area, several possible undeveloped sites were considered. Acquisition of a developed property and demolishing existing structures was not an option due to cost. Areas in the north portion of the target area, south of Texas Highway 121, are zoned for commercial development. As such, the real estate in this area is expensive and sites are poorly located for a fire station. Therefore, the north portion of the target area was not chosen for a fire station location. There were several locations identified along the eastern portion of the target area. These locations are currently in use as parks and a golf course, are located within a floodplain, and are therefore not considered suitable sites for the proposed fire station. One possible site was identified in the northeastern portion of the target area. However, due to the distance from the center of the desired target area and the proximity to a floodplain, it was determined that this site was poorly located for a fire station. Another location was identified for consideration near the center of the target area, but was approved for residential development and is more environmentally sensitive due to the lake near the center of this property. The means of egress in this area are not as favorable as the selected site and therefore, this site was not chosen for the fire station.

The remaining available land in the target area is owned by the McDermott Family. The McDermott Family's southern tract of land is a private residence and the family does not wish for the land to be developed. However, they would consider donating portions of the land for conservation. The McDermott Family offered two locations within the northern tract of land. The first site was located on a collector street with limited North/South access at the current time. East/West responses from this site were limited and required traveling on residential streets. Therefore, this first location was not chosen. The second

site and preferred location is a 2.8-acre tract of vacant land located near the intersection of a major thoroughfare and a collector street. This site provides easily accessible North/South and East/West response routes and is near the center of the target area. The site was purchased from the McDermott Family at a reduced price, with the understanding that the fire station, once completed, would be Leadership in Energy and Environmental Design certified.

4.0 AFFECTED ENVIRONMENT AND POTENTIAL IMPACTS

This section describes the potential impact of the Proposed Action Alternative and the No-Action Alternative. Where potential impact exists, conditions or mitigation measures to offset the impact are detailed.

4.1 PHYSICAL RESOURCES

4.1.1 Geology and Soils

According to the Bureau of Economic Geology, the University of Texas at Austin, Geologic Atlas of Texas-Sherman Sheet, the proposed project site is underlain by the Cretaceous Austin Chalk (Appendix A: Figure 3). The Austin Chalk consists of interbedded chalk and marl and microcrystalline calcite. The upper and lower parts of the Austin Chalk consist of light gray, massive chalk with some interbeds and partings of calcareous clay. The middle portion of the Austin Chalk consists of mostly thin-bedded marl with interbeds of massive chalk that is typically light gray. Marine megafossils are scarce throughout the formation. The thickness of the Austin Chalk is approximately 600 feet.

A review of the United States Geological Survey (USGS, 1960) 7.5-minute topographic map for the Plano, Texas quadrangle indicates the approximate elevation of the proposed project site ranges from 670 to 685 feet above mean sea level (amsl). The topographic map indicates that an intermittent tributary of Rowlett Creek borders the northern and western portions of the proposed project site. The surface topography of the proposed project site generally slopes down to the north and northwest toward the tributary of Rowlett Creek.

According to the U.S. Department of Agriculture (USDA) National Resources Conservation Service (NRCS) online Web Soil Survey, the proposed project site contains soils classified as Altoga silty clay with slopes ranging from 5 to 8 percent and Houston Black clay with 1 to 3 percent slopes (USDA/NRCS 2009). The Altoga silty clay consists of deep, calcareous, light-colored clayey soils that have moderately slow permeability and moderate available water capacity. Surface runoff is rapid and the hazard of erosion is severe. In a typical profile of the Altoga silty clay, the surface layer is light brownish-gray silty clay about 7 inches thick. The subsoil is about 53 inches thick and is pale-brown silty clay in the upper part and very pale brown silty clay in the lower part. At a depth of about 60 inches, the soils are very pale brown silty clays. The Houston Black clay consists of deep, calcareous, clayey soils that formed in calcareous clay or chalky marl. The soil color ranges from gray to very dark gray clay. Surface runoff and the hazard of erosion are moderate. This soil series are shallow, calcareous, clayey soils that are formed from weathering of the Austin Chalk formation.

No Action Alternative – Under the No Action Alternative, no construction will occur and there will be no impact to geology or site soils.

Proposed Action Alternative – Under the Proposed Action Alternative, construction activities will be relatively shallow and restricted to those activities associated with site grading and installation of relatively shallow underground utilities. The grading activities will not be deep enough to impact underlying geologic resources. Soils on the proposed fire station site will be disturbed during construction to develop the property. Excavated soil and waste materials will be managed and disposed in accordance with applicable local, State, and Federal regulations. If contaminated materials are discovered during the construction activities, the work will cease until appropriate procedures and permits can be implemented.

4.1.2 Farmland Conversion Impact Rating

The Farmland Protection Policy Act (FPPA) states that Federal agencies must "minimize the extent to which Federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses..." The NRCS is responsible for protecting significant agricultural lands from irreversible conversion that result in the loss of an essential food or environmental resource. Prime farmland is characterized as land with the best physical and chemical characteristics for the production of food, feed, forage, fiber, and oilseed crops. Prime farmland is either used for food or fiber crops or is available for those crops, but is not urban, built-up land, or water areas. Unique farmland is land other than prime farmland that is used for projection of specific high-value food and fiber crops. Unique farmland has the special combination of soil quality, location, growing season and moisture supply needed to economically produce sustained high quality, high yields or specific crops when treated and managed according to acceptable farming methods. Altoga silty clay is not prime farmland (USDA/NRCS 2009). However, all areas of Houston Black clay are considered prime farmland.

No Action Alternative – Under the No Action Alternative, no construction will occur and there will be no impact to areas of the proposed fire station site that contain prime farmland.

Proposed Action Alternative – Under the Proposed Action Alternative, construction activities will disturb the prime farmland soils on the proposed fire station site. The site is not currently being used as farmland. Conversion of the site from vacant land to the proposed fire station will not result in the loss of an essential food or environmental resource.

On December 21, 2009, GME Consulting Services, Inc. (GME) submitted a letter and Farmland Conversion Impact Rating Form to the NRCS requesting review and comments regarding the proposed project. The Farmland Conversion Rating Form requires the Land Evaluation Information and Site Assessment Criteria be developed for the proposed fire station site. The Land Evaluation criteria is to be completed by NRCS. This criteria is based on information from several sources including national cooperative soil surveys or other acceptable soil surveys, NRCS field office technical guides, soil potential ratings or

soil productivity ratings, land capability classifications, and important farmland determinations. Based on this information, groups of soils within a local government's jurisdiction are evaluated and assigned a score between 0 and 100, representing the relative value, for agricultural production, of the farmland to be converted by the project compared to other farmland in the same local government jurisdiction. In a response dated January 15, 2010 (see Appendix H), the NRCS provided the Land Evaluation Information for the proposed fire station site. The NRCS evaluated the proposed fire station site and gave a Relative Value rating of 18.4 out of the possible 100. GME was then instructed by Micki Yoder (NRCS State Resources Inventory Coordinator) in a phone conversation on January 28, 2009 (see Appendix H) to complete the Site Assessment Criteria section for the proposed fire station site. The Site Assessment Criteria included twelve (12) criterion that were given a score on a scale of 0 to the maximum points shown in FPPA Rule, 7 CFR 658.5(b). Conditions suggesting top, intermediate, and bottom scores were indicated for each criterion. GME made the scoring decisions in the context of the proposed fire station site by examining the site and the surrounding area in which the site is located. GME determined the Total Site Assessment Score of 34 out of a possible 160 points for the site based on the twelve criteria (see Appendix H). The Total Assessment Score (the total of the Relative Value rating and the Total Site Assessment Score) of 52.4 points out of a possible 260 points was determined by GME for both tracts comprising the proposed fire station site. FPPA Rule, 7 CFR 658.4 states "Sites receiving a total score less than 160 need not be given further consideration for protection and no additional sites need be evaluated." As a result, development of the proposed fire station site will not contribute to the unnecessary conversion of farmland to nonagricultural uses.

4.1.3 Air Quality

The Clean Air Act (CAA) requires that States adopt ambient air quality standards. The standards have been established in order to protect the public from potentially harmful amounts of pollutants. Under the CAA, the Environmental Protection Agency (EPA) establishes primary and secondary air quality standards. Primary air quality standards protect the public health, including the health of "sensitive populations, such as people with asthma, children, and older adults." Secondary air quality standards protect public welfare by promoting ecosystems health, and preventing decreased visibility and damage to crops and buildings. EPA has set national ambient air quality standards (NAAQS) for the following six criteria pollutants: ozone (O_3), particulate matter less than 2.5 microns, particulate matter less than 10 microns (PM_{10}), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide , and lead. According to the Texas Commission on Environmental Quality (TCEQ), Collin County is in attainment, meaning criteria air pollutants do not exceed the NAAQS.

No Action Alternative – Under the No Action Alternative, no construction will occur and there will be no impacts to air quality.

Proposed Action Alternative – Under the Proposed Action Alternative, minor long-term impacts to air quality may occur due to exhaust emissions produced by the operation of emergency response vehicles. Short-term impacts to air quality may occur during construction of the facility. To reduce the short-term temporary impact to air quality, the construction contractors will be required to wet down the construction areas when necessary to minimize the generation of dust. Emissions from fuel-burning internal combustion engines (e.g. heavy equipment and earthmoving machinery) could temporarily increase the levels of some of the criteria pollutants, including CO, NO_2, O_3, PM_{10}, and non-criteria pollutants such as volatile organic compounds. To reduce the emission of criteria pollutants, fuel-burning equipment running times will be kept to a minimum and engines will be properly maintained.

4.2 WATER RESOURCES

4.2.1 Surface Water

The Clean Water Act (CWA), as amended in 1977, established the basic framework for regulating discharges of pollutants into the waters of the United States.

The proposed fire station site slopes downward from southeast to northwest, with the site surface elevation varying from approximately 670 to 685 feet amsl. An intermittent tributary of Rowlett Creek borders the northern and western portions of the Site. Surface water from the proposed fire station site appears to flow to the northwest toward the tributary of Rowlett Creek. Water from this tributary appears to flow to the east to the main body of Rowlett Creek located approximately 3,000 feet to the east from the proposed fire station site. There are no wild and scenic rivers, as designated under the Wild and Scenic Rivers Act, in the project area.

No Action Alternative – Under the No Action Alternative, no construction will occur and there will be no impacts to surface water.

Proposed Action Alternative – Under the Proposed Action Alternative, temporary short term impacts to downstream surface waters may occur during the construction period due to soil erosion. The applicant will be required to prepare a Storm Water Pollution Prevention Program (SWPPP) and obtain a National Pollutant Discharge Elimination System (NPDES) permit. Implementation of appropriate Best Management Practices (BMPs) will be required at the construction location. BMPs will be implemented in accordance with the permits. These BMPs will include installing silt fences and revegetating bare soils. Portions of the proposed fire station site are designed to be covered with permeable concrete pavement. Once construction is complete and the facility is in operation, the proposed fire station site is designed to implement rainwater harvesting, reduced stormwater runoff, and improved stormwater quality.

4.2.2 Groundwater

The proposed fire station site is located in an area where groundwater is dominated by the Trinity aquifer, which consists of early Cretaceous age formations of the Trinity Group. The Trinity aquifer consists of sandstone, sand, silt, clay, conglomerate, shale, limestone, dolomite, and marl. Formations comprising the group are, from youngest to oldest, the Paluxy, Glen Rose, and Twin Mountains-Travis Peak. Due to the continuing increase in population and demand for potable water, the Trinity aquifer has been extensively developed in the Dallas-Fort Worth region. As a result, many public supply wells have been abandoned in favor of surface water supply since the mid-1970s. Groundwater levels have responded correspondingly with a slight increase in surface elevation.

A Phase I Environmental Site Assessment (ESA) was performed on the proposed project site in 2007 (GME report number 07.03.0336, dated November 15, 2007). At that time, what appeared to be a former water cistern was observed at the proposed project site. For regulatory closure purposes, the cistern must be considered either an underground storage tank (UST) or form of water well. These types of structures are not specifically regulated by the TCEQ as an UST. This cistern does not pose an environmental concern. The cistern is regulated by the Texas Water Well Board and must be properly closed during site construction in accordance with state regulatory requirements. A steel pipe vertical riser was also observed at the proposed project site. The steel pipe vertical riser may also be a cistern and should be investigated and properly closed in accordance with state regulatory requirements. Although groundwater quality testing was not performed as a part of the ESA, no recognized environmental conditions were identified that would indicate the potential for contamination of groundwater.

No Action Alternative – Under the No Action Alternative, no construction will occur and there will be no impacts to groundwater.

Propose Action Alternative – Under the Proposed Action Alternative, construction activities will not reach a sufficient depth to impact groundwater. If the proposed action will require additional excavation to groundwater depths, the applicant will consult the EPA and TCEQ to identify appropriate mitigation measures.

4.2.3 Floodplains

Executive Order (EO) 11988 (Floodplain Management) requires Federal agencies to avoid direct or indirect support of development within the 100-year floodplain whenever there is a practicable alternative. FEMA uses Flood Insurance Rate Maps (FIRM) to identify the regulatory 100-year floodplain for the National Flood Insurance Program. Consistent with EO 11988, FIRMs were examined during the preparation of this EA. The proposed project site is located in Zone X and is not located within the 100-year or 500-year floodplain. Please see Appendix D for the floodplain map (FEMA 2009; Community Panel Number 48058C0380J).

No Action Alternative – Under the No Action Alternative, no construction will occur and there will be no impacts to the floodplain.

Proposed Action Alternative – Under the Proposed Action Alternative, no impacts to the floodplain are anticipated. The proposed fire station site is located outside the 100-year and 500-year flood zones.

4.2.4 Waters of the U.S. including Wetlands

The U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or filled material into waters of the U.S., including wetlands, pursuant to Section 404 of the CWA. Wetlands are identified as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Additionally, EO 11990 (Protection of Wetlands) requires Federal agencies to avoid, to the extent possible, adverse impact to wetlands.

An intermittent tributary to Rowlett Creek borders the northern and western portions of the proposed fire station site. This tributary was observed during both dry and wet seasons of the year. It was observed to be dry during drier seasons or periods of the year. A review of the of the U.S. Department of the Interior's Wetlands Inventory (see Appendix E) of the area was conducted in order to identify the potential for wetlands and/or other waters of the U.S. This review indicated that there are no potential wetland areas on the proposed project site. There is a wetland area approximately 3000 feet to the northeast of the proposed fire station site; however, the proposed project must not have an environmental impact on this area.

The Coastal Zone Management Act enables coastal states, including Texas, to designate State coastal zone boundaries and develop coastal management programs to improve protection of sensitive shoreline resources and guide sustainable use of coastal areas. According to the National Oceanic and Atmospheric Administration (NOAA), the proposed project site is located outside of the Texas Coastal Zone (NOAA, 2009).

No Action Alternative – Under the No Action Alternative, no construction will occur and there will be no impacts to the waters of the U.S., including wetlands.

Proposed Action Alternative – Under the Proposed Action Alternative, there will be no dredging or stream crossing, which could result in discharges of fill materials into "waters of the U.S." Consequently, and after a conversation on January 14, 2010 with Mr. Steven Brooks, Regulatory Branch, USACE (Fort Worth Division), a Section 404 permit will not be required (see Appendix H).

Short-term impacts to downstream surface waters could occur during the construction period due to erosion of soils. A SWPPP has been prepared and BMP's for storm water

management will be implemented to minimize any detrimental effects to water quality of the creek bordering the proposed project site during construction.

4.3 BIOLOGICAL RESOURCES

The proposed fire station site is currently covered with trees and dense vegetation. The proposed fire station site is located near an urban area and provides limited wildlife habitat.

There are two federally protected species listed for Collin County. According to the U.S. Fish and Wildlife Service (USFWS) website, the bald eagle (*Haliaeetus leucocephalus*) is listed as a threatened species. The whooping crane (*Grus americana*) is listed as an endangered species (USFWS, 2009).

The bald eagle usually nests in tall trees or on cliffs located near bodies of water. The bald eagle nests in trees including pines, spruce, firs, cottonwoods, oaks, poplars, and beech trees. The breeding habitat for the bald eagle most commonly includes areas close to (within 2.5 miles) coastal areas, bays, rivers, lakes, or other larger bodies of water that reflect the general availability of primary food sources including fish, waterfowl, and seabirds. The bald eagle typically avoids areas with nearby human activity, such as boat or pedestrian traffic, and developed areas. The proposed fire station site is located in a mostly urban developed area with very limited nesting and food resources for the bald eagle.

The whooping crane nests in dense emergent vegetation, such as sedge or bulrush, in shallow, often slightly alkaline, ponds, freshwater marshes, wet prairies, or along lake margins. Their nest is a mound of marsh vegetation rising about 8 to 20 inches above the surrounding water level. The Aransas-Wood Buffalo National Park whooping crane population nests in Wood Buffalo National Park and adjacent areas in Canada and winters in the coastal marshes in Texas. This population migrates mainly through the Great Plains from southern Canada and the Dakotas south to Texas, arriving in mid-October. The whooping crane feeds on insects, crustaceans and berries in the winter and in the summer, feeds on grains, acorns, wolfberry, fruit, insects and crustaceans. The migratory path of the Aransas-Wood Buffalo National Park Population does extend over the proposed fire station site. The proposed fire station site contains limited food resources and does not contain nesting resources for the whooping crane.

The site visit conducted on January 4, 2010 confirmed that the proposed fire station site does not contain habitat for any federally protected species.

No Action Alternative – Under the No Action Alternative, there will not be any impact to biological resources, including federally protected species.

Proposed Action Alternative – Under the Proposed Action Alternative, approximately 1.7 acres of vegetated area will be cleared and graded for construction of the fire station and associated drives and parking areas. There is no suitable habitat for federally protected species at the proposed site. Therefore, under the Proposed Action Alternative, no impact to federally

protected species is anticipated. FEMA has determined that the proposed project will have no effect to federally listed species or designated critical habitat.

On December 31, 2009, GME submitted a letter to the Texas Parks and Wildlife Department (TPWD) requesting their agency review and comments regarding the proposed project. In a response dated February 3, 2010 (see Appendix H), the TWPD described certain BMPs to include establishing a 50-foot buffer along the creek to protect the wooded riparian areas, restricting the removal of only that vegetation that impedes construction, and incorporating vegetated swales to filter site runoff toward the creek from the completed facility. The TPWD also suggests that disturbance of native vegetation should be avoided or minimized and that native vegetation should be incorporated into the project's landscape plan. The TPWD also reviewed the Texas Natural Diversity Database (TXNDD), which revealed no occurrences of rare resources within the vicinity of the proposed project.

4.4 CULTURAL RESOURCES

Section 106 of the National Historic Preservation Act (NHPA), as amended, and implemented by 36 CFR Part 800, requires Federal agencies to consider the effects of their actions on historic properties and provide the State Historic Preservation Office (SHPO) an opportunity to comment on Federal projects prior to implementation. Historic properties are defined as archeological sites, standing structures, or other historic resources listed in or eligible for listing in the National Register of Historic Places (NRHP).

GME conducted a review of known cultural resources in proximity to the proposed project site. The online records of the NRHP (http:/www.nps.gov/nr/) and the Texas Historical Commission (THC)(http://atlas.thc.state.tx.us) were used for this records review. Both websites indicated no cultural resources within a 1-mile radius of the proposed site. Environmental Data Resources Inc (EDR) also searched the NRHP, State Historic Places, and Indian Reservation databases and did not find any historic sites within a 1-mile radius of the proposed project site (see Appendix G).

No Action Alternative – Under the No Action Alternative, no construction will occur and no historic properties will be affected.

Proposed Action Alternative – As no known historic properties are located within 1 mile of the proposed fire station site, no impacts to archeological or cultural resources are anticipated. GME communicated these findings and requested agency review and comment regarding the proposed project in a letter dated December 21, 2009, to the THC. A response from the THC dated January 19, 2010, stated that no survey was required and the project may proceed (see Appendix H).

In the event that archeological deposits, including any Native American pottery, stone tools, or human remains are uncovered, the project shall be halted. The applicant shall stop all work in the immediate vicinity of the discovery and take reasonable measures to avoid or minimize harm to the finds. All archeological findings will be secured and access to the sensitive area restricted. The applicant shall inform FEMA immediately and FEMA will consult with the SHPO or Tribal

Historic Preservation Office (THPO) and Tribes. Work in sensitive areas cannot resume until consultation is completed and appropriate measures have been taken to ensure that the project complies with the NHPA.

4.5 SOCIOECONOMIC RESOURCES

The proposed fire station site is located on the western side of the City of Allen and is bound by vacant, privately owned land to the north, east, south, and west, and residential areas to the northeast and southwest. The proposed fire station site is located within census tract 314.01 of Collin County. The total population, as measured by the U.S. Census Bureau (USCB) 2000 Census, was 43,554, with 78.3% of citizens over the age of 16 participating in the work force. Leading employment sectors are management, professional, and related occupations (54.4%), sales and office occupations (27.3%), and service occupations (8.0%). Leading industries include manufacturing (15.6%), educational, health, and social services (15.1%), and professional, scientific, management, administrative, and waste management (13.5%).

No Action Alternative – Under the No Action Alternative, no impacts to socioeconomic resources will occur.

Proposed Action Alternative – Under the Proposed Action Alternative, impacts to socioeconomic resources will be minimal. The City of Allen estimates 12 new full time employment positions will be available once the proposed fire station is completed. In the coming years, the number of full time employment positions is anticipated to increase to 18. The design and construction of the proposed fire station would create approximately 63 temporary jobs.

4.6 ENVIRONMENTAL JUSTICE

EO 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) mandates that Federal agencies identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations.

The City of Allen has a population of 81,268 individuals. According to the USCB 2000 Census, in 1999 the median household income reported in the City of Allen was $78,924, with 3.0 percent of individuals living below the poverty level. The median household income in all of Collin County was $70,835, with 4.9 percent of individuals living below the poverty level. The median household income in the State of Texas was $39,927, with 15.4 percent of individuals living below the poverty level (USCB 2000).

According to the USCB 2000 Census, minorities represented 12.9, 18.6, and 29.0 percent, respectively, of the City of Allen, Collin County, and the State of Texas populations. The following table shows the specific racial composition of the City of Allen, Collin County, and the State of Texas populations.

Ethnicity	City of Allen	Collin County	State of Texas
White	87.1	81.4	71.0
Black or African American	4.4	4.8	11.5
American Indian or Native Alaskan	0.5	0.5	0.6
Asian	3.7	6.9	2.7
Native Hawaiian of Other Pacific Islander	0.0	0.0	0.1
Other	2.4	4.3	11.7
Source: USCB 2000			

No Action Alternative – Under the No Action Alternative, there will be no disproportionate impacts on minority or low-income populations.

Proposed Action Alternative – The Proposed Action Alternative will enhance firefighter and resident safety by increasing staffing levels and decreasing response times in the City of Allen. There will be no disproportionately high or adverse impact on minority or low-income portions of the population. All populations will benefit from the emergency response provided by the facility.

4.7 NOISE

Noise is generally defined as unwanted sound. Sound is most commonly measured in decibels (dB) on the A-weighted scale, which is the scale most similar to the range of sound that the human ear can hear. The Day-Night Average Sound Level is an average measure of sound. The DNL descriptor is accepted by Federal agencies as a standard for estimating sound impacts and establishing guidelines for compatible land uses. EPA guidelines, and those of many other Federal agencies, state that outdoor sound levels in excess of 55 dB DNL are "normally unacceptable" for noise-sensitive land uses such as residences, schools, or hospitals. The Allen Fire Department operates one type of siren on all of their apparatus. It has an output of 123 to 126 dB at a distance of ten feet directly in front of the siren speaker. The sound level diminishes as the angle, distance, and height between the siren speaker and a person increases. Other factors such as wind, temperature and obstructions can impact the dB level. Allen firefighters are required by procedure to wear noise canceling intercom headsets while riding in an enclosed cab fire apparatus. They encounter little or no sound from the siren. The public is exposed to the sirens when they are in the path of an apparatus responding to an emergency incident and the siren is activated. The Allen Fire Department does not activate a siren except when necessary to gain a driver's attention or when negotiating a negative right of way when any lanes of traffic are unaccounted for. The Allen Fire Department activates the siren in bursts of approximately 15 seconds in duration. The proposed project site is located near vacant land and residences, and therefore minimizing residential exposure to excessive siren noise.

No Action Alternative – Under the No Action Alternative, no construction will occur and there will be no impacts to noise levels.

Proposed Action Alternative – Under the Proposed Action Alternative, temporary short-term increases in noise levels are anticipated during the construction period. To reduce noise levels during that period, construction activities will take place during working hours enforceable by local ordinance. Equipment and machinery installed at the project site will meet all local, State, and Federal noise regulations. During operation of the facility, sirens operated by emergency response vehicles could have a minor impact on the adjacent residents depending on the frequency and timing of emergency responses. This site was chosen, in part, because the vacant land surrounding the site would provide a reasonable noise "buffer" between the fire station and nearby residential properties, therefore minimizing disturbance due to the occasional sirens that occur during an emergency call. As a result, no significant impact is expected.

4.8 TRAFFIC

The proposed fire station site is located on the north side of McDermott Drive, approximately 0.2 mile east of Custer Road in Allen, Texas. Access to the proposed fire station site is provided by McDermott Drive on the southern property boundary and by Shallowater Drive (currently under construction) on the east side of the property. Custer Road forms the western boundary of the City of Allen with the City of Plano. McDermott Drive is accessible from Custer Road to the west and Alma Drive to the east. Texas State Highway 121 is easily accessible to the north and Interstate Highway 75 is easily accessible to the east.

No Action Alternative – Under the No Action Alternative, no construction will occur and there will be no impacts to transportation.

Proposed Action Alternative – Under the Proposed Action Alternative, there will be a minor temporary increase in the volume of construction traffic on roads in the immediate vicinity of the proposed fire station site. This temporary increase could potentially result in a slower traffic flow during the construction phase of the project. To mitigate potential delays, construction vehicles and equipment will be stored on site during the project construction and appropriate signage will be posted on affected roadways. Once the proposed fire station is in operation, the traffic increase is expected to be minor and associated with staff traveling to and from the facility, and emergency response vehicles leaving and arriving the fire station. Installation of a traffic signal and warning signs is planned at the intersection of McDermott Drive and Shallowater Drive and is expected to be complete in conjunction with the proposed fire station. These traffic control and warning devices will be visible to cars approaching the proposed fire station in each direction. As a result, no significant impact to traffic is expected.

4.9 HAZARDOUS MATERIALS

Hazardous substances are defined as any solid, liquid, contained gaseous or semi-solid waste, or any combination of regulated wastes that pose a substantial present or potential hazard to human health and the environment. Hazardous substances are primarily generated by industry, hospitals,

research facilities, and the government. Improper management and disposal of hazardous substances can lead to pollution of groundwater or other drinking water supplies, and the combination of surface water and soil. The primary Federal regulations for the management and disposal of hazardous substances are the Comprehensive Environmental Response, Compensation and Liability Act and the Resource Conservation and Recover Act (RCRA).

A Phase I ESA was performed for the proposed project site in 2007 (GME report number 07.03.0336, dated November 15, 2007). Various quantities of surface debris (wood, plastic, old carpet, etc.), and abandoned car, a natural gas barbeque grill, tires, and several soil mounds containing debris were observed. The soil mounds and surface debris did not appear to pose an environmental concern to the site and, at the time of the Phase I ESA, GME recommended that they be removed and transported to a municipal landfill prior to development of the proposed fire station site. Should any drums, chemical containers, hazardous materials, or storage containers be observed during removal, then the soil mounds, debris piles and the underlying surface will require testing and laboratory analysis to determine if a municipal landfill will accept the waste. Any portion of the proposed fire station site surface beneath the soil mounds and surface debris that is observed to contain potentially hazardous materials must be tested to determine if the hazardous materials have been impacted the subsurface soils and/or groundwater. Evidence that chemicals or hazardous waste were generated, treated, stored, or disposed of on the proposed fire station site was not apparent during the site visit.

The federal and state environmental database information was provided to GME by EDR, an independent information data search vendor specializing in these services (Appendix E). A review of databases and files from federal, state, and local environmental regulatory agencies was conducted to identify use, generation, storage, treatment or disposal of hazardous materials and chemicals, or release incidents of such materials which may impact the site. A description of each of the reviewed regulatory databases is provided in EDR's report entitled "Government Records Searched, Data Currency Tracking". The federal and state regulatory records and the approximate research radius that were reviewed for this project are listed below:

FEDERAL AND STATE DATABASES SEARCHED IN REGULATORY REVIEW	
Federal (USEPA) Database	**Search Distance**
National Priorities List (NPL), Proposed NPL, Delisted NPL, NPL Liens	1.0 mile
NPL Records of Decision (ROD)	1.0 mile
Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS), CERCLIS No Further Remedial Action Planned (CERC-NFRAP)	1.0 mile
Corrective Action Report (CORRACTS)	1.0 mile
Superfund (CERCLA) Consent Decrees (CONSENT)	1.0 mile
Resource Conservation and Recovery Act Information System (RCRIS) – for Treatment, Storage, and Disposal Facilities (RCRIS-TSD)	1.0 mile
RCRIS – Small Quantity Hazardous Waste Generators (RCRIS-SQ) and Large Quantity Generator Hazardous Waste Generators (RCRIS-LQ)	1.0 mile
RCRA Administrative Action Tracking Systems (RAATS)	1.0 mile
Emergency Response Notification System (ERNS)	1.0 mile
Facility Index System (FINDS)	1.0 mile
Hazardous Material Incident Report System (HMIRS)	1.0 mile
Material License-Radioactive Tracking System (MLTS)	1.0 mile
Mines Master Index File (MINES)	1.0 mile
PCB Activity Database System (PADS)	1.0 mile
Toxic Release Inventory System (TRIS)	1.0 mile
Toxic Substance Control Act (TSCA)	1.0 mile
US Brownfields	1.0 mile
Formerly Used Defense Sites (FUDS)	1.0 mile
Uranium Mill Tailings Sites (UMTRA)	1.0 mile
Indian Reservations (INDIAN RESERV)	1.0 mile
Department of Defense (DOD)	1.0 mile
Section 7 Tracking Systems (SSTS)	1.0 mile
Open Dump Inventory (ODI)	
FIFRA/TSCA Tracking System (FTTS)	1.0 mile
Orphan Summary (Orphans)	Zip code

State (TCEQ) Database	**arch Distan**
State Hazardous Waste Sites (SHWS)	1.0 mile
Solid Waste Landfill Facilities (SWLF)	1.0 mile
Closed Landfill Inventory (CLI)	1.0 mile
Leaking Petroleum Storage Tanks (LTANKS)	1.0 mile
Registered Underground Storage Tanks (UST)	1.0 mile
USTs on Indian Land (INDIAN UST)	1.0 mile
Registered Aboveground Storage Tanks (AST)	1.0 mile
State Spill List (SPILL)	1.0 mile
TCEQ Voluntary Cleanup Program (VCP)	1.0 mile
State Multi Media Enforcement Cases (State Multimedia)	1.0 mile
State Industrial & Hazardous Waste Database (IHW)	1.0 mile
Innocent Owner/Operator Program (IOP)	1.0 mile
Drycleaner Registration Database Listing (DRYCLEANERS)	1.0 mile
Edwards Aquifer Permits (ED AQUIF)	1.0 mile
Current Emission Inventory Data (AIRS)	1.0 mile
Brownfields Site Assessments (Brownfields)	1.0 mile
Brownfields Sites with Controls (AUL)	1.0 mile
State Commercial Hazardous & Solid Waste Management Facilities (WASTEMGT)	1.0 mile
Enforcement Report (ENF)	1.0 mile

Eight storage or industrial facilities are listed on the database information within a 1-mile radius of the proposed fire station site. The first facility, the North Texas Municipal Water District (NTMWD) Custer Solid Waste Transfer Station, was identified as a Solid Waste Facility/Landfill Site, a State Enforcement Facility, and a Tier 2 facility. The NTMWD Custer Solid Waste Transfer Station was also reported on the UST list, but not listed as having any leaking UST incidents. This facility, addressed at 9901 Custer Road, is located approximately 0.9-mile northwest and topographically downgradient from the proposed fire station site. This facility does not appear to pose an environmental concern to the proposed fire station site due to its distance and topographic location relative to the proposed fire station site.

The second facility, Tetco 643 (Chevron), was reported on the UST list. The UST at this facility is in use and is not reported as leaking. This facility, addressed at 105 S. Custer Road, is approximately 875 feet west and is topographically upgradient from the proposed project site. Tetco 643 was constructed within the past 11 years and is not listed as having leaking UST incidents. It is unlikely that this facility currently poses an environmental concern to the proposed site. Based on the area surface topography, the groundwater flow from this facility appears to migrate to the east and toward the proposed fire station site. The apparent hydrological influence of the intermittent stream tributary along the north and west boundaries of the proposed fire station site will likely minimize the potential for groundwater flow from the east to extend beneath the proposed fire station site. Due to the distance, topographic location and area hydrogeologic features relative to the proposed fire station site, this site does not appear to pose an environmental concern to the proposed fire station site.

A third facility, Tetco 653 (Texaco), was reported on the UST list. This facility, addressed at 2200 McDermott Drive, is approximately 0.25-mile west and topographically upgradient to the proposed fire station site. Tetco 653 was constructed within the past 11 years and is not listed as having leaking UST incidents. It is unlikely that this facility currently poses an environmental concern to the proposed site. Based on the area surface topography, the groundwater flow from this facility appears to migrate to the east and toward the proposed fire station site. The apparent hydrological influence of the intermittent stream tributary along the north and west boundaries of the proposed fire station site will likely minimize the potential for groundwater flow from the east to extend beneath the proposed fire station site. Due to the distance, topographic location and area hydrogeologic features relative to the proposed fire station site, this site does not appear to pose an environmental concern to the proposed fire station site.

The fourth and fifth facilities (Sandero Custom Builders and unnamed builder) are on the FINDS list. The listing indicated that these two builders were required to obtain stormwater permits to construct the Twin Creeks subdivision located northeast of the proposed fire station site. The permits for this subdivision were addressed at 401 Brazoria Drive and at 1847 Nueces Drive in Allen, Texas. Based on the area surface topography, the groundwater flow from these subdivisions appears to migrate to the east toward Rowlett Creek and not toward the proposed fire station site. These facilities do not appear to pose an environmental concern to the proposed fire station site due their topographic location relative to the proposed fire station site

A sixth facility, The Mansions at Ridgeview Ranch, was listed on the FINDS list because of their "involvement with a local drinking water program". This facility is a residential subdivision addressed at 9601 Custer Road, and is located northwest of the proposed fire station site. It does not appear that based on the current use of this site that it would create any significant environmental impairment concern. Based on the area topography, the groundwater flow from this facility appears to migrate to the north toward a tributary of the Rowlett Creek and not toward the proposed fire station. This facility does not appear to pose an environmental concern to the proposed fire station site due to its use and its distance and topographic location relative to the proposed fire station site.

The final two listed facilities were registered as drycleaners. One of these two facilities, Praslas Cleaners, addressed at 2023 West McDermott Drive, Suite 260 in Allen, Texas (approximately 0.2 mile west of the proposed fire station site) is no longer a drycleaners. At the time this assessment was performed, the Praslas Cleaners facility had been converted to a market/restaurant identified as Mealtime Market. It could not be determined whether a dry cleaning facility was ever in operation at this address. If it was, it may have been a pick up station as we did not find any record of this facility having used or stored regulated materials on this property. Based on the reviewed information and our observations of the exterior of this property, it is in our opinion unlikely to pose an environmental concern to the proposed fire station site. The second listed dry cleaning facility within the search radius is Maxwell Cleaners. This facility is located approximately 0.3 mile west of the proposed fire station site and addressed at 2300 McDermott Drive, Suite 300 in Plano, Texas. We found no indication in the data reviewed that Maxwell either used reportable amounts of regulated chemicals or is a listed RCRA generator of hazardous waste. While we could not conclusively determine whether regulated materials or wastes may be used or stored at this site, it is in our opinion unlikely. Based on the area surface topography, the groundwater flow from this facility appears to migrate to the east and toward the proposed fire station site. The apparent hydrological influence of the intermittent stream tributary along the north and west boundaries of the proposed fire station site would likely minimize the potential for groundwater flow from the east to extend beneath the proposed fire station site. Therefore, this facility does not appear to pose an environmental concern to the Site.

No Action Alternative – Under the No Action Alternative, no construction will occur and there will be no impacts to hazardous materials or waste.

Proposed Action Alternative – Under the Proposed Action Alternative, no hazardous materials or waste impacts are anticipated. Any hazardous materials discovered, generated, or used during construction will be handled and disposed of in accordance with applicable local, State, and Federal regulations.

4.10 SAFETY

Safety and security issues considered in this EA include the health and safety of area residents and the public-at-large, and the protection of personnel involved in activities related to the proposed construction of Fire Station #5.

No Action Alternative – The No Action Alternative could have a negative effect on the general safety of the residents of the City of Allen. The lack of this emergency response facility will continue to hinder response capability and the protection of the community it serves from fire and fire-related hazards. The Allen Fire Department currently has just enough suppression resources to dispatch an NFPA 1710 compliant first alarm assignment. If one of the Allen Fire Department's apparatus is assigned to a different emergency incident, the City of Allen must rely on mutual aid to meet this standard.

Proposed Action Alternative – Under the Proposed Action Alternative, the construction of the new fire station will allow the Allen Fire Department to improve their emergency response operations. Construction of the new facility will provide faster emergency response times to calls due to the proposed project's access to the western portion of the City of Allen. These operations are critical to the health and safety of residents throughout the City of Allen.

Construction activities could also present safety risks to those performing the activities. To minimize risks to safety and human health, all construction activities will be performed using qualified personnel trained in the proper use of the appropriate equipment, including all appropriate safety precautions. Additionally, all activities would be conducted in a safe manner and in accordance with the standards specified in the Occupational Safety and Health Administration (OSHA) regulations. The appropriate signage and barriers should be in place prior to construction activities to alert pedestrians and motorists of project activities.

In the long term, the Proposed Action Alternative is believed to be an overall enhancement to public safety.

5.0 CUMULATIVE IMPACTS

According to CEQ regulations, cumulative impacts represent the "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7)." In accordance with NEPA and to the extent reasonable and practical, this EA considered the combined effect of the Proposed Action Alternative and other actions occurring or proposed near the proposed project site.

The proposed fire station site is located within an area consisting primarily of residential development with few retail centers. Large portions of the area surrounding the proposed project site are vacant land. The construction of Shallowater Drive, a separate capital improvement project, is the one known project occurring near the proposed project site. The Shallowater Drive project is being constructed on the east-adjacent site to the proposed project site. This project consists of a 300 linear foot, two-lane road (Shallowater Drive) that dead ends just north of the proposed fire station site driveway. The project also includes some median construction along McDermott Drive, and the installation of wet utilities (water, wastewater, and storm lines). There are no other known projects that, when added to the proposed fire station, have a cumulative impact on the human environment.

Development will eventually increase within the vicinity of the proposed fire station site. As of January 1, 2009, the City of Allen population was 82,500. The total population is expected to be 97,938 when the City reaches total build out. The future land use plan indicates residential development for the area immediately surrounding the proposed fire station site. It is projected that over the next ten year period that 2,500 homes will be added to service area for this proposed fire station. However, there are currently no immediate plans to develop the immediate area surrounding the proposed fire station site. The addition of Fire Station #5 will help the Allen Fire Department meet both current and future demands for fire protection and emergency medical service.

The construction of the proposed project and the Shallowater Drive project may have temporary impacts on air quality, by increasing criteria pollutants during construction activities, and traffic. No other cumulative impacts are anticipated. The construction of the proposed fire station will have little or no negative cumulative impact on the surrounding community and environment.

6.0 PUBLIC INVOLVEMENT

FEMA is the lead Federal agency for conducting NEPA compliance for the proposed Fire Station #5 in the City of Allen, Collin County, Texas. It is the goal of the lead agency to expedite the preparation and review of NEPA documents and to be responsive to the needs of the community and the purpose and need of the proposed action while meeting the intent of NEPA and complying with all NEPA provisions.

The City of Allen will notify the public of the availability of the draft EA through publication of a public notice in a local newspaper. FEMA will conduct a 30-day public comment period commencing on the initial date of publication of the public notice.

7.0 AGENCY COORDINATION AND PERMITS

The following agencies and organizations were contacted by letter requesting project review during the preparation of this EA. Responses received to date are included in Appendix H.

- U.S. Department of Agriculture, Natural Resources Conservation Service, Texas State Office
- Texas Historical Commission
- Texas Parks and Wildlife Department

USACE was contacted by phone concerning a CWA Section 404 permit. A memorandum to file of this conversation is included in Appendix H.

In accordance with applicable local, State, and Federal regulations, the applicant would be responsible for acquiring any necessary permits prior to commencing construction at the proposed project site.

8.0 CONCLUSIONS

The following table is a summary of those items discussed in detail in Section 4.0 Affected Environment and Potential Impacts of this report. The table provides a review of information regarding the potential impact and any required mitigation measures discussed in that section.

Affected Environment	Impacts	Mitigation
Geology and Soils	No impacts to underlying geology are anticipated. Shallow soils and rock on the proposed fire station site will be disturbed during construction	Excavated soil and waste materials will be managed and disposed of in accordance with applicable local, State, and Federal regulations. If contaminated materials are discovered during the construction activities, the work will cease until appropriate procedures and permits can be implemented.
Farmland Conversion Impact Rating	Prime farmland soils are present at the proposed fire station site and will be disturbed during construction.	Based on the overall score given to the proposed fire station site, development of the proposed fire station site will not contribute to the unnecessary conversion of farmland to nonagricultural uses.
Air Quality	Minor long-term impacts due to exhaust emissions produced by the operation of emergency response vehicles. Short-term impacts may occur during construction.	Construction contractors will be required to water down the construction areas when necessary to minimize dust and to keep fuel-burning equipment running times to a minimum and keep engines properly maintained.
Surface Water	Temporary short-term impacts to downstream surface waters may occur during construction.	A SWPPP and a NPDES permit must be obtained prior to construction. BMPs, such as installing silt fences and revegetating bare soils, will minimize runoff.
Groundwater	No impacts to groundwater are anticipated.	If the proposed action will require additional excavation to groundwater depths, the applicant will consult with EPA and TCEQ to identify the appropriate mitigation.
Floodplains	No impacts to the floodplain are anticipated.	None

Affected Environment	Impacts	Mitigation
Waters of the U.S. including Wetlands	Short-term impacts to downstream surface waters could occur during construction.	A SWPPP has been prepared and BMPs for storm water management will be implemented to minimize the detrimental effects to water quality of the creek bordering the proposed fire station site during construction.
Biological Resources	No impacts to federally protected species are anticipated.	None
Cultural Resources	No impacts to archeological or cultural resources are anticipated.	In the event that archeological deposits, including and Native American pottery, stone tools, or human remains are uncovered, the project shall be halted. The applicant shall stop all work immediately in the vicinity of the discovery and take reasonable measures to avoid or minimize the harm to finds. All archeological findings will be secured and access to the sensitive area restricted. The applicant shall inform FEMA immediately and FEMA will consult with the SHPO or THPO and Tribes. Work in sensitive areas cannot resume until consultation is completed and appropriate measures have been taken to ensure that the project is in compliance with the NHPA.
Socioeconomic Resources	No adverse impacts to socioeconomic resources are anticipated.	None
Environmental Justice	No adverse impacts on minority or low-income portions of the population are anticipated.	None
Noise	Temporary short-term impacts in noise levels are anticipated during construction. Minor impacts in noise levels from sirens operated by emergency response vehicles are anticipated.	To reduce noise levels during construction, construction activities will take place during working hours enforceable by local ordinance.

Affected Environment	Impacts	Mitigation
Traffic	Minor temporary increase in the volume of construction traffic on roads in the immediate vicinity is anticipated. After construction of the facility, minor increase in traffic from staff traveling to and from the facility, and emergency response vehicles leaving and arriving the fire station are anticipated.	Construction vehicles and equipment will be stored on site during the project construction and appropriate signage will be posted on affected roadways. The installation of a traffic signal and warning signs is planned at the intersection of McDermott Drive and Shallowater Drive and is expected to be complete in conjunction with the fire station.
Hazardous Material	No hazardous materials or waste impacts are anticipated,	Any hazardous materials discovered, generated, or used during construction will be handled and disposed of in accordance with applicable local, State, and Federal regulations.
Safety	Construction activities could present safety risks to those performing the activities. No long-term negative safety impacts are anticipated.	All construction activities will be performed using qualified personnel trained in the proper use of the appropriate equipment, including all appropriate safety precautions. All activities will be conducted in a safe manner and in accordance with the standards specified in OSHA regulations. The appropriate signage and barriers should be in place prior to construction activities to alert pedestrians and motorists of the project activities.

No impacts to geology, groundwater, floodplains, wetlands, environmental justice, threatened and endangered species, cultural resources, hazardous materials, or socioeconomic resources are anticipated with the Proposed Action Alternative. Positive impacts to public health and safety are expected. During the construction period, short-term impacts to soils, downstream surface water, traffic, air quality, and noise are anticipated. All short-term impacts require conditions to minimize and mitigate impacts to the proposed project site and surrounding areas.

The findings of this Environmental Assessment conclude that the proposed construction of a new fire station for the City of Allen would result in no significant environmental impacts to the human or natural environment; therefore, the Proposed Action Alternative meets the requirements of a Finding of No Significant Impact (FONSI) under NEPA and the preparation of an Environmental Impact Statement (EIS) will not be required.

9.0 REFERENCES

Federal Emergency Management Agency (FEMA), June 2, 2009, *Flood Insurance Rate Map, Collin County, Texas*. Community Panel Number 480130 0380 J. http://www.msc.fema.gov. Accessed December 16, 2009.

GME Consulting Services, Inc. 2007. *Phase I Environmental Site Assessment, Proposed Fire Station #5*. GME Project No. 07.03.0336. Prepared for City of Allen Engineering Department.

National Oceanic and Atmospheric Administration (NOAA). 2004. *State Coastal Zone Boundaries*. http://coastalmanagement.noaa.gov/mystate/docs/StateCZBoundaries.pdf. Created April 22, 2004. Accessed December 16, 2009.

National Parks Service. 2009. *National Register of Historic Places, City of Allen, Collin County*. Accessed December 16, 2009.

NatureServe Explorer, An Online Encyclopedia of Life, 2009. *Haliaeetus leucocephalus and Grus Americana*. http://www.natureserve.org/explorer. Accessed March 2, 2010.

Texas Commission on Environmental Quality. 2004. *Air Quality Data, Frisco C31/C680*. Modified December 16, 2009. Accessed December 16, 2009.

Texas Historical Commission. 2009. *Texas Historic Sites Atlas, Collin County*. Accessed December 16, 2009.

Texas Natural Resources Information Systems. 1992. *National Wetlands Inventory, United States Department of the Interior*. Accessed December 30,2009.

U.S. Census Bureau (USCB). 2000. *American Fact Finder, Allen, Texas*. http://factfinder.census.gov/home/saff/main.html?_lang=en. Accessed December 16, 2009.

U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). 2009. Web Soil Survey. http://websoilsurvey.nrcs.usda.gov/app/. Last Modified October 26, 2010. Accessed December 16, 2009.

U.S. Fish and Wildlife Service. 2009. *Endangered Species List - Lists of Species by county for Texas*. http://www.fws.gov/southwest/es/EndangeredSpecies/lists/ListSpecies.cfm. Last Modified December 16, 2009. Accessed December 16, 2009.

U.S. Geological Survey (USGS). 1960. *Plano, Texas, 7.5-minute Quadrangle*. 1:24,000 series.

REFERENCES

U.S. Geological Survey (USGS). 2009. *Groundwater Atlas of the U.S.* http://pubs.usgs.gov/ha/ha730/ch_e/E-text8.html. Assessed December 28, 2009.

University of Texas at Austin, Bureau of Economic Geology. 1954. *Geologic Atlas of Texas, Sherman Sheet*. Revised 1963 and 1991.

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