

Draft Environmental Assessment

Elementary School

Chapman Unified School District

Chapman, Kansas

FEMA-1776-DR-KS

March 2009



FEMA

U.S. Department of Homeland Security
9221 Ward Parkway, Suite 300
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CHAPMAN UNIFIED SCHOOL DISTRICT

ELEMENTARY SCHOOL

CHAPMAN, KANSAS

DRAFT

ENVIRONMENTAL ASSESSMENT

U.S. DEPARTMENT OF HOMELAND SECURITY

9221 WARD PARKWAY, SUITE 300

KANSAS CITY, MO 64114-3372

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Abbreviations and Acronyms

CFR	Code of Federal Regulations
CO	carbon monoxide
EA	Environmental Assessment
EIS	Environmental Impact Statement
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
KDHE	Kansas Department of Health and Environment
KDWP	Kansas Department of Wildlife and Parks
KSDE	Kansas State Department of Education
KVE	Kaw Valley Engineering, Inc.
NAAQS	National Ambient Air Quality Standards
NFIP	National Flood Insurance Program
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act
NO ₂	nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O ₃	ozone
PCB	polychlorinated biphenyls
pCi/L	picoCuries per liter
PM ₁₀	particulate matter with a diameter less than or equal to 10 micrometers
RCRA	Resource Conservation and Recovery Act
SHPO	State Historic Preservation Officer
SO ₂	sulfur dioxide
SWP2	Stormwater Pollution Prevention
USACE	U.S. Army Corps of Engineers
USCB	U.S. Census Bureau
USD	Unified School District
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

1.0 INTRODUCTION

As a result of severe storms, flooding and tornadoes in Kansas between May 22 and June 16, 2008, a major disaster was declared under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. § 5121-5206 (the Stafford Act). The disaster was designated as FEMA-1776-DR. One of the events that occurred during the disaster period was a tornado that struck the town of Chapman, Kansas. On the night of June 11, 2008, a tornado touched down in Chapman that damaged approximately 60 percent of the buildings in the town, including the Chapman Unified School District (USD) elementary school.

As a result of damage sustained from the tornado, Chapman USD has applied for funding under the Public Assistance Program administered by the Federal Emergency Management Agency (FEMA). In accordance with the Stafford Act, FEMA is required to review the environmental effects of the proposed action prior to making a funding decision. In accordance with 44 Code of Federal Regulations (CFR) Part 10, FEMA has prepared this environmental assessment to meet the requirements of the National Environmental Policy Act of 1969 (NEPA) and the Council on Environmental Quality's implementing regulations at 40 CFR Parts 1500-1508. The purpose of this environmental assessment is to analyze and assess the potential environmental impacts associated with the proposed action.

2.0 PURPOSE AND NEED

The original Chapman USD elementary school building was substantially damaged by the June 11th tornado. A damage assessment indicated the structure to be more than 50 percent damaged and therefore eligible for replacement. The original three-story building was 24,338 square-feet in area and housed 227 students. The damaged building will be demolished. Currently, the Chapman USD is utilizing 24 temporary buildings to serve as classrooms and administrative offices for the elementary school. The current situation is short-term in that the Chapman USD has entered into a temporary agreement for locating the temporary classroom facilities (modular trailers) on the grounds of a local church. Bussing the students to one or more of the other three elementary schools in the Chapman USD was not feasible because these facilities are too small and are currently at full capacity.

The purpose of the proposed action is to replace the damaged elementary school building with a new facility so that the Chapman USD can provide a permanent, functional and effective environment for their elementary school students and faculty.

3.0 ALTERNATIVES

3.1 ALTERNATIVES CONSIDERED AND DISMISSED

One option for the reconstruction of the Chapman USD elementary school was to rebuild on the site of the former (currently damaged) school building. This option was considered but dismissed due to the constraints at the site that don't allow for adequate space for future expansion and parking. Another reason for not rebuilding onsite is that the current location is in the 100-year floodplain of Chapman Creek. Another option that was considered but dismissed was to bus the 227 students to other schools. Bussing the students to one or more of the other three elementary schools in the Chapman USD was not feasible because these facilities are

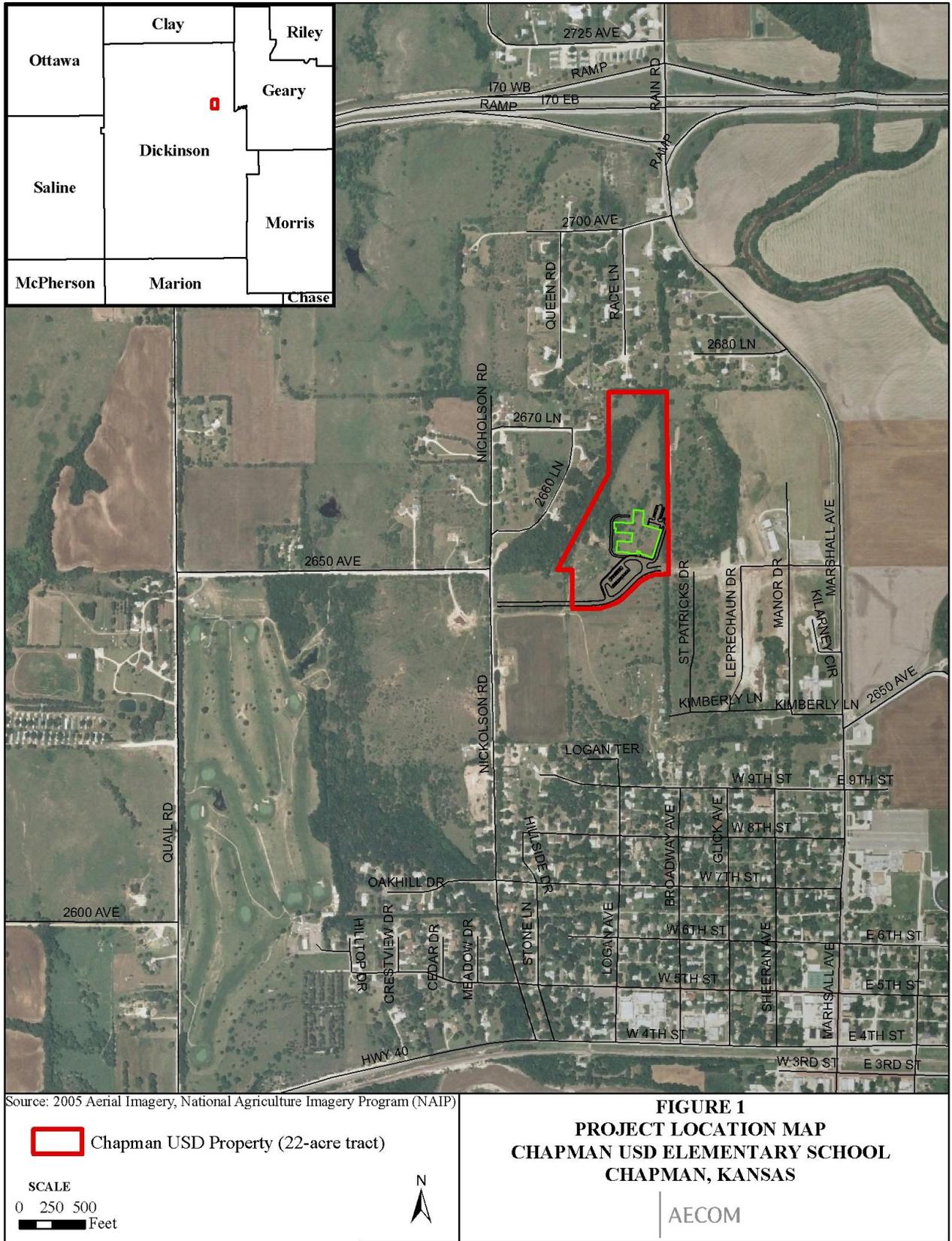
currently full. The total enrollment of the other three schools is 199. The other schools are not able to accommodate an additional 227 students. The Chapman USD, along with FEMA, determined that the most cost effective solution would be to rebuild the facility on a new site.

3.2 NO ACTION

The No Action alternative would not reconstruct the Chapman USD elementary school facility. Under this scenario, Chapman USD would continue to provide its elementary-level education program in temporary buildings but would have to seek another solution when the current two-year agreement with the local church expires. As discussed above, bussing the students to one or more of the other three elementary schools in the Chapman USD is not feasible because these facilities are currently full. The nature of the current, temporary buildings (location, size, amenities, etc.) does not provide a suitable long-term solution to the need for a new, permanent elementary school facility for the Chapman USD.

3.3 PROPOSED ACTION

The new Chapman USD elementary school would be a one-story facility 69,697 square-feet in size with a basement/safe room of 7,462 square-feet. The new facility would be located on a 21 acre tract northwest of downtown Chapman. This site was chosen because it was the only available tract outside of the floodplain, large enough and within or adjacent to the Chapman city limits. The new construction would include a parking lot (18,980 square-feet) and continuation of Irish Drive on the east side to Nicholson Road to the west (1,416 linear feet, 35 feet wide). *Figure 1* shows a layout of the planned facilities on an aerial image. The construction of the new facility would consist of site preparation (grading and/or excavation) and construction of the buildings and paved areas.



4.0 AFFECTED ENVIRONMENT AND IMPACTS

The following table summarizes the potential impacts of the proposed action, and identifies mitigation measures to minimize those impacts, where appropriate. Following the summary table, each environmental resource area is evaluated in greater detail.

Table 1
Affected Environment and Impacts Summary

Affected Environment	Impacts	Mitigation
Geology, Soils and Seismicity	The proposed action would cause some disturbance of the shallow soils and surficial geology as part of the site preparation work. Since the site is relatively flat/gently rolling, the grading needed at the site would be minor. In general, effects to geology and soils would be minor and temporary in nature.	Exposed soils could be subject to erosion, therefore, silt fence and/or other storm water runoff best management practices will be utilized during construction.
Radon	With the movement and excavation of the shallow soils and the construction of the facility there is a potential for encountering elevated concentrations of radon gas at the site.	The contractor will use radon-resistant construction techniques to minimize the potential for radon gas to migrate into the proposed elementary school.
Waters of the U.S. including Wetlands	The proposed project would not impact waters of the U.S., including wetlands, and therefore would not require a Section 404 permit. There are no navigable waters in the area; therefore, Section 10 of the Rivers and Harbors Act of 1899 does not apply.	N/A
Floodplains	The proposed action is not located in a floodplain.	N/A
Water Quality	The proposed action would disturb more than one acre, therefore would require a construction stormwater general permit from the KDHE.	The primary requirement of the general permit is for the contractor or permittee to develop and implement a Stormwater Pollution Prevention plan.
Flora and Fauna	The construction of the proposed action would result in clearing of approximately seven acres of vegetation; however the remaining 13 acres would remain as pasture. The effects to wildlife are expected to be minimal and temporary in nature.	N/A
Threatened and Endangered Species	The proposed action would have no effect on threatened and endangered species.	N/A
Migratory Birds	No adverse impacts are expected to migratory birds.	N/A

Affected Environment	Impacts	Mitigation
Cultural Resources	Coordination with the State Historic Preservation Officer concluded that the proposed project would have “no effect on historic properties.”	N/A
Socioeconomic Resources	Construction of the proposed elementary school would alleviate the crowded elementary schools and need for temporary classrooms within Chapman USD. In addition, the construction of the new elementary school is expected to create jobs in the short term.	N/A
E.O. 12898 - Environmental Justice	Benefits of the new elementary school would be equally received by residents, students and employees in the school district. Construction of the proposed project would not have an adverse effect on minority or low-income populations.	N/A
Hazardous Materials	Based on the information presented in the Phase I and II ESAs, there is no evidence of environmental degradation on the project site.	The contractor will take appropriate measures to prevent, minimize, and control the spill of hazardous materials in the construction staging area.
Noise	The proposed action would result in a slight increase in noise during the construction of the facility. The increase in noise is expected to be minor and short term. No permanent changes to noise levels in the area are expected to be associated with the proposed project.	N/A
Air Quality	Pollutant emissions from construction equipment may result in minor, temporary effects to air quality in the area immediately surrounding the construction activity. Vehicular exhaust emissions would be produced by the operation of diesel engines and other construction equipment. These effects would be localized and of short duration.	The contractor will be required to keep all equipment in good working order to minimize air pollution. After construction, the new elementary school is not expected to degrade area air quality.
Public Health and Safety	The construction of the new elementary school is expected to follow all applicable federal, state, and local safety laws and guidelines. No adverse effects to the health and safety of Chapman USD students, employees, and others associated with Chapman USD are expected.	N/A
Traffic, Circulation, Volume, and Parking Access	Access to the proposed elementary school would be provided from the west via Nicholson Road and from the east via Irish Drive. The traffic in the project area is expected to increase on weekdays during the morning and afternoon hours when parents are dropping off and picking up students from school. Construction personnel and equipment would require access to the site, which would temporarily increase traffic in the project area.	N/A

4.1 GEOLOGY

4.1.1 Geology, Soils and Seismicity

Dickinson County is located in the physiographic region known as the Flint Hills of east-central Kansas. The Flint Hills region is a wide, gently rolling landscape extending nearly 200 miles from an area near the Nebraska border on the north into Oklahoma on the south. This region represents one of last great preserves of tallgrass prairie in the country. The Flint Hills are underlain by lower Permian-aged limestone, shale and evaporates. Review of the *Map of Surficial Geology of Kansas*, indicates that the bedrock underlying the project area is mapped as the Chase Group, which consists of seven different shale and limestone formations.

The Soil Survey of Dickinson County, Kansas, indicates the soils mapped in the project area are within the Valentine-Ortello-Wells Soil Association. In general, this association consists of deep to very deep, well-drained soils that occur on nearly level to moderately steep uplands. Specifically, the main soils mapped across the majority of the project area include, Valentine loamy fine sand, 5 to 15 percent slopes, and Carwile loam, 0 to 1 percent slopes (NRCS 2008).

The Farmland Protection Policy Act (FPPA) (P.L. 97-98, Sec. 1539-1549; 7 U.S. Code 4201, et seq.) was enacted to minimize the unnecessary conversion of farmland to non-agricultural uses as a result of federal actions. The Natural Resources Conservation Service (NRCS) is responsible for protecting significant agricultural lands from irreversible conversions that result in the loss of an essential food or environmental resource. Prime farmland is characterized as land with the best physical and chemical characteristics for the production of food, feed, forage, fiber, and oilseed crops. This land is either used for food or fiber crops or is available for those crops, but is not urban, built-up land, or water areas. Unique farmland is land other than prime farmland that is used for production of specific high-value food and fiber crops, such as citrus, olives, cranberries, and other fruits and vegetables. It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality or high yields of specific crops when treated and managed according to acceptable farming methods. None of the soil units mapped on the site are classified as prime farmland or unique farmlands (NRCS 2008).

Executive Order 12699 (Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction) requires the use of appropriate seismic design and construction standards and practices for federally funded projects involving new building construction. According to the National Seismic Hazard Mapping Project, there is currently a low probability of seismic activity within the project area (USGS 2008).

Alternative A – No Action: The No Action alternative would no have any impact on the soils or geology of the area.

Alternative B – Build New Elementary School: Construction of a new elementary school at the site would cause some disturbance of the shallow soils and surficial geology as part of the site preparation work. Since the site is relatively flat/gently rolling, the grading needed at the site would be minor. Exposed soils could be subject to erosion, therefore, silt fence and/or other storm water runoff best management practices would be utilized during construction. In general, effects to geology and soils would be minor and temporary in nature. The contractor, design engineer and architect would as required by E.O. 12699 follow appropriate seismic design and construction standards and practices. Since no soils on the site are classified as prime or unique farmlands, coordination with NRCS under the FPPA was not required.

4.1.2 Radon

Radon is a naturally occurring radioactive gas that is produced by the decay of uranium found within soil, rocks, and groundwater. The U.S. Environmental Protection Agency (USEPA) currently considers residential radon exposure at or above 4.0 picoCuries per liter (pCi/L) as a public health risk. The EPA created a map for each county in the U.S. which identifies 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, Dickinson County is mapped within Zone 1 (USEPA 2008b). The information reviewed is limited in nature and should not be used other than as a guide to anticipating radon levels in any specific location. Site specific radon testing would need to be performed prior to construction of the proposed facility in order to determine whether or not radon levels are elevated. Radon-resistant construction techniques may vary for different foundations and site requirements, but in general include five key concepts:

- Gas Permeable Layer – Usually a 4-inch layer of clean gravel used beneath the slab or flooring system to allow soil-gas to move freely.
- Plastic sheeting – Polyethelene 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.
- Sealing and Caulking – Openings in the concrete foundation are sealed to prevent soil gas from entering the facility.

Alternative A – No Action: The No Action alternative would not involve any movement or excavation of soil therefore there would be no potential for adverse effects caused by elevated concentrations of radon gas.

Alternative B – Build New Elementary School: With the movement and excavation of the shallow soils associated with the construction of this facility there is a potential for encountering elevated concentrations of radon gas at the site. Therefore the contractor will use applicable radon-resistant construction techniques to minimize the potential for radon gas to migrate into the proposed elementary school.

4.2 WATER RESOURCES

4.2.1 Waters of the United States Including Wetlands

The U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or fill material into waters of the U.S., including wetlands, pursuant to Section 404 of the Clean Water Act. Wetlands are identified as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. In addition, Executive Order 11990 (Protection of Wetlands) directs federal agencies to take actions to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands on federal property. A site visit was performed by a qualified wetland specialist to identify potential waters of the U.S., including wetlands, on or adjacent to the proposed project site.

Alternative A – No Action: The No Action alternative would have no effect on wetlands or other waters of the U.S. and would not require a Section 404 permit.

Alternative B – Build New Elementary School: An onsite review of the project location did not find any potential areas meeting the definition of waters of the U.S., including wetlands. As depicted in *Figure 2*, there is an unnamed tributary of Chapman Creek located north of the proposed school location, but within the Chapman USD property (21-acre tract). This tributary did not exhibit evidence of an ordinary high water mark and therefore is not defined as a waters of the U.S.. This area would not be affected by the proposed project. The proposed project would not impact waters of the U.S., including wetlands, and therefore would not require a Section 404 permit. There are no navigable waters in the area; therefore, Section 10 of the Rivers and Harbors Act of 1899 does not apply.

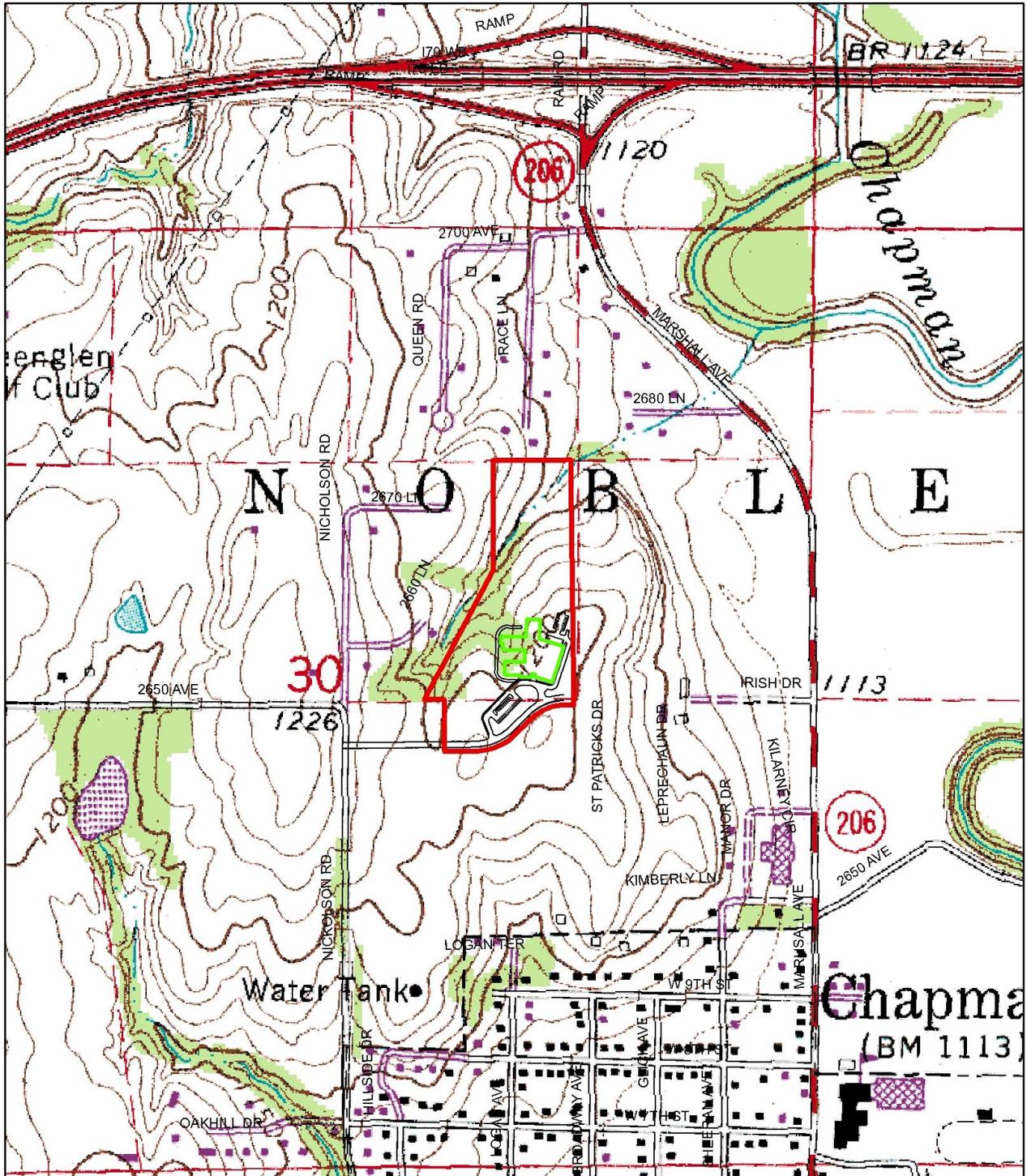
4.2.2 Floodplains

Floodplains generally refer to 100-year floodplains as set by FEMA and are delineated on Flood Insurance Rate Maps (FIRM) or Flood Hazard Boundary Maps for all communities that are members of the National Flood Insurance Program (NFIP). The City of Chapman and Dickinson County are participants in the NFIP.

Executive Order 11988 (Floodplain Management) requires federal agencies to avoid or minimize development in the floodplain except when there are no practicable alternatives. According to the NFIP Flood Insurance Rate Map for Dickinson County Incorporated and Unincorporated Areas (Map Number 20041C0085C), the proposed project site is not located within a 100 or 500 year floodplain.

Alternative A – No Action: The No Action alternative would not result in impacts to the 100 or 500 year floodplain.

Alternative B – Build New Elementary School: Under the proposed action, no impact to the floodplain is anticipated, because the site is not located in a floodplain.



Source: Kansas Geospatial Community Commons December 2008

Chapman USD Property (22-acre tract)

SCALE
0 250 500
Feet



FIGURE 2
USGS TOPOGRAPHIC MAP
CHAPMAN USD ELEMENTARY SCHOOL
CHAPMAN, KANSAS

AECOM

4.2.3 Water Quality

The Kansas Department of Health and Environment (KDHE) is responsible for administering the state's stormwater management program. The Kansas stormwater program is closely modeled after the federal National Pollutant Discharge Elimination System (NPDES) program, which requires stormwater be treated to the maximum extent practicable. Owners or operators of any project or combination of projects who engage in construction activities which will disturb one or more acres must have authorization to discharge stormwater runoff under the construction stormwater general permit S-MCST-0701-1.

Alternative A – No Action: The No Action alternative would have no effect water quality.

Alternative B – Build New Elementary School: The proposed action would have no adverse impacts to ground or surface water quality. The City of Chapman Utilities Department would supply the proposed elementary school with drinking water. The proposed action would disturb more than one acre, therefore would require a construction stormwater general permit from the KDHE. The primary requirement of the general permit is for the contractor or permittee to develop and implement a Stormwater Pollution Prevention (SWP2) plan. When the project is complete and final stabilization of the site has been achieved, the contractor must notify KDHE to terminate the authorization to discharge stormwater runoff.

4.3 BIOLOGICAL RESOURCES

4.3.1 Flora and Fauna

According to the Ecoregions of Nebraska and Kansas, the project area is located in the Central Great Plains within the Smoky Hills ecoregion (Chapman 2001). This region is transitional, with a variable climate and natural vegetation ranging from tall-grass prairie in the east to mixed-grass prairie in the west. Land use consists of cropland and grassland with dry-land winter wheat as the principal crop. The average precipitation ranges from 24 to 28 inches per year.

The project site is located on agricultural land currently used for cattle grazing. It consists primarily of upland grasses with a wooded area along an unnamed tributary of Chapman Creek which runs along the northern portion of the Chapman USD property (21-acre tract). The herbaceous community is dominated by little bluestem (*Schizachyrium scoparium*) and other prairie grasses. The wooded area along the drainage on the project site is dominated by Osage Orange (*Maclura pomifera*).

Wildlife occurring in the project area is expected to be typical of the location and geologic make-up of eastern Kansas. According to the KDWP, several wildlife species are abundant in Kansas including white-tailed deer, wild turkey, coyotes, bobwhite quail, ring-necked pheasant and prairie chickens. Migratory birds common to Kansas are doves, rails, snipe, ducks, crows, teal, sandhill crane, geese and woodcock.

The Fish and Wildlife Coordination Act was enacted to protect fish and wildlife when federal actions result in control or modification of a natural stream or body of water. No streams or other water bodies would be controlled or modified as a result of the proposed action; therefore, the Fish and Wildlife Coordination Act is not applicable.

Alternative A – No Action: The No Action alternative would have no effect on the flora and fauna.

Alternative B – Build New Elementary School: The construction of the proposed action would result in clearing of approximately seven acres of vegetation; however the remaining 13 acres would remain as pasture. The effects to wildlife are expected to be minimal and temporary in nature.

4.3.2 Threatened and Endangered Species

The Endangered Species Act of 1973 provides for the protection of all listed threatened and endangered species from take defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." Harm is further defined by U.S. Fish and Wildlife Service (USFWS) to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering. Harass is defined by the USFWS as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering.

Rare species protection was implemented within the State of Kansas by the Kansas Nongame and Endangered Species Act of 1975. This act provided the state authority to define and list endangered and threatened species. Endangered species are any species of wildlife whose continued existence as a viable component of the state's wild fauna is determined to be in jeopardy. Threatened species are any species of wildlife that appear likely, within the foreseeable future, to become an endangered species. These designations protect the animal from commercial or personal possession. The law also gives authority to the Kansas Department of Wildlife and Parks to review projects requiring a state or federal permit or those funded by tax revenues. This process is designed to safeguard listed wildlife.

The USFWS lists one species as endangered in Dickinson County, the Topeka shiner (*Notropis topeka*) (USFWS 2008). The KDWP lists the following six species as threatened in Dickinson County: Bald Eagle (*Haliaeetus leucocephalus*), Eastern Spotted Skunk (*Spilogale putorius*), Piping Plover (*Charadrius melodus*), Snowy Plover (*Charadrius alexandrinus*), Sturgeon Chub (*Macrhybopsis gelida*), and Topeka Shiner; and the following five species as endangered in Dickinson County: American Burying Beetle (*Nicrophorus americanus*), Eskimo Curlew (*Numenius borealis*), Least Tern (*Sterna antillarum*), Peregrine Falcon (*Falco peregrinus*), and the Whooping Crane (*Grus Americana*) (KDWP 2008a).

**Table 2
Federal and State Listed Threatened/ Endangered Species in Dickinson County, Kansas**

Common Name	USFWS Status	KDWP Status	Comments
American Burying Beetle	–	Endangered	Not recorded in Dickinson County. Historical occurrence in adjacent county.
Bald Eagle	–	Threatened	Migratory/ Transient Species
Eastern Spotted Skunk	–	Threatened	Known historic range in Dickinson County but no state designated critical habitat.
Eskimo Curlew	–	Endangered	Migratory/ Transient Species
Least Tern	–	Endangered	Migratory/ Transient Species
Peregrine Falcon	–	Endangered	Migratory/ Transient Species
Piping Plover	–	Threatened	Migratory/ Transient Species
Snowy Plover	–	Threatened	Migratory/ Transient Species
Sturgeon Chub	–	Threatened	No perennial streams present in project area.

Common Name	USFWS Status	KDWP Status	Comments
Topeka Shiner	Endangered	Threatened	No perennial streams present in project area.
Whooping Crane	–	Endangered	Migratory/ Transient Species

Sources: USFWS 2008, KDWP 2008a, KDWP 2008b

Alternative A – No Action: The No Action alternative would have no effect on threatened or endangered species.

Alternative B – Build New Elementary School: Both the KDWP and USFWS lists of endangered, threatened, proposed and candidate species for Dickinson County were reviewed on December 1, 2008 and a field visit of the project area occurred on December 3, 2008. If any of the avian species defined above as migratory/transient were to occur in the project area they would likely be transitory, due to the lack of the vegetation or landscapes typically used for resting or feeding present in the project area. In regard to the two fish described above, there are no perennial streams located in the project area and the closest perennial stream is Chapman Creek which is located approximately 0.4 mile north-east of the proposed project. The American burying beetle has never been recorded in Dickson County, but has been recorded in Saline County which shares its eastern border with Dickinson County. The Eastern spotted skunk has been documented in Dickinson County, however there is no state designated critical habitat present. The proposed action would have no effect on threatened and endangered species.

4.3.3 Migratory Birds

The Migratory Bird Treaty Act provides that it is unlawful for anyone to kill, capture, collect, possess, buy, sell, trade, ship, import or export, any migratory bird, or part, or nest or egg thereof, unless they first obtain an appropriate Federal Permit, issued pursuant to the Migratory Bird Treaty Act regulations, authorizing such activity.

Alternative A – No Action: The No Action alternative would have no effect on migratory birds.

Alternative B – Build New Elementary School: No adverse impacts are expected to migratory birds.

4.4 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, as amended and as implemented by 36 CFR Part 800. Requirements include the need to identify significant historic properties that may be impacted by the proposed action or alternatives within the project’s area of potential effect. Historic properties are defined as archeological sites, standing structures, or other historic resources listed in or determined eligible for listing in the National Register of Historic Places. If adverse effects on historic, archeological, or cultural properties are identified, then agencies must consider effects of their activities and attempt to avoid, minimize, or mitigate the impacts to these resources.

Alternative A – No Action: The No Action alternative would have no effect on cultural resources in the area.

Alternative B – Build New Elementary School: Coordination with the State Historic Preservation Officer (SHPO) concluded that the proposed project would have “no effect on historic properties” (see letter in *Appendix A*). However, if artifacts or other potential historic materials are discovered during construction, work would be suspended and the applicant would contact the Kansas State Historic Preservation Officer and the FEMA Regional Environmental Officer.

4.5 SOCIOECONOMIC RESOURCES

The City of Chapman, population 1,241 and per capita income of \$16,842, is located in Dickinson County (USCB 2000). According to the U.S. Census Bureau, Dickinson County has a population of 19,344 and a per capita income of \$17,780. The primary industries in Dickinson County are related to agriculture.

The Chapman USD provides education for about 973 students in grades pre-kindergarten through twelve (KSDE 2009). Chapman USD operates six schools including four elementary schools, one middle school and one high school. Those employed at these schools consist of teachers, administrative staff, food service and maintenance workers.

Alternative A – No Action: The No Action alternative could possibly have an adverse impact on Chapman USD, and consequently the community within Chapman USD because the lack of a fourth elementary school could hinder educational processes.

Alternative B – Build New Elementary School: Currently, the Chapman USD is utilizing temporary buildings to serve as classrooms and administrative offices for the elementary school. Construction of the proposed elementary school would alleviate the crowded elementary schools and the need for temporary classrooms within Chapman USD. In addition, the construction of the new elementary school is expected to create jobs in the short term.

4.5.1 Executive Order 12898, Environmental Justice

On February 11, 1994, President Clinton signed Executive Order 12898, entitled “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations”. The Executive Order directs federal agencies to focus attention on human health and environmental conditions in minority and/or low-income communities. The Executive Order’s goals are to achieve environmental justice, fostering non-discrimination in federal programs that substantially affect human health or the environment. It also requires that agencies identify and address, as appropriate, disproportionately high and adverse human health or environmental effects on its programs, policies, and activities on minority populations and low-income populations in the United States.

The population within the Chapman USD is made up of 92.91% white, 3.29% Hispanic, 2.06% African American and 1.75% other (KSDE 2009). From 2007-2008, 33.20% of the students within the Chapman USD were classified as economically disadvantaged. For the same time period, all school districts within Kansas had an average of 38.67% of students classified as economically disadvantaged. The economically disadvantaged classification indicates eligibility for participation in federal and other public assistance programs. This indicator is used to measure family income levels within schools and school districts.

Alternative A – No Action: The No Action alternative would not have disproportionate impacts on minority or low-income populations in the City of Chapman or Dickinson County.

Alternative B – Build New Elementary School: Benefits of the new elementary school would be equally received by residents, students and employees in the school district. Construction of the proposed project would not have an adverse effect on minority or low-income populations.

4.6 HAZARDOUS MATERIALS

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 Kansas by a combination of federal laws 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, Solid Waste Act, and Toxic Substances Control Act.

Pursuant to RCRA, a review of previous available environmental documents was conducted to determine the potential for environmental degradation in the project area due to past practices and activities that have occurred on the site or adjacent sites which could potentially impact the site. The environmental documents reviewed were prepared by Kaw Valley Engineering, Inc. of Lenexa, Kansas and included the following: *Revised Phase I Environmental Site Assessment, Chapman Elementary School, Irish Drive and Saint Patrick’s Drive, Chapman, Kansas*, dated October 31, 2008 and *Limited Phase II Environmental Site Assessment, Chapman Elementary School, Irish Drive and Saint Patrick’s Drive, Chapman, Kansas*, dated December 11, 2008. The Phase I Environmental Site Assessment (ESA) included a review of regulatory databases compiled on September 24, 2008. The regulatory databases provide information regarding the presence of regulated facilities in the project area that may generate, transport, store and/or dispose of hazardous materials, and if any of these facilities are listed as having a past or present record of environmental impact or are under investigation for an environmental impact. Review of the regulatory databases did not reveal regulated sites within the prescribed radius to the project site.

The Phase I ESA did not reveal recognized environmental conditions at the project site, except for the following: a surface dump area located on the southwest portion of the Chapman USD property. Discarded items in this area include old paint cans, 55-gallon drums, two 1,000-gallon storage tanks, old automobiles and parts, farming equipment, refrigerators, tires, scrap metal, and numerous other miscellaneous items. In addition, a closed landfill, owned by the City of Chapman, is located offsite to the immediate southwest of the Chapman USD property. The landfill was reported to be in operation from about 1958 to the early 1970s. The landfill disposal procedures at the time included the digging of a long trench, dumping waste, periodically burning the waste, covering with soil, and the excavation of a new trench once full. The adjacent closed landfill is currently covered with soil and natural vegetation with no evidence of waste exposed at the surface. Surface drainage and probable groundwater movement from the closed city landfill was reported to be along the west side of the subject property and then crossing the subject property at the north end. A Phase II ESA was recommended to evaluate the potential of contamination of the site due to past usages.

The Phase II ESA was conducted on November 18, 2008 and included the advancement of six soil borings on the Chapman USD property. Two soil borings were advanced in the vicinity of the City’s former landfill located near the southwest corner of the property, three in the area of the surface dump area on the southwest portion of the property, and one in the drainage located on the north end of the property. The six borings were advanced to depths ranging from 3.0 to 15.0 feet below ground surface and groundwater was not encountered while drilling. A total of 11 soil samples were collected from the six borings and submitted to the laboratory

for analysis. None of the soil samples collected were found to be above the clean-up values of the Kansas Department of Health and Environment's applicable health-based regulatory cleanup standards.

The above environmental document review was also supplemented with a site reconnaissance of the project area. The site reconnaissance was performed to identify obvious visual indications of present or past activities which have or could have contaminated the site. Other than the discarded items noted in the surface dump area on the southwest portion of the Chapman USD property, no other evidence of potentially hazardous materials, substances, or recognized environmental conditions were observed. The discarded items are considered waste and would be disposed in an appropriate permitted landfill prior to the sale of the property. The subject property is not listed on any of the federal or state regulatory databases reviewed and no regulated facilities or businesses of environmental concern are listed in the general area. No evidence of overhead electrical transformers potentially containing polychlorinated biphenyls (PCBs) was noted during our site reconnaissance. In addition, no indications of pipelines crossing the project area were noted in the field or on the USGS topographic map reviewed for this project (USGS 1979).

Alternative A – No Action: The No Action alternative would not disturb any hazardous materials or create any potential hazard to human health.

Alternative B – Build New Elementary School: Chapman USD has performed a Phase I and II ESA on the proposed site. The objective of these investigations were to evaluate the potential for contamination on the site due to past usages on the site and the adjacent property. The results of the soil analysis completed during the Phase II ESA were found to be below the clean-up values of the Kansas Department of Health and Environment's applicable health-based regulatory cleanup standards. Based on this information, there is no obvious evidence of environmental degradation on the subject property. If hazardous constituents are unexpectedly encountered during construction, all construction activities will cease and FEMA will be contacted regarding the future eligibility of this project. The contractor will take appropriate measures to prevent, minimize, and control the spill of hazardous materials in the construction staging area.

4.7 NOISE

Noise is generally defined as an unwanted sound. Noise sources in the project area are typical of agricultural areas, primarily farm vehicles. Noise levels within and adjacent to the project would increase during the proposed construction activities as a result of construction and earth-moving equipment. The noise levels generated would be limited to workday daylight hours for the duration of the work.

Alternative A – No Action: The No Action alternative would not result in impacts to noise receivers in the area.

Alternative B – Build New Elementary School: The proposed action would result in a slight increase in noise during the construction of the facility. The increase in noise is expected to be minor and short term. No permanent changes to noise levels in the area are expected to be associated with the proposed project.

4.8 AIR QUALITY

The Clean Air Act, which was last amended in 1990, requires USEPA to set National Ambient Air Quality Standards (40 CFR part 50) for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly.

Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

The USEPA has established National Ambient Air Quality Standards (NAAQS) for six principal pollutants called criteria pollutants. These pollutants include sulfur dioxide (SO₂), particulate matter with a diameter less than or equal to 10 micrometers (PM₁₀), carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), and lead.

The USEPA has designated specific areas as NAAQS attainment or non-attainment areas. Attainment areas are any areas that meet ambient air quality standards. Non-attainment areas are any areas that do not meet (or that contribute to ambient air quality in a nearby area that does not meet) the quality standard for a pollutant. According to the USEPA, the entire State of Kansas is currently designated as an “attainment” area for all NAAQS (USEPA 2008a).

Alternative A – No Action: The No Action Alternative would have no effect on air quality.

Alternative B – Build New Elementary School: Pollutant emissions from construction equipment may result in minor, temporary effects to air quality in the area immediately surrounding the construction activity. Vehicular exhaust emissions would be produced by the operation of diesel engines and other construction equipment. These effects would be localized and of short duration. The contractor would be required to keep all equipment in good working order to minimize air pollution.

4.9 PUBLIC HEALTH AND SAFETY

Safety and security issues that were considered in this environmental assessment include the health and safety of area residents, the public at-large, and the protection of personnel involved in activities related to the implementation of the proposed project.

Alternative A – No Action: The No Action alternative would not likely have an adverse effect on health and safety.

Alternative B – Build New Elementary School: The construction of the new elementary school is expected to follow all applicable federal, state, and local safety laws and guidelines. No adverse effects to the health and safety of Chapman USD students, employees, and others associated with Chapman USD are expected.

4.10 TRAFFIC CIRCULATION, VOLUME, AND PARKING ACCESS

The proposed project is located near the intersection of 2650 Avenue and Nicholson Road just north of the Chapman city limits. The project is bounded by I-70 on the north, Highway 40 on the south, Quail Road on the west and Marshall Avenue/Highway 206 on the east.

Alternative A – No Action: The No Action alternative would have no effect on transportation in the area.

Alternative B – Build New Elementary School: Access to the proposed elementary school would be provided from the west via Nicholson Road and from the east via Irish Drive. The traffic in the project area is expected to increase on weekdays during the morning and afternoon hours when parents are dropping off and picking up students from school. Construction personnel and equipment would require access to the site, which would temporarily increase traffic in the project area.

5.0 CUMULATIVE IMPACTS

Cumulative impacts are those effects on the environment that result from the incremental effect of an action when added to past, present, and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

There are several projects planned and currently under construction within the tornado damaged portion of the City of Chapman. These repair and reconstruction activities would be expected to cause temporary inconveniences resulting from construction traffic, detours, noise and dust. In addition, these projects would be expected to create jobs in the short term. On a cumulative basis, these impacts would be short-term and localized until the reconstruction process has been completed.

There is no master plan for the City of Chapman (T. Hummel, City of Chapman, February 25, 2009). There is a new housing development currently being developed adjacent to the proposed new school location. Plans for access to this new development and local streets are being coordinated and developed. The location for the new elementary school does not conflict with planning or zoning requirements of the City of Chapman.

The Chapman USD school system has an enrollment of approximately 1000 students. The facilities include four elementary schools, one middle school and one high school. The three facilities within Chapman (elementary school, middle school and high school) were damaged by the June 11th tornado. The overall plan of the school district is to repair/reconstruct the middle school and high school in place and, as discussed in this document, reconstruct the elementary school on a new location. The cumulative effects of reconstructing the elementary school are beneficial considering the intent of Chapman USD to maintain K-12 educational facilities in the City Chapman. The beneficial effects also extend to parents and students who reside within and near Chapman who attend these facilities.

6.0 PUBLIC INVOLVEMENT

The public was invited to comment on the proposed action and the Draft Environmental Assessment. A legal notice was posted in The Abilene Reflector-Chronicle on March 6, 2009, and on FEMA's website (<http://www.fema.gov/plan/ehp/envdocuments/index.shtm>). Additionally, the Draft Environmental Assessment was made available for review for a period of 30 days at the Chapman USD District Office located at 413 North Marshall, Chapman, Kansas. A copy of the notice is attached in *Appendix B*.

7.0 COORDINATION AND PERMITS

The following agencies and organizations were contacted and asked to comment on the proposed project. Agency correspondence is located in *Appendix A*.

- Kansas State Historic Preservation Office
- Chapman Unified School District

In accordance with applicable local, state, and federal requirements, the applicant is responsible for obtaining any necessary permits or approvals prior to commencing construction at the proposed project site.

The proposed action would require a construction stormwater general permit S-MCST-0701-1 from the KDHE.

8.0 CONCLUSION

The findings of this Environmental Assessment conclude that the proposed construction of the proposed elementary school would result in no significant environmental impacts to the human or natural environment; therefore, the proposed action meets the requirements of a Finding of No Significant Impact (FONSI) under NEPA and the preparation of an Environmental Impact Statement will not be required.

9.0 REFERENCES

- Chapman, S., et. al. 2001. Ecoregions of Nebraska and Kansas (color poster with map, descriptive text, summary tables, and photographs). Reston Virginia, U.S. Geological Survey (map scale 1:1,950,000).
- Kansas Department of Wildlife and Parks (KDWP). 2008a. Dickinson County – Threatened and Endangered Species. Available at <http://www.kdwp.state.ks.us/news/Other-Services/Threatened-and-Endangered-Species/Threatened-and-Endangered-Species/County-Lists/Dickinson-County> (viewed on December 18, 2008).
- Kansas Department of Wildlife and Parks (KDWP). 2008b. Species Information. Available at <http://www.kdwp.state.ks.us/news/Other-Services/Threatened-and-Endangered-Species/Threatened-and-Endangered-Species/Species-Information> (viewed on December 18, 2008).
- Kansas State Department of Education (KSDE). 2009. Report Card 2007-2008 – USD Chapman 473. Available at http://online.ksde.org/rcard/district.aspx?org_no=D0473. (viewed on January 8, 2009).
- Kaw Valley Engineering, Inc. (KVE). 2008a. Revised Phase I Environmental Site Assessment, Chapman Elementary School, Irish Drive and Saint Patrick’s Drive, Chapman, Kansas. October 31, 2008.
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- Meriam, D.F., 1963. The Geologic History of Kansas, originally published in the Kansas Geological Survey Bulletin 162, <http://www.kgs.ku.edu/Publications/Bulletins/162/index.html> [viewed on December 30, 2008].
- Natural Resource Conservation Service (NRCS). 2008. Soil Survey of Dickinson County, Kansas. Web Soil Survey 2.1, <http://websoilsurvey.nrcs.usda.gov/app/> (viewed on December 30, 2008).
- Petersen, M.D., and others. 2008. United States National Seismic Hazard Maps: U.S. Geological Survey Fact Sheet 2008–3018, 2 p.
- U.S. Census Bureau (USCB). 2000. U.S. Census Bureau – American Fact Finder – Census 2000 Demographic Profile Highlights. Available at <http://factfinder.census.gov>. (viewed on January 8, 2009).
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- U.S. Environmental Protection Agency (USEPA). 2008b. EPA Map of Radon Zones. Available: <http://www.epa.gov/radon/zonemap.html> (viewed on December 2008).
- U.S. Fish and Wildlife Service (USFWS). 2008. Endangered, Threatened, Proposed and Candidate Species – Kansas Counties. USFWS Ecological Services Kansas Field Office. December 2008.
- U.S. Geological Survey (USGS). 1964. Topographic Map, 7.5-minute Series, Chapman, Kansas, dated 1964.
- U.S. Geological Survey (USGS). 1979. Topographic Map, 7.5-minute Series, Chapman, Kansas, dated 1964, photorevised 1979.
- U.S. Geological Survey (USGS). 2008. Earthquake Hazards Program, National Hazards Seismic Maps. Available: <http://eqhazmaps.usgs.gov/> (viewed on December 30, 2008).

10.0 LIST OF PREPARERS

Carlos Swonke, P.G., Senior Project Manager, AECOM, Austin Texas

Tricia Bruck, Environmental Scientist, AECOM, Austin Texas

Doug Zarker, P.G., Project Manager, AECOM, Austin Texas

APPENDIX A
Agency Coordination

KANSAS

KSR&C No. 08-11-034

Kansas State Historical Society
Cultural Resources Division

KATHLEEN SEBELIUS, GOVERNOR

November 6, 2008

Daniel Crouch
Bowman Bowman Novick Inc
228 Poyntz Avenue
Manhattan KS 66502

RECEIVED
NOV 10 2008
BOWMAN BOWMAN NOVICK, INC.
MANHATTAN, KANSAS

RE: USD 473 New Elementary School Location
City of Chapman
Dickinson County

Dear Mr. Crouch:

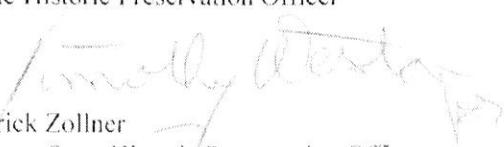
The Kansas State Historic Preservation Office has reviewed its cultural resources files for the area of the above referenced project in accordance with 36 CFR 800. The project as proposed should have no effect on properties listed on the National Register of Historic Places or otherwise identified in our files. This office has no objection to implementation of the project.

Any changes to the project area that include additional ground disturbing activities will need to be reviewed by this office prior to beginning construction. If construction work uncovers buried archeological materials, work should cease in the area of the discovery and this office should be notified immediately.

This information is provided at your request to assist you in identifying historic properties, as specified in 36 CFR 800 for Section 106 consultation procedures. If you have questions or need additional information regarding these comments, please contact Tim Weston 785-272-8681 (ex. 214). Please refer to the Kansas Review & Compliance number (KSR&C#) above on all future correspondence relating to this project.

Sincerely,

Jennie Chinn
State Historic Preservation Officer


Patrick Zollner
Deputy State Historic Preservation Officer

APPENDIX B
Public Notice

U.S. Department of Homeland Security
9221 Ward Parkway, Suite 300
Kansas City, Missouri, 64114-3372



FEMA

PUBLIC NOTICE OF AVAILABILITY
CHAPMAN UNIFIED SCHOOL DISTRICT ELEMENTARY SCHOOL
ENVIRONMENTAL ASSESSMENT
CHAPMAN, DICKINSON COUNTY, KANSAS
FEMA-1776-DR-KS

Interested parties are hereby notified that the Federal Emergency Management Agency (FEMA) has prepared a Draft Environmental Assessment (DEA) for the construction of a new elementary school within the Chapman Unified School District (USD). The original elementary school was destroyed by a tornado on June 11, 2008. FEMA was authorized under a Presidential disaster declaration (FEMA-1776-DR-KS) to provide Federal disaster assistance to Chapman USD in Dickinson County, Kansas as a result of damages incurred during the incident period beginning on May 22, 2008 and ending June 16, 2008 (Section 408 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 USC 5121-5206, as amended (Stafford Act, Public Law 93-288).

The new facility would be located on a 21 acre tract northwest of downtown Chapman. The new Chapman USD elementary school would be a one-story facility 69,697 square-feet in size with a basement/safe room of 7,462 square-feet. The new construction would include a parking lot and continuation of Irish Drive on the east side to Nicholson Road to the west.

In compliance with the National Environmental Policy Act (42 U.S.C. 4371 *et seq.*), and associated environmental statutes, a DEA has been prepared to evaluate the proposed action's potential impacts on the human and natural environment. The DEA summarizes the purpose and need, site selection process, affected environment, and potential environmental consequences associated with the proposed action. The DEA is available for review between March 6, 2009 to April 4, 2009 at the Chapman USD District Office located at 413 North Marshall, Chapman, Kansas. The DEA can also be viewed and downloaded from FEMA's website at <http://www.fema.gov/plan/ehp/envdocuments/index.shtm>. Written comments on the DEA can be faxed to FEMA's Regional Office in Kansas City, Missouri at (816) 283-7018. Comments should be received no later than 5:00pm on April 4, 2009. If no substantive comments are received, the DEA will become final and this initial Public Notice will also serve as the final Public Notice. The DEA will then be moved to the archives page at http://www.fema.gov/plan/ehp/envdocuments/archives_index.shtm.