Draft Environmental Assessment

Valley Hill Station 4

Valley Hill Fire and Rescue

ARRA-AFG/SCG Grant #: EMW-2009-FC-00669R

October 2010

FEMA

U.S. Department of Homeland Security
Federal Emergency Management Agency - Region IV
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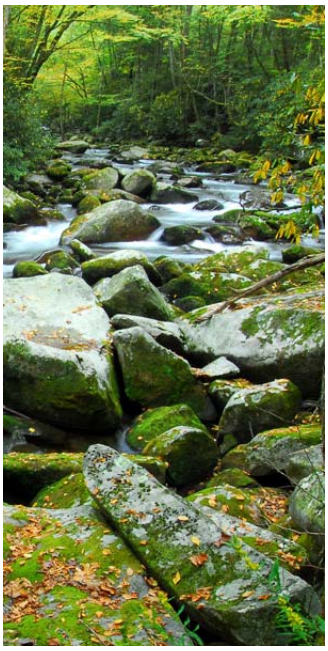
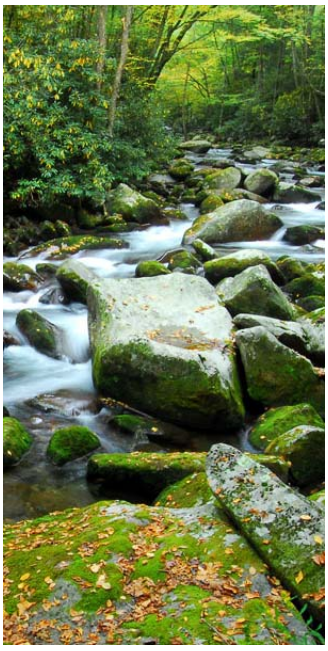
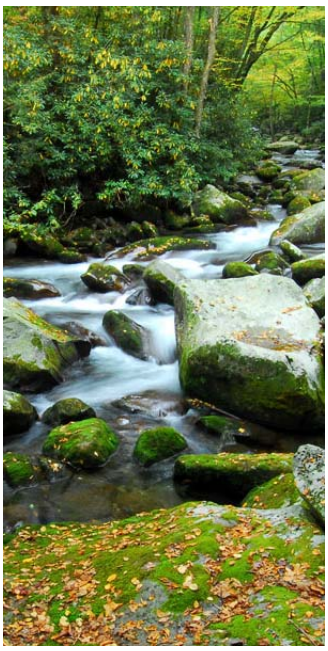
Atlanta, GA 30341-4112







ALTAMONT ENVIRONMENTAL, INC.

ENGINEERING & HYDROGEOLOGY

National Environmental Policy Act

Draft Environmental Assessment

Valley Hill Fire and Rescue, Station 4

1914 Brevard Road

Hendersonville, North Carolina

October 2010

Prepared for
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List of Acronyms

BMP	Best Management Practice
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
dB	Decibels
DENR	North Carolina Department of Environment and Natural Resources
DNL	Day-Night Average Sound Level
DWQ	DENR, Division of Water Quality
EA	Environmental Assessment
EHP	Environmental Planning and Historic Preservation
EIS	Environmental Impact Statement

EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
GHG	Greenhouse Gas
HyC	Hayesville Loam
LiDAR	Light Detection and Ranging
NEPA	National Environmental Policy Act
NFPA/ISO	National Fire Protection Association/Insurance Services Office
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Services
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
OSHA	Occupational Safety and Health Act
PM10	Particulate Matter 10 microns or less
RCRA	Resource Conservation and Recovery Act
SHPO	North Carolina State Historic Preservation Office
USACE	U.S. Army Corps of Engineers
VHFR	Valley Hill Fire and Rescue

1.0 Introduction

Valley Hill Fire and Rescue (VHFR) is a regional fire department currently serving an approximate 37-square-mile area in southwestern North Carolina. Within that area are the communities of Valley Hill and Laurel Park. These communities continue to grow in population and area, which is resulting in an inability for fire and rescue to service these areas effectively. In order to improve service and to reduce response times to the areas in need, VHFR is proposing to build an additional station: Valley Hill Station 4, to be located at 1914 Brevard Road (Highway 64) in Hendersonville, North Carolina. Please refer to Figure 1 for location reference.

VHFR attained federal funding from the Firefighters Assistance Program, Fire Station Construction Grant Program, a program of the Federal Emergency Management Act (FEMA), in October 2009, for the development and construction of the Valley Hill Station 4. FEMA is required to consider potential environmental impacts, through an environmental assessment process, before funding or approving grant projects. The purpose of this Environmental Assessment (EA) is to analyze the potential environmental impacts of the Valley Hill Station 4. This EA has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA), the President's Council on Environmental Quality's (CEQ) regulations to implement NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and FEMA's regulations to implement NEPA (44 CFR Part 10). FEMA will use the findings in this EA to determine whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

2.0 Purpose and Need for Action

2.1 Purpose

The Firefighters Assistance Program awards grants to fire departments to enhance their abilities to protect the public and fire service personnel from fire and related hazards. VHFR attained federal funding from the Firefighters Assistance Program, a FEMA program, in October 2009. The grant was acquired for the development and construction of Valley Hill Station 4 in order for VHFR to better serve and protect its communities.

2.2 Need

The VHFR response area is growing in population density, due to increased residential development, nursing and assisted living facilities, summer camps, private retreat facilities, and hotels (Valley Hill Grant Application 2009). Henderson County's population in 2000 was 89,225 (U.S. Census). There was a 16.2 percent increase from 2000 to 2009 making the population in 2009 103,669 with almost a quarter of that population being over the age of 65 (U.S. Census). It is anticipated that the population of Henderson County will continue to increase. Referenced census information for Henderson County can be found in Appendix A.

In March 2006, VHFR underwent a National Fire Protection Association/Insurance Services Office (NFPA/ISO) study, which analyzed the fire and rescue operations including population growth, call types, staffing, apparatus, and station locations. The study found that VHFR was deficient with regard to station location and emergency response times, and in need of an additional station that will serve emergency needs in the underserved communities.

The current response time to the proposed Station 4 response district is 10 minutes or greater depending on the time of day, traffic, weather, etc. Construction of Valley Hill Station 4 would lower response times to this area to five minutes or less. According to NFPA 1710 anything greater than eight minutes is considered deficient, and an eight minute or less response time is required at least 90 percent of the time. The only way for VHFR to meet this standard in this area is to construct Valley Hill Station 4.

It was determined in the NFPA/ISO evaluation that VHFR only received 1.05 percent credit out of a total of four percent, based on the NFPA/ISO credit distribution method (Valley Hill Grant Application 2009). For maximum credit all sections of the district should be within 1.5 miles of a fully-equipped engine company and within 2.5 miles of a fully-equipped ladder company. The addition of Valley Hill Station 4 will not give this area full credit, but would significantly increase the existing 1.05 percent credit.

3.0 Alternatives

The following is a discussion of the preferred action and potential alternatives to the proposed project if it cannot be completed.

3.1 No Action Alternative

If Valley Hill Station 4 is not constructed, industrial facilities, commercial facilities, and residents of the Valley Hill and Laurel Park communities will continue to endure deficient emergency response times as indicated by the NFPA/ISO study. Not only could this have a significant impact on the health and well being of these communities, but fire insurance rates will likely continue to increase resulting in an additional burden to the citizens and businesses of the underserved communities.

3.2 Preferred Action

The intention of this project is to add an additional station to the VHFR District in order to provide faster emergency response to the Valley Hill and Laurel Park communities. The addition of the Valley Hill Station 4 will reduce response time by an average of five or six minutes for the referenced communities. Please refer to Figure 2 for the location of the proposed fire station and the location of the communities it will serve (outlined in blue) as well as existing fire stations and future fire district boundaries. The area outlined in blue continues to grow in population and lacks a nearby Valley Hill fire and rescue station that can provide an eight minutes or less response time. Therefore, constructing Valley Hill Station 4 in the proposed location will better serve the Valley Hill and Laurel Park communities (outlined in blue on Figure 2).

3.3 Other Action Alternatives

3.3.1 Alternative 1

Build the fire station facility at an alternate location.

3.3.2 Alternative 2

Increase the manpower at existing VHFR stations.

3.4 Alternatives Considered and Dismissed

The No Action Alternative has been dismissed because it has been determined by an NFPA/ISO study that the Valley Hill and Laurel Park communities need additional fire and rescue assistance. The study revealed these areas have emergency services response times that have caused VHFR's current ranking with the NFPA to be relegated. Concurrently, fire insurance rates are increasing, particularly for commercial properties, which is deterring developers from investing in these areas and burdening existing residents and businesses.

Alternative 1 has been dismissed because the VHFR currently owns the property proposed for the Valley Hill Station 4. It will be costly for VHFR to purchase additional property in another location that will serve the needs of the Valley Hill and Laurel Park communities. The land purchased for the development of the Valley Hill Station 4 was selected based on a location that will best solve those deficiencies identified by the NFPA/ISO study. The property is situated in a geographically beneficial area, along the Brevard Road corridor. Additionally, the three acre parcel purchased by VHFR will allow the Valley Hill Station 4 to be constructed in a location away from Shaw Creek and floodplain and will result in little or no impact to the creek and floodplain. Furthermore, the

previous property owner of the land purchased by VHFR has been logged and minor grading has been conducted at the site which has resulted in relatively recent environmental impact to the property before the property was purchased by VHFR. If VHFR were to purchase property in another location, the impacts may be greater if the condition of the other location were more pristine. Lastly, the site currently has access to public utilities including municipal water lines.

Alternative 2 has been dismissed because increasing manpower at existing facilities will not lower the response time to communities from existing VHFR facilities. As you can see in Figure 2, adding personnel to the Valley Hill Headquarters and or Stations 2 and 3 would not lower the response times to the Valley Hill and Laurel Park areas highlighted in blue because the distance from existing fire station to these areas remain such that these stations cannot provide these areas with response times of eight minutes or less. The only way to lower response times to the areas is to construct a station closer to the area in need that is staffed with the appropriate personnel and equipment.

Therefore, the preferred action is the preferred alternative due to the site's location, acreage, existing utilities, and accessibility to the communities in need of faster emergency response.

4.0 Affected Environment and Potential Impacts

This section describes potential environmental consequences of the preferred action by comparing it with potentially affected environmental components. The preferred action is also evaluated against existing environmental documentation of current and planned actions and information on anticipated future projects to determine the potential for cumulative impacts. The potential for significant environmental consequences is evaluated herein using the context and intensity considerations as defined in the CEQ regulations for implementing the procedural provisions of NEPA (40 CFR 1508.27).

The Affected Environment is located on the south side of Brevard Road in the Town of Laurel Park. It is immediately surrounded by residences and undeveloped parcels. Shaw Creek flows through the middle of the site in a westerly direction. The site slopes moderately to the south (8.5 percent, Section 4.1), toward the stream. The subject property was logged just before it was sold by the previous owner and is currently in vegetative succession. Larger trees were cut and removed from the property. Underbrush and smaller trees were cleared and piled in the middle of the property and scattered throughout the property. The existing stand of trees is mixed hardwood and coniferous of various sizes. The riparian buffer is relatively intact and does not appear to have been disturbed by the prior logging activities that occupied roughly 0.25 to 0.5 acres adjacent to Brevard Road. Soils in this area were disturbed by the ingress and egress of logging equipment and vehicles. There is no evidence that the site has undergone major grading because it appears to follow the natural contours of the surrounding area.

This table summarizes the following section by describing the potential Environmental Planning and Historic Preservation (EHP) impacts and the EHP mitigation measures/BMPs that will be implemented to reduce or avoid those impacts.

Affected Environment / Resource Area	Impacts	Agency Coordination / Permits	Mitigation / BMPs
Geology and Soils	The Preferred Action will have no impact to geology, short-term impact to soils during construction, less than one acre of disturbed land	Grading Permit-City of Hendersonville Sediment and Erosion Control Plan Approval-Henderson County	Applicable soil erosion BMPs, including silt fence and quick establishment of temporary and permanent vegetation.
Air Quality	Short-term impacts from dust resulting from construction and equipment emissions during construction	Building Permit-Henderson County	Watering of disturbed area of site to suppress dust. Keep petroleum fuel-burning equipment use to the minimum necessary and maintain equipment properly.

Affected Environment / Resource Area	Impacts	Agency Coordination / Permits	Mitigation / BMPs
Water Quality	Short-term impacts to surface water may be possible but unlikely during construction; no impact to water resources; site has public water and will install permitted septic	Sediment and Erosion Control Plan Approval-Henderson County NPDES Construction Stormwater Permit NCG010000-Henderson County Public Water Supply Plan Approval Septic Permit-Henderson County	Necessary permits will be obtained and pollution prevention measures will be implemented during construction.
Wetlands	No Impact	None	None
Floodplains	No Impact	None	None
Threatened and Endangered Species and Critical Habitat	No Impact	None	None
Historical Sites	No Impact	None	During construction, ground disturbing activities will be monitored. Should human remains or historic or archaeological materials be discovered during construction, all ground-disturbing activities on the project site will cease and the coroner's office (in the case of human remains), FEMA and North Carolina State Historic Preservation Office will be contacted immediately.
Tribal Coordination and Religious Sties	No Impact	None	Refer to mitigation measures for Historical sites.
Environmental Justice	No Impact	None	None
Noise	Short-term impact during construction	Building Permit-Henderson County	Construction will be limited to daytime business hours.

Affected Environment / Resource Area	Impacts	Agency Coordination / Permits	Mitigation / BMPs
Traffic	Short-term impact during construction	Building Permit-Henderson County	Construction vehicles and equipment will be stored on-site during the project construction and appropriate signage will be posted on affected roadways. The installation of a caution signal is planned at the entrance of the fire station on Brevard Road.
Public Service and Utilities	No Impact	None	None
Public Health and Safety	No Impact	None	Any hazardous materials discovered during construction must be disposed of in accordance with federal, state, and local laws.

4.1 Physical Resources

4.1.1 Geology and Soils

Altamont Environmental, Inc. reviewed the 1985 Geologic Map of North Carolina and has determined the project area is Inner Piedmont, Chauga Belt, Smith River Allochthon, and Sauratown Mountains Anticlinorium (Geologic Map of NC 1985). More specifically, the area is underlain by Henderson Gneiss, monzonitic to granodioritic, inequigranular and is located approximately eight miles east of the Brevard fault.

Soil survey information for Henderson County, North Carolina (published by the U.S. Department of Agriculture, Soil Conservation Services) describes dominant soils in the project area as Hayesville loam (HyC), 7 to 15 percent slopes. The setting is described as mountain slopes and ridges, shoulder and summit, convex, with parent material from residuum weathered from igneous and metamorphic rock. The properties of HyC are well draining, no frequency of flooding or ponding, and a high water capacity (about 9.9 inches). These soils are not foreseen as a constraint to the project. Please refer to Figure 3 for the Soil Map and Appendix B for the Soil Map Unit Descriptions.

According to 2007 Light Detection and Ranging (LiDAR) contour lines, as seen on Figure 3, for Henderson County, North Carolina, the topography of the area to be disturbed by the preferred action is gently sloping to the south southwest with an elevation change from 2,198 to 2,210 over approximately 140 horizontal feet within the project area, which is an 8.5 percent slope or 12H:1V.

The Farmland Protection Policy Act (FPPA), Public Law 97-98, Section 1539-1549, United States Code 4201, was enacted in 1981 to minimize the unnecessary conversion of farmland to non-agricultural uses as a result of federal actions. Programs administered by federal agencies must be compatible with state and local farmland protection policies and programs. The Natural Resources Conservation Services (NRCS) is responsible for protecting significant agricultural lands from irreversible conversions that result in the loss of an essential food or environmental resources. According to the FPPA, this land must either be used for food or fiber crops or be available for those crops, is not urban, built-up land, or water areas.

The no-action alternative will require no construction and therefore will not impact geology or soils.

The preferred action was reviewed for potential impacts to the geology and soils. The property's existing state can be described as follows. The subject property was logged just before it was sold by the previous owner. Larger trees were cut and removed from the property. Underbrush and smaller trees were cleared and piled in the middle of the property and scattered throughout the property. Successive underbrush and smaller trees are beginning to grow. Please refer to Appendix C for representative photographs and descriptions.

Land within the area of the facility foot print will be cleared and grubbed, with minimal grading necessary only to remove deleterious material before placement of fill to create a level area that will match the facility elevation to that of Brevard Road. It is not anticipated that grading will need to penetrate the ground surface to a depth exceeding six inches.

The building is proposed to be built as "slab-on-grade construction" and will not have footers that penetrate the existing ground elevation. Fill material will be clean of contaminants. Fill material will be properly compacted and analyzed by a structural engineer prior to the slab being poured.

The preferred action will disturb less than one acre of land. During construction, silt fencing will be installed to prevent runoff from impacting Shaw Creek. The building will be 4,320 square feet and will be one story. The footprint of the entire project will be approximately 37,800 square feet. There will be six parking spaces in the parking area. The amount of impervious surface for the building and the parking lot will be approximately 14,000 square feet. Please refer to Appendix D for a plan view drawing and correspondence from Henderson County Technical Review Committee approving the site plan for lighting, accessibility, and operations.

The proposed site is zoned County R-2 residential by the Henderson County Planning Department, which, in addition to residential development, allows public service buildings such as fire stations. Please refer to Appendix E for the Henderson County Zoning Permit for the fire and rescue station.

The proposed construction site lies within a previously disturbed mixed-use residential/commercial area, and therefore does not meet the farmland requirements met under the FPPA.

4.1.2 Air Quality

The Clean Air Act of 1970 requires the U.S. Environmental Protection Act (EPA) to establish and maintain the National Ambient Air Quality Standards that define the maximum allowable concentrations of pollutants to protect human health (primary standard) including sensitive populations such as asthmatics, children, and the elderly; and welfare (secondary standard) including protection against decreased visibility, damage to animals, crops, vegetation, and buildings within a reasonable margin of safety. These standards include maximum concentrations for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, lead, and particulate matter with a diameter of 10 microns or less.

According to the North Carolina Department of Environment and Natural Resources (DENR), Division of Air Quality, Henderson County only monitored for particulate matter 10 microns or less (PM10) up until December 27, 2009 (Henderson County Particulate Matter 2009). Particulate matter monitoring in Henderson County met the minimum federal and state of North Carolina requirements for PM10.

The no-action alternative will have no impacts to air quality because no construction will occur.

The preferred action will have short-term impacts, resulting from construction and earth moving activities such as clearing and grubbing, with minimal grading necessary only to remove deleterious material before placement of fill to match the facility elevation to that of Brevard Road. These activities could create dust. Construction contractors will be required to wet down the construction areas when necessary to minimize the generation of dust. The construction of Valley Hill Station 4 will require the operation of heavy machinery, which will produce vehicular emissions. It is anticipated the construction of the building and parking area will be completed in approximately six months of its start date.

Current sources for air emissions at the site are vehicular emissions from Brevard Road and potentially from nearby industrial facilities. The long-term impacts from the proposed project will be similar to existing conditions in that the operation of Valley Hill Station 4 will result in one more fire engine and one more fire truck being used for service, and employee vehicle transportation to and from work, which may add to vehicular emissions in the area. However, the proposed site for Valley Hill Station 4 will require less driving time to those communities that currently have higher response times, resulting in less vehicular emissions for response calls closer to Valley Hill Station 4.

Additionally, the construction of Valley Hill Station 4 will result in faster response times to fires, which could will likely result in an improvement in air quality for these communities because fires may be extinguished faster.

It is not likely that the development of Valley Hill Station 4 will increase odor levels or the possibility for odor complaints. The proposed Valley Hill Station 4 will not be used as a live fire training facility where fires are intentionally started so that firemen can train how best to extinguish them.

4.1.3 Climate Change

The EPA has determined that human activities are changing the composition of Earth's atmosphere (USEPA). Increasing levels of greenhouse gases (GHG), e.g. ozone and carbon dioxide, in the atmosphere is largely the result of human activities such as the burning of fossil fuels. The majority of GHGs emitted by human activities remain in the atmosphere for periods ranging from decades to

centuries. Therefore, it is virtually certain that atmospheric concentrations of GHGs will continue to rise over the next few decades. Increasing GHG concentrations tend to warm the planet. EPA has issued the Mandatory Reporting of Greenhouse Gases Rule (40 CFR Parts 86, 87, 89 et al.). The rule requires reporting of GHG emissions from large sources and suppliers in the United States, and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHG, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions are required to submit annual reports to EPA.

The no-action alternative will have impacts to climate change because existing VHFR fire stations have longer response times to fires, therefore causing fire response vehicles to drive further to respond to fires, resulting in greater GHGs emissions. The no-action alternative will allow fires to burn longer before they are extinguished, which result in greater GHGs emissions, than if the fire was extinguished earlier by a response from a closer fire station.

The preferred action will have an impact on the climate by producing GHGs and adding more impervious and non-reflective surfaces. The new station is proposed to have a 50-year life expectancy and will consume energy for normal procedures and operations which will add to GHG emissions from the local power plant. However, the Valley Hill Station 4 will minimize energy consumption by installing Energy Star kitchen appliances and utilizing weatherization techniques for the construction of the fire station. GHG emissions will be released from normal operation of the fire station truck and engine, and from employees going to and from the fire station. The proposed parking lot will be made of asphalt which will absorb solar heat thus increasing normal ground temperature for this area. However, the addition of Valley Hill Station 4 will decrease the length of fires will burn, thus decreasing potential release of GHG emissions. Due to the fact that the Valley Hill Station 4 will not emit 25,000 metric tons of GHG emissions, annual reporting to the EPA will not be required.

4.2 Water Resources

4.2.1 Water Quality

Shaw Creek flows through the property purchased for Valley Hill Station 4, however a minimum 50-foot buffer between the project area and the creek will not be disturbed. Shaw Creek flows into the French Broad River and is part of the French Broad River Basin. Shaw Creek is a water supply IV stream according to DENR, Division of Water Quality (DWQ) (NC Waterbodies Listed by County).

The proposed project will utilize the public water utility instead of a drilled well for its water source. The proposed project site has an existing 16-inch water main and right-of-way crossing through the proposed project property parallel to Shaw Creek. The water main will provide domestic and fire/sprinkler water service for Valley Hill Station 4. Approval of fire/sprinkler plans and specifications is required for water line extensions, by the North Carolina Public Water Supply Section, prior to construction. Refer to Appendix F for comments from the North Carolina Department of Environment and Natural Resources, Division of Environmental Health.

Erosion and sediment laden runoff could result from construction activities, which could directly impact surface water quality in Shaw Creek. According to the Henderson County Sediment and Erosion Control Ordinance §200A-222 C.1(a), an erosion control plan will be required for any land-disturbing activity, which uncovers one or more acres of land.

Altamont submitted a scoping letter dated March 24, 2010 describing the proposed project to the North Carolina Clearinghouse, which was subsequently directed to the Division of Water Quality (DWQ). DWQ responded to the scoping letter in a memorandum dated April 20, 2010. The DWQ requires that a National Pollutant Discharge Elimination System (NPDES) Construction Stormwater Permit NCG010000 be issued concurrently with an approved Sediment and Erosion Control plan if greater than one acre is disturbed. Please Refer to Appendix F for comments from the DWQ.

Additionally, the DWQ indicated that if impacts to surface water are anticipated, then a 401 Water Quality Certification will be required for the project.

Lastly, DWQ explained that if the proposed project were to be closer than 30 feet from the nearest surface water, then the project will need to be compliant with Henderson County Phase II stormwater requirements. Due to the fact that the project is anticipated to remain at least 30 feet from the nearest surface water body, a 401 Water Quality Certification or compliance with Phase II stormwater requirements will not be required.

The no-action alternative will have no impacts to water quality because no construction will occur.

The preferred action will avoid the stream, riparian buffer zone, floodplain, and will maintain a minimum buffer of at least 50 feet from Shaw Creek. There is available room on the site to expand the riparian buffer if necessary. A septic tank and drain-field was permitted on February 17, 2009 and will be and installed if the facility is constructed. The remainder of the site, not used for the facility, will be left in its existing state or will be enhanced through the planting of native vegetation. The area between the fire station and Brevard Road will be landscaped. Permanent stormwater control devices are not required to be installed on-site because stormwater management is not currently regulated in Henderson County, North Carolina. However, stormwater will be managed in a way that promotes the slowing, spreading, and infiltration of concentrated stormwater generated by impervious surfaces.

Maintaining and enhancing the existing riparian buffer will improve water quality in Shaw Creek by slowing stormwater flow into the creek, stabilizing the stream banks, and shading the creek, which lowers surface water temperatures and is beneficial to the ecology of the area.

A grading plan and sediment erosion control plan will be submitted for approval prior to construction of the proposed fire station. BMPs including temporary and permanent seeding of bare soils, and silt fences will be installed during the construction of Valley Hill Station 4 to prevent sediment runoff from impacting Shaw Creek.

Construction activities will not reach a sufficient depth to impact groundwater. If the preferred action will require additional excavation to groundwater depths, the applicant will consult the EPA and DENR to identify appropriate mitigation measures. Additionally, using public water will minimize impact to the local groundwater table.

It is not anticipated that the construction of the Valley Hill Station 4 will disturb more than one acre of land. However, if it is determined that the project will disturb more than one acre of land then a sediment and erosion control plan will be submitted to Henderson County for approval concurrently with the application for a NPDES Construction Stormwater Permit NCG010000.

4.2.2 Wetlands

The U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or filled material into waters of the U.S., including wetlands, pursuant to Section 404 of the Clean Water Act. Executive Order 11990, Protection of Wetlands, requires federal agencies to take action to minimize the destruction or modification of wetlands, by considering both direct and indirect impacts to wetlands that may result from federally funded actions. Activities disturbing jurisdictional wetlands require a permit from the USACE.

According to a National Wetlands Inventory (NWI) map, wetland soils are not present in the area to be disturbed by the project. Verification that wetlands do not exist within the area to be disturbed by the project was made by a field survey conducted by Altamont on May 4, 2010. Please refer to Appendix G for the NWI map.

The no-action alternative will not have impacts to wetlands because no construction will occur.

The preferred action will have no impacts to wetlands because none are present on or near the proposed project site.

4.2.3 Floodplains

Executive Order 11988, Floodplain Management, requires federal agencies to minimize the occupancy and modification of floodplains. The order specifically prohibits federal agencies from funding construction in a 100-year floodplain (or 500-year floodplain for critical facility) unless there are no practical alternatives. According to FEMA Flood Rate Insurance Map Number 3700955900, the proposed site is located outside of defined floodplains. Please refer to the FEMA FIRMette map included in the Figures section of the attachments.

The no-action alternative will have no impacts to the floodplain because no construction will occur.

The preferred action is located outside of defined floodplains. Therefore, the preferred action will not have an impact on floodplains.

4.3 Biological Resources

4.3.1 Threatened and Endangered Species and Critical Habitat

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. According to FEMA, the ESA requires any federal agency that funds, authorizes, or carries out an action to ensure that their project is not likely to jeopardize the continued existence of any endangered or threatened species (including plant species) or that results in the destruction of or adverse modification of designated critical habitats.

In compliance with the ESA, a review of the potential impacts to federally listed endangered, threatened, and candidate species has been completed. According to the North Carolina Natural Heritage Program, the federally listed endangered, threatened, and candidate species for the Hendersonville Quad (attached in Appendix H), are the following:

Vascular Plant:

- Bunched arrowhead (*Sagittaria fasciculate*)—Endangered
- Mountain sweet pitcherplant (*Sarracenia jonesii*)—Endangered
- Small whorled pagonia (*Isotria medeoloides*)—Threatened
- Swamp pink (*Helonias bullata*)—Threatened
- White Fringeless Orchid (*Platanthera integrilabia*)—Candidate

Existing conditions at the proposed site can be described as follows. A water line was installed through the site which caused historical disturbance to the site. Additionally, Henderson County currently maintains the right-of-way for the water line by clearing and mowing, which continually disturbs the habitat and succession of vegetation at the site.

The no-action alternative will have no impacts to endangered or threatened species because no construction will occur.

The following habitat descriptions are taken from the U.S. Fish and Wildlife and U.S. Forest Service Endangered and Threatened Species guidance documents for North Carolina and have been investigated for the preferred action.

The bunched arrowhead can typically be found in seepage areas with very low water flow and no stagnation; soils are sandy loams overlain by muck l0-24 inches deep; some shade is beneficial. A distinguishing characteristic of the Bunched arrowhead is that it is an emergent aquatic plant. Therefore, this plant is not likely to be found in the proposed project area because wetland areas will not be disturbed in the proposed project area.

The mountain sweet pitcherplant's typical habitat is mountain bogs. The proposed project area is not a characteristic habitat for the mountain sweet pitcherplant because wetland areas do not exist within the project area and therefore will not be disturbed.

In North Carolina, the small whorled pogonia is typically found in montane oak-hickory or acidic cove forests. The understory structure and composition of occupied sites can be quite variable, ranging from dense rhododendron thickets to open/sparse shrub and sub-shrub strata. The species does not appear to exhibit strong affinities for a particular aspect, soil type, or underlying geologic substrate. The proposed project site has recently been logged, which is not a characteristic habitat for the small whorled pogonia. However a site survey for the small whorled pagonia was conducted on May 4, 2010, and was not identified.

Typical habitat for swamp pink are wetlands that are saturated but not flooded, including southern Appalachian bogs and swamps, Atlantic white cedar swamps, swampy forests bordering small streams; boggy meadows and spring seepage areas. The swamp pink habitat is commonly associated with some evergreens, including white cedar, pitch pine, American larch, and black spruce. This plant is not likely to be found in the proposed project area because wetland areas do not exist within the project area and therefore will not be disturbed in.

The white fringeless orchid is typically found in partially shaded, flat, boggy areas at the head of streams or seepage slopes. The species is often found in association with Sphagnum species and *Osmunda cinnamonea*, *Woodwardia areolata*, and *Thelyptris novaboracensis*, in acidic muck or sand. White fringeless orchid is native to the southeastern and south central United States. It is rare throughout its range. Threats to this species include alteration of the habitat primarily through alteration of hydrology. This plant is not likely to be found in the proposed project area because wetland areas will not be disturbed in the proposed project area.

4.4 Cultural and Historic Resources

4.4.1 Historical Sites

Consideration of impacts to cultural resources is mandated under Section 106 of the National Historic Preservation Act, as amended and implemented by 36 CFR Part 800. The regulations require identification of significant cultural resources so that they may be avoided by the preferred action or alternatives. Cultural resources are prehistoric and historic sites, structures, districts, artifacts, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons.

The no-action alternative will have no impacts to historic properties because no construction will occur.

The preferred action is not anticipated to impact any historical resources at the site and will not impact historical resources within one mile of the proposed fire station site. As described above in section 4.1.1, only minimal grading is proposed for the Valley Hill Station 4 and a majority of the site development will involve placement of clean fill on which the facility will be built. A scoping letter dated March 24, 2010, which was sent to the North Carolina Clearinghouse was subsequently directed to the North Carolina State Historic Preservation Office (SHPO) described the need, purpose, and scope of the preferred action. The SHPO responded to the scoping letter with no comments. The correspondence is attached in Appendix F.

The online records of the National Register of Historic Places (NRHP) and the SHPO were used to review known historic resources in proximity to the proposed project area. The NRHP and SHPO database indicated no historic properties within a one-mile radius of the proposed site. Please refer to Appendix I for reference.

In the event that archeological artifacts, including any Native American pottery, stone tools, or human remains are uncovered, the project will be halted, the applicant will stop all work in the immediate vicinity of the discovery and take reasonable measures to avoid or minimize harm to the

finds. All archeological findings will be secured and access to the sensitive area restricted. The applicant will immediately inform FEMA and FEMA will consult with the SHPO. Work in sensitive areas will not resume until consultation is completed and appropriate measures have been taken to ensure that the project complies with the National Historic Preservation Act of 1966.

4.4.2 Tribal Coordination and Religious Sites

Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, directs federal agencies to establish regular and meaningful consultation and collaboration with tribal officials in the development of Federal policies that have tribal implications, to strengthen the U.S. government-to-government relationships with Native American tribes, and to reduce the imposition of unfunded mandates upon Native American tribes.

The no-action alternative will have no impacts to tribal or religious sites.

Requests for evaluation of the presence or absence of known archaeological and Native American Religious sites within **the preferred action** areas were distributed by FEMA to recognize tribes that may have an interest in the proposed project. Responses have not been received from any tribes at this time.

Please refer to section 4.4.1 for plan of action if significant cultural or historical items are found.

4.5 Socioeconomic Resources

4.5.1 Environmental Justice

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.

According to the U.S. Census Bureau, in 2009 Henderson County had a population of 103,669. The median household income for Henderson County in 2008 was $46,047 with 12.7 percent living below the poverty level. In 2008, minorities made up 14.1 percent of the population in Henderson County. Please refer to Appendix A for reference.

The no-action alternative will have no disproportionate impacts to low-income or minority populations.

The preferred action will enhance resident safety by decreasing response times in the communities to be served by the Valley Hill Station 4 in Henderson County. There will be no disproportionately high or adverse impact on minority or low-income portions of the population. All populations will benefit from the improved emergency response provided by the proposed facility.

4.5.2 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 (DNL), and is used by agencies for estimating sound impacts and establishing guidelines for compatible land uses. EPA guidelines state that outdoor sound levels in excess of 55 dB DNL are normally unacceptable for noise-sensitive land uses such as residences, schools, or hospitals. Typically fire sirens have noise at 115 dB at a distance of 10 feet from the source and approximately 60 dB at a distance of one mile.

Current noise levels for the project area include noise resulting from heavy traffic, police and ambulance services along Brevard Road, the main traffic corridor that connects the cities of Hendersonville and Etowah.

The no-action alternative will have no impacts to noise levels because no construction will occur.

The preferred action has the potential to produce greater short-term noise disturbance locally, resulting from construction of the Valley Hill Station 4. To reduce noise levels during that period, construction activities will take place only during daytime working hours (8:00 a.m. – 6:00 p.m.) enforceable by local ordinance. Equipment and machinery installed at the project site will meet all local, State, and Federal noise regulations. Additionally, there is a possibility for long-term noise disturbance from fire trucks leaving the station. However, there is a noise ordinance for this area, which the Valley Hill Station 4 will abide by. Fire and rescue personnel will only engage sirens when outside of the residential areas and when absolutely necessary. Warning signs will be installed along Brevard Road to indicate for traffic to yield to emergency vehicles when exiting the fire station. A traffic signal may be installed but its installation is pending budget analysis. If a traffic signal were to be installed, it will eliminate the need for the use of a siren when exiting the fire station.

4.5.3 Traffic

The proposed Valley Hill Station 4 will be located north of the Laurel Park community along Brevard Road. Access to the proposed fire station site will be provided by Brevard Road located along the north property boundary. Brevard Road is the main highway, which connects the Cities of Hendersonville and Brevard with the Laurel Park, Valley Hill, and Etowah communities. Brevard Road, in most locations, is a two-lane, asphalt road without a turning lane.

The no-action alternative will have no impacts to traffic because no construction will occur.

The preferred action will likely result in a short-term increase in traffic due to construction equipment and workers accessing the site. This temporary increase could potentially result in slower traffic flow during the construction phase of the project. Mud mats will be installed at the construction entrance to limit tracking of mud and debris onto Brevard Road. Once the proposed fire station is in operation, the traffic increase is expected to be minor and only associated with staff traveling to and from the facility, and emergency response vehicles leaving and arriving the fire station. Installation of warning signs is planned at the entrance of the fire station along Brevard Road and is expected to be completed in conjunction with the proposed fire station. Traffic control signs will be visible to cars approaching the proposed fire station from each direction. No significant long-term impact to traffic is expected.

4.5.4 Public Service and Utilities

Public services available to the proposed site include: water, electricity, gas, telephone, and cable. A septic tank and field has been permitted and will be installed for disposal of wastewater. The proposed site is within the West Henderson County school district which contains Etowah Elementary, Glenn C. Marlow Elementary, Mill River Elementary, Rugby Middle, and West Henderson High (Henderson County Schools Map, 2009).

The no-action alternative will have no impacts to public service or utilities because no construction will occur.

The preferred action will benefit the Valley Hill and Laurel Park communities through decreased emergency response times, and decreased fire insurance rates. Valley Hill Station 4 anticipates utilizing all utilities listed above and connection issues are not anticipated. The septic permit and Henderson County Technical Review Committee correspondence is included in Appendix J.

4.5.5 Public Health and Safety

To minimize risks to safety and human health, all construction activities will be performed using qualified personnel trained in the proper use of the appropriate equipment for the project including all appropriate safety precautions. Additionally, all activities will be conducted in a safe manner in

accordance with the standards specified in the Occupational Safety and Health Act of 1970 (OSHA) regulations. Additionally, Executive Order 13045, Protection of Children, requires federal agencies to make it a high priority to identify and assess environment health and safety risks that may disproportionately affect children.

A Phase I Environmental Site Assessment was not preformed for the purchase property for the proposed project. However, a visual inspection was conducted on May 4, 2010 and did not reveal the presence of vent pipes or fill pipes, which might indicate the presence of hazardous materials or underground storage tanks (USTs) or aboveground storage tanks (ASTs) or any other recognized environmental condition. Hazardous substances are defined as any solid, liquid, contained gaseous or semi-solid waste, or any combination of regulated wastes that pose a substantial presence or potential hazard to human health and the environment. Hazardous substances are primarily generated by industry, hospitals, research facilities, and the government. Improper management and disposal of hazardous substances can lead to pollution of groundwater or other drinking water supplies, and the contamination of surface water and soil. The primary federal regulations for the management and disposal of hazardous substances are the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA).

The no-action alternative will have no impacts to public health or safety because no construction will occur.

The preferred action will allow the VHFR to improve their emergency response operations. Construction of the new facility will provide faster emergency response times to the communities that it serves. These operations are critical to the health and safety of residents throughout the Valley Hill and Laurel Park communities. Construction activities associated with the new fire station could pose safety risks to those performing the activities. To minimize risks to safety and human health, all construction activities will be performed using qualified personnel trained in the proper use of the appropriate equipment, including all appropriate safety precautions. Additionally, all activities will be conducted in a safe manner and in accordance with the standards specified in the OSHA regulations. The appropriate signage and barriers will be in place prior to construction activities to alert pedestrians and motorists of project activities.

It is anticipated that the preferred action will have no hazardous materials or waste impacts. Any hazardous materials discovered, generated, or used during construction will be handled and disposed of in accordance with applicable local, state, and federal regulations.

4.6 Cumulative Impacts

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

The proposed fire station site is located within a mixed-use commercial/residential area. The property is bordered to the north by Brevard Road and Shaws Creek Baptist Church. The area surrounding the proposed site is developed. Private residences border the property to both the east and west, and the Oak Hill Racquet Club borders the property to the south across a water line and railroad right-of-way, Shaw Creek, and a private drive. Development is expected to increase in the vicinity of the proposed fire station site. Cumulative impacts on or adjacent to the proposed site include: waterline installation and right-of–way maintenance, traffic and noise associated with Brevard Road, and grading and logging conducted by the previous property owner. Railroad right of way maintenance and noise associated with the railroad is not anticipated due to the fact that this section of railroad has not been in use for several years according to a representative from

Norfolk Southern. Therefore, it is not anticipated that the railroad will hinder fire and rescue services from reaching the communities.

In accordance with NEPA and to the extent reasonable and practical, this EA considered the combined effect of the preferred action and the other actions occurring or proposed in the vicinity of the proposed project site. It has been determined that the preferred action will cause no greater impact than would be reasonably anticipated by impacts resulting from the development of the mixed-use commercial/residential parcel for another purpose.

5.0 Agency Coordination, Public Involvement, and Permits

FEMA is the lead federal agency conducting the NEPA compliance process for the proposed Valley Hill Station 4 in Henderson County, North Carolina. 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 preferred action while meeting the intent of NEPA and complying with all NEPA provisions. Inter-agency reviews have been conducted in the form of a scoping letter addressed to the North Carolina Clearinghouse, an organization with the North Carolina Department of Administration, which disperses the letter to all appropriate regulatory agencies. Applicable agency responses are provided in Appendix F.

As of the date of this letter, the proposed project has been discussed at the following public meetings:

- Numerous VHFR advisory committee meetings, a sub-committee of the County Commissioners
- VHFR member meetings
- The VHFR board of directors meetings
- Numerous speaking events including local home owners association meetings, church, school, and civic group meetings

All of the above-mentioned meetings are open to the public. Additionally, a large sign has been posted at the proposed project site since October 2009, which plainly describes the proposed project and its location. Please refer to Appendix C for representative photographs of the posted sign, along with additional photographs of the site and Shaw Creek. An article was published in the local Hendersonville newspaper on September 30, 2009 on the front page describing the proposed project (Times-News 2009). No negative comments have been received in response to the article. VHFR will notify the public of the availability of the EA through publication of a public notice in a local newspaper as required by NEPA. Copies of the EA will be placed in the VHFR Head Quarters, Laurel Park Town Hall, Henderson County Fire Marshal's office, and on the FEMA website. Additionally, VHFR will send letters directly to immediate neighbors surrounding the proposed project site. FEMA will conduct a public comment period commencing on the initial date of publication of the public notice.

In accordance with applicable local, state, and federal regulations, the applicant is 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:

- A State Building Permit
- Grading Permit
- Sediment and Erosion Control Plan Approval
- NPDES Construction Stormwater Permit NCG010000
- Public Water Supply Plan Approval
- Septic Permit

6.0 List of Preparers

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