



DRAFT ENVIRONMENTAL ASSESSMENT

Grand Traverse Metro Emergency Services Authority Station 12

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**Grand Traverse Metro Emergency Services Authority
Station 12
Part of Parcel ID No. 05-030-001-00
1785 N. East Silver Lake Road
Garfield Township
Grand Traverse County, Michigan**

ENVIRONMENTAL ASSESSMENT

January 2010

1.0 BACKGROUND

1.1 PROJECT AUTHORITY

On October 2, 2009, the Grand Traverse Metro Emergency Services Authority received 2.8 million dollars from the American Recovery and Reinvestment Act (ARRA) through the Assistance to Firefighters Grant, which is administered by the Federal Emergency Management Agency (FEMA). The purpose of the Grant is to provide Grand Traverse Metro Emergency Services Authority with financial assistance to support development and construction of a two-bay fire station with living quarters (i.e., new Station 12). This Environmental Assessment (EA) has been prepared 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). This EA has been completed in accordance with 44 Code of Federal Regulations (CFR) for FEMA, Subpart B, Agency Implementing Procedures, Part 10.9, and 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).

1.2 PROJECT LOCATION

The Grand Traverse Metro Emergency Services Authority is comprised of three former township fire departments (Acme, East Bay, and Garfield), which are located in Grand Traverse County, Michigan; Grand Traverse County is situated in the northwestern lower peninsula of the state (refer to Figures 1 and 2, Appendix A). The proposed Station 12 will be constructed within Garfield Township, but will also provide emergency services to other areas of Grand Traverse Metro Emergency Services Authority's jurisdiction. The Grand Traverse Metro Emergency Services Authority provides emergency response for a 108 square mile area that includes each of the three aforementioned townships; it collectively services an estimated 28,081 residences (as of year 2000 Census figures), in addition to area visitors. The alternative actions for the proposed project are as follow:

Alternative 1 - No Action: No building or site developments would occur and the Grand Traverse Metro Emergency Services Authority would continue to service the emergency response needs of the project area utilizing their existing facilities.

Alternative 2 – Address Area Needs Using Closest Existing Station: Grand Traverse Metro Emergency Services Authority would expand the emergency response duties of the closest existing station to address the emergency response needs of the project area. The closest existing station is Station 11.

Alternative 3 – Construct New Fire Station (Station 12): This alternative is the proposed action. The proposed project site is located at 1785 North East Silver Lake Road and is comprised of approximately three acres of land within the Garfield Charter Township (Garfield Township) Silver Lake Recreation Area. Figure 1 (Appendix A) shows the location of the proposed project location and Figure 3 shows the locations of existing Grand Traverse Metro Emergency Services Authority fire stations in relationship to the proposed project location. Photographs of the proposed project location and the surrounding area are provided as Appendix B. Geographic coordinates of the proposed project site are 44° 42.969' N, 85° 40.658' W. The proposed project site is bordered by North East Silver Lake Road to the east, a rural residential parcel to the north, and remaining portions of the Silver Lake Recreation Area to the south and west. No wetlands, floodplains, or waterways are located immediately adjacent to the project site. The nearest waterways border the remaining portion of the Garfield Township Silver Lake Recreation Area and are located approximately 750 feet to the west and approximately one-quarter mile to the southwest of the proposed project site.

1.3 PURPOSE AND NEED

The proposed project building site is currently vacant. It was selected as a location for a fire station by the Grand Traverse Metro Emergency Services Authority in 2003 through the completion of the strategic planning process, which identified the need for five additional fire stations over a 15-year period. The proposed Station 12 building site was selected by the Grand Traverse Metro Emergency Services Authority as a fire station location based upon the “Standard of Cover Rules” which, according to the National Fire Protection Association (NFPA) 1710 Standard, dictate initial response times for fire departments shall be four minutes or less. The Grand Traverse Metro Emergency Services Authority strategic planning process identified emergency response times from existing fire stations to locations in the proposed project area to be, on average, slightly longer than 12 minutes. The geographic locations of the existing stations (Figure 3) do not accommodate a four-minute initial response time and such cannot be obtained without construction of a new fire station in the proposed project location.

Additionally, the proposed new fire station will be located in Garfield Township; according to Township records, Garfield Township has grown, on average, by 41% over the last seven years. Most of this growth has occurred in the area west of Silver Lake, and such growth is expected to continue. Some of the population expansion is the direct result of construction of two senior citizen housing developments, each of which plan to expand in the coming years. Other area expansions include Traverse City West High School, with an enrollment of over 1,800 students and a staff in excess of 100 people; a large Montessori school; numerous adult foster care facilities; a large medical out-patient surgical center; a mobile home community; and numerous new professional buildings. While expansion of existing Station 11 will accommodate some of this growth, response times that exceed the Standard of Cover Rules will still remain an issue for many locations within the project area.

Development of the proposed project location (fire station building and associated site development) is estimated to cost \$3,415,620.00. As part of the development, the Grand Traverse Metro Emergency Services Authority will contribute 10% (\$341,562.00) of the construction costs to the project budget; however, complete project funding is not available without outside financial assistance such as the ARRA Assistance to Firefighters Grant. Funding for the Grand Traverse Metro Emergency Services Authority is provided through fixed-tax millages imposed by each of the three Townships the Grand Traverse Metro Emergency Services Authority services. Through budget carry-over and fund balance investments, the Grand Traverse Metro Emergency Services Authority will be able to contribute the aforementioned 10% of the proposed development costs, although no other local funding sources for the project are available. Due to the current economic state of Michigan and the community, Grand Traverse Metro Emergency Services Authority and local Township representatives do not feel the representative communities would support an increase in millage rates for project funding. Between 2006 and 2008, there was a 7.7% increase in the poverty rate in Grand Traverse County, and this rate is anticipated to increase substantially due to the current state of the economy in Michigan and Grand Traverse County. Poverty levels for income were also researched for each of the three Townships that comprise the operational area of the Grand Traverse Metro Emergency Services Authority. In Acme Township, 6.5% of the population's income is below poverty standards, where as East Bay Township is 0.29% and Garfield Township is 0.20% (2000 Census).

In October 2009 (latest data available), the unemployment rate for Grand Traverse County was 12.1%, as compared to 4.4% in January 2000. Adding to the economic downturn in the area, Garfield Township recently lost two of the County's largest employers - Lear Corporation and Tower Automotive. The loss of these two companies is also expected to lead to the closing of several supporting businesses and other area service businesses, resulting in additional job losses and subsequent loss of tax-generated revenues. The subsequent loss of incomes has resulted in an increase in home foreclosures and home loss due to tax payment defaults. In Grand

Traverse County, between 2007 and 2009, foreclosure rates increased by over 95% and bankruptcies increased by 50%. In addition to the loss of area businesses, the struggling Michigan economy will likely result in a decline to the areas largest remaining industry - tourism. As a result of business and job losses in the local and state economies, a “no additional tax” mentality is held by area residents and businesses. All of these factors limit funds available for public service and infrastructure expansion projects.

To aid the financial feasibility of the project, the Charter Township of Garfield has donated the use of the proposed project building site to Grand Traverse Metro Emergency Services Authority through execution of a 99-year lease agreement at a rate of \$1.00 per year.

Using the \$2.8 million ARRA Assistance to Firefighters Grant funding to construct the proposed new fire station (Station 12), area residences and businesses will benefit from increased public safety through reduced emergency response times; in addition, first responder safety will also increase via reduced travel times thereby reducing road time and the potential for an accident en route. Additionally, en route accident costs which could be incurred and thus would be saved by building Station 12 include those associated with job absence (medical and personal leave), medical costs, increased insurance rates (medical, vehicle, and liability), and vehicle repair and maintenance expenses.

1.4 EXISTING FACILITY

As shown on Figure 3, the Grand Traverse Metro Emergency Services Authority currently operates four fire stations and an administrative office building to provide emergency, fire safety, and inspection services to an approximately 108 square miles area that is comprised of Garfield, Acme, and East Bay Townships. Three of the four stations are located approximately 11 or more miles (by road) from the proposed project site. The fourth Grand Traverse Metro Emergency Services Authority fire station, Station 11, is located approximately four miles to the northeast of the proposed Station 12 site and is the existing station located closest to the area for which emergency response times are longest and where population growth is greatest.

2.0 ALTERNATIVE ANALYSIS

2.1 ALTERNATIVE 1 – NO ACTION

Under the No Action Alternative, the Grand Traverse Metro Emergency Services Authority would continue to operate from their existing facilities. There would be no environmental impacts associated with the No Action Alternative, but Grand Traverse Metro Emergency Services Authority needs, specifically emergency response times that meet Standard of Cover Rules and coverage of population growth areas, would not be addressed. Simply put, the existing facilities do not meet the current emergency service needs of the community.

2.2 ALTERNATIVE 2 – ADDRESS AREA NEEDS USING CLOSEST EXISTING STATION (STATION 11)

Under Alternative 2, Grand Traverse Metro Emergency Services Authority would expand the emergency response duties of the closest existing fire station to address the emergency response needs of the project area. The closest existing fire station is Station 11. Note, Station 11 cannot physically be expanded to accommodate more emergency response equipment or personnel due to site constraints. However, given it is the closest station physically to the project area, the bulk of emergency responses to the project area would be routed out of Station 11. While there would be minimal environmental impacts associated with implementation of this Alternative, the emergency response times to homes and businesses in the vicinity of the proposed project area, specifically to the south and west portions of the Grand Traverse Metro Emergency Services Authority service area, would continue to exceed those stipulated by the Standard of Cover Rules. In addition, Station #11 has no room to expand to meet the future growth needs of the west portion of the Grand Traverse Metro Emergency Services Authority service area.

2.3 ALTERNATIVE 3 –NEW FIRE STATION (PROPOSED ACTION)

Construction of a new fire station (Station 12) at the proposed project site will provide for the current needs of Grand Traverse Metro Emergency Services Authority and will also complement other emergency and public safety services adjacent to this station's jurisdiction. This station location will blend well with the Mutual Aid Pact to provide the area and entities with a cost-effective and flexible facility while expanding current service and planning for future growth considerations. Upon construction of Station 12, Station 11 (discussed in Alternative 2, above) would be down-sized (i.e., equipment and personnel would be moved to Station 12) and physically

relocated to a site that, in combination with new Station 12, would better serve the project area and accommodate future expansion, if needed.

The proposed building site for Station 12 is comprised of approximately three acres located within the 80-acre Garfield Silver Lake Recreation Area in Grand Traverse County, Michigan. The property currently consists of a vacant parcel that comprises portions of “open space” in the recreation area which is owned by Garfield Charter Township (see tax assessment information contained in Appendix C). Following development of the proposed new Fire Station 12, Garfield Township would retain ownership of the property and would lease it to Grand Traverse Metro Emergency Services Authority for \$1.00 per year via a 50-year lease. According to the Garfield Township Assessor, the proposed project site most recently was assessed at \$60,000.00, based on the sale values of similar properties in the area. The parcel is currently zoned as agricultural land but is not used for agricultural production. Development in the area consists mainly of park “open space”, rural residences, and road right-of-ways. The parcel contains one pedestrian walking path that will be relocated approximately 10 feet southward to maintain a suitable buffer of undeveloped land between the project site and the walking path. Refer to Figure 2 (Appendix A), which shows the proposed project site and the surrounding area.

The Grand Traverse Metro Emergency Services Authority will contribute 10% (\$341,562.00) of the construction costs for the proposed fire station. The station will be comprised of a single-story, approximately 10,390-ft² building with surrounding landscaping and parking lots. Figure 4 (Appendix A) shows the proposed building and site development. Leadership in Energy and Environmental Design (LEED) Gold certification standards have been implemented in site and building design and development, as discussed below.

The Station 12 building will contain two equipment bays with capacity to house five emergency medical and fire suppression apparatuses. Station 12 will also contain gender-specific sleeping quarters and bath facilities, a dayroom, kitchen and dining areas, a training room, office space, a laundry room, maintenance areas, and storage rooms. The interior building design will accommodate five to six fire fighters with the potential for future expansion if needed.

As designed, the proposed building will be constructed to meet LEED certification requirements. The building exterior has been designed to complement area architecture. The building will be constructed of a concrete form system made from recycled plastics with a poured concrete core. The foam will provide soundproofing and insulation, while the concrete provides structural support and acts as a heat sink to regulate temperatures. The

combined system is inert, is ecologically friendly, and does not allow mold growth in or on the walls. Additionally, the material meets flame-spread and smoke-density ratings required by building codes.

Window and door placements are designed to harness solar heat via placement of the majority of the windows and doors in southern- and western-facing portions of the building. The design specifications for the windows and doors also provide for use of fenestration and r-value products that meet LEED Gold certification standards.

Building heat will be provided through in-floor radiant heat and high efficiency rated HVAC equipment, which will be installed within the crew's quarters. The in-floor radiant heat will be provided by two high efficiency natural gas fired boilers; the boilers will also provide building hot water through a boiler mate system. Each boiler is designed to lead and lag, providing a redundancy to maintain station operations in case of a breakdown. Natural gas and electric utilities are currently provided to the site.

Other utility equipment services will include an electrical system to support an emergency automatic standby generator in the case of a power outage. A NFPA 13 compliant fire sprinkler system and a NFPA 72 compliant fire alarm/detection system will also be installed in the building. The aforementioned NFPA systems are not required by code; however, the systems will be installed per building policies adopted by Grand Traverse Metro Emergency Services Authority. Smoke and heat detection devices will also be installed in each space in the building. Additionally, a NFPA 17A compliant fire suppression system will be installed in a Type 1 hood and duct system to protect kitchen appliances.

Onsite appliances for kitchen and laundry use will be Energy Star rated. Other onsite electrical devices will utilize recycled materials whenever possible, and will be energy-saving compliant and "green" rated. Plumbing fixtures will be ultra low flow (i.e., using 1.5 gallons of water in toilets and 0.5 gallon in urinals). Onsite showerheads and fixtures will consist of automatic blending type to prevent excessive hot water use and potential accidental scalding. Installed water faucets will also be water-saver type to meet energy ratings. Interior lighting will be automatically controlled with occupancy sensors of passive infrared and/or ultrasonic ceiling type controlled by a master control module. Exterior property lighting will be down-cast type with energy-saving luminaries and energy-saving ballasts.

In the equipment apparatus areas, carbon monoxide detection and automatic mechanical ventilation devices will be installed to initiate ventilation if hazardous levels of carbon monoxide are detected. The ventilation process can also be initiated by humidistat sensors installed within the equipment apparatus bays; this will eliminate

excessive moisture build up and potential for mold growth. To accent the aforementioned devices, the housed fire apparatuses will be equipped with NFPA 1500 “No Smoke” exhaust filtering systems. An offsite UL-listed system will also be utilized to monitor for potential building fires and unauthorized entries.

The building will utilize municipal water provided via a connection to the water main located adjacent to the proposed building site. An on-site septic system and leach field will be installed to handle sanitary wastes. Soil testing identified subsurface soils on the proposed building site that are suitable for an onsite sanitary septic system. The sanitary septic system is designed to be comprised of 1,680 square feet of disposal field and a 2,000 gallon septic tank. Approximately 180 cubic yards of soil will be displaced and stored adjacent to the field site for backfilling once the piping is installed. The stored fill will be covered with impervious sheeting to prevent any erosion or run-off. The septic field and tank location will be graded and seeded to prevent erosion immediately after all piping materials and backfill are installed.

Stormwater management areas for the proposed project site have been designed to handle precipitation and irrigation runoff from rooftops and other impervious surfaces, such as parking lots and sidewalks. The retention basins have been designed to meet County ordinance requirements for on-site stormwater retention for the 100-year flood; there will be no off-site discharge of stormwater from the project site. A portion of the retained water will be used for onsite irrigation through installation of a drip system. Installation of the drip irrigation system and plant selection will allow for drought resistant vegetation and eco-friendly water usage practices. The irrigation system will consist of an underground water storage tank sized to accept the run-off from the building roof during an average rainfall/precipitation event. This water will be collected in a piping system installed on the interior of the building and connected to the roof drains; the piping system will extend through the building and down to the tank. Overflow from the roof drain underground tank will flow into a nearby catch basin (CB #4, Figure 4) which outfalls to one of the on-site stormwater retention basins (Basin 1, Figure 4).

There will be two stormwater retention basins constructed at the proposed project site, as well as other catch basins, drainage swales, and conveyances. Figure 4, attached, shows each of the stormwater retention basins, catch basins, and drainage swales; and provides the stormwater calculations for the site, including basin sizes and capacities. The smaller of the two basins, Basin 1, will be located on the east side of the entrance drive/parking area and is approximately 4,000 square feet in area (Figure 4). Basin 1 will collect stormwater from the parking and driveway surfaces located on the east side of the site, and will also receive any overflow precipitation from the roof drain underground storage tank described above. The larger basin, designated “Basin 2”, will be located just off the southwest corner of the building and is approximately 7,200 square feet in area. Basin 2 will collect

stormwater from the west side of the site (adjacent to the site building) and from the south and west portions of the drive, as well as any overflow from retention Basin 1. Basin 2 will also collect water from the floor drains inside of the site building, where emergency vehicles may occasionally be washed; the water from the floor drains will pass through an oil/water separator to remove any oils, greases, and sediments prior to discharge to the retention basin under an MDEQ groundwater discharge permit. The MDEQ groundwater discharge permit will prohibit discharge of deleterious materials to Basin 2 and ultimately to the groundwater at the site. Basin 2 has been sized to accommodate volume from a 100-year flood event for the site, as well as any overflow from Basin 1, and floor drain water from inside the site building.

3.0 AFFECTED ENVIRONMENT AND IMPACTS

3.1 PHYSICAL ENVIRONMENT

3.1.1 Geology, Seismicity, and Soils

The proposed project site is located within part of the Silver Lake Recreation Area property located at 1785 North East Silver Road in Garfield Township, Grand Traverse County, Michigan.

According to the U.S. Geological Survey 7.5-minute topographic map for the area (Appendix A, Figure 1), the approximate elevation of the proposed project site is about 910 feet above mean sea level (msl). Surface topography at the subject property varies greatly with the highest elevations located in the east portion of the site and the lowest elevations found in the central portion of the parcel.

The U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) online Web Soil Survey indicates the proposed project site contains soils consisting of Emmet sandy loam (EyD) with 12 to 18 percent slopes and Emmet gravelly sandy loam (ExF) with 25 to 45 percent slopes. Soil survey documentation is provided in Appendix C. Soil borings from a geotechnical investigation of the proposed project site, conducted in August 2009, are also provided in Appendix C.

Soils in the proposed project area are not classified as prime farmland (USDA 2009), which would be subject to the Farmland Protection Policy Act (FPPA). According to the USDA online Web Soil Survey, the proposed project site is located on "Farmland of Local Importance"; therefore, it has been determined that FPPA would not apply to the proposed project.

Alternative 1 No Action – Under the No Action Alternative, no impacts to geology or soils would occur.

Alternative 2 Address Area Needs Using Closest Existing Station (Station 11) – There would be no construction activity under this alternative, as Station 11 cannot be physically expanded due to site constraints. Therefore, no impact to geology or soils would occur. The proposed project site (Alternative 3) would remain as park “open space” with no disturbance.

Alternative 3 New Fire Station (Proposed Action) – Under the Proposed Action Alternative, approximately 89,126 square feet (or 2.05 acres) of ground disturbance will occur. Of this area, approximately 67,615 square feet of disturbance (or 1.55 acres) will occur on the new fire station property; the remainder (21,511 square feet, or 0.49 acres) will occur off of the new fire station property. The off-site disturbance will occur to the immediate south of the fire station property, and will consist of that necessary to construct the entrance drive to the fire station. As discussed in Section 3.4.1 of this Assessment, a future by-pass road is planned to abut the proposed project property to the south, as shown on Figure 4. This road would follow the same path as the driveway to the new fire station (Station 12) and continue to the west/northwest; therefore, this area of ground disturbance is part of future development activities planned for the site vicinity, independent of the proposed project. Planned project site construction activities would not occur deep enough to impact underlying geologic resources; only short-term impacts to soils would occur during the construction period. Portions of the site will require fill placement to achieve necessary elevations (primarily for the access drive); excavation will be limited to shallow excavations necessary to construct the building foundation, utility installations (i.e., water, septic, communication, and electrical conduits), and stormwater management features. Specifically, approximately 4,968 cubic yards of fill and 5,567 cubic yards of excavation are expected to occur during construction of the new fire station, for a net effective excavation total of 600 cubic yards. Appropriate soil erosion and sediment control requirements and best management practices (BMPs), such as silt fence and barriers, prompt planting of vegetation, and completion of landscaping, will be used to minimize runoff.

3.1.2 Water Resources and Water Quality (Surface Water)

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

Figure 1 (Appendix A) shows the current topography of the proposed project site. Elevations on the proposed building site range from approximately 892 to 915 feet above msl, with a general topographic gradient toward the

center of the site. Vegetation on the proposed project site consists of natural grasses, scrub brush, and wooded areas.

The proposed project consists of construction of an approximately 10,390-ft² single-story fire station with adjacent parking lots, pedestrian sidewalks, and areas of mowed grass and landscaping. Stormwater management areas have been designed to handle precipitation and irrigation runoff from rooftops and other impervious surfaces such as parking lots and sidewalks. Two stormwater retention basins (i.e., Basin 1 and Basin 2) have been designed to meet County ordinance requirements for on-site water retention and to retain precipitation volume equivalent to that of a 100-year flood; no stormwater will be discharged off site. The stormwater from the building roof will be stored in an underground tank and utilized for onsite irrigation through the installation of a drip irrigation system; excess water from the tank will be directed to a catch basin (CB #4) which outfalls to stormwater retention Basin 2. Installation of the drip irrigation system and plant selection will allow for drought-resistant vegetation and eco-friendly water usage practices. Stormwater management features and calculations are shown on Figure 4: stormwater Basins 1 and 2 are clearly shown on Figure 4 to the east (Basin 1) and west (Basin 2) of the proposed building and drives/parking areas; and the stormwater calculations are provided on the bottom right-hand corner of Figure 4.

Alternative 1 No Action – Under the No Action Alternative, no adverse impacts to water resources or surface water would occur.

Alternative 2 Address Area Needs Using Closest Existing Station (Station 11) – Under this Alternative, there would be no impacts to water resources or surface waters. Specific operations conducted at existing Station 11 would not change, although emergency responses from this Station would increase. Station 11 cannot be expanded due to site constraints. Therefore, the impervious surfaces, stormwater management features, landscaping, and building structures already in place at Station 11 would remain as is, with no modifications.

Alternative 3 New Fire Station (Proposed Action) – Under the Proposed Action Alternative, there would be no direct permanent impacts to water resources or surface waters. Long-term management and short-term (during construction) control of stormwater runoff will be conducted on the proposed project site. No off-site discharge of stormwater is anticipated; rather, stormwater will be collected in onsite retention basins and used on-site for irrigation or allowed to infiltrate into the onsite soils. Stormwater retention Basin 2 will also collect water from the floor drains inside of the site building, where emergency vehicles may occasionally be washed; the water from the floor drains will pass through an oil/water separator to remove any oils, greases, and sediments prior to

discharge to the retention basin under an MDEQ groundwater discharge permit; the groundwater discharge permit will prohibit discharge of deleterious materials to Basin 2 and to the groundwater underlying the site.

While development of the site will add impervious surfaces and thus potentially increase runoff, stormwater will discharge to the underlying groundwater aquifer by infiltration through the onsite granular soils via the stormwater retention basins and the onsite irrigation system. Therefore, the stormwater runoff will remain onsite, as it does on the undeveloped site at present. Although the surrounding properties are reliant on the groundwater aquifer for their potable drinking water supply, the onsite stormwater management system, which includes an oil/water separator and associated MDEQ groundwater discharge permit for floor drain wash waters discharged to stormwater retention Basin 2, will not jeopardize the aquifer as a safe potable water supply.

The potential exists for temporary short-term impacts to downstream surface waters because of possible soil erosion during construction activities. To eliminate the potential for impacts to surface water during construction, the applicant would implement appropriate soil erosion and sediment control requirements and BMPs such as installation of silt fences, installation of silt barriers/filters on stormwater drains, and replanting of vegetation on bare soils immediately following completion of construction activities.

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. In addition, critical actions (such as fire stations) are not allowed to be constructed within the 500-year floodplain.

FEMA uses Flood Insurance Rate Maps (FIRMs) to identify the regulatory 100-year and 500-year floodplains for the National Flood Insurance Program (NFIP). Review of the FEMA mapping information showed the proposed project site is not located within an area of mapped flood plains. However, the following factors result in minimal risk of a flood occurrence at the proposed project site:

- The average elevation at the proposed project site, after construction, is approximately 905 ft above msl; the nearest receiving water, Silver Lake, has an elevation of 869 ft above msl. Therefore, the lowest elevation on the proposed project site is approximately 36 feet above the elevation of the nearest receiving

water body (Silver Lake), providing effective freeboard in the event of a flood in the vicinity of Silver Lake.

- There are no rivers or streams in close proximity to the proposed project site. The closest receiving water, Silver Lake, is located approximately 750 feet to the west of the proposed project site.
- There are no area drainage pathways on the proposed project site. The topography in the immediate area of the site is very hilly, with 12 to 45 percent slopes that trend to the west, toward Silver Lake.
- Soils on the proposed project site and in the area of the site are primarily sands and gravelly sands, each of which are very pervious, readily absorbing precipitation and minimizing flood potential.

Alternative 1 No Action – Under the No Action Alternative, no impacts to the floodplain would occur.

Alternative 2 Address Area Needs Using Closest Existing Station (Station 11) – Under this Alternative, there would be no physical changes made to existing Station 11 to accommodate the increase in emergency response because the site cannot physically be expanded due to site constraints. The Station 11 site is not in a 100-year floor plain; therefore, there would be no impacts to the floodplain.

Alternative 3 New Fire Station (Proposed Action) – Under the Proposed Action Alternative, no impacts to the floodplain are anticipated as no flood plains have been identified on the proposed project site.

3.1.4 Air Quality

The Clean Air Act requires that states adopt ambient air quality standards to protect the public from potentially harmful amounts of pollutants. Under the Clean Air Act, the U.S. Environmental Protection Agency (USEPA) 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, preventing decreased visibility, and preventing damage to crops and buildings. The USEPA has set national ambient air quality standards (NAAQS) 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). According to the USEPA, Grand Traverse County is

in attainment for all six criteria pollutants, meaning that criteria air pollutants do not exceed the NAAQS (USEPA, 2009). Documentation of the NAAQS attainment is provided in Appendix C.

Alternative 1 No Action – Under the No Action Alternative, there would be no impacts to air quality because no construction or other traffic would occur.

Alternative 2 Address Area Needs Using Closest Existing Station (Station 11) – Under this Alternative, there would likely be slight, temporary increases in criteria pollutants at Station 11 attributable to an increase in emergency response from the station. Emissions from the engines of the emergency response equipment could temporarily increase the levels of some of the criteria pollutants, such as CO, in the immediate vicinity of the station. To mitigate these emissions, emergency equipment idle times would be kept to a minimum and equipment would be properly maintained.

Alternative 3 New Fire Station (Proposed Action) – Under the Proposed Action Alternative, short-term impacts to air quality would occur during construction and during operation of fuel-burning emergency response equipment at the new Station 12. To reduce particulate emissions during construction, the construction contractors would be required to wet down construction areas as needed to mitigate fugitive dust. Emissions from fuel-burning engines, during construction and during operation of Station 12, would be mitigated by keeping fuel-burning equipment run and idle times to a minimum and properly maintaining the equipment. The anticipated increase in air emissions during construction will be limited to the construction cycle. Other post-construction air emissions will primarily be limited to those arising from facility heating (natural gas combustion) and will be minimized by utilization of fuel-efficient HVAC equipment, and building design that incorporates use of passive solar energy and effective building insulation.

3.2 BIOLOGICAL ENVIRONMENT

3.2.1 Terrestrial and Aquatic Environment

The proposed project site is located within the Garfield Township Silver Lake Recreation Area, which is an 87-acre park located in the west portion of Garfield Township. Planned development on the proposed building site has been designed to limit potential impacts to terrestrial and aquatic environments. Site development will take place on the northeast portion of the parcel, which consists mainly of open field with little terrestrial density as compared to other portions of the parcel. On the eastern portion of the property, excluding the building footprint and parking lot areas, the density of tree and scrub brush vegetation will remain as is and may actually increase as

a result of the planned landscaping. Little or no impact is anticipated on the site in existing areas of high plant density. The proposed building site supports wildlife common to the area, including various types of birds, reptiles, and small mammals, and occasionally a few large mammals such as deer.

As discussed in previous sections, there are no wetlands or flood plains located on the proposed project site. Although the proposed project site is located near Silver Lake itself, the site is upland of the lake and thus there is no aquatic environment on the proposed building site.

Alternative 1 No Action – Under the No Action Alternative, there would be no impacts to terrestrial or aquatic environments.

Alternative 2 Address Area Needs Using Closest Existing Station (Station 12) – Under this Alternative, impact to terrestrial and aquatic environments would not be a concern as there are no terrestrial or aquatic environments on the existing Station 11 property. An increase in emergency response traffic out of Station 11 will not impact terrestrial or aquatic environments as there are none located in the immediate area of Station 11. The Station 11 property and properties nearby are fully or nearly fully developed. Expansion or modification of the Station 11 site is not possible due to physical site constraints.

Alternative 3 New Fire Station (Proposed Action) – Under the Proposed Action Alternative, impacts to nearby aquatic environments would not be a significant concern. The nearest surface water body (an unnamed pond/lake to the west of the property) is located approximately 750 feet to the west and Silver Lake is located approximately one-quarter of a mile to the southwest of the proposed project site. The proposed project site is located upland to both surface water bodies and contains no aquatic environment. Stormwater runoff and other potential effects from the development will be limited and will be managed on site. No off-site runoff is anticipated.

Impacts to the terrestrial environment would result from the development of the site. The proposed development will encompass approximately three acres of land, of which a significant amount of the sites soil and vegetation would be disturbed during construction activities. No endangered resources would be impacted but some existing vegetation would be removed, resulting in temporary displacement of some resident animals and insects. The site's new landscaping will include grasses, trees, and shrubs, as well as stormwater retention areas, all of which will provide additional wildlife habitat.

3.2.2 Wetlands (Executive Order 11990)/Waters of the United States Including Wetlands

The U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or filled material into waters of the United States, including wetlands, pursuant to Section 404 of the Clean Water Act (CWA). Additionally, Executive Order 11990 (Protection of Wetlands) requires Federal agencies to avoid, to the extent possible, adverse impacts on wetlands that may result from federally funded actions. Wetlands in Michigan are protected by the Michigan Department of Natural Resources (MDNR).

No wetlands or surface water bodies have been identified on the proposed project site or immediately adjacent to it (Appendix C). The nearest surface water body (an unnamed pond/lake to the west of the property) is located approximately 750 feet to the west and Silver Lake is located approximately one-quarter of a mile to the southwest of the proposed project site.

Alternative 1 No Action – Under the No Action Alternative, no impacts to waters of the United States, including wetlands, would occur.

Alternative 2 Address Area Needs Using Closest Existing Station (Station 11) – Under Alternative 2, there would be no impacts to waters of the United States or wetlands as such areas are not located immediately adjacent to the facility.

Alternative 3 New Fire Station (Proposed Action) – Under the Proposed Action Alternative, no impacts to waters of the United States or wetlands would occur because none are present on or immediately adjacent to the proposed project site. The nearest surface water body (an unnamed pond/lake to the west of the property) is located approximately 750 feet to the west and Silver Lake is located approximately one-quarter of a mile to the southwest of the proposed project site. During construction, adherence to soil erosion and sediment control requirements and use of BMPs would minimize erosion at the site and mitigate potential impacts to the nearest water resources. Appropriate measures include, but are not limited to, installation of silt fences, stormwater silt blocks, and the planting of vegetation and other landscaping measures to minimize erosion. Long-term, stormwater will be managed, stored and retained/infiltrated onsite.

3.2.3 Threatened and Endangered Species

In accordance with Section 7 of the Endangered Species Act of 1973, the proposed project area was evaluated for potential occurrences of Federally-listed threatened and endangered species. The Endangered Species Act 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 (FEMA 1996).

Research was performed to identify any potential Threatened, Endangered, Proposed, or Candidate species in Grand Traverse County, Michigan. The U.S. Fish and Wildlife Service (USFWS) listing of Threatened, Endangered, Proposed, or Candidate species for Michigan lists the following federally endangered and threatened species to be present in Grand Traverse County (USFWS 2009), where the proposed project site is located: Eastern Massasauga (Candidate), Pitcher's thistle (Threatened), and the Kirkland's Warbler (Endangered). FEMA has made a determination of not likely to affect federally listed threatened or endangered species (Appendix D) based on the habitat present at the proposed site.

Alternative 1 No Action – Under the No Action Alternative, no impacts to threatened and endangered species would occur.

Alternative 2 Address Area Needs Using Closest Existing Station (Station 11) – Under this Alternative, no impacts to threatened and endangered species are expected occur as a result of the increased emergency response activity from Station 11.

Alternative 3 New Fire Station (Proposed Action) – Under the Proposed Action Alternative, an approximately three-acre site would be disturbed for construction of the proposed Station 12, including adjacent parking lots and the access road. As part of this disturbance, some of the trees present on the proposed project site would be removed for site preparation. Mature trees are present on the proposed project site along the north and east property boundaries. These mature trees primarily consist of deciduous species common to northwest Michigan, such as maple, ash, beech, and basswood: and include some interspersed pine such as white pine, red pine, and spruce. A number of these mature trees will be removed to facilitate construction of stormwater retention Basin 1 and the north section of the driveway that will provide access to the site building. Small groups of small-diameter, deciduous trees (i.e., approximately two to six inches in diameter) are present throughout the center portion of the project site; these small groups of small trees would be removed in their entirety to facilitate construction of the site building and associated parking lots and driveways. There are no Jack Pine trees known to be present on the proposed project site. FEMA has made a determination of not likely to affect federally listed threatened or endangered species (Appendix D) based on the habitat present at the proposed site.

3.3 HAZARDOUS MATERIALS

A site visit to the proposed project property was conducted on December 29, 2009. During the site visit, the property was visually searched for evidence of the potential presence of hazardous materials. The visual search of the property did not identify the presence of hazardous materials or evidence of such (i.e., empty containers, stressed vegetation, stained soil, etc.). However, it should be noted that, at the time of the site visit, the ground surface was covered with approximately six to twelve inches of snow, limiting our observation.

To further evaluate the potential for the presence of hazardous materials on the proposed project site and in the project vicinity, regulatory databases were searched and reviewed on December 22, 2009. The database search and review were conducted as defined in the ASTM Standard of Environmental Records sources and according to the appropriate ASTM search radii. The proposed project property was not listed on any of the searched State, Federal, or Tribal environmental databases, indicating that the proposed project property does not have an adverse environmental history. Appendix E, attached, provides relevant information supporting this finding, including a brief description of each of the regulatory databases, a Site Location Map showing the search radii and the locations of the sites identified in the regulatory data search, and a Table that summarizes the findings of the records search.

Alternative 1 No Action – Under the No Action Alternative, there would be no construction and there would be no impacts related to hazardous materials or wastes.

Alternative 2 Address Area Needs Using Closest Existing Station (Station 11) – Under this Alternative, minimal use of hazardous materials (primarily fuels such as gasoline and diesel for emergency response equipment) and limited generation of (non-hazardous) wastes would continue as there would be no physical changes to Station 11, nor would there be changes to the operations conducted at the station other than increased volume of emergency response traffic. Consistent with current operations at Station 11, any hazardous materials or wastes discovered, generated, or used during emergency response activities or operation of the Station would continue to be handled and disposed in accordance with applicable local, State, and Federal regulations.

Alternative 3 New Fire Station (Proposed Action) – Under the Proposed Action Alternative, minimal use of hazardous materials (primarily fuels such as gasoline and diesel for construction equipment and emergency response equipment) and limited generation of (non-hazardous) wastes are anticipated. Consistent with current operations at any fire station, any hazardous materials or wastes discovered, generated, or used during emergency

response activities or operation of the new Station 12 would be handled and disposed in accordance with applicable local, State, and Federal regulations.

3.4 SOCIOECONOMIC

3.4.1 Zoning and Land Use/Transportation

The proposed project site is located in the northeast corner of the Garfield Township Silver Lake Recreation Area in Grand Traverse County, Michigan. The site is currently “open space” that is part of the aforementioned recreational area, and is zoned as agricultural land. The adjacent properties are also zoned as agricultural lands and are currently being utilized as park “open space” (to the west and south), a road right-of-way (East Silver Lake Road to the east), or rural residential home sites (a new housing development to the north). Access to the proposed building site is available from the east via East Silver Lake Road or by pedestrian traffic from the adjacent park lands or residential parcels. The Comprehensive Plan/Future Land Use Map, Comprehensive Plan/Thoroughfare Plan, and Non-Motorized Ways maps showing Garfield Township land uses and the proposed project location, obtained from the Garfield Charter Township Planning Department, are provided in Appendix C.

The proposed project site contains one pedestrian walking path that will be relocated approximately 10 feet southward to maintain a suitable buffer of undeveloped land between the project site and the walking path. In addition, a future by-pass road is planned to abut the proposed project property to the south, as shown on Figure 4. This by-pass road is part of the Garfield Township master plan for the area, and will occur independent of the proposed project. It will follow the same path as the driveway to the new fire station (Station 12) and continue to the west/northwest, effectively isolating the 3.12 acres of the proposed project site from the remainder of the Silver Lake Recreation Area. According to Garfield Township personnel, the resultant isolation of the proposed project site from the Recreation Area by the by-pass road will render the site unusable as parkland, but provide a suitable parcel for the new fire station in terms of land use and traffic considerations. Therefore, the adverse isolation of the proposed project site from the remaining parkland will occur independent of the proposed project; the proposed project will make positive use of the land, as it will not be usable as parkland once the by-pass road is constructed.

Alternative 1 No Action – Under the No Action Alternative, there would be no changes to zoning or transportation.

Alternative 2 Address Area Needs Using Closest Existing Station (Station 11) – Under Alternative 2, there would be no changes to zoning because existing Station 11 currently meets area zoning requirements. However, expansion of emergency response activities from Station 11 will result in increased emergency response vehicle use of area transportation routes. In addition, a significant increase in the number of emergency response vehicles traveling to/from Station 11 would be anticipated, as would employee vehicle traffic for those manning the station. It is also important to reiterate that, although Station 11 is the closest existing station to the proposed project area, emergency response times from this location will not meet NFPA Standard of Cover Rules (i.e., response times of four minutes or less).

Alternative 3 New Fire Station (Proposed Action) – Under the Proposed Action 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 would potentially result in a slower traffic flow for the duration of the construction phase. To mitigate potential traffic delays, construction vehicles and equipment would be stored on-site during construction; there is ample room at the site for equipment and materials staging. Appropriate traffic control and signage would be utilized to further aid in area navigation. Following the development of the proposed site, an increase in vehicle traffic would be expected to increase mainly due to the presence of onsite emergency response vehicles. Conversely, traffic at the existing fire stations would be expected to slightly reduce because construction of the new station would reduce the number of emergency responses from the existing fire stations.

The proposed project site contains one pedestrian walking path that will be relocated approximately 10 feet southward to maintain a suitable buffer of undeveloped land between the project site and the walking path. In addition, as part of the site development plans, an access road is planned to further control localized area traffic in the vicinity of the planned fire station. Also, as discussed above, a future by-pass road is planned to abut the proposed project property to the south, as shown on Figure 4. This road would follow the same path as the proposed location of the driveway to the new fire station (Station 12) and continue to the west/northwest, effectively isolating the 3.12 acres of the proposed project site from the remainder of the Silver Lake Recreation Area. According to Garfield Township personnel, the resultant isolation of the proposed project site from the Recreation Area by the by-pass road will render the site unusable as parkland and will occur independent of the proposed project. The proposed project will make positive use of the land, as it will not be usable as parkland once the by-pass road is constructed.

Grand Traverse Metro Emergency Services Authority has worked extensively with the Grand Traverse County Road Commission and engineering consultants on improvements to the frontage along East Silver Lake Road.

The planning and engineering has addressed site access and traffic issues, including the potential future by-pass, traffic sight distance, and ingress/ egress from the proposed project site.

The parcel is currently zoned agricultural, although it is not used for agricultural purposes. The proposed project has been presented and approved by the Garfield Township Planning Commission and Township Board. The extensive review and approval process included completion of an Impact Assessment, which evaluated the potential effects of completing the proposed development. Following review of the Impact Assessment, the project was approved by the Commission and Board. A voluntary Special Land Use permit was applied for and received in order to ensure all aspects of the planned site development were in compliance with local restrictions, and to provide an opportunity for neighbors to voice their opinions regarding the proposed project. While there were some concerns voiced about the proposed project, the majority of the local populace supported the project.

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 the day-night average sound level (Ldn), and is used by agencies for estimating sound impacts and establishing guidelines for compatible land uses. A USEPA document entitled "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety" (USEPA, 1974) provides a basis for State and local government 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, noise levels of 55 dB outdoors and 45 dB indoors are identified as preventing activity interference and annoyance. These noise 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 level would be consistent with a 24-hour average of 70 dB, as long as a sufficient amount of relative quiet is experienced. The proposed project site is located adjacent to a recreational park and a rural residential area. Although a typical emergency vehicle siren has a noise level of 115 dB at a distance of 10 feet, the noise level will be of short duration and will decrease rapidly as the vehicle leaves the proposed project site; there will be no siren noise upon return of the emergency vehicle to the station.

Alternative 1 No Action – Under the No Action Alternative, no noise impacts would occur.

Alternative 2 Address Area Needs Using Closest Existing Station (Station 11) – Under Alternative 2, an noticeable increase in the incidences of noise would be anticipated as Station 11 responds to more emergency

calls as necessary to meet the emergency response needs of the project area. Emergency response equipment would continue to meet all local, State, and Federal noise regulations, so the noise levels would not increase but the occurrences of the noise would be expected to increase. In addition, during emergency calls, sirens will impact the adjacent properties more often and the noise impacts would continue through the travel route of the emergency vehicles. Given the travel routes are expected to result in emergency response times that exceed the NFPA Standard of Cover Rules (i.e., exceed four minutes), the duration of siren noise from emergency response vehicles traveling from Station 11 is expected to increase.

Alternative 3 New Fire Station (Proposed Action) – Under the Proposed Action Alternative, temporary short-term increases in noise levels would be anticipated during construction of Station 12, due to construction traffic and construction equipment. To reduce noise levels during that period, construction activities would be restricted to normal (daylight) business hours and equipment and machinery utilized at the site would be required to meet all local, State, and Federal noise regulations.

Over the long term, vehicle traffic would see an increase at the proposed project site, primarily when EMS personnel are training or responding to emergency events. The increased traffic and use of sirens would increase the noise level, but these increases would be very short in duration and would be expected to occur infrequently. It is anticipated that these noise peaks would not cause an exceedence of the EPA's 24-hour exposure levels. Conversely, noise levels at the existing fire stations would be expected to slightly reduce because construction of the new station would reduce the number of emergency responses traveling from the existing fire stations.

3.4.3 Public Service and Utilities

Public services and utilities are currently provided to the proposed building site. These include police and fire response; and natural gas and electrical utilities, as well as municipal water service. The proposed building would utilize an onsite sanitary septic system, which is to be constructed as part of the overall site development.

Alternative 1 No Action – Under the No Action Alternative, there would be no changes to public services or utilities because the proposed project site would remain vacant. However, there would continue to be increased adverse risk to the community and area travelers due to the growing demand for public (emergency) services and the excessive length of emergency response times (i.e., greater than the NFPA Standard of Cover Rules-stipulated four minutes) from the locations of the current facilities.

Alternative 2 Address Area Needs Using Closest Existing Station (Station 11) – Under Alternative 2, there would be no changes to utilities because Station 11 already exists and is operational. However, use of Station 11 to meet the growing emergency response needs of the proposed project area does not meet the NFPA Standard of Cover Rules (i.e., emergency response times from Station 11 exceed four minutes). In addition, Station 11 is placed in the position of covering approximately 18 square miles of response district that contains significant population expansion and residential and commercial development. As with Alternative 1, there would continue to be increased adverse risk to the community and area travelers due to the growing demand for public (emergency) services and the excessive length of emergency response times (i.e., greater than the NFPA Standard of Cover Rules-stipulated four minutes) from the locations of the current facilities.

Alternative 3 New Fire Station (Proposed Action) – Under the Proposed Action Alternative, there would be significant improvements to the proposed project site in order to connect the proposed building to the existing utilities. Following the completion of the proposed fire station, public (emergency) services will improve greatly for the community and area travelers due to a decrease in emergency response times in the proposed project area such that the NFPA Standard of Cover Rules would be met. In addition, the reallocation of emergency response personnel and equipment from existing fire stations in order to cover the project area will no longer be necessary and those areas covered by the existing fire stations, including Station 11, will also be better served.

3.4.4 Environmental Justice (Executive Order 12898)

Executive Order 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. Socioeconomic and demographic data for the project area were analyzed to determine if a disproportionate number of minority or low-income persons have the potential to be adversely affected by the proposed project.

The Grand Traverse Metro Emergency Services Authority is comprised of three Townships: Acme, East Bay, and Garfield. United States Census Bureau data for each of these is as follows:

Ethnic Population	Acme Township	East Bay Township	Garfield Township
White	97.3%	97.31%	98.07%
African American	0.23%	0.22%	-

Native American	0.28%	0.87%	0.66%
Asian	0.35%	0.60%	0.05%
Hispanic/ Latino	2.10%	1.25%	1.02%
Other	1.06%	0.29%	0.20%

Poverty levels for income were also researched for each of the three Townships that comprise the operational area of the Grand Traverse Metro Emergency Services Authority. In Acme Township, 6.5% of the population has income that is below poverty standards; East Bay Township has 0.29% of the population earning below poverty standards; and Garfield Township has 0.20% of the population earning below poverty standards. No concentrations of minority or low-income populations were identified near the proposed project site.

Alternative 1 No Action – Under the No Action Alternative, there would be no disproportionately high or adverse effects on minority or low-income populations. All populations would equally be adversely affected by the lack of construction of a new fire station, due to the elevated emergency response times from the existing fire stations.

Alternative 2 Address Area Needs Using Closest Existing Station (Station 11) – Under this alternative, there would be no disproportionately high or adverse impacts on minority or low-income populations. All populations would equally be adversely affected by the demand placed on Station 11. In addition, those populations currently serviced by existing Station 11 would be expected to experience somewhat more of a burden from the increased demand for Station 11 to provide emergency response services to a larger geographic area.

Alternative 3 New Fire Station (Proposed Action) – Under the Proposed Action Alternative, there would be no disproportionately high or adverse impacts on minority or low-income populations. Implementation of the Proposed Action would benefit all populations within the Grand Traverse Metro Emergency Services Authority service area.

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 the standards specified in Occupational Safety and Health Act (OSHA) regulations. Executive Order 13045, Protection of Children, requires Federal agencies to make it 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, the increase in emergency response demands for the existing fire stations, in combination with the elevated emergency response times, could result in increased safety risks. Increased safety risks to the community could occur from lengthy response times (i.e., greater than four minutes) before emergency response personnel arrive at the scene of the emergency to render aid. Increased safety risks for emergency responders occur due to lengthy travel distances and increased time in transit, both of which increase the risk of an accident en route.

Alternative 2 Address Area Needs Using Closest Existing Station (Station 11) – Under this Alternative, expansion of Station 11 emergency response coverage would not provide any additional emergency services to the proposed project area; specific operations conducted at existing Station 11 would not change, although emergency responses from this Station would increase. The increase in emergency response demands for Station 11, in combination with the elevated emergency response times, could conceivably result in increased safety risks to the community and the emergency responders. As outlined in Alternative 1, increased safety risks to the community could occur from lengthy response times (i.e., greater than four minutes) before emergency response personnel arrive at the scene of the emergency to render aid. Increased safety risks for emergency responders occur due to lengthy travel distances and increased time in transit, both of which increase the risk of an accident en route.

Alternative 3 New Fire Station (Proposed Action) – Under the Proposed Action Alternative, short-term construction activities would present minor and typical safety risks to those performing the activities. However, access to the site would be restricted during construction to protect the public and to minimize risks to safety and human health. The appropriate signage and barriers would be in place during construction activities to alert pedestrians and motorists of project activities. Long-term, the Proposed Action Alternative would significantly improve the safety of area residents, travelers, and emergency response personnel through decreased emergency response times, decreased travel distances en route to emergency scenes, and decreased transit times (of emergency response equipment personnel and transport of sick and/or injured persons to emergency care facilities).

3.5 HISTORIC AND CULTURAL RESOURCES

Consideration of effects to historic properties is mandated under Section 106 of the National Historic Preservation Act (NHPA) as implemented by 36 CFR Part 800. Requirements include identification of historic properties that may be affected by the Proposed Action and consideration of what effect, if any, the action will have on historic properties. If the project will have an adverse effect on these properties, FEMA must consult with the State

Historic Preservation Officer (SHPO), or the Tribal Historic Preservation Officer (THPO) for undertakings on tribal lands, regarding ways to avoid, minimize, or mitigate the adverse effect. In addition, Section 101 of the NHPA requires federal agencies to consult with federally-recognized Indian tribes and Native Hawaiian organizations that attach religious or cultural significance to historic properties that may be affected by an undertaking (36 CFR §800.2(c)(2)(ii)).

As defined in 36 CFR §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.” 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 §60.4).

Alternative 1 No Action – Under the No Action Alternative, there would be no construction and thus there would be no impacts to historic or cultural resources.

Alternative 2 Address Area Needs Using Closest Existing Station (Station 11) – Under Alternative 2, there would be no construction as Station 11 already exists and cannot be expanded due to physical site constraints; therefore, there would be no impacts to historic or cultural resources.

Alternative 3 New Fire Station (Proposed Action) – Under the Proposed Action Alternative, construction of the new fire station has potential to impact historic or cultural resources. Evaluation of the Proposed Action is described in Sections 3.5.1 through 3.5.3, below.

3.5.1 Historic Sites and Structures

Michigan’s Historic Sites Online website lists historic structures and sites of local, state and national historic interest, including those listed on the National Register of Historic Places and the Michigan State Register of Historic Sites. FEMA used this tool to investigate historic sites in Grand Traverse County and determined that no historic structures or sites are located within the project APE. FEMA also assessed the undertaking’s potential to affect unidentified historic properties that might be present in the APE. On January 11, 2010, an application form, letter and supporting documentation were submitted to the Michigan SHPO with a request for comment on this federal undertaking. The request included a description of Alternative 3 and the APE. The documentation noted that FEMA identified no historic properties in the APE and found that there was no effect from this undertaking on historic properties. In a letter dated February 8, the Michigan SHPO concurred with the finding of no historic properties affected, and confirmed that FEMA had fulfilled its responsibilities under Section 106 to consult with

the SHPO regarding potential adverse effects from federally-funded undertakings. A copy of the SHPO's letter is included in Appendix F.

3.5.2 Archaeological Resources

The SHPO considers known archeological sites when commenting on a finding. Concurrence with a finding of no historic properties affected confirms 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 closely 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 Consultation Regarding Traditional Cultural Properties

On January 26, 2010, requests for evaluation of the project area for sites of known archaeological, religious, or cultural significance, referred to as Traditional Cultural Properties (TCPs), were sent to federally-recognized tribes that may have an interest in projects located in Grand Traverse County, Michigan. Those tribes included the Grand Traverse Band of Ottawa and Chippewa Indians, the Little River Band of Ottawa Indians, and the Little Traverse Bay Band of Ottawa Indians. The communication requested a response within 30 days. The 30-day response period ended on February 25, 2010 without comment from these tribes regarding effects to TCPs from this undertaking.

3.6 COMPARISON OF ALTERNATIVES

This section compares the potential impacts of the proposed alternatives and the No-Action Alternative. Where potential impacts exist, conditions or mitigation measures to offset these impacts are detailed in the body of this document. A summary table is provided on the following page. To reiterate, the Alternatives are:

Alternative 1 – No Action

Alternative 2 – Address Area Needs Using Closest Existing Station (Station 11)

Alternative 3 –New Fire Station (Proposed Action)

Table 2: Impact and Mitigation Summary

Affected Environment	Impacts	Mitigation
Geology and Soils	Alt 2: No impacts to geology or soils would occur.	None.
	Alt 3 (proposed): No impacts to geology are anticipated. Short-term impacts to shallow soils are anticipated during construction. Construction would disturb the east portion of the 3.12-acre site.	Appropriate BMPs and soil erosion and sediment control measures such as silt fence, prompt planting of vegetation, and landscaping to minimize runoff.
Water Quality (including surface water and Ground water)	Alt 2: No impacts to water quality are anticipated. The existing fire station (Station 11) uses municipal water supplies for potable water and no surface waters are present at the Station 11 site.	None; a Stormwater Pollution Prevention Plan (SWPPP) is already in place for the facility.
	Alt 3 (proposed): No impacts to water quality or groundwater are anticipated. The proposed development will be serviced by the Garfield Township municipal water system.	A SWPPP is required for the proposed site. During construction, soil erosion and sediment control measures and BMPs would be employed to minimize runoff. Floor drain water from inside the site building will be discharged under an MDEQ groundwater discharge permit.
Floodplains	Alt 2: No impact to floodplains would occur	None
	Alt 3 (proposed): No floodplains have been identified on the proposed project site. No impacts are anticipated.	None
Air Quality	Alt 2: Short-term impacts from increased usage of emergency response vehicles and equipment.	Proper maintenance of vehicles and equipment, and limiting vehicle/equipment idle times.
	Alts 3 (proposed): Short-term impacts from dust and emissions during construction and usage of emergency response vehicles during new fire station operation.	Dust control measures during construction activities; proper maintenance of construction vehicles and equipment, and limiting vehicle/equipment idle times. Same for emergency response equipment.

Table 2: Impact and Mitigation Summary - Continued

Affected Environment	Impacts	Mitigation
Terrestrial and Aquatic Environments	Alt 2: No impacts to the terrestrial or aquatic environment of the existing Station 11.	None
	Alt 3 (proposed): No aquatic environments have been identified on the proposed project site. The east portion of the site would be impacted by construction activities, temporarily disrupting the terrestrial environment of the site.	Topsoil will be replaced following completion of construction. Landscaping of the new fire station site, (which will include grasses, trees, shrubs, and stormwater retention areas), will mitigate the temporary disruption of the terrestrial environment, providing new habitat.
Waters of the U.S. Including Wetlands	Alt 2: The existing Station 11 site is not located proximal to existing wetlands or surface water bodies.	None
	Alt 3 (proposed): No wetlands or waters have been identified on or immediately adjacent to the proposed project site. Nearest surface water body is 750 feet to the west.	Use of BMPs and soil and sediment control measures to prevent erosion and runoff to nearby surface water.
Threatened and Endangered Species	Alts 2 and 3 (proposed): No impacts are anticipated	None
Hazardous Materials	Alts 2 and 3 (proposed): Limited use of hazardous materials and limited generation of (non-hazardous) wastes anticipated at existing Station 11 and at the proposed project site, consistent with typical fire station operation.	No releases of contaminants to the environment have been reported at the existing facilities or the proposed project site. Any hazardous materials and wastes used, stored, or generated would continue to be handled and disposed in accordance with applicable local, State, and Federal regulations.

Table 2: Impact and Mitigation Summary - Continued

Affected Environment	Impacts	Mitigation
Zoning, Land Use, and Transportation	Alt 2: No impact to existing zoning or land use as Station 11 meets current zoning requirements. However, expansion of emergency response activities from Station 11 is expected to increase emergency response and relevant employee traffic on area transportation routes.	Existing traffic control and signage on area transportation routes may need to be modified or upgraded.
	Alt 3 (proposed): Special Land Use permit approved by Garfield Township to facilitate development of the proposed project site as a new fire station. Increase in area traffic (during construction and during operation of the new fire station) is anticipated.	The site has been approved by the Township to accommodate the development of the new fire station. Planned land use is consistent with Township and adjacent Silver Lake Recreation Area plans. Site access and traffic patterns have been coordinated with local authorities. During construction, vehicles and equipment would be stored on-site to the extent possible. Traffic control and signage to be implemented as needed to support emergency response traffic upon site development.
Noise	Alt 2: Increase in (siren) noise incidents and durations due to increased emergency responses originating from Station 11 and along traffic routes from Station 11 to emergency scenes.	None at Station 11 site. Implementation of Alt 3 (proposed) would mitigate noise impacts at Station 11.
	Alts 3 (proposed): Short-term impacts from construction activities. Long-term impacts include increased traffic and siren noise from EMS vehicles.	Construction activities 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 EMS vehicles would not cause 24-hr exposure levels to be exceeded.

Table 2: Impact and Mitigation Summary - Continued

Affected Environment	Impacts	Mitigation
Public Services and Utilities	Alt 2: No impacts to utilities (Station 11 exists). Increased adverse risk to community due to growing demand for EMS services and inability to meet NFPA Standard of Cover Rules for emergency response time.	None at Station 11 site. Implementation of Alt 3 (proposed) would mitigate adverse risk impacts at Station 11.
	Alt 3 (proposed): Onsite utilities at the proposed project site would be installed to service the development. Potential short-term disruption of emergency response services during the transition from the existing facilities to the new facility could occur.	Planning and staging of construction activities would be conducted to prevent any disruption of emergency response services.
Environmental Justice	Alts 2 and 3 (proposed): No disproportionately high or adverse effect on minority or low-income populations is anticipated.	None.
Safety and Security	Alt 2: Increased safety risks for community and emergency response personnel due to lengthy response times and increased time in transit.	None at Station 11 site. Implementation of Alt 3 (proposed) would mitigate adverse risk impacts at Station 11.
	Alt 3 (proposed): Short-term increased risks during construction activities. Long-term improvements to public safety would result from improved EMS facilities; no long-term adverse impacts anticipated from the proposed project.	Restrict site access during construction; use of appropriate signage and barriers during construction; require construction personnel to follow appropriate (OSHA/MIOSHA) construction safety standards.
Historic and Cultural Resources	Alt 2: No impacts anticipated given the Station 11 site has already been developed.	None.
	Alt 3 (proposed): No impacts anticipated. At the time this writing was completed, FEMA personnel were in the process of completing the SHPO/THPO request. Their findings will be appended to this EA upon receipt.	During construction, ground disturbing activities would be monitored. Should human skeletal remains or historic or archaeological materials be discovered during construction, all ground-disturbing activities on the proposed project site would cease and the Coroner's office (in the case of human remains), FEMA, and the Michigan Historical Society would be notified.

4.0 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 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.

As discussed in Section 3.4.1 Zoning and Land Use/Transportation of this EA, independent of the proposed project, a future by-pass road is planned to abut the proposed project property to the south, as shown on Figure 4. This road would follow the same path as the driveway to the new fire station (Station 12) of Alternative 3 (Proposed Action) and continue to the west/northwest, effectively isolating the 3.12 acres of the proposed project site from the remainder of the Silver Lake Recreation Area. According to Garfield Township personnel, the resultant isolation of the proposed project site from the Recreation Area by the by-pass road will render the site unusable as parkland, but provide a suitable parcel for the new fire station in terms of land use and traffic considerations. Other area projects include construction of a new rural residential development to the north of the proposed project site (on non-parkland property). From a community and Township planning perspective, the cumulative impact of the proposed project and the planned future by-pass supports development of the new fire station at this particular site. The planned future construction of the near-by housing development will have the cumulative effect of increasing the need for the planned by-pass road (lending credence to the isolation of the proposed project site from the parkland) and further increasing the need for a fire station in the proposed project area.

5.0 PUBLIC PARTICIPATION

FEMA is the lead Federal agency for conducting the NEPA compliance process for the Grand Traverse Metro Emergency Services Authority in Grand Traverse County, 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 the responses received from the agencies. Agencies consulted are listed in Section 6; Agency responses are provided in Appendices C, D, and E.

The proposed project has been discussed at numerous Grand Traverse Metro Emergency Services Authority board and participating Township meetings that are open to the public. In addition, the Grand Traverse Metro Emergency Services Authority will notify the public of the availability of this draft EA through publication of a public notice. FEMA will conduct a public comment period commencing on the initial date of publication of the public notice.

6.0 AGENCY COORDINATION, PERMITS, AND REFERENCES

The following agencies and organizations were consulted or their websites were accessed to obtain project information and/or review during the preparation of this EA. Responses received to date or, in the case of websites access, copies of the appropriate web page findings, are included in Appendices C, D, E, and F.

1. Administrative Assistant, Equalization Department, Grand Traverse County
2. Administrative Assistant, Acme Township
3. Administrative Assistant, East Bay Township
4. Administrative Assistant, Garfield Township
5. Mr. Brad Schnaidt, Assistant Fire Marshal, Grand Traverse Metro Emergency Services Authority
6. Mr. Andy Knott, Grand Traverse Band of Ottawa and Chippewa Indians
7. Ms. Rachel Schwarz, Traverse Bay Band of Odawa Indians
8. Mr. Glenn Zaring, Little River Band of Ottawa Indians
9. Ms. Rhonda Klann, Michigan Department of Environmental Quality
10. 7.5' USGS Quadrangle Map (1983), Delorme 1999
11. Grand Traverse County Tax Assessment Records
12. Natural Resource Conservation Service, Web Soil Survey, Grand Traverse County
13. Michigan Department of Environmental Quality Web Site

14. United States Environmental Protection Agency Web Site
15. National Response Center Web Site
16. Grand Traverse Metro Emergency Services Authority, Station 12, Impact Assessment
17. Grand Traverse Metro Emergency Services Authority Web Site
18. United States Fish and Wildlife Web Site
19. Federal Emergency Management Agency Web Site

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. Building Permits (Garfield Township and Grand Traverse County)
2. Erosion Control and Stormwater Management Permit
3. Grand Traverse County Health Department, Environmental Health Division, Sanitary Septic Permit

7.0 LIST OF PREPARERS

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