Draft Environmental Assessment

Five Seasons Transportation Bus Garage and Office Building

City of Cedar Rapids, Iowa

FEMA 1763-DR-IA

April 13, 2012

FEMA

Federal Emergency Management Agency
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Abbreviations and Acronyms

ACM	Asbestos Containing Material
APE	Area of Potential Effect
BMP	Best Management Practices
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
dB	Decibels
EA	Environmental Assessment
EHP	Environmental Planning and Historic Preservation
EO	Executive Order
EPA	Environmental Protection Agency

Abbreviations and Acronyms continued

ESA	Endangered Species Act
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
GHG	Greenhouse Gases
HUD	U.S. Department of Housing and Urban Development
IEDA	Iowa Economic Development Authority
IHSEMD	Iowa Homeland Security and Emergency Management Division
IDNR	Iowa Department of Natural Resources
LUST	Leaking Underground Storage Tank
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OSA	Office of the State Archaeologist
RCRA	Resource Conservation and Recovery Act
sf	Square Feet
SHPO	State Historic Preservation Office
SHSI	State Historic Society of Iowa
SWPPP	Storm Water Pollution Prevention Plan
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
UST	Underground Storage Tank
USFWS	U.S. Fish and Wildlife Service
VMT	Vehicle Miles Traveled

1. INTRODUCTION

Cedar Rapids is the second largest city in the State of Iowa and is the county seat of Linn County. The City spans both banks of the Cedar River with municipal facilities on May's Island within the river and multiple other locations throughout the City. Between June 11 and June 13 2008, the Five Seasons Transportation Bus Garage and Office Building at (hereon, "Bus Garage") 437 8th Street NW (Appendix A, Figure 1) experienced damage from the flooding of the Cedar River and its tributaries along with large portions of Cedar Rapids and the surrounding area. On May 27, 2008, President Bush declared a major disaster in the State of Iowa (1763-DR-IA) pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended, 42 U.S.C. Section 5121-5206. The incident period began on May 25, 2008 and closed August 13, 2008. The Bus Garage serves Cedar Rapids with a 2010 Decennial Census population of 126,326.

The National Environmental Policy Act (NEPA) requires that Federal agencies evaluate the environmental effects of their proposed and alternative actions before deciding to fund an action. The President's Council on Environmental Quality (CEQ) has developed a series of regulations for implementing NEPA. These regulations are included in Title 40 of the Code of Federal Regulations (CFR), Parts 1500–1508. They require the preparation of an Environmental Assessment (EA) that includes an evaluation of alternative means of addressing the problem and a discussion of the potential environmental impacts of a proposed Federal action. An EA provides the evidence and analysis to determine whether the proposed Federal action will have a significant adverse effect on human health and the environment. An EA, as it relates to the FEMA program, must be prepared according to the requirements of the Stafford Act and 44 CFR, Part 10. This section of the Federal Code requires that FEMA take environmental considerations into account when authorizing funding or approving actions. This EA was conducted in accordance with both CEQ and FEMA regulations for NEPA and will address the environmental issues associated with proposed FEMA grant funding of eligible options to restore the Bus Garage function and capacity.

2. PURPOSE AND NEED

Pursuant to Section 406 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1974 (42 U.S.C. 5172), as amended, the City of Cedar Rapids (hereon, "City") has requested funding through FEMA Public Assistance Program. FEMA's Public Assistance Program provides supplemental Federal disaster grant assistance to State, Tribal, and local governments, and certain types of Private Nonprofit organizations so that communities can respond to and recover from major disasters or emergencies. The Public Assistance Program also has rules whereby eligible applicants may choose to use eligible, though reduced, recovery funds for alternate or improved projects that may be more beneficial to the applicant than what existed prior to the disaster event.

The need for the proposed project and the following evaluated alternatives is to restore the Five Seasons Transit facilities and operations to, at a minimum, their pre-disaster levels. The Bus Garage flooded at approximately four feet eight inches (4 feet 8 inch) above the finished floor height and had interior finishing damaged. The existing Bus Garage consists of two (2) buildings, the main building and Battery Shed. The main building includes fuel and wash bays, maintenance areas, parts storage and shop, and administrative offices (Appendix A, Figure 2).

Other facilities associated with options considered in this EA include the Five Season Bus Annex (former Fire Station #2) located at 4235 5th Street, the Caboose used as a bus shelter at the intersection of 1st Street SW and 5th Avenue SW, and two (2) remaining buildings on the T.M. Sinclair & Co. Packing Plant site (hereon, "Sinclair Site"); the Main Garage (Building #9) and the A&P Feed and Bone Gelatine/Hog Hair-Drying and Bailing building #72/73 (Appendix A, Figure 1). Flood waters inundated the Sinclair Site up to a height of 12 feet; while many of the buildings on the site were demolished, the Main Garage and the A&P Feed and Bone Gelatine/Hog Hair-Drying and Bailing buildings were determined eligible for repair funds. The Caboose was washed away and destroyed in the 2008 flood and was disposed of as debris. The Transit Annex, used for storage and training before the disaster, was inundated by eight feet one inch (8 feet 1 inch) of flood water and damaged mortar, ductwork, insulation, and mechanical equipment.

This EA is intended to document and evaluate City and FEMA defined alternatives in the City's desire to use eligible recovery funds from the facilities considered here toward a reconstructed Bus Garage facility under FEMA's alternate or improved project rules.

3. ALTERNATIVES ANALYSIS

NEPA requires the investigation and evaluation of reasonable project alternatives as part of the project's environmental review process. Executive Order (EO) 11988 Floodplain Management requires the investigation of practicable alternatives prior to Federal agencies taking actions that provide direct or indirect support of floodplain development. Inclusion of a No Action Alternative in the environmental analysis and documentation is required under NEPA and EO 11988. The No Action Alternative is used to evaluate the effects of not providing eligible assistance for the project, thus providing a benchmark against which "action alternatives" may be evaluated.

3.1 ALTERNATIVE 1 – NO ACTION

The No Action Alternative is defined as maintaining the status quo with no additional FEMA funding being provided for repairs. No repairs, code upgrades, or mitigation measures would be implemented; FEMA funding would be limited to the completed mucking out and debris removal from immediately following the receding of the flood waters.

3.2 ALTERNATIVE 2 – REPAIR OF BUS GARAGE AND CONTRIBUTING FACILITIES

Alternative 2 would restore the Bus Garage to pre-disaster condition with the inclusion of code upgrades and hazard mitigation measures. Hazard mitigation measures proposed include elevating mechanical equipment onto two new (2) mezzanine structures within the building and to relocate the underground fuel storage tank to above ground and one foot above the flood of record. The Caboose was used as a bus shelter and would be replaced with a new bus shelter outside of the floodplain. The bus shelter location would be near the previous site; approximately 150 feet southeast along 1st Avenue SW or at the intersection of 1st Avenue SW and 6th Avenue SW. Bus shelter repair does not necessitate replacing the Caboose for use as a bus shelter, only replacing the function of the disaster-destroyed facility. The bus shelter would remain on the same block and on the same bus route. The two buildings on the Sinclair Site and the Transit Annex would be restored to pre-disaster condition with no change to pre-disaster footprint as permitted through coordination with the City's local floodplain administrator.

3.3 ALTERNATIVE 3 – REPLACE BUS GARAGE

Alternative 3 would replace the existing Bus Garage building at its current site with eligible funds from the Caboose bus shelter, Transit Annex, and two (2) buildings on the Sinclair Site under FEMA's alternate project rules. The proposed building would be approximately 30,000 square foot (sf) pre-engineered building containing garages space for buses, bus maintenance facilities, administrative offices, and training space. The proposed building has a drive-through design for the fuel and wash bay, and the bus storage bays (Appendix A, Figure 3). The two (2) buildings on the Sinclair Site and the Transit Annex would be rendered safe and secure without restoration; the bus shelter on 1st Avenue would not be restored with FEMA's funding.

4. SUMMARY OF IMPACTS AND MITIGATION

Three Alternatives, including the No Action Alternative, were evaluated in this EA and their impacts summarized in this section using the following scale. Impacts are assumed to be negative unless noted otherwise. The following section, Section 5, further details the anticipated impacts of both alternatives.

- No impact – no impacts are anticipated
- Negligible impact – no discernible impacts are anticipated or are minimal and cannot be measured meaningfully
- Minor impact – anticipated impacts are measurable, but are minor and within or below regulatory standards and / or are confined to the project site(s)
- Moderate impact – anticipated impacts are measurable and / or have impacts that may extend beyond the project site(s), may require permitting, and may require limited mitigation actions or coordination to minimize negative impacts
- Major impact – anticipated impacts are readily measurable, have a regional impact, require mitigation to reduce impacts, and / or exceed existing regulatory standards; permanent changes to the resources would be expected

Table 4-1: Summary of Impacts and Mitigation

Affected Environment	Impacts	Mitigation Measures / BMPs
Air Quality		
Alternative 1	Negligible to Minor impact	Not applicable
Alternative 2	Negligible to Minor impact	Not applicable
Alternative 3	Minor to Moderate impact (short term), Minor impact (long term)	Construction best management practices (BMP) appropriate to site conditions and fugitive dust controls required to reduce short term impacts to minor to negligible levels
Climate Change		
Alternative 1	No impact	Not applicable
Alternative 2	Negligible impact	Not applicable
Alternative 3	Negligible to Minor impact	Salvage or recycling of uncontaminated building components and building debris is recommended
Water Quality		
Alternative 1	No impact	Not applicable
Alternative 2	No to Negligible impact	Not applicable
Alternative 3	Negligible to Moderate impact	For ground disturbance of one acre or more, a Storm Water Pollution Prevention Plan and NPDES permit are required
Wetlands		
Alternative 1	No impact	Not applicable
Alternative 2	No to Negligible impact	Not applicable

Alternative 3	No to Minor impact	Appropriate sediment and erosion control BMP for ground-disturbing activities
Floodplain		
Alternative 1	Moderate impact	Not applicable
Alternative 2	Negligible to Moderate impact	If repairs to buildings within 100-year floodplain involves changing footprint of buildings, FEMA's 8-Step process would be required and coordination with local floodplain administrator would be required
Alternative 3	Negligible to Moderate impact	Adaptive reuse of Transit Annex would need to be coordinated with the local floodplain administrator
Protected Species and Habitat		
Alternative 1	No impact	Not applicable
Alternative 2	Minor impact	If active Bald eagle nest is identified, work must take place 660 feet or more away or outside of nesting season
Alternative 3	No impact	Not applicable
Historic Structures		
Alternative 1	No impact	Not applicable
Alternative 2	Minor impact	Incorporation of mitigation measures may require further consultation with SHPO
Alternative 3	Minor impact	Transit Annex must remain safe and secure for the duration of the FEMA grant period
Archaeology		
Alternative 1	No impact	Not applicable
Alternative 2	Minor impact	Incorporation of mitigation measures may require further consultation with SHPO
Alternative 3	No impact	In the event of unanticipated archaeological discoveries, work must stop, site secured, and FEMA notified to consult with SHPO; work cannot resume until consultation is resolved and approval to resume work is given by FEMA
Environmental Justice		
Alternative 1	Negligible to Minor impact	Not applicable
Alternative 2		
Alternative 3	Minor to Moderate impact	Maintenance and periodic inspection of vacant sites may reduce potential for perceived disinvestment
Noise		
Alternative 1	No impact	Not applicable
Alternative 2	Negligible to Minor impact	Not applicable
Alternative 3	Minor to Moderate impact	Construction BMP to reduce impacts of construction noise during work are required
Land Use and Planning		
Alternative 1	No impact	Not applicable

Alternative 2	No impact	Any rezoning necessary under local requirements would take place through the City's standard zoning process
Alternative 3		
Transportation		
Alternative 1	No impact	Not applicable
Alternative 2	Negligible to Minor impact	Not applicable
Alternative 3	Minor impact (short term), Minor impact (positive long term)	
Public Health and Safety		
Alternative 1	No impact	Not applicable
Alternative 2	Negligible to Moderate impact	Any work requiring disturbance of Asbestos Containing Materials must be undertaken by properly licensed contractors; hazardous materials must be properly disposed of
Alternative 3	Moderate impact	Any work requiring disturbance of Asbestos Containing Materials must be undertaken by properly licensed contractors; hazardous materials must be properly disposed of; Radon-resistant construction measures are recommended as practicable
Demolition		
Alternative 1	No impact	Not applicable
Alternative 2	Minor impact	Not applicable
Alternative 3	Moderate impact	Discovery and removal of site contamination in excess of IDNR requirements must be coordinated with the IDNR, BMP to prevent the release of soil or groundwater contaminants to surrounding properties and in transit must be used; salvage or recycling of uncontaminated building components should be considered as practicable
Cumulative Impact		
Alternative 1	Minor impact	Not applicable
Alternative 2	Minor to moderate impact	All work within floodplains would need to be coordinated with local floodplain administrator, Work at the Sinclair Site must be coordinated with USACE in anticipation of a planned flood protection system project
Alternative 3		

5. AFFECTED ENVIRONMENT AND IMPACTS

Chapter 5 describes the existing environmental conditions that may be affected by the proposed FEMA grant funding being applied towards the alternatives for Bus Garage. The impacts on the human environmental of the No Action Alternative were also analyzed.

This chapter also describes the potential environmental consequences of the proposed alternatives by comparing them with the potentially affected environmental components. The proposed activity was also evaluated against existing environmental documentation on current and planned actions and information on anticipated future projects to determine the potential for cumulative impacts. The potential for significant environmental consequences was evaluated utilizing the context and intensity considerations as defined in CEQ regulations for implementing the procedural provisions of NEPA (40 CFR 1508.27).

5.1 PHYSICAL RESOURCES

5.1.1 Air Quality

The 1990 Clean Air Act, its amendments, and NEPA require that air quality impacts be addressed in the preparation of environmental documents. The U.S. Environmental Protection Agency (EPA) established National Ambient Air Quality Standards (NAAQS) for six (6) "criteria" pollutants; carbon monoxide (CO), nitrogen dioxide (NO2), ozone (O3), particulate matter (PM10 and PM2.5), sulfur dioxide (SO2) and lead (Pb), and define the allowable concentrations that may be reached but not exceeded in a given time period to protect human health (primary standard) and welfare (secondary standard) with a reasonable margin of safety.

Primary and secondary standards for NAAQS have been established for most of the criteria pollutants which are detailed in Table 5-1: NAAQS, below. The EPA designates areas that have not met the NAAQS as non-attainment and to classify these non-attainment areas according to their degree of severity. Attainment pertains to the compliance/violation of any of the NAAQS for the six criteria pollutants mentioned above. Each year, states are required to submit an annual monitoring network plan to EPA. The network plans provide for the creation and maintenance of monitoring stations, in accordance with EPA monitoring requirements specified in 40 CFR Part 58. The State of Iowa's most recent *Monitoring Network Plan* was approved by EPA Region 7 in December 2010.

The Linn County Public Health Department, Air Quality Division, is authorized by the EPA to implement and enforce the Clean Air Act and the county's code on Air Quality. The Linn County Air Quality Division maintains a network of instruments and devices located throughout the Cedar Rapids metropolitan area to monitor ambient air. The nearest Air Quality Monitoring System location is 520 11th Street NW at the Abbe Center for Community Mental Health in Cedar Rapids, approximately 0.2 miles from the Bus Garage. As of August 30, 2011, no area within the State of Iowa is considered a non-attainment area for the six (6) criteria pollutants.

Table 5-1: National Ambient Air Quality Standards

Pollutant	Primary Standards		Secondary Standards	
	Level	Averaging Time	Level	Averaging Time
Carbon Monoxide	9 ppm (10 mg/m^3)	8-hour	None	
	35 ppm (40 mg/m^3)	1-hour		
Lead	0.15 mg/m^3	Rolling 3-Month Average	Same as Primary	
Nitrogen Dioxide	53 ppb	Annual (Arithmetic Average)	Same as Primary	
	100 ppb	1-hour	None	
Particulate Matter (PM_{10})	150 mg/m^3	24-hour	Same as Primary	
Particulate Matter ($PM_{2.5}$)	15 mg/m^3	Annual (Arithmetic Average)	Same as Primary	
	35 mg/m^3	24-hour	Same as Primary	
Ozone	0.075 ppm (2008 std)	8-hour	Same as Primary	
	0.08 ppm (1997 std)	8-hour	Same as Primary	
	0.12 ppm	1-hour	Same as Primary	
Sulfur Dioxide	0.03 ppm (1971 std)	Annual (Arithmetic Average)	0.5 ppm	3-hour
	0.14 ppm (1971 std)	24-hour		
	75 ppb	1-hour	None	

Source: USEPA, 2011a

Any construction activities at the Bus Garage have the potential to disturb existing asbestos containing material (ACM); see 5.5.5 and 5.5.6 for evaluation of hazardous materials. The building had pre-disaster problems with ventilation resulting in exhaust accumulation in maintenance bays evidenced by diesel soot on the ceilings.

5.1.1.1 Alternative 1 – No Action

Under the No Action Alternative, no further construction activities would take place at the Bus Garage beyond the muck-out and debris removal already undertaken. Pre-disaster indoor air quality would remain unchanged and may have levels of NAAQS in excess of primary or secondary standards that are not detectable by the existing air quality monitoring system.

5.1.1.2 Alternative 2 – Repair of Bus Garage and Contributing Facilities

Ground disturbing activities would be minimal under this alternative limiting the potential for fugitive dust. Operation of construction equipment would elevate vehicle emissions of criteria pollutants temporarily, including particulate matter, NO2, and CO; any increases are anticipated to be negligible to minor. Following construction activities, air quality levels would return to pre-disaster levels. Pre-disaster indoor air quality would

remain unchanged and may have levels of NAAQS in excess of primary or secondary standards that are not detectable by the existing air quality monitoring system.

5.1.1.3 Alternative 3 – Replace Bus Garage

This alternative would require some soil excavation for the reconstruction of the Bus Garage; thereby short-term emissions of criteria pollutants associated with heavy equipment fuel combustion are anticipated during the construction phase. The proposed action would require approximately 18 months of construction and heavy equipment including; bulldozers, scrapers, and backhoes. The operation of motor vehicles on unpaved surfaces and the use of earthmoving equipment may also generate particulate matter. The moving and handling of soil during construction would increase the potential for emissions of fugitive dust; however, any deterioration of air quality would be a localized, short-term condition that would be discontinued when the project is completed and disturbed soils have been stabilized or permanently covered. Construction activities would be required to minimize fugitive dust emissions through watering, controlling entrainment of dust by vehicles, and/or other measures to reduce the disturbance of particulate matter.

- Construction activities would be required to minimize fugitive dust emissions through watering, controlling entrainment of dust by vehicles, and/or other measures to reduce the disturbance of particulate matter.
- During site preparation and construction, the contractor would:
    - Minimize land disturbance;
    - Suppress dust on traveled paths that are not paved through wetting, use of watering trucks, chemical dust suppressants, or other reasonable precautions to prevent dust from entering ambient air;
    - Cover trucks when hauling soil;
    - Minimize soil track-out by washing or cleaning truck wheels before leaving the construction site;
    - Stabilize the surface of soil piles; and,
    - Create wind breaks.
- During site restoration, the contractor would:
    - Re-vegetate any disturbed land not used with native species in accordance with Executive Order (EO) 13112;
    - Remove unused material; and,
    - Remove soil piles via covered trucks.

5.1.2 Climate Change

Climate change encompasses changes in precipitation, sea level, temperature and other climatic variables including natural cycles and the climatic changes attributed to human actions on the environment. The EPA identifies the climate change largely associated with human actions as “abrupt climate change” occurring over decades to distinguish it from that which occurs gradually over centuries or millennia. In 2010 the CEQ issued draft guidance for Federal agencies to consider climate change in NEPA documentation. The guidance uses the EPA-defined threshold for mandatory greenhouse gas (GHG) emission reporting of 25,000 metric tons per year as a level where NEPA documents determine whether a quantitative analysis is required. This threshold is equivalent to the energy needed to power 2,300 homes for a year or the emissions from 4,600 passenger

vehicles per year (USEPA, 2009). FEMA has determined that the actions considered in this EA are incremental changes compared to the pre-disaster condition and the overall effects are expected to be significantly below this threshold.[1] The majority of GHG emissions result from industry, heating and cooling of buildings, and automobile non-point sources.

Between 1958 and 2007 amounts of very heavy precipitation has increased by 31 percent in the Upper Midwest encompassing Iowa, Missouri, Minnesota, Michigan, Illinois, Indiana, Ohio, and Wisconsin. During the same period, the Upper Midwest experienced a 27 percent increase in the average number of days with heavy precipitation defined as the heaviest one (1) percent of all events. Heavy downpours currently occurring one time in 20 years on average are projected to increase in frequency between 10 and 25 percent through the 2090s (USGCRP, 2009).

Average temperatures in the United States have increased more than two (2) degrees Fahrenheit in the last 50 years. Average temperatures in Iowa and portions of surrounding states are projected to increase by another four (4) to six (6) degrees, under low-emission models, or eight (8) to 10 degrees, under high-emission models, by the end of the century. Under current projections, Iowa can anticipate increases in flooding, heat waves, droughts, invasive plant and insect species, and insect-borne diseases (USGCRP, 2009). While data needed to predict specific events and the full range of climate impacts are still being developed, enough data is available to suggest that climatic events, such as severe storms, will be localized and will be increasingly unpredictable.

Embodied energy is a concept in measuring sustainability in terms of energy usage or carbon-equivalent inputs invested into an existing material or structure. Another measure of sustainability is life-cycle or cradle-to-grave analysis which accounts for the extraction, manufacture, distribution, use, and eventual disposal of materials. While resources exist to quantify embodied energy or life cycle analysis, the calculations were not prepared by the City for the options presented in this EA. New construction, even with incorporation of energy efficient materials and design, typically involves more embodied energy than retention and retrofit of older buildings. Advanced materials such as electronic climate controls, solar panels, and engineered building products typically require more energy intensive manufacture and installation than traditional materials. The General Services Administration (GSA) found in 1999 that the operation costs of historic buildings were 27 percent lower than more modern buildings reflecting the higher quality materials, thicker walls, and passive energy features (Frey et al., 2008).

5.1.2.1 Alternative 1 – No Action

Under the No Action Alternative, no further construction activities would take place at the Bus Garage beyond the muck-out and debris removal already undertaken. The overall embodied energy of the Bus Garage is not expected to change.

[1] The Draft EA developed by consultants on behalf of FEMA Region X for the Veronia K-12 School Project includes a quantification of GHG. This accounting found that the new 135,000 sf school with 18,000 sf in outbuilding space to be built to LEED Platinum standards would result in the emission of 152 metric tons per year of GHG, significantly below the EPA threshold. This draft EA can be found on FEMA's website at; http://www.fema.gov/library/viewRecord.do?id=4351.

5.1.2.2 Alternative 2 – Repair of Bus Garage and Contributing Facilities

Repair of Bus Garage, Transit Annex, two (2) buildings at the Sinclair Site, and reconstruction of a bus shelter are expected to result in negligible increases in embodied energy investment beyond what is necessary to restore functionality of the buildings. No change in the energy consumption of the facilities is anticipated beyond that required for construction activities.

5.1.2.2 Alternative 3 – Replace Bus Garage

According to the Cedar Rapids Tax Assessor website, the proposed building is approximately 30,000 sf which is approximately 7,000 sf larger than the existing Bus Garage. The increased square footage is anticipated to require additional heating and cooling which may require an increase in energy usage. This increase may be offset by moving functions from the Transit Annex and rendering the Transit Annex and two (2) buildings at the Sinclair Site safe and secure. This increase may also be offset depending on energy efficient design features; such features are not included in the preliminary plans received by FEMA. The increase in energy usage and embodied energy is anticipated to be a negligible to minor impact.

Salvage or recycling of unwanted and uncontaminated building components and demolition debris should be incorporated into the project to retain embodied energy invested in the components and materials, see 5.5.6 Demolition for additional discussion.

5.2 WATER RESOURCES

5.2.1 Water Quality

Congress enacted the Federal Water Pollution Control Act in 1948 which was reorganized and expanded in 1972 and became known as the Clean Water Act (CWA) in 1977, as amended. The CWA regulates discharge of pollutants into water with sections falling under the jurisdiction of the U.S Army Corps of Engineers (USACE) and the EPA. The USACE jurisdiction extends to tributaries and wetlands where a “significant [biological or chemical] nexus” exists between the resources as articulated in two recent Supreme Court decisions known as the SWANCC and Rapanos decisions. Under the National Pollution Discharge Elimination System (NPDES) the EPA regulates both point and non-point pollutant sources, including storm water and storm water runoff. Activities that disturb one (1) acre of ground or more are required to apply for an NPDES permit through the Iowa Department of Natural Resources (IDNR) as authorized by the EPA. The Wild and Scenic Rivers Act is another regulatory framework related to water resources; however there are no designated wild and scenic rivers in the State of Iowa.

The majority of Cedar Rapids is located on the west side of the Cedar River (i.e., Bus Garage, Caboose bus shelter location, and Sinclair Site) and within the Middle Cedar watershed (HUC 7080205) which includes Vinton, Waterloo, and Cedar Falls upstream. The rest of Cedar Rapids north of the Kirkwood Community College Campus is located in the Lower Cedar watershed (HUC 7080206) which extends to Columbus Junction to the southeast. The Cedar River has a history of water impairment resulting from nutrient and pathogen contamination (USEPA, 2011d). Cedar Rapids is further regulated by NPDES with a Municipal Separate Storm Sewer System (MS4) individual or general permit. MS4 permits require the City to develop and

maintain a storm water management program (SWMP) to reduce contamination of storm water and limit contamination discharges.

5.2.1.1 Alternative 1 – No Action

Under the No Action Alternative, no ground disturbance or construction activities would take place. No change to pre-disaster impacts to local water quality would occur.

5.2.1.2 Alternative 2 – Repair of Bus Garage and Contributing Facilities

Repair of the Bus Garage, Transit Annex, and the two (2) buildings at the Sinclair Site to pre-disaster condition and reconstruction of a bus shelter on 1st Street SW would involve minimal ground disturbance. Impacts to local water quality resulting from this option are anticipated to be negligible.

5.2.1.3 Alternative 3 – Replace Bus Garage

Reconstruction of the Bus Garage may disturb more than one (1) acre of ground depending on the amount of excavation required to ensure stabilized soils, utilities, and associated site work. Ground disturbing activities of one (1) acre or more require the City prepare a Storm Water Pollution Prevention Plan (SWPPP) and to obtain and comply with a NPDES permit from the IDNR (also see 5.7 Coordination and Permits). All ground disturbing activities would require site and project appropriate sediment and erosion control BMPs. Implementation of BMP and permit conditions, if required, would reduce the potential impact of this project to minor levels.

5.2.2 Wetlands

In addition to the CWA, Executive Order (EO) 11990 Protection of Wetlands requires Federal agencies to avoid, to the extent practicable, adverse impacts to wetlands. Under the CWA two (2) types of authorization are available from the USACE for activities regulated under Section 404 of the Clean Water Act: general nationwide permits, which are issued for a specific category of similar activities and include nationwide permits defined in 33 CFR Part 30, and individual permits issued after review of the project, project alternative, and proposed mitigation.

The 1987 *Corps of Engineers Wetlands Delineation Manual* provides the technical guidelines in identifying and delineating wetlands. The Corps' manual requires the presence of all three parameters (greater than 50 percent dominance of hydrophytic vegetation, evidence of hydric soils, and presence of hydrologic indicators) for an area to be considered a wetland. The U.S. Fish and Wildlife Service maintains the National Wetlands Inventory (NWI) maps including conventional maps, downloadable digital map data, dynamic online maps[2] and geographic information system (GIS) data.

The A&P Feed and Bone Gelatine/Hog Hair-Drying and Bailing building is located adjacent to a wetland between the Sinclair Site and the Cedar River. The wetland is identified as a Palustrine Forested Seasonally

[2] U.S. Fish and Wildlife Service National Wetland Inventory Geospatial Wetlands Digital Data is available at; http://www.fws.gov/wetlands/data/index.html

Flooded (PFO1C) wetland in the NWI maps. Additional wetlands are located downstream on both banks of the river; however they are located at a sufficient distance to omit from further consideration under the alternatives identified here.

5.2.2.1 Alternative 1 – No Action

Under the No Action Alternative, no impacts to wetlands are anticipated as there would be no ground disturbance or construction activities in or near known wetlands.

5.2.2.2 Alternative 2 – Repair of Bus Garage and Contributing Facilities

Repair of the Bus Garage, Transit Annex, and the two (2) buildings on the Sinclair Site and the reconstruction of a bus shelter on 1st Street SW are not anticipated to have impacts to known wetlands. No ground-disturbing activities at the Sinclair Site are anticipated, repair and restoration work within the building would not impact the adjacent wetland.

5.2.2.3 Alternative 3 – Replace Bus Garage

Replacement of the Bus Garage alternative and the rendering of the Transit Annex and the two (2) buildings on the Sinclair Site would have no direct impact to wetlands. Sediment and erosion control BMPs are required and an NPDES permit would be required if one acre or more of ground disturbance is needed for the project (see 5.7 Coordination and Permits).

5.2.3 Floodplain

EO 11988 (Floodplain Management) requires that a Federal agency avoid direct or indirect support of development within the 100-year floodplain whenever there is a practicable alternative. FEMA uses Flood Insurance Rate Maps (FIRM) to identify the floodplains for the National Flood Insurance Program (NFIP). Federal actions within the 100-year floodplain, or 500-year floodplain for critical actions, require the Federal agency conduct an 8-Step process where proposed work is beyond restoration to pre-disaster condition. This process, like NEPA, requires the evaluation of alternatives prior to funding the action. FEMA's regulations on conducting 8-Step processes are contained in 44 CFR Part 9.5. Cedar Rapids, Iowa is a participant in the NFIP with updated FIRMs promulgated in April of 2010. Historic FIRM Panel 1901870020B dated December 15, 1982 included all of the facilities addressed in this EA and was in effect as of the 2008 floods. Revised FIRM Panels for Cedar Rapids were issued April 5, 2010 with Panel 19113C0410D encompassing the facilities considered in this EA.

Under the historic FIRM Panels, the two (2) buildings at the Sinclair Site and the Caboose bus shelter were located within Zone A11 within the 100-year floodplain while the Bus Garage and the Transit Annex were located in Zone B within the 500-year floodplain. The updated FIRM Panels locate the Transit Annex, the location of the disaster destroyed Caboose bus shelter, and both buildings at the Sinclair Site in Zone AE within the 100-year floodplain. The Bus Garage and Battery Shed are located within Shaded Zone X within the 500-year floodplain. Current and historic FIRM panels for the sites are contained in Appendix A, Figures 4-7.

5.2.3.1 Alternative 1 – No Action

Under the No Action Alternative no additional work would take place beyond the muck-out activities already undertaken. No construction activities would take place; the two (2) buildings on the Sinclair Site would remain in the floodplain.

5.2.3.2 Alternative 2 – Repair of Bus Garage and Contributing Facilities

Repair of the Bus Garage would have no impact to the 100-year floodplain; however the Transit Annex and both buildings at the Sinclair Site would remain in the floodplain. Repair of those three (3) buildings would have to be evaluated under the 8-Step process if this alternative is selected and proposed work involves changing the pre-disaster footprint of the facilities. Under the repair option, flood mitigation for those three (3) buildings located in the floodplain may be considered. Repair of the three (3) buildings in the floodplain would have to be coordinated with the local Floodplain Administrator to ensure compliance with National Floodplain Insurance Program (NFIP) requirements. The disaster destroyed Caboose bus shelter would be restored as a newly constructed bus shelter outside of the 100-year floodplain south of the damaged site along 1st Street SW.

5.2.3.3 Alternative 3 – Replace Bus Garage

Rebuilding the Bus Garage would not impact the 100-year floodplain. The Transit Annex and two (2) buildings at the Sinclair Site would remain in the floodplain; these three (3) buildings would be rendered safe and secure and are not expected to further diminish floodplain values or encourage floodplain development. Use or future removal of these three (3) structures within the floodplain will need to be coordinated with the local floodplain administrator and comply with local floodplain regulations (see 5.7 Coordination and Permits).

5.3 BIOLOGICAL RESOURCES

5.3.1 Protected Species and Habitat

The Endangered Species Act (ESA) of 1973 establishes a Federal program to conserve, protect, and restore threatened or endangered plants and animals and their habitats. ESA specifically charges Federal agencies with the responsibility of using their authority to conserve threatened or endangered species. Biological consideration consisting of literature review, field reconnaissance, and map documentation were performed. A site visit was conducted on March 29, 2012.

All Federal agencies must ensure any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of an endangered or threatened species or result in the destruction of critical habitat for these species. EO 13112 prohibits Federal agencies from funding, authorizing, or carrying out actions that are likely to cause or promote the introduction or spread of invasive species in the United States.

While the Bald eagle (*Haliaeetus leucocephalus)* has been removed from the Federal threatened and endangered species list, the species is still protected by The Bald and Golden Eagle Act and the Migratory Bird Treaty Act of 1918. USFWS recommends that any work be conducted at least 660 feet from an active nest. The Cedar River corridor is conducive to Bald eagle habitat with identified nests in the area of Ellis Park and downstream from the Water Pollution Control Facility. Any construction and landscaping activities must take

place outside of the nesting season if work is closer to an active nest than the USFWS recommendation. Work may take place from August through mid-January which is outside of the nesting season.

Table 5-2: Federally Protected Species of Linn County, Iowa

Common Name	Scientific Name	Status	Potential Occurrence at Site	Reason
Indiana bat	*Myotis sodalist*	Endangered	No	No habitat
Western prairie fringed orchid	*Platanthera praeclara*	Threatened	No	No habitat
Prairie bush clover	*Lespedeza leptostachya*	Threatened	No	No habitat

5.3.1.1 Alternative 1 – No Action

The No Action Alternative would have no impact to threatened or endangered species as there would be no construction activities and no known protected species are located on or adjacent to damaged sites.

5.3.1.2 Alternative 2 – Repair of Bus Garage and Contributing Facilities

Repair of the Bus Garage and Transit Annex would have no impact to threatened or endangered species. Similarly, replacement of the bus shelter on 1st Street SW and repair of the Transit Annex is not expected to have an impact. The A&P Feed and Bone Gelatine/Hog Hair-Drying and Bailing building is located adjacent to a forested wetland along the river. While no known Bald eagle nests are in this area, it is conducive to nesting habitat. If a nest is identified within the USFWS recommended 660 feet, then the activities will be required to take place outside of nesting season.

5.3.1.3 Alternative 3 – Replace Bus Garage

Replacement of the Bus Garage is not expected to impact protected species as there are no known species located at or in close proximity to the site.

5.4 CULTURAL RESOURCES

In addition to review under NEPA, consideration of impacts to cultural resources is mandated under Section 106 of the National Historic Preservation Act (NHPA), as amended and implemented by 36 CFR Part 800. Requirements include the identification of significant cultural resources that may be impacted by the undertaking. Cultural resources are prehistoric and historic sites, structures, districts, buildings, objects, artifacts, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons.

Only those cultural resources determined to be potentially significant under NHPA are subject to protection from adverse impacts resulting from an undertaking. To be considered significant, a cultural resource must meet one or more of the criteria established by the National Park Service that would make that resource eligible for inclusion in the National Register of Historic Places (NRHP). The term “eligible for inclusion in the

NRHP" includes all properties that meet the NRHP listing criteria, which are specified in the Department of Interior regulations Title 36, Part 60.4 and NRHP Bulletin 15. Sites not yet evaluated may be considered potentially eligible for inclusion in the NRHP and, as such, are afforded the same regulatory consideration as nominated properties. Whether prehistoric, historic, or traditional, significant cultural resources are referred to as "historic properties."

For the purposes of this analysis, the term "Area of Potential Effects" (APE) as defined under cultural resources legislation, defines all historic properties that could be affected by each alternatives' actions and encompasses areas requiring ground disturbance (e.g. areas of grading, cut and fill, etc) associated with the proposed Federal undertaking. For Alternatives 1, 2, and 3 of this EA, the APE will include all sites affected by the proposed actions including the entire Bus Garage site, the Transit Annex, the site of the Caboose Bus Shelter and the two (2) structures located at the Sinclair Site.

5.4.1 Historic Structures

FEMA has considered the potential for these alternatives to affect historic structures. Various sources were checked to determine if any previously identified historic structures are located within the APE of this undertaking and to determine the potential for the APE to contain previously unidentified historic structures. This review included the NRHP and National Historic Landmarks Databases, and the Office of the State Archaeologist's (OSA) I-Sites GIS and Database, historic maps and aerial photographs available through the Iowa Geographic Map Server at Iowa State University and the University of Iowa Libraries' Iowa Digital Library.

In an effort to identify and evaluate flood affected properties, FEMA in coordination with the SHPO, Iowa Homeland Security and Emergency Management Division (IHSEMD) and the City arranged for reconnaissance surveys of the flood affected neighborhoods on the west side of the Cedar River in Cedar Rapids. In June 2009, Camilla Deiber of the Louis Berger Group completed the *Architectural Reconnaissance Survey for St. Patrick's Neighborhood in Cedar Rapids* (57-086). This survey included the commercial and residential area west of Interstate 380 to 11th Street NW and from E Avenue NW south to Second Avenue NW. The original Five Seasons Bus Garage opened in November 1949, and featured the largest radiant heat flooring system in the City at the time – designed because it, "assured warm floors for mechanics and for bus storage." The facility was constructed for its original use, and has continued to function as the central transit location for the City of Cedar Rapids for over 60 years. The facility was evaluated within the St. Patrick's survey as not NRHP eligible, and the SHPO concurred in a letter to the City of Cedar Rapids dated July 21, 2009. Furthermore, the survey did not identify any NRHP eligible historic districts or individually eligible properties immediately adjacent to the Bus Garage parcel. The Transit Annex, formerly Cedar Rapids Fire Station #2, was constructed in 1908 and was identified in the above referenced St. Patrick's survey as eligible for listing in the NRHP under Criteria A and C. The Caboose Bus Shelter, constructed from a former train caboose and located along 1st Street SW at the intersection of 5th Avenue SW was installed at that location in the 1990s and served as a bus shelter for the City Bus route along 1st Street. The Caboose Bus Shelter was inundated with up to 12 feet of contaminated flood water during the disaster, and was destroyed by the event; therefore it no longer retained sufficient integrity to be considered eligible for listing in the NRHP. The other two (2) structures within the APE of this EA include the two (2) extant buildings at the Sinclair Site, Building #9 the Main Garage and Building

#72/73 A&P Feed and Bone Gelatine/Hog Hair-Drying and Bailing, which were previously determined not NRHP eligible and the SHPO concurred with this determination.

5.4.1.1 Alternative 1 – No Action

The No Action Alternative would neither result in consolidation of functions of the Bus Garage and Transit Annex into a new facility nor would it result in demolition of the original Bus Garage in conjunction with the Federal undertaking. As the original scopes of work for the facilities within the APE included repairs to pre-disaster condition, should this alternative be selected, FEMA will be required to consult with the SHPO regarding this change in scope of work, and address any potential effects to the single NRHP eligible property within the APE, resulting from no further FEMA action.

5.4.1.2 Alternative 2 – Repair of Bus Garage and Contributing Facilities

Repair to pre-disaster condition of the Bus Garage, Transit Annex, and the Sinclair Building #9 the Main Garage and Building #72/73 A&P Feed and Bone Gelatine/Hog Hair-Drying and Bailing would be reviewed in accordance with the Programmatic Agreement developed among FEMA, SHPO, IHSEMD and the Advisory Council on Historic Preservation (ACHP) and Appendix A: Programmatic Allowances for program activities that will have limited or no effect on historic properties if implemented as specified. Any potential Hazard Mitigation considered for these facilities, if not in conformance with the Programmatic Allowances, may require consultation with the SHPO and if necessary plans to avoid, minimize, or mitigate adverse effects may be considered.

The relocation of the Caboose Bus Shelter would require further evaluation for its potential to affect historic structures depending on chosen locations and consultation with the SHPO regarding the effects of relocating the facility would be required.

5.4.1.3 Alternative 3 – Replace Bus Garage

This Alternative, the City's preferred option, will require the demolition of the original Bus Garage. As noted above, the facility has been determined not eligible for listing in the NRHP. This Improved and Alternate project consists of the demolition of this facility, and the consolidation of the function of the Transit Annex and additional funding from the Caboose Shelter and Sinclair Building #9 the Main Garage and Building #72/73 A&P Feed and Bone Gelatine/Hog Hair-Drying and Bailing.

As this Alternative has been selected as the City's preferred option, FEMA has initiated the consultation with the SHPO regarding this undertaking. In accordance with the Programmatic Agreement, FEMA identified a single property within the APE to be eligible for listing in the NRHP. The undertaking as defined in this alternative ensures that the former Fire Station #2/Transit Annex will be rendered safe and secure for the duration for the FEMA grant period of performance. In addition, as a result of a completely separate undertaking, the Iowa Economic Development Authority (IEDA), through a Community Development Block Grant (CDBG), a program funded by the Federal Housing and Urban Development (HUD) Agency, is providing funds for an adaptive reuse study for this facility. While the funding is limited to the study itself and no repairs to the facility, FEMA and the SHPO have determined that rendering the building safe and secure in conjunction

with the FEMA funded Bus Garage improved project will result in No Adverse Effect to historic properties. See Appendix C for the consultation letter dated March 12, 2012.

5.4.2 Archaeological Resources

FEMA has considered the potential for the alternatives to affect archaeological resources. Various sources were checked to determine if any previously identified archaeological sites are located within the APE of these undertakings and to determine the potential for the APE to contain previously unidentified sites. This review included the NRHP and National Historic Landmarks Databases, and the OSA I-Sites GIS and Database, historic maps and aerial photographs available through the Iowa Geographic Map Server at Iowa State University and the University of Iowa Libraries' Iowa Digital Library. According to the master inventory of archaeological sites in Iowa, no previously recorded archaeological sites are located within the APE of the Bus Garage facility; however, several previously identified sites are located within one (1) mile of the APE.

5.4.2.1 Alternative 1 – No Action

The No Action Alternative would not include any demolition or construction activities at the Bus Garage site or the other sites within the APE, therefore no ground disturbing activities would occur, and no archeological resources would be affected with the selection of the No Action Alternative.

5.4.2.2 Alternative 2 – Repair of Bus Garage and Contributing Facilities

Repair to pre-disaster condition of the Bus Garage, Transit Annex, and the Sinclair Building #9 the Main Garage and Building #72/73 A&P Feed and Bone Gelatine/Hog Hair-Drying and Bailing would be reviewed in accordance with the Programmatic Agreement developed among FEMA, SHPO, IHSEMD and the ACHP and Appendix A: Programmatic Allowances for program activities that will have limited or no effect on historic properties if implemented as specified.

For any ground disturbing activities which may result from any eligible Hazard Mitigation Proposal at any of the sites within the APE, FEMA would have to consider the effects of these ground disturbing activities and potentially open consultation with the SHPO to address those effects.

The relocation of the Caboose Bus Shelter to a new site outside of the floodplain would require further evaluation for its potential to affect archaeological resources depending on chosen locations. Archaeological investigation may be required and consultation with the SHPO regarding the effects of relocating the facility would be required. In addition, any ground disturbing activities at any of the locations within the APE that are not in conformance with the Programmatic Allowances would require review and consultation with the SHPO.

5.4.2.3 Alternative 3 – Replace Bus Garage

For any ground disturbing activities within the Bus Garage site, including the demolition of the original facility and the construction of a new larger facility, FEMA has reviewed the historic Sanborn Fire Insurance Maps and historic aerial images, and has determined that the site has been previously profoundly disturbed by the construction of the Cedar Rapids Sash and Door Company located on that site in the early 1900s and replaced in 1949 with the existing Bus Garage. The facility has had subsequent additions, and continued use as a Bus

Garage operating heavy machinery on the site. FEMA has determined that as there are no known archaeological sites within the APE, and as the area has been previously profoundly disturbed, no further archaeological review or investigation is required.

As the abandoned facilities will all be retained in place, the work required to the facilities in order to render them safe and secure has no potential to effect archaeological resources.

For any post-review discoveries: in the event that any archaeological deposits (soils, features, or any other remnants of human activity) are uncovered during the undertaking, this project shall be halted, the applicant shall stop all work immediately in the vicinity of the discovery and take reasonable measures to avoid or minimize harm to the finds. The City will inform IHSEMD immediately, will secure all archaeological findings and restrict access to the area. IHSEMD shall notify FEMA and FEMA will consult with the SHPO and the State Archaeologist of Iowa. Work in sensitive areas may not resume until consultations are completed or until an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards determines the extent and historical significance of the discovery. Work may not resume at or around the delineated archaeological deposit until the applicant is notified by IHSEMD.

5.5 SOCIOECONOMIC CONSIDERATIONS

5.5.1 Environmental Justice

On February 11, 1994, President Clinton signed Executive Order (EO) 12898, *"Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations."* The EO directs Federal agencies to focus attention on human health and environmental conditions in minority and/or low-income communities. Its goals are to achieve environmental justice, fostering non-discrimination in Federal programs that substantially affect human health or the environment, and to give minority or low-income communities greater opportunities for public participation in and access to public information on matters relating to human health and the environment. Also identified and addressed, as appropriate are, disproportionately high and adverse human health, or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States.

The Bus Garage is located at the juncture of Census Tracts 12, 22, and 23 and is fully within Census Tract 23; the disaster destroyed Caboose bus shelter is located within Census Tract 22. The two (2) buildings at the Sinclair Site are located in Census Tract 27 (Appendix A, Figure 8). The boundaries of these three (3) Census Tracts are the same as for the 2000 Census. Select demographic data used in this analysis is contained in Appendix A, Figure 9. Census Tract 23 has the largest amount of housing units by about twice as much as either Tract 22 or Tract 27; Census Tract 12 has the fewest number of housing units as of the 2010 Census counts.

Census Tracts 12 and 23 have minority populations (10.8% and 8.7% respectively) lower than the proportion of the City as a whole (12%). Census Tracts 22 and 27 have higher proportions of minority populations with a significant concentration in Census Tract 27 with more than 30 percent of the population reporting as non-white as of the 2010 Census. Census Tract 22 has a higher proportion (5.1%) of the population reporting as having Hispanic or Latino heritage than the City proportion (3.3%) as a whole. Census Tract 22 has lower median

ages for men and for women than the City as a whole while Census Tract 27 has significantly higher median ages for men and for women than the City as a whole; Census Tract 23 has a higher median age for women than the City as a whole. Census Tract 22 has a significantly lower proportion of elderly residents than the City as a whole while a higher proportion of elderly residents are located in Census Tract 27.

Census Tract 12 is most comparable to the City as a whole with regard to the proportion of the population determined to be under the poverty threshold in the 2000 Census. Census Tract 23 had the lowest proportion under the poverty threshold while Tracts 22 and 27 were significantly higher. All four (4) Census Tracts are estimated by the 2010 American Community Survey (ACS) as having higher rates of poverty than in 2000 as is the City as a whole. Census Tract 23 is estimated to have had the smallest increase in poverty rates between the four (4) Tracts is comparable to moderately higher than the City rate. Census Tract 27 is estimated to have the highest proportion of the population determined to be below the poverty threshold of the four (4) Tracts and compared to the City level and has the highest margin of error; the proportion estimated below the poverty threshold is estimated at 42.4 percent with a margin of error range between 27.2 percent to 57.6 percent.

5.5.1.1 Alternative 1 – No Action

Under the No Action Alternative, no construction activity would take place. No new impacts to the surrounding neighborhoods would be expected as compared to the existing post-flood condition. Impacts are expected to be negligible to minor and primarily associated with nuisances as addressed in 5.1.1 Air Quality, 5.5.2 Noise, 5.5.3 Land Use and Planning, and 5.5.4 Transportation.

5.5.1.2 Alternative 2 – Repair of Bus Garage and Contributing Facilities

Repair of the Bus Garage would return the facility to its pre-disaster conditions preserving any positive and negative impacts that existed prior to the disaster. Short term impacts are anticipated to be limited to construction activities with associated impacts such as air quality, transportation, and others addressed elsewhere in this document. This alternative does not displace or further encroach on low-income or minority populations as the sites had been in operation prior to the disaster.

5.5.1.3 Alternative 3 – Replace Bus Garage

Reconstruction of the Bus Garage would replace the existing building; which is predominantly brick and glass building adjacent to residential areas that transitions to the back of the site into a predominantly utilitarian structure. The replacement building is proposed to be a pre-fabricated metal building with partial brick facing. The new structure has greater massing and a more utilitarian design which may present an aesthetic impact to the surrounding neighborhood; FEMA has not evaluated such potential aesthetic impacts. Reconstruction of the facility may result in short term negative and long term positive impacts associated with removal of suspected hazardous substances, see 5.5.5 Public Health and Safety for further discussion. Short term impacts are anticipated to be limited to construction activities with associated impacts such as air quality, transportation, and others addressed elsewhere in this document. This alternative does not displace or further encroach on low-income or minority populations as the site has been operated as a transportation facility prior to the disaster.

Impacts associated with the two (2) buildings at the Sinclair Site and the Transit Annex may include perception of disinvestment in the community; opportunities for vandalism; and opportunities for squatting. These impacts may be mitigated through maintenance of the vacant facilities and periodic inspection which would reduce the impacts to minor or negligible levels.

5.5.2 Noise

As a result of the human health and welfare impacts of uncontrolled noise, the Noise Control Act was enacted in 1972. In 1982, the EPA shifted Federal noise control policy and transferred the primary responsibility of regulating noise to state and local governments. The Noise Control Act of 1972 and the Quiet Communities Act of 1978 were not rescinded by Congress and remain in effect.

The term “noise” is considered unwanted or nuisance sound and is typically measured in decibels (dB). The day-night average sound level (Ldn) is the 24-hour average sound level, in dB, obtained after the addition of 10 dB to the sound levels occurring between 10 p.m. and 7 a.m. and is used by agencies for estimating sound impacts and establishing guidelines for compatible land uses. The U.S. Department of Housing and Urban Development (HUD) regulations set acceptable noise levels at 65 Ldn or less (24 CFR Part 51). The EPA identifies a 24-hour exposure level of 70 decibels (dB) as the level of environmental noise which will prevent any measurable hearing loss over a lifetime. Likewise, levels of 55 dB outdoors and 45 dB indoors are identified as preventing activity interference and annoyance (e.g., spoken conversation, sleeping, working, recreation). The levels represent averages of acoustic energy over long periods of time such as eight (8) hours or 24 hours rather than single events. Table 5-3, below, presents some common construction equipment with their estimated noise levels and levels at various distances.

Table 5-3: Estimated Sound Levels for Construction Equipment and Attenuation at Various Distances

Equipment	Typical Noise Level (dBA) at 50 ft. from Source[1]	Estimate at 100 ft.	Estimate at 200 ft.	Estimate at 500 ft.	Estimate at 1,000 ft.
Air Compressor	81	75	69	61	55
Backhoe	80	74	68	60	54
Concrete Mixer	85	79	73	65	59
Dozer	85	79	73	65	59
Generator	81	75	69	61	55
Loader	85	79	73	65	59
Paver	89	83	77	69	63
Pneumatic Tool	85	79	73	65	59
Pump	76	70	64	56	50
Saw	76	70	64	56	50
Shovel	82	76	70	62	56
Truck	88	82	76	68	62

Source: FHWA, 2006

Noise regulations take into account sensitive receptors which are populations or land uses that may be impacted to a greater extent by increases in ambient noise levels. Sensitive receptors generally include museums, libraries, day care centers, schools, hospitals, and places of worship, among others. The Bus Garage is adjacent to residential areas as well as commercial properties. Aside from residential properties, the nearest identified sensitive noise receptor is Saint Patrick's Church located approximately 800 feet away. Saint Wenceslaus Church is the next closest receptor at approximately 860 feet from the Main Garage at the Sinclair Site.

According to the Cedar Rapids Municipal Code 56.02, any noise measured over 65 dB at any time within a commercial district is prohibited; motor vehicles or combination of vehicles with gross weight rating of 10,000 pounds or more that produce noise measured at 90 dB are prohibited in speed zones of 35 miles per hour or less; and all other vehicles that produce noise at 80 dB are prohibited in the same areas. The City also prohibits "loud and raucous noise in the vicinity of any residence or hospital which causes unreasonable distress to the occupants thereof" (62.01, Code 2011).

5.5.2.1 Alternative 1 – No Action

Under the No Action Alternative, no construction activities would take place that would affect surrounding properties. Any existing noise impacts would remain unchanged.

5.5.2.2 Alternative 2 – Repair of Bus Garage and Contributing Facilities

Repair of the Bus Garage, Transit Annex, and two (2) buildings at the Sinclair Site would be largely contained within the existing building reducing the amount of noise impacts to surrounding properties. Impacts are expected to be incremental during construction and be negligible to minor. Reconstruction of the bus shelter on 1st Street SW is not expected to increase noise in the immediate area.

5.5.2.3 Alternative 3 – Replace Bus Garage

Reconstruction of the Bus Garage would result in short-term increases in noise levels in the vicinity of the project resulting from construction activities for approximately 18 months. The impacts of noise from construction activities will be limited to day-time hours according to City regulations. Construction noise impacts to Saint Patrick's Church are expected to be negligible to minor due to decreased decibel levels over distance. Noise impacts to surrounding residential properties would require noise reduction BMP.

According to the Center for Environmental Excellence by the American Association of State Highway and Transportation Officials (AASHTO), BMPs for noise reduction include (AASHTO 2009);

- Early and frequent communication with the public;
- Planning noisier activities and equipment usage for mid-morning to mid-afternoon;
- Planning site access and staging to minimize or eliminate "back-up alarm" noise;
- Limiting equipment on site to only what is necessary;
- Imposing seasonal limitation on construction noise as spring and fall are critical times when windows are left open in residential areas;
- Using newer, "low-noise" models of equipment;
- Limiting construction activities to daylight hours; and,
- Shift work to weekends rather than weeknights.

Once construction activities are completed, noise levels should return to pre-project levels. Applying BMPs for construction noise reduction is expected to minimize the short-term adverse impacts of the project. FEMA has determined that the proposed action is expected to have no long-term adverse impacts on the noise quality of the area.

5.5.3 Land Use and Planning

The Cedar Rapids Community Development Department coordinates planning activities in the City and advises the City Council, other departments, other non-City agencies, and private stakeholders on issues of development and planning within the City. The City adopted the current comprehensive plan in 1999 which established the community's priorities including vision, objectives, and goals through 2030. See 5.5.4 Transportation for metropolitan transportation planning discussion. Land-use and zoning regulations are administered and enforced by the City of Cedar Rapids.

Prior to the 2008 flood, the City had selected the planning firm Sasaki to prepare a *Riverfront Park Master Plan*. Following the flood, the City requested that Sasaki expand its scope to explore flood recovery options as well, primarily for neighborhoods affected by the flood. The Bus Garage and Transit Annex are located within

the a areas primarily identified for housing and mixed use reinvestment by the Sasaki *Framework Plan for Reinvestment and Recovery* (*Framework Plan*) and also in the *Neighborhood Action Plan*. The Sinclair Site is identified as an area primarily identified for business and mixed use reinvestment. The process for developing the *Framework Plan* began on June 17, 2008 leading up to City Council adoption on November 12, 2008 which included three (3) public open houses.[3]

The *Neighborhood Action Plan* initiated with a kick-off meeting in January 2009 and proceeded with three (3) workshops and four (4) area meetings through May 5, 2009.[4] The *Neighborhood Action Plan* was unanimously adopted by the City Council on May 13, 2009 and unveiled to the public online on June 15, 2009. Following the adoption of the plan, additional open houses were held as part of an action plan with a Public Facilities and Parks and Recreation process consisting of events taking place between June 23, 2009 and October 6, 2009.

The Bus Garage currently occupies land between D Avenue NW and C Avenue NW along 8th Street NW with five (5) residential properties on the southwest portion of the block and opposite of the facility along 8th Street NW. The Battery Shed is located at the northwest corner of C Avenue NW and 8th Street NW, sharing the block with residential properties. The Transit Annex occupies a triangular parcel bound by E Avenue NW, C Avenue NW, and 5th Street NW. The sites occupied by the Bus Garage, Battery Shed, Transit Annex, and Caboose bus shelter are all currently zoned PUB Special Purpose Overlay District designating land owned by government entities where the City designates the permitted use of the land. The Sinclair Site is zoned I-2 designating land reserved for general industrial land uses. The land surrounding the Bus Garage is zoned on three sides for general industrial uses with the residential parcels on the same block and properties across 8th Street NW zoned as RMF-1 designating land for residential multi-family uses (Appendix A, Figures 10-11).

5.5.3.1 Alternative 1 – No Action

Under the No Action Alternative, no impacts to land use are expected.

5.5.3.2 Alternative 2 – Repair of Bus Garage and Contributing Facilities

Repair of the Bus Garage, Transit Annex, Battery Shed, bus shelter, and the two (2) buildings at the Sinclair Site would restore pre-disaster conditions consistent with previous land use and zoning.

[3] Open House 1: Analysis (July 29, 2008), Open House 2: Flood Management Options (September 11, 2008), and Open House 3: Framework for Reinvestment and Revitalization (October 16, 2008)

[4] Kick-off meeting: Community Goals (January 10, 2009), Workshop 1: Elements of a Great Neighborhood (January 31, 2009), Area Meeting 1: Assets and Opportunities (February 10, 2009), Area Meeting 2: Confirmation of Opportunities (February 24, 2009), Workshop 2: Reinvestment Scenarios (March 21, 2009), Area Meeting 3: Refined Area-Specific Scenarios (March 31, 2009), Workshop 3: Preferred Plan and Urban Design Principles (April 25, 2009), and Area Meeting 4: Initiatives and Action Items (May 5, 2009).

5.5.3.3 Alternative 3 – Replace Bus Garage

Reconstruction of the Bus Garage is expected to be consistent with the City's land use planning goals and would conform to existing zoning designations. Adaptive reuse of the Transit Annex as is being developed between the City, IEDA, and SHPO may need further evaluation for consistency with City plans and with zoning designation. If any re-zoning is needed, it would proceed through the City's standard zoning process.

5.5.4 Transportation

The Corridor Metropolitan Planning Organization (CMPO) is tasked under the 1973 Highway Act to coordinate metropolitan-wide transportation planning and investment. CMPO's most recent Lo*ng Range Transportation Plan* (*LRTP*), consistent with SAFETEA-LU (current Federal transportation legislation), Clean Air Act (CAA), and Title VI of the 1964 Civil Rights Act, was adopted July 15, 2010. E Avenue transitions from a minor arterial to principle arterial at Ellis Boulevard NW, one block north of the Bus Garage site while the rest of the roads around the site are classified as local roads.

The Level of Service for E Avenue NW west of Ellis Boulevard NW is projected to become "congesting" through 2040. The remaining roads surrounding the proposed project site are classified as "uncongested" or unclassified and are projected to remain so through 2040 (Appendix A, Figure 12).

5.5.4.1 Alternative 1 – No Action

Under the No Action Alternative, impacts to transportation are anticipated to remain unchanged from the post-disaster.

5.5.4.2 Alternative 2 – Repair of Bus Garage and Contributing Facilities

Repair of the Bus Garage, Transit Annex, and two (2) buildings at the Sinclair Site are not anticipated to have meaningful impacts to transportation services or network. Short term construction impacts to traffic on the surrounding roads are expected to be limited as the majority of the work is expected to be confined to the site. Traffic may be marginally impacted by construction equipment entering or leaving the site, however the impacts are expected to be partially mitigated by the urban street grid with the presence of alternate routes.

Restoration of a bus shelter on 1st Street SW outside of the floodplain near the disaster destroyed Caboose bus shelter furthers the multimodal and Land Use Transportation visions in the LRTP. The bus shelter would remain on the same block and on the same bus route.

5.5.4.3 Alternative 3 – Replace Bus Garage

Replacement of the Bus Garage at its current site is anticipated to have minor positive impacts to transportation services by upgrading facilities used for maintaining City buses. Short term construction impacts to traffic on the surrounding roads are expected to be limited as the majority of the work is expected to be confined to the site. Traffic may be marginally impacted by construction equipment entering or leaving the site, however the impacts are expected to be partially mitigated by the urban street grid with the presence of alternate routes.

5.5.5 Public Health and Safety

Hazardous wastes, as defined by the Resource Conservation and Recovery Act (RCRA), are defined as "a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may; (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible or incapacitating reversible illness or; (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of or otherwise managed." Hazardous materials and wastes are regulated in Iowa by a combination of Federal and state laws. Federal regulations governing the assessment and disposal of hazardous wastes include RCRA, the RCRA Hazardous and Solid Waste Amendments, Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Solid Waste Act, and the Toxic Substances Control Act.

Radon (Rn) is a naturally occurring radioactive gas that is produced by the decay of uranium found within soil, rocks, and groundwater that accumulates in enclosed spaces such as the lowest level of buildings. The U.S. Environmental Protection Agency (EPA) currently considers residential radon exposure at or above 4.0 pico Curies per liter (pCi/L) as a public health risk as an additional risk factor for development of lung cancer. The EPA provides a map for each county in the U.S. which shows the potential for elevated indoor radon levels, with Zone 1 having the highest potential for predicted average indoor screening levels greater than 4.0 pCi/L. According to the EPA's Map of Radon Zones, Linn County and the entire State of Iowa is mapped within Zone 1 (EPA, 2011b). Actual levels of radon can vary significantly from property to property, even within areas with high potential for elevated radon levels. Radon testing is the only way to determine actual radon levels within an enclosed space such as the lowest floor of a structure.

Based on the age of the Bus Garage and the Transit Annex, presence of asbestos is anticipated and coordination with the IDNR prior to demolition will be required, see 5.5.6 Demolition for additional discussion. EPA data indicates that the facility currently occupied by MidAmerican Energy neighboring the Bus Garage to the north was previously a farm machinery and equipment manufacturing facility. According to the Toxic Release Inventory (TRI) Chromium, Methyl Ethyl Ketone, Nickel, and Xylene have been used at the site as late as 2002 with some limited releases to the surrounding environment. The Bus Garage is listed as a "conditionally exempt small generator" RCRA facility by the EPA (USEPA 2012). No Environmental Site Assessment (ESA) investigation was conducted on the Bus Garage. While an underground storage tank (UST) is present on site, no known soil or groundwater contamination exists at the Bus Garage. The Sinclair Meat Packing Plant buildings contained significant amounts of asbestos; however the remaining two (2) buildings, the Main Garage (Building #9) and the A&P Feed and Bone Gelatine/Hog Hair-Drying and Bailing Building #72/73 were tested and found to not contain asbestos.

5.5.5.1 Alternative 1 – No Action

Under the No Action Alternative, no construction or demolition activities would take place. If soil or groundwater contamination is present, it would not be disturbed or discovered.

5.5.5.2 Alternative 2 – Repair of Bus Garage and Contributing Facilities

Repair of the Bus Garage and Transit Annex is not anticipated to disturb Asbestos Containing Materials (ACM) beyond what has been removed during muck-out of the buildings. If repair work is needed in areas undisturbed by muck-out activities that have already taken place, ACM must either be undisturbed, encapsulated, or properly removed and disposed by licensed contractors. Restoration of a bus shelter on 1st Street SW is not expected to disturb contaminated materials or expose the public to new sources of contamination.

5.5.5.3 Alternative 3 – Replace Bus Garage

Replacement of the Bus Garage has to potential to disturb ACM and other potential hazardous materials. The City must comply with all Federal, state, and local laws governing the removal and disposition of hazardous materials, including but not limited to ACM, and ensure that contractors working on behalf of the City are in compliance as well. Documentation of proper handling and disposal are conditions of the FEMA grant and must be received by FEMA prior to project closeout. See 5.5.6 for discussion on sub-surface contaminates.

With the movement and excavation of the shallow soils associated with the construction of this facility there is a potential for elevated concentrations of radon gas within the proposed building following construction. The project design should incorporate Radon-resistant construction appropriate to the site and overall project design as practicable; exact levels of radon present at the site can only be determined by site-specific testing. Radon-resistant construction techniques may vary for different foundations and site requirements, but in general include five key concepts:

- Gas Permeable Layer – Usually four (4) inch layer of clean gravel is used beneath the slab or flooring system to allow soil-gas to move freely;
- Plastic Sheeting – Polyethylene sheeting is placed on top of the gas permeable layer and under the slab to help prevent migration of the soil gas from entering the facility;
- Vent Pipe – A PVC pipe runs from the gas permeable layer up through the structure to the roof to safely vent radon above the facility;
- Junction Box – An electrical junction box is installed in case an electrical venting fan is needed later; and,
- Sealing and Caulking – Openings in the concrete foundation are sealed to prevent soil gas from entering the facility.

5.5.6 Demolition

The Bus Garage site is substantially developed thus any significant alteration to the site would require demolition activities. Demolition activities are regulated by Federal, state, and local laws ranging from local permits to contractor licensure to approved disposal facilities. Demolition debris is expected to be disposed of at the Cedar Rapids/Linn County Landfill #2 located at 1954 County Home Road which is authorized to receive non-friable asbestos.

The IDNR requires that structures be tested for asbestos containing material prior to demolition. If testing is not conducted, all debris or demolition material must be disposed of as if it contained asbestos. IDNR requires at

least 10 days notice prior to renovation, repairs, or demolition of asbestos contaminated structures. Cost of disposing ACM is significantly higher; in the Cedar Rapids area it is nearly three (3) times as expensive to dispose as uncontaminated debris as referenced in a recent article in the *Cedar Rapids Gazette* (Gazette, 2012).

5.5.6.1 Alternative 1 – No Action

Under the No Action Alternative, no construction or demolition activities would take place.

5.5.6.2 Alternative 2 – Repair of Bus Garage and Contributing Facilities

Under the repair alternative, selective demolition associated with muck-out activities have already been performed at the Bus Garage. Additional demolition activities, if required as part of restoring the Bus Garage, Transit Annex, and the two (2) buildings at the Sinclair Site to pre-disaster condition, would be minimal and largely contained to interior portions of the existing structures. No demolition activities are anticipated to restore a bus shelter on 1st Street SW near the former, disaster destroyed Caboose bus shelter.

5.5.6.3 Alternative 3 – Replace Bus Garage

Replacement of the Bus Garage would require complete demolition of the existing facility. No demolition activities are anticipated at the Transit Annex. The two (2) buildings at the Sinclair Site would be rendered safe and secure and are not anticipated to be demolished in the foreseeable future.

If contamination in excess of reporting requirements is met, work must stop, the site must be stabilized, and the IDNR must be contacted at Field Office #1 (563-927-2640). Work within the sensitive area cannot resume until IDNR clean-up or containment requirements are met and IDNR personnel indicate that no further assessment is needed at the site of the discovery. Contaminated soils and material must be properly disposed of and surround properties protected from being impacted between disturbance and disposal; BMP to prevent release of contaminants while in transit to a permitted disposal site must be implemented.

Salvage or recycling of uncontaminated building components and demolition debris such as crushing concrete for future use as aggregate or other uses should be implemented to mitigate the impact of demolition. Such opportunities are expected to reduce the impact of the demolition to the human environment through reducing wasted embodied energy and the premature opening and closing of cells at the landfill. Reuse of building components in the new facility could further reduce incremental impacts by reducing transportation of materials.

5.6 CUMULATIVE IMPACTS

Cumulative effects are defined by CEQ as the impact on the environment resulting from incremental impacts of evaluated actions when combined with other past, present, and reasonably foreseeable future actions, regardless of the source, such as Federal or non-Federal. Cumulative impacts can result from individually minor but collectively significant actions take over time. The City is engaged in numerous flood recovery projects including housing acquisitions, house and public building demolitions, relocation of public buildings, restoration of flood-impacted public facilities, and a City-desired flood protection system on both sides of the river. The Neighborhood Action Plan produced by Sasaki for the City does not show impacts of the projected

flood protection system on the Bus Garage or Transit Annex. However, maps included in the plan suggest redevelopment of the Sinclair Site. Under a non-FEMA project, the IEDA is funding an adaptive re-use study for the Transit Annex; this study has no other work associated with it funded under either program.

5.6.1 Alternative 1 – No Action

Under the No Action Alternative, the Bus Garage, Transit Annex, bus shelter, and the two (2) buildings at the Sinclair Site would not be restored to, at a minimum, pre-disaster function. The Bus Garage functions would continue to operate out of mucked-out and damaged facilities, continuing to compromise efficient public service of the transit system. The Transit Annex and the two (2) buildings at the Sinclair Site would remain in the 100-year floodplain in their existing, damaged state. So long as the Transit Annex retains its designation as a "historic structure" it remains exempt from National Floodplain Insurance Program regulations; any future use or work on the structure should be coordinated with the local floodplain administrator.

5.6.2 Alternative 2 – Repair of Bus Garage and Contributing Facilities

Building repairs considered in this EA would restore the functions to their pre-disaster levels. The Transit Annex would remain in the 100-year floodplain and may be used for new functions pending as yet unidentified public or private funding and uses. So long as the Transit Annex retains its designation as a "historic structure" it remains exempt from National Floodplain Insurance Program regulations; any future use or work on the structure should be coordinated with the local floodplain administrator. Restoration of the Main Garage and the A&P Feed and Bone Gelatine/Hog Hair-Drying and Bailing Building #72/73 at the Sinclair Site facilitates continued occupancy of the 100-year floodplain; restoration work should be coordinated with the local floodplain administer. The planned flood protection on the east side of the river funded in part by the U.S. Army Corps of Engineers (USACE) is anticipated to be in close proximity to the A&P Feed and Bone Gelatine/Hog Hair-Drying and Bailing Building. This building may lie within the construction area of the proposed flood protection system which may require future demolition by the USACE; coordination between the City and the USACE must happen prior to repair work under this alternative. If the flood protection structure is built, then the Main Garage may no longer be considered in the floodplain.

5.6.3 Alternative 3 – Replace Bus Garage

Bus Garage reconstruction is not expected to intersect with other on-going or near-term projects. Demolition of the existing Bus Garage building is expected to incrementally increase the amount of construction and demolition waste entering the local landfill along with debris from numerous other demolition activities. In the long-term, if the City's preferred flood protection system is built on the west side of the river, then the Transit Annex will likely no longer be considered in the floodplain. Until such time the Transit Annex would remain in the 100-year floodplain and may be used for new functions pending as yet unidentified public or private funding and uses. So long as the Transit Annex retains its designation as a "historic structure" it remains exempt from National Floodplain Insurance Program regulations; any future use or work on the structure should be coordinated with the local floodplain administrator. The planned flood protection on the east side of the river funded in part by the U.S. Army Corps of Engineers (USACE) is anticipated to be in close proximity to the A&P Feed and Bone Gelatine/Hog Hair-Drying and Bailing Building. This building may be within the construction area of the flood protection system which may require future demolition of the building by the USACE. If the flood protection is built then the Sinclair Site is anticipated to no longer be considered in the floodplain.

5.7 COORDINATION AND PERMITS

Under any of the alternatives, work that disturbs one (1) acre or more of ground must have a SWPPP developed and NPDES permit from the IDNR. Sediment and erosion control BMPs must be implemented. Any work located in the floodplain will need to be coordinated with the local floodplain administrator and must comply with City floodplain regulations. The City of Cedar Rapids will issue any required building and demolition permits to its selected contractors who will be required to abide by any associated conditions according to the City's standard processes and regulations.

If contamination in excess of reporting requirements is met, work must stop, the site must be stabilized, and the IDNR must be contacted at Field Office #1 (563-927-2640). Work within the sensitive area cannot resume until IDNR clean-up or containment requirements are met and IDNR personnel indicate that no further assessment is needed at the site of the discovery. The City must ensure compliance with all Federal, state, and local laws regarding proper removal and disposal of asbestos containing materials, lead paint, and other potential hazardous materials.

In the event that any archaeological deposits (soils, features, or any other remnants of human activity) are uncovered during the undertaking, this project shall be halted, the applicant shall stop all work immediately in the vicinity of the discovery and take reasonable measures to avoid or minimize harm to the finds. The City will inform IHSEMD immediately, will secure all archaeological findings and restrict access to the area. IHSEMD shall notify FEMA and FEMA will consult with the SHPO and the State Archaeologist of Iowa. Work in sensitive areas may not resume until consultations are completed or until an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards determines the extent and historical significance of the discovery. Work may not resume at or around the delineated archaeological deposit until the applicant is notified by IHSEMD.

6. CONCLUSION

The draft EA evaluated potentially significant resources that could be affected. The evaluation resulted in identification of no unmitigated significant impacts associated with the resources of climate, historic, cultural, geology and soils; floodplains; wetlands and water resources; biological resources; and environmental justice. Obtaining and implementing permit requirements along with appropriate Best Management Practices and mitigation measures will avoid or minimize any effects associated with the alternatives considered in this EA to below the level of a significant impact. Should no unidentified significant impacts be identified during the public comment period, FEMA recommends that a Finding of No Significant Impact (FONSI) to the human or natural environment be issued for the City's preferred alternative.

7. PARTIES CONSULTED AND REFERENCES

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