



Highland Park Fire Department

Fire Station Construction

Highland Park, Wayne County, Michigan

Draft Environmental Assessment

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U.S. Department of Homeland Security

FEMA Region V

536 South Clark Street

Chicago, Illinois 60605



FEMA

Prepared by:

Sandy McDonald, Director
Community & Economic Development
12050 Woodward Avenue
Highland Park, Michigan 48203

Prepared for:

FEMA Region V
536 South Clark Street
Chicago, Illinois 60605

TABLE OF CONTENTS

	<u>Page</u>
COVER PAGE	Cover
TABLE OF CONTENTS	2-3
ACRONYMS	4-5
SECTION 1: BACKGROUND	
1.1 PROJECT AUTHORITY	6
1.2 PROJECT LOCATION	6
1.3 PURPOSE AND NEED	7
1.4 EXISTING FACILITY	7-8
SECTION 2: ALTERNATIVE ANALYSIS	
2.1 ALTERNATIVE 1 – NO ACTION ALTERNATIVE	8
2.2 ALTERNATIVE 2 – NEW FIRE STATION (PROPOSED ACTION)	8-9
2.3 ALTERNATIVES CONSIDERED AND DISMISSED	10
SECTION 3: PHYSICAL ENVIRONMENT AND IMPACTS	
3.1 PHYSICAL ENVIRONMENT	10
3.1.1 Geology, Seismicity and soils	10
3.1.2 Water Resources and Water Quality (Surface Water)	11
3.1.3 Floodplain Management	12
3.1.4 Air Quality	13
3.2 BIOLOGICAL ENVIRONMENT	14
3.2.1 Terrestrial and Aquatic Environment	14
3.2.2 Wetlands (Executive Order 11990) / Water of the U.S.	14-15
3.2.3 Threatened and Endangered Species	15-16
3.3 HAZARDOUS MATERIALS	16-17
3.4 SOCIOECONOMICS	17
3.4.1 Zoning and Land Use/Transportation	17
3.4.2 Noise	18-19
3.4.3 Public Services and Utilities	19
3.4.4 Environmental Justice (Executive Order 12898)	19-20
3.4.5 Safety and Security	20
3.5 HISTORIC AND CULTURAL RESOURCES	21
3.5.1 Historic Structures	21-22
3.5.2 Archaeological Resources	22

3.5.3	Tribal Coordination and Religious Sites	22
3.6	COMPARISON OF ALTERNATIVES	23
TABLE 1	Impact and Mitigation Summary	23-24
	SECTION FOUR: CUMULATIVE IMPACTS	26
	SECTION FIVE: PUBLIC PARTICIPATION	26
	SECTION SIX: AGENCY COORDINATION AND PERMITS	27-28
	SECTION SEVEN: REFERENCES	29
	SECTION EIGHT: LIST OF PREPARERS	30
APPENDIX	A	Figures
Figure 1		Map of Highland Park, MI with Project Location
Figure 2		Area of Potential Effect Map
APPENDIX	B	Site Photographs
Figure 3		Photos Southwest to Northeast
APPENDIX	C	Preliminary Plan set
Figure 4		Proposed Site plan
Figure 5		Proposed Building Layout
Figure 6		Proposed Front Elevation
APPENDIX	D	Agency Coordination
		Memorandum of Agreement with MI State Historic Preservation Office
		Tribal Consultation

ACRONYMS:

ADA	Americans with Disabilities Act
AMSL	Above Mean Sea Level
APE	Area of Potential Effects
ARRA	American Recovery and Reinvestment Act
BMP	Best Management Practices
BRRTS	Bureau for Remediation and Redevelopment Tracking System
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CWA	Clean Water Act
DB	Decibel
EA	Environmental Assessment
EIS	Environmental Impact Statement
EMS	Emergency Medical Services
EO	Executive Order
EOC	Emergency Operations Center
ESA	Endangered Species Act
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
HSG	Hydrologic Soil Group
LDN	Day-Night Soil Group
NAAQSD	National Ambient Air Quality Standards

NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NO2	Nitrogen Dioxide
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
MAC	Michigan Administrative Code
O3	Ozone
OSHA	Occupational Safety and Health Administration
Pb	Lead
PM25	Particulate Matter Less than 2.5 microns
PM10	Particulate Matter Less than 10 microns
RCRA	Resource Conservation and Recovery Act
SCG	Station Construction Grant
SHPO	State Historic Preservation Office
SHWIMS	Solid and Hazardous Waste Information Management System
SO2	Sulfur Dioxide
SWDV	Surface Water Data Viewer
SWPPP	Storm Water Pollution Preventive Plan
THPO	Tribal Historic Preservation Office
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
VOC	Volatile Organic Compound
MDNR	Michigan Department of Natural Resources

SECTION 1: BACKGROUND

1.1 PROJECT AUTHORITY

Highland Park Fire Department received an Assistance to Firefighters Grant (AFG) – Station Construction Grant from the Department of Homeland security – FEMA. The Station Construction Grant (SCG) was established as part of the American Recovery and Reinvestment Act of 2009 (ARRA) to provide financial assistance for fire departments to build or modify fire stations, which will enhance the department's response capability. Funding for the program was provided by the American Reinvestment and Recovery Act of 2009 (Pub. L. 111-5). In accordance with 44 Code of Federal Regulations (CFR) for FEMA, Subpart B, Agency Implementing Procedures, Part 10.9, an Environmental Assessment (EA) is being 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 Highland Park is located in Wayne County, Michigan within the boundaries of the City of Detroit. The approximate population is 16,700 according to the most current U.S. Census. The proposed new fire station location is 25 Gerald Street on the old municipal complex site which is the approximate center of Highland Park and will provide fire services for all of the residents of Highland Park.

The proposed project site is a 0.91 acre portion of the existing 2.2 acre municipal complex site which includes the former fire station, police station and city hall. Various maps indicating the City of Highland Park's location within the State of Michigan, its relation to the City of Detroit, as well as the proposed construction site and photographs of the proposed construction site are provided in Appendix A. The proposed site is bordered by primarily commercial establishments to the west, east, north, and south. No wetlands, floodplains, or waterways are located near the project site. The nearest waterway is the Detroit River which is located approximately five miles to the south.

1.3 PURPOSE AND NEED

The purpose of the AFG fire station construction grant is to provide funding to assist states and local governments in improving their emergency response capabilities. Highland Park has proposed the construction of a new fire station to replace the current outdated, unsafe and unhealthy facility. A formal Needs Assessment was not conducted for this project. Highland Park's Fire Department currently operates out of a temporary facility located at 12900 Oakland Park Boulevard. This fire station is inadequate structurally and has many mechanical system deficiencies. The facility is not compliant with the Americans with Disabilities Act (ADA) standards. It is grossly inadequate structurally and was condemned by OSHA. There is no ventilation system for the trucks, the electrical system is antiquated and substandard and the facility lacks natural lighting or windows. Plumbing in the facility is grossly inadequate, and the vehicles do not have a separate garage area – they are held in the same area that the firefighters sleep. The facility also has a deficient heating system and there are numerous roof leaks throughout the structure.

From an operational standpoint the current location does not provide optimal fire protection to the community due to its location and does not meet standards for specific response time objectives as established by the NFPA Code 1710, Chapter 4, Section 4.1.2.1.1. The facility is located on the fringe of the city, resulting in poor response times to parts of the community. A more centralized location would provide consistent and uniform response times for the community as a whole. The existing facility also lacks conference space, meeting rooms, a fitness center and media rooms, all usual and customary amenities.

A new facility will address the aforementioned shortcomings and meets the needs of firefighting services operations. It is needed to provide the best possible response time within the 2.9 square mile service area. The new facility will also provide a safe and healthy living and training environment for the firefighting personnel.

1.4 EXISTING FACILITIES

The existing Highland Park Fire Station provides services to a population of approximately 15,000 residents covering 2.9 square miles. The current station is located in a temporary facility (old 40,000 sq. ft. warehouse) on the far southeast side of the city. Due to the nature of the structure, it is not appropriate for use as a permanent fire station. It is unsafe, and currently in violation of numerous

health codes. Trailers are used for office, kitchen and bathrooms. Not only is the current station substandard, it is also in an inconvenient location which hampers response time.

SECTION TWO: ALTERNATIVE ANALYSIS

2.1 ALTERNATIVE 1 – NO ACTION

Under the No Action Alternative, the Fire Department would continue to operate out of the 12900 Oakland Park Boulevard facility. There would be no environmental or historic preservation impacts associated with the No Action Alternative; however, the shortcomings identified in the needs assessment would not be addressed – resulting in a negative impact to the community in terms of public services. The existing facility is outdated and there is no way to upgrade the facilities to meet the needs identified resulting in poor response times and inadequate facilities for firefighting personnel.

2.2 ALTERNATIVE 2 – NEW FIRE STATION (PROPOSED ACTION)

The proposed new fire station site is a 0.91 acre City of Highland Park owned parcel located in the center of the city between Victor Street to the north, Gerald Street to the south, Woodward Avenue to the west, and John R Street on the east. The parcel address is 25 Gerald Street and is bordered on all sides by primarily commercial development. The parcel is currently zoned for municipal government use. It is the location of the former police station, fire station and city hall, all of which are currently condemned. The former police station will be demolished in order to accommodate the construction of the new fire station.

The proposed facility is centrally located within the city's 2.9 square mile boundary; response times from this proposed station to anywhere in the city will be less than five minutes.

The proposed project consists of a single story fire headquarters station, approximately 12,000 square feet in size. The site is served by all utilities, including sanitary and storm sewer, water, gas and electric power. The new fire station will be a slab-on-grade structure without a basement; therefore the extent of the depth of the ground disturbance activity will be limited to approximately eight feet, the depth of the existing foundation which is to be removed as part of the demolition process. The area of disturbance will be limited to the approximately 12,000 square foot size of the new structure and the area needed for 26 asphalt paved parking spaces associated with the construction. Parking will be provided for fire administration personnel, as well as visitor parking. The design is able to take advantage of Gerald Street for vehicle movement, as it is not a through street. Because the site is located in a

developed, urban area, the bays will be “back-in” bays. The building and site have been designed to accommodate the ingress and egress of the apparatus.

A state of the art security system will be provided to insure the safety and security of both fire department staff and fire-fighting equipment. Access points will be restricted to authorized personnel, and access to the public entry will be controlled by the front desk. A natural gas, emergency generator will provide 100% emergency power backup. The building will be equipped with smoke and carbon monoxide detectors, and will incorporate a fire suppression (sprinkler) system throughout.

The building consists of the following operational spaces:

Suppression Functions:

1. A five-bay Apparatus Bay.
2. Turn out Gear Area adjacent to the Apparatus Bay for 28 firefighters.
3. Support services for the Apparatus Bay including:
 - a. SCBA Room, including work bench.
 - b. Dehumidification Room for drying equipment and hose.
 - c. Parts Rooms, including work bench.
 - d. Air Compressor Room.
 - e. Vehicle-exhaust extraction system.
4. Sleeping quarters for male and female firefighters.
5. Male and Female restroom facilities.
6. Wellness Room.
7. Day Room.

Administration Functions:

8. Public Lobby.
9. Public Toilet
10. Front Desk-Dispatch Station
11. Administrative offices, including:
 - a. Chief's Office
 - b. Fire Inspector
 - c. Arson Investigators
12. Training Room

The project will be designed in accordance with the State of Michigan Building Code, local and federal ordinances and regulations, and comply with ADA requirements. In addition, it is the goal of this project to follow LEED © guidelines.

2.3 ALTERNATIVE 3 – Dismantle and Rebuild

Renovation of the former police station would represent a sizable investment of time, money, and resources to accomplish. Some of the major renovations would include removal and replacement of the entire roof structure, demolition and replacement of portions of the external shell, Installation of all new doors, windows, and all fixtures. Replacement of the entire electrical and mechanical infrastructure would be required.

In addition, the Secretary of the Interior's Guidelines for Rehabilitating Historic Buildings recommends retaining the existing floor plan and interior features that are important to defining the overall character of the building. Maintaining the existing floor plan would not allow the City to comply with certain modern building codes and ADA requirements for a new fire station. The necessity to reconfigure the building's floor plans would require significant changes to the interior spaces. For example, the existing one story police garage will have to be demolished and replaced with a larger addition to meet the area and height requirements for current fire emergency vehicles.

While the City of Highland Park fully appreciates the historical significance of the existing structures and would like to have the luxury of adequate funding to dismantle and rebuild the municipal complex; even if funding was available to restore the structure, the size and configuration of the buildings would be grossly inadequate functionally to serve the current needs of the city's fire station.

SECTION THREE: EFFECTED ENVIRONMENT AND IMPACTS

3.1 PHYSICAL ENVIRONMENT

3.1.1 Geology, Seismicity, and Soils

A review of available Michigan Geology texts indicates that several ice sheets (i.e. glaciers) advanced and retreated several times over all of Southern Michigan during the Quaternary Period of the Cenozoic Era, with the most recent being during the late Wisconsin period (ending approximately 10,000 years ago). Based on the 1982 Quaternary Geology Map of Southern Michigan the site soils were generally deposited

as lake or lacustrine sediments in areas formerly inundated by glacial Great Lakes. Any sand and gravel strata are generally attributed to a succession of gradually receding lakes creating beach ridges. The seasonal changes during the arctic conditions affected the structure of the sediments. In the summer time suspended material within the lakes consisted of silt and clay. The silt particles settled out during the summer. During the winter no new material was carried to the lakes since the rivers were completely frozen. Thus, only clay particles which did not settle out during the summer were deposited. Therefore the sediment is composed of light colored summer deposits of mostly silt with some clay and darker winter layers of mostly clay. The alternating layers of silt and clay are known as varved clay. Prior to melting, the glacial ice exerted tremendous pressure on the underlying soils creating very dense strata locally known as hardpan. The site is underlain by the Antrim Shale formation.

Southeastern Michigan and Detroit, within Wayne County, are considered to have a relatively low seismic risk. This is apparent from a review of the map of seismic risk of the United States as published by the U.S. Geological Survey in which all of Michigan is located within the lowest zone of seismic risk.

Based on a review of available soil borings nearby, Quaternary Geology maps, and the character of the urban environment, the site soils primarily consist of silty clays with traces of sand and gravel. However, there may be pockets of fill underlying parking areas. Existing pavements in the area are typically underlain with 6 inches to 18 inches of sand and gravel base material. Soil survey information was not readily available online for this area.

The location is in an urban environment void of farmland. However, there are several nearby tracts of vacant land that had been previously developed. There are subsequently no prime or unique farmland impacts due to the re-development of the property.

ALTERNATIVE 1 – No Action

Under the No Action Alternative, no impacts to geology or soils would occur.

ALTERNATIVE 2 – New Fire Station (Proposed Action)

Under the Proposed Action Alternative, construction activities would not be deep enough to impact underlying geologic resources. Short-term impacts to soils would occur during the construction period and an estimated 5,930 SY of the site would be disturbed. Appropriate BMPs such as silt fence, prompt planting of vegetation, and completion of landscaping would be used to minimize runoff.

ALTERNATIVE 3 – Dismantle and Rebuild

Under the Dismantle and Rebuild Action Alternative, Construction activities would be quite similar to alternative 2 new construction above. The construction activities would not be deep enough to impact the underlying geologic resources.

3.1.2 Water Resources and Water Quality (Surface Water)

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

In Michigan regulatory authority to issue Soil Erosion and Sedimentation Control Permits has been transferred in most cases to local units of government. In Highland Park, Soil Erosion & Sedimentation Control Permits are issued by the Wayne County Department of Environment for sites that disturb over 1 acre of land. The proposed project will not disturb more than one acre of land, therefore a Soil Erosion & Sedimentation Control permit is not required.

Storm water run-off from the entire area is collected by an existing storm sewer system that discharges directly to a combined sewer system. The combined sewer conveys the waste water to a waste water treatment plant and is treated by the Detroit Water & Sewer Department to required regulatory levels before being discharged to the Detroit River. Since the entire area is served by a combined sewer system that treats 100 percent of the storm water runoff, detention is not required.

ALTERNATIVE 1 – No Action

Under the No Action alternative, no adverse impacts to surface water would occur.

ALTERNATIVE 2 – New Fire Station (Proposed Action)

Under the proposed Action Alternative, there would be no direct permanent impacts to surface waters. However, temporary short-term impacts to downstream surface waters could occur during the construction period because of soil erosion. To reduce impacts to surface water, the applicant would implement appropriate BMPs, such as installing silt fences and prompt replanting of bare soils.

ALTERNATIVE 3 – Dismantle and Rebuild

Under the Dismantle and Rebuild Action Alternative, Water Quality Impact will be similar to alternative 2 for new construction above and will be addressed in the same manner.

3.1.3 Floodplain Management (Executive Order 11988)

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. Specifically, EO 11988 prohibits federal agencies from funding construction in the 100-year floodplain unless there are no practicable alternatives. FEMA's regulations for complying with EO 11988 are promulgated in 44 CFR Part 9.

FEMA uses Flood Insurance Rate Maps (FIRM's) to identify the regulatory 100-year floodplain for the National Flood Insurance Program (NFIP). Consistent with EO 11988, FIRM's were examined during the preparation of this EA using FEMA Floodplain Mapping Viewer.

The index of FIRM Maps for the area indicate the City of Highland Park is in an unmapped area. Therefore, there is no floodplain map available for the subject site. However, there are no nearby drainage courses that are typically associated with a floodplain and there is no known history of flooding at the project site. The area has been developed for over a century and is provided with extensive sewer systems that convey storm water run-off to a wastewater treatment plant owned & operated by the Detroit Water & Sewer Department.

ALTERNATIVE 1 – No Action

Under the No Action Alternative, no impacts to the floodplain would occur.

ALTERNATIVE 2 – New Fire Station (Proposed Action)

Under the proposed Action Alternative, the project site is not in a floodplain and no impacts are anticipated.

ALTERNATIVE 3 – Dismantle and Rebuild

Under the Dismantle and Rebuild Action Alternative, Floodplain Management requirements are quite similar to Alternative 2 for new construction above.

3.1.4 Air Quality

The Clean Air Act (CAA) requires that states adopt ambient air quality standards. These standards have been established to protect the public from potentially harmful amounts of pollutants. Under CAA, the U.S. 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 ecosystem health, and preventing decreased visibility and damage to crops and buildings.” The EPA has set national ambient air quality standards (NQS) for the following six criteria pollutants: ozone (O₃), particulate matter (PM_{2.5}, PM₁₀), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), and lead (Pb). There are no operating systems or machinery present at the existing site. There is asbestos and lead present at the site, but is of no significant consequence unless the structure is disturbed.

ALTERNATIVE 1 – No Action

Under the No Action Alternative, no impacts to the Air Quality would occur.

ALTERNATIVE 2 – New Fire Station (Proposed Action)

Under the Proposed Action excavation may result in temporary localized dust, but will not result in long term release of pollutants. No stationary sources of air pollution will be created by the project. Best management practices and reasonably available control measures (OAC Rule 3745-17-08(B)) shall be employed by the contractor to control fugitive dusts during construction activities. All appropriate OSHA regulations shall be followed to insure employee protection. Emissions from fuel burning engines (e.g. heavy equipment and earth moving machinery) could also temporarily increase the levels of some of the criteria pollutants, such as CO, NO₂, O₃, PM₁₀ and non-criteria such as VOC's. To mitigate these emissions, fuel-burning equipment run times would be kept to a minimum and equipment would be properly maintained.

ALTERNATIVE 3 – Dismantle and Rebuild

Under the Dismantle and Rebuild Action Alternative, the Air Quality requirements would be quite similar to Alternative 2 for New Construction and would be addressed in accordance with the requirements of the Clean Air Act (CAA).

3.2 BIOLOGICAL ENVIRONMENT

3.2.1 Terrestrial and Aquatic Environment

The proposed site is a modestly densely populated commercial area with peripheral residential and is located in the center of Highland Park. Most of the commercial and residential development occurred between late 1920s and 1950s. The existing site is primarily urban void of any significant vegetation and does not presently harbor or support wildlife. Because the proposed site is a moderately densely populated area, the new fire station site would be considered to have limited value for plant and wildlife species. The site will be fully landscaped (seeded and decorative landscaping after completion of construction).

ALTERNATIVE 1 – No Action

Under the No Action Alternative, no impacts to the Terrestrial and Aquatic Environment would occur.

ALTERNATIVE 2 – New Fire Station (Proposed Action)

No endangered resources will be impacted. The site's new landscaping will include trees, seeding and other plant materials.

ALTERNATIVE 3 – Dismantle and Rebuild

Under the Dismantle and Rebuild Action Alternative, the impact on Terrestrial and Aquatic Environment will be minimal and similar to Alternative 2 for New Construction above the site is primarily when void of any significant vegetation and does not presently harbor or support wildlife.

3.2.2 Wetland (Executive Order 11990)/Water of the U.S. Including Wetlands

The USACE regulates the discharge of dredged or filled material into waters of the U.S., including wetlands, pursuant to section 404 of the CWA. Additionally, EO 11990 (Protection of wetlands) requires Federal agencies to avoid, to the extent possible, adverse impacts on wetlands that may result from federally funded actions.

No wetlands or surface waters have been identified on-site or adjacent to it.

ALTERNATIVE 1 – No Action

Under the No Action Alternative, no impacts to waters of the U.S., including wetlands, would occur.

ALTERNATIVE 2 – New Fire Station (Proposed Action)

Under the Proposed Alternative, no impacts to waters of the U.S., including wetlands, would occur because none are present on or near the proposed project site. Wetlands closest to the proposed site are outside of the area to be disturbed by grading or filling and would not be directly or indirectly impacted by construction. During the construction, the use of BMPs would minimize erosion at the site and mitigate potential impacts to the nearest water resources. Appropriate BMPs would be required at the construction site, including, but not limited to, the installation of silt fences and the re-vegetation of bare soils to minimize erosion.

ALTERNATIVE 3 – Dismantle and Rebuild

Under the Dismantle and Rebuild action Alternative, no wetlands or surface waters have been identified on-site or adjacent to it. No impacts to waters of U.S., including wetlands would occur.

3.2.3 Threatened and Endangered Species

The proposed site is a modestly densely populated commercial area with peripheral residential uses and is located in the center of Highland Park. Most of the development of both commercial and residential occurred between late 1920s and 1950s. The existing site is primarily urban and does not harbor or

support wildlife. Because the proposed site is a moderately densely populated area, the new fire station would be considered to have limited value for plant and wildlife species.

In accordance with Section 7 of the Endangered Species Act (ESA) of 1973, the project area was evaluated for the potential occurrences of federally listed threatened and endangered species. The ESA requires any federal agency that funds, authorizes or carries out an action to ensure that their action is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitats.

The project area is located in a developed area and will not result in extensive destruction or disturbance of natural habitat.

ALTERNATIVE 1 – No Action

Under the No Action Alternative, no impacts to threatened or endangered species would occur.

ALTERNATIVE 2 – New Fire Station (Proposed Action)

Under the Proposed alternative, the site for the Fire Station is primarily a moderately densely populated urban area and there will be little to no impact to threatened or endangered species.

ALTERNATIVE 3 – Dismantle and Rebuild

Under the Dismantle and Rebuild Action Alternative, the project area is located in a developed area and like Alternative 2 for New Construction above will not result in significant destruction or disturbance of natural habitat.

3.3 HAZARDOUS MATERIALS

To identify potential hazardous materials sites in the vicinity of the project area, environmental databases were reviewed in 2005. No hazardous material sites are located on or near the proposed project site. Based upon database reviews, topographic maps and aerial photographs the following information is provided:

Thermal and Explosive Hazards: There is no bulk above ground storage of explosive or flammable materials in the vicinity of the project area and the project does not involve the construction of a hazardous facility. No further coordination is required with respect to 24 CFR Part 51 Subpart C.

Airport Hazards: The only airport within a 20 mile radius of the site is Detroit City Airport which operates light commercial aircraft and is located approximately ten miles to the east. The project area is not located within the clear zone or accident potential zones of the airport.

Hazardous Waste: Facilities generating, treating, storing, or disposing of hazardous wastes are regulated by the Resource Conservation and Recovery act (RCRA). The project will not result in the generation of RCCA hazardous wastes. The project site is located in an area of residential and commercial development with no nearby RCRA Large Quantity Generators, or Treatment, Storage or Disposal Facilities.

There is a limited amount of undisturbed asbestos in the existing structure primarily found in piping insulation and floor tile.

No subsurface material testing was conducted in the project area as part of this analysis. Conclusions are based upon visual on-site inspection, review of topographic maps, aerial photographs as well as historic knowledge of the use of the structures.

ALTERNATIVE 1 – No Action

Under the No Action Alternative, no impacts related to hazardous materials or waste would occur.

ALTERNATIVE 2 – New Fire Station (Proposed Action)

Under the Proposed Alternative, no hazardous materials or waste-related impacts would be anticipated. Proposed construction activities would require excavation for storm water control site grading, building foundation, but no hazardous materials are anticipated. Any hazardous materials, including lead and asbestos discovered, generated, or used during construction would be handled and disposed of in accordance with applicable local, state, and federal regulations.

ALTERNATIVE 3 – Dismantle and Rebuild

Under the Dismantle and Rebuild Action Alternative, no hazardous materials or waste related impacts would be anticipated. Any hazardous materials discovered generated, or used during construction would be handled and disposed of in accordance with applicable local, state, and federal regulations.

3.4 SOCIOECONOMICS

3.4.1 Zoning and Land Use/ Transportation

The site is located approximately 100 feet off of Woodward Avenue a primary access artery. Construction on the site and sufficient area for the staging of vehicles and equipment would not impact traffic on Woodward Avenue.

ALTERNATIVE 1 – No Action

Under the No Action Alternative, no impacts related zoning or transportation would occur.

ALTERNATIVE 2 – New Fire Station (Proposed Action)

Under the Proposed Alternative, there would be only minor temporary increases in the volume of construction related traffic in the immediate vicinity of the proposed project site. This could potentially result in a slower traffic flow for the duration of the construction phase. To mitigate potential delays, construction vehicles and equipment would be stored on-site during construction. There is ample room at the site for equipment and material staging. Appropriate traffic control and signage would be utilized.

Upon completion of the proposed project no further impact to traffic is anticipated.

ALTERNATIVE 3 – Dismantle and Rebuild

Under the Dismantle and Rebuild Action Alternative, the zoning, land use and transportation will not be adversely affected by the Dismantle and Rebuild Alternative and therefore would not impact traffic on Woodward Avenue the Primary Site access artery.

3.4.2 Noise

Noise can be considered unwanted sound and sound is typically measured in decibels (db). An average measure of sound is known as day-night average sound level (Ldn) and is used by agencies for estimating sound impacts and establishing guidelines for compatible land uses. An EPA document, *Information on levels of Environmental Noise Requisite to Protect Public Health with an adequate Margin of Safety* (EPA, 1974) provides a basis for State and local governments' judgments in setting standards. The document identifies a 24-hour exposure level of 70 db as the level of environmental noise that will prevent any measurable hearing loss over a lifetime. Also, levels of 55 db outdoors and 45 db indoors are identified as preventing interference and annoyance. These levels are considered those which will permit spoken conversation and other activities such as sleeping, working and recreation. The levels are not single event, or "peak" levels, but rather, they represent averages over long periods of time. An occasional higher noise levels would be consistent with a 24-hour average of 70 db, as long as a sufficient amount of relative quiet is experienced.

The sound level of a typical sound outdoors falls off in level at 6 db per doubling of distance. Assuming a typical siren is 115 db at a distance of 10 feet, at 20 feet it will be 109 db, at 40 feet it will be 103 db, at 80 feet it will be 97 db, at 160 feet it will be 91 db, at 320 feet it will be 85 db, at 640 feet it will be 79 db, at 1280 feet it will be 73 db, and at 2560 feet it will be 67 db.

The general use of the APE is moderately dense commercial and light residential dispersed throughout.

ALTERNATIVE 1 – No Action

Under the No Action Alternative, no impacts related noise would occur. Less than optimal fire service would continue.

ALTERNATIVE 2 – New Fire Station (Proposed Action)

Under the Proposed Action Alternative, temporary short-term increases in noise levels would be anticipated during construction. To reduce noise levels during that period, construction activities would

be restricted to normal business hours. Equipment and machinery utilized at the site would meet all local, State, and federal noise regulations.

Over the long term, vehicle traffic would increase at the proposed site, primarily when Fire personnel are training or responding to fires, or other emergency events. The increased traffic and sirens would increase noise level, but these increases would be very short in duration and would occur infrequently. It is anticipated that these noise peaks would not exceed the EPA's 24-hour exposure levels. The overall impact will however, be greatly improved fire services, safety and an improved environment.

ALTERNATIVE 3 – Dismantle and Rebuild

Under the Dismantle and Rebuild Action Alternative, the impact will be the same as under Alternative 2 – New Fire Station and the anticipated noise peaks will not exceed the EPA's 24-hour exposure levels.

3.4.3 Public Service and Utilities

Public services to the proposed site are provided by a number of private businesses. Water service is provided by City of Highland Park, electric service is provided by DTE Energy, gas is provided by Consumers Energy, phone and data services are provided by various companies, sewage is provided by City of Detroit. Police service to the area is provided by the City of Highland Park. Fire service is provided by City of Highland Park, but it is far less than optimal due to its poor facilities and station location.

ALTERNATIVE 1 – No Action

Under the No Action Alternative, no impacts related to public services or utilities would occur. There would be continued poor fire services under this alternative.

ALTERNATIVE 2 – New Fire Station (Proposed Action)

Under the Proposed Action Alternative, all of the public service and utilities that are listed above would be provided to the new facility. The new facility however, would provide a significant improvement to the Fire Services delivery throughout the City and surrounding neighborhoods.

ALTERNATIVE 3 – Dismantle and Rebuild

Under the Dismantle and Rebuild Action Alternative, all of the public service and utilities that are listed in Alternative 2 above would be provided to the rebuilt facility. While the rebuilt fire station would be an improvement to the current fire services it would not provide optimum services however; due to the restricted size and configuration of the rebuilt station.

3.4.4 Environmental Justice (Executive Order 12898)

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

U.S. Census data for Highland Park, Michigan states that 1.5% of the population is White, 93% is African American, .57% Hispanic/Latino, 2.75% American Indian or Alaska native, .24% Asian, 0.2% Pacific Islander, two or more races 1.67%, and .25% some other race. According to the 2000 U.S. Census, the subject area is a concentrated minority population.

ALTERNATIVE 1 – No Action

Under the No Action Alternative, there would be continued less than optimal fire services to the entire City of Highland Park.

ALTERNATIVE 2 – New Fire Station (Proposed Action)

Under the proposed Action Alternative, there would be no disproportionately high and adverse impacts on minority or low-income populations. To the contrary, implementation of the proposed action would benefit all of the population within Highland Park Fire response district.

ALTERNATIVE 3 – Dismantle and Rebuild

Under the Dismantle and Rebuild Action Alternative, there would be an adverse impact on the mostly minority and low-income community of Highland Park as a result of a less than optimum functioning fire station under the Dismantle and Rebuild Alternative.

3.4.5 Safety and Security

To minimize risks to safety and human health, all construction activities would 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 in accordance with standards specified in Occupational Safety and Health Act (OSHA) regulations. EO 13045, Protection of children, requires Federal agencies to make a high priority to identify and assess environmental health and safety risks that may disproportionately affect children.

ALTERNATIVE 1 – No Action

Under the No Action Alternative, there would be no construction and no direct impacts to the safety of the population would occur. If an emergency event were to occur, area residents would continue to be under served by the existing Highland Park Fire Station.

ALTERNATIVE 2 – New Fire Station (Proposed Action)

Under the Proposed Action alternative, construction of the new fire Station would provide increased protection for area residents during a fire and/or other emergency events.

ALTERNATIVE 3 – Dismantle and Rebuild

Under the Dismantle and Rebuild Action Alternative, Safety and Security would be less than that identified in Alternative 2 – New Fire Station. The rebuilt fire station would not provide optimum services due to its limited size and configuration.

3.5 HISTORIC AND CULTURAL RESOURCES

In addition to review under NEPA, consideration of effects to historic properties is mandated under Section 106 of the National Historic Preservation Act (NHPA), as amended, and implemented by 36 CFR Part 800. Requirements include identification of significant historic properties that may be affected by the Proposed Action. Historic properties are defined as archaeological sites, standing structures or other historic resources listed in or eligible for listing in the National Register of Historic Places (NRHP) (36 CFR 60.40).

As defined in 36 CFR Part 800.16(d), the Area of Potential effect (APE) “is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if such properties exist.”

In addition to identifying historic properties that may exist in the proposed project’s APE, FEMA must also determine, in consultation with the appropriate State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO), what effect, if any, the undertaking will have on historic properties. Moreover, if the project would have an adverse effect on these properties, FEMA must consult with SHPO/THPO on ways to avoid, minimize, or mitigate the adverse effect.

ALTERNATIVE 1 - No Action

Under the No Action alternative, no impacts related to Historical or Cultural Resources would occur.

ALTERNATIVE 2 – New Fire Station (Proposed Action)

Under the Proposed Action Alternative, construction of the new fire station will have an adverse effect on the former Police Department building, which is eligible for listing on the National Register of Historic Places. Evaluation of the Proposed Action is described in Sections 3.5.1 through 3.5.3 below.

ALTERNATIVE 3 – Dismantle and Rebuild

Under the Dismantle and Rebuild Action Alternative, changes to the historic Police Department building would be in accord with the Secretary of the Interior's Standards for Rehabilitation of Historic Properties, resulting in no adverse effect on historic properties. Because this alternative is not being pursued, no further evaluation of this action is provided.

3.5.1 Historic Structures (Alternative 2)

FEMA has determined and the Michigan SHPO has concurred that the former Police Department Building, along with the neighboring abandoned Highland Park Fire Department Building and City Hall, are eligible for listing in the National Register of Historic Places. Designed in the Colonial Revival and Neoclassical Revival Styles, the buildings of the Highland Park Municipal Complex maintain considerable integrity of design and workmanship, as well as integrity of location. The three buildings were designed in the then-popular revival styles: the historic police station at 25 Gerald Street in the Colonial Revival Style and the City Hall and Fire Station in the Neoclassical Revival Style. The Police Station's cornerstone is dated 1917, predating the city's incorporation in 1918.

In addition to being significant for their architecture, the three buildings together represent a planned municipal complex during a time of rapid growth and prosperity after construction of the Ford Highland Park automotive plant. The three buildings together are eligible for listing as a district in the National Register for both their historical and architectural significance (criteria A and C, respectively).

The APE for direct and belowground effects for this undertaking includes the footprint of the building to be demolished along with the surrounding area to be developed as part of the building site. The APE for indirect (visual) effects includes the area from which the building site is visible. A map indicating the boundaries of both APEs are included in the Appendix.

Pursuant to 36CFR §800.6, FEMA has consulted with the Michigan SHPO, The City of Highland Park and other interested parties, including Preservation Wayne, the Detroit Historical Society, the Michigan Preservation Network and the Woodward Avenue Action Association. As a result of this consultation, FEMA entered into a Memorandum of Agreement (MOA) with the SHPO and the City of Highland Park to mitigate the loss of the former police department building through the following measures:

- Recordation of the former Police Department building
- Conduct a conditions assessment of the former Highland Park Fire Station and City Hall buildings

- Undertake actions to secure, stabilize and preserve the former Highland Park Fire Station and City Hall buildings

Preservation Wayne took part in the consultations and development of the MOA and was invited to sign as a concurring party.

3.5.2 Archaeological Resources (Alternative 2)

The SHPO considers known archaeological sites when commenting on a finding. Neither FEMA's adverse effects finding nor the SHPO's concurrence referenced archaeological resources, indicating that no known archaeological sites are present in the APE. However, in order to safeguard unidentified archaeological resources that may exist below ground within the APE, during construction all ground-disturbing activities will be monitored. Should human remains or items of historic or archaeological interest be discovered during construction, all ground-disturbing activities will cease and FEMA, the SHPO and, in the case of human remains, the Coroner's office will be notified. Those responsible for the project site will take all reasonable measures to avoid or minimize harm to the property, and work will not resume until FEMA completes consultation with the SHPO and other affected consulting parties.

3.5.3 Tribal Coordination and Religious Sites (Alternative 2) FEMA is aware of two Native American groups which may have ancestral or other cultural interests in the Highland Park area. On December 3, 2010, FEMA notified the Forest County Potawatomi Community of Wisconsin (Crandon, Wisconsin) and the Hannahville Indian Community (Wilson, Michigan) of the proposed project, explaining that should an archeological survey be necessary, all work will follow SHPO-approved methods and will be subject to the Section 106 review process as required by the National Historic Preservation Act of 1966. No response from these tribes has been received to date.

In addition, the Highland Office of Community Development notified Native American groups regarding the project and received a response indicating no interest in the project from the Lac Vieux Desert Band of Lake Superior Chippewa Indians (Watersmeet, Michigan). This group did, however, wish to be notified if any archaeological resources are discovered as a result of ground-disturbing activities related to this project.

Table 1: Impact and Mitigation Summary		
Affected Environment	Impacts	Mitigation
Geology and Soils	Alt 2: No impacts to geology, minimal, short-term impact to soils during construction digging and grading.	Appropriate BMPs: silt fence, prompt planting of vegetation and landscaping to minimize run off.
Water Quality (including Surface water and Ground water)	Alt 2: Short-term impacts to surface water are possible during construction. No impact to ground water resources. Potable water is supplied to the site from City of Highland Park.	A Storm Water Management and erosion Control plan and implementation of storm water BMPs will minimize runoff.
Floodplains	Alt 2: No impacts anticipated not in 100 year flood plain	None
Air Quality	Alt 2: Short-term impacts from dust and emissions from equipment would occur during construction.	Dust control measures such as watering down construction areas would be implemented as needed. Fuel-burning equipment run times could be minimized and equipment properly maintained.
Terrestrial and Aquatic Environments	Alt 2: No impacts are anticipated to aquatic environments.	Topsoil will be replaced in areas of the site and landscaping will include grasses, trees, bushes, and storm water basin. This will restore any loss of the terrestrial environment.
Waters of the U.S. Including Wetlands	Alt 2: No impacts anticipated	None
Threatened and Endangered Species	Alt 2: No impacts anticipated	None

3.6 COMPARISON OF ALTERNATIVES

3.6 CONT'D. COMPARISON OF ALTERNATIVES

Table 1: Impact and Mitigation Summary		
Affected Environment	Impacts	Mitigation
Hazardous Materials	Alt 2: No impacts anticipated	Any hazardous substances generated, or used would be handled and disposed of in accordance with applicable local, State and Federal regulations
Zoning, Land Use, and Transportation	Alt 2: No impact to zoning and land use of the site. Short-term increase in the volume of construction related traffic in the vicinity of the site.	During construction, vehicles and equipment would be stored on-site to the extent possible. Traffic control and signage would be used as needed.
Noise	Alt 2: Short-term impacts from heavy equipment would occur during construction. Long-term impacts would include increased traffic and siren noise from fire department vehicles.	Construction would be limited to normal business hours and equipment would meet local, State, and Federal noise regulations. The infrequent and short duration noise impacts from Fire vehicles would not cause 24-hr exposure levels to be exceeded.
Public Services and Utilities	Alt 2: No impact anticipated	None
Environmental Justice	Alt 2: No disproportionately high or adverse effect on minority or low-income populations are anticipated.	None
Public Health and Safety	Alt 2: No adverse impacts anticipated. Long-term improvements to public safety would result from new facility.	None
Historic and Cultural Resources	Alt 2: Loss of the former Police Department Building, which has historical and architectural significance.	Recordation of the former Police Department building; condition assessment of the neighboring former City Hall and Fire Department; and actions to secure, stabilize and preserve these two remaining historic structures.

SECTION FOUR: 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 and Non-Federal) or person undertakes such other 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 in the vicinity of the proposed project site.

No proposed or occurring actions by other were identified in the vicinity of the proposed project site; therefore, no cumulative impacts are anticipated.

SECTION FIVE: PUBLIC PARTICIPATION

FEMA is the lead Federal agency for conducting the NEPA compliance process for the Highland Park Fire Station Construction Grant project in Highland Park, Michigan. 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.

Interagency reviews have been conducted in the form of agency consultation letters and responses received from the agencies. Agencies consulted are listed in Section 6. Agency responses are provided in Appendix D.

In addition, FEMA has consulted with the Michigan SHPO, the City of Highland Park and other interested parties, including Preservation Wayne, the Detroit Historical Society, the Michigan Preservation Network and the Woodward Avenue Action Association regarding the impacts of this project to historic properties.

The Highland Park Fire Department will notify the public of the availability of the draft EA through publication of the public notice in a local newspaper. FEMA will conduct a public comment period commencing on the initial date of publication of the public notice.

SECTION SIX: AGENCY COORDINATION AND PERMITS

The following agencies and organizations were consulted or were contracted to request project review during the preparation of the EA.

1. Michigan Historic Preservation Office
2. Federally Recognized Native American Tribes

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. The following permits and approvals may be required prior to construction:

1. Site Plan Approval
2. Building Permit

SECTION SEVEN: REFERENCES

City-Data.com <http://www.city-data.com/Highland> Park Michigan

FEMA Flood Insurance rate Map, Wayne County, Michigan

U.S. Department of Agriculture (USDA), Natural Resources Conservation Service, 2009.

<http://websoilsurvey.nrcs.usda.gov>. Accessed: June 2009.

U.S. Fish and Wildlife Service (USFWS), 2009

<http://wetlandsfws.er.usgs.gov/imf/imf.jsp?site=NWI> CONUS

U.S. Environmental Protection Agency (EPA), 2009. Air Quality.

<http://www.epa.gov/airtrends/where.html>

U.S. Environmental Protection Agency (EPA), 2009.

<http://www.epa.gov/myenv/MYENVIEW.results2?pQuery=&minx=84.17793&miny=39.15163&maxx=-84.04060&maxy=39.23146&mw=750&mh=290&ve=12,39.1914584.10920&pText=45122,OH>

U.S. Environmental Protection Agency (EPA), 1974

Information on Levels of Environmental Noise Requisite to Protect Public

Health and Welfare with an Adequate Margin of Safety

SECTION EIGHT: LIST OF PREPARERS

Preparation and quality control review of Draft and Final EA:

Sandy McDonald, Director; Community & Economic Development

David L Peek, Fire Chief, Highland Park Fire Department

Amanda C. Ratliff, Regional Environmental Officer, FEMA RV

Nicholas Dorochoff, Historic Preservation Specialist, FEMA RV

Ray K. Shull, Architect – Ekklesia Building Corporation

