PUBLIC DRAFT

ENVIRONMENTAL ASSESSMENT

OF THE PROPOSED
ACQUISITION, DEVELOPMENT AND OPERATION OF THE

NATIONAL VETERANS BURIAL GROUND

CEDAR CITY, IRON COUNTY, UTAH

DEPARTMENT OF VETERANS AFFAIRS

425 I STREET, NW
WASHINGTON, DC 20001

PREPARED BY:

TTL Associates, Inc.

MAY 31, 2018

ENVIRONMENTAL ASSESSMENT
ABSTRACT

LEAD AGENCY:	Department of Veterans Affairs (VA)
COOPERATING AGENCIES:	None
TITLE OF PROPOSED ACTION:	Proposed National Veterans Burial Ground
AFFECTED JURISDICTION:	Cedar City, Iron County, Utah
POINT OF CONTACT:	Ms. Marianne Marinucci, Realty Specialist, CFM Office of Real Property, Department of Veterans Affairs, 425 I Street, NW, Room 6W214B, Washington DC 20001; Email: Marianna.Marinucci@va.gov; Tel.: (202) 632-5468
PROPONENTS:	Department of Veterans Affairs (VA)

DOCUMENT DESIGNATION: Draft Environmental Assessment (Draft EA)

ABSTRACT: This Draft Environmental Assessment (Draft EA) evaluates the Proposed Action of the Department of Veterans Affairs (VA) to acquire, develop, operate, and maintain a site in the Cedar City, Iron County, Utah area as a new National Veterans Burial Ground (rural National Veterans Cemetery). This EA discusses two alternatives: (1) *Preferred Action Alternative* – Acquire approximately eight acres (net five acres) of unimproved land located approximately 400 feet west of Scenic Drive and an entrance ramp for Interstate 15 in Cedar City to develop, operate, and maintain as a new National Veterans Burial Ground; and (2) the *No Action Alternative*. This Draft EA evaluates possible effects to aesthetics; air quality; cultural resources; geology and soils; hydrology and water quality; wildlife and habitat; noise; land use; floodplains, wetlands, and coastal zone management; socioeconomics; community services; solid and hazardous materials; transportation and parking; utilities; and environmental justice. The EA concludes there would be no significant adverse impact, either individually or cumulatively, to the local environment or quality of life associated with implementing the Preferred Action Alternative, provided the management measures and best management practices identified in this EA are implemented.

EXECUTIVE SUMMARY

This Environmental Assessment (EA) has been prepared to identify, analyze, and document the potential physical, environmental, cultural, and socioeconomic impacts associated with the Department of Veterans Affairs' (VA's) proposed selection and acquisition of approximately eight acres of land located in Cedar City, Iron County, Utah, to develop, operate, and maintain as a new National Veterans Burial Ground. As a Federal action, preparation of this EA is required by the National Environmental Policy Act of 1969 ([NEPA]; 42 United States Code [USC] 4321 *et seq*.), the President's Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] 1500-1508), and 38 CFR Part 26 (*Environmental Effects of the Department of Veterans Affairs Actions*). This EA has also been prepared in accordance with the *VA NEPA Interim Guidance for Projects* dated 30 September 2010.

PROPOSED ACTION

VA's Proposed Action is to acquire approximately three to five acres (net) of land located near Cedar City, Iron County, Utah to develop, operate, and maintain as a new National Veterans Burial Ground.

The proposed National Veterans Burial Ground would be open to the public every day throughout the year. VA estimates that the cemetery, once fully established, would receive approximately 20 visitors per day. VA anticipates approximately 2 to 3 funeral processions per week at the cemetery, averaging approximately 20 cars per procession.

PURPOSE AND NEED

The purpose of the Proposed Action is to provide a National Veterans Burial Ground of sufficient size and capacity to serve the projected needs of Veterans in southwestern Utah, northwestern Arizona and eastern Nevada for the next 100 or more years. The Proposed Action would provide burial facilities for eligible Veterans in the southwestern Utah area who are currently not served by a National Cemetery or State Veterans Cemetery.

A new National Cemetery is needed to better serve Veterans and their families in the southwestern Utah area. The new cemetery would provide additional burial capacity, as well as improved access to Veterans and their families to a National Cemetery, and would balance the current unequal geographic distribution of National Cemeteries in this region. There are currently no open National or State Veterans Cemeteries located within 75 miles of Cedar City, Utah. In addition, the new National Veterans Burial Ground is needed for VA to comply with the Rural Initiatives program.

VA established the Rural Initiatives program to establish a cemetery presence in rural areas where Veterans populations are less than 25,000 Veterans within a 75-mile radius. The goal is to build small National Veterans Burial Grounds in certain rural areas where the Veteran population has been identified by VA to be underserved. The Rural Initiatives program targets states with no National Cemeteries open for first interments, and areas within those states that are not currently served by a State Veterans Cemetery or a National Cemetery in another state. NCA identified eight states (Idaho, Montana, Nevada, North Dakota, Maine, Utah, Wisconsin, and Wyoming) that met these criteria.

ALTERNATIVES

This EA examines in-depth two alternatives, the Preferred Action Alternative and the No Action Alternative, defined as follows:

- **Preferred Action Alternative**: VA would acquire approximately eight acres (net five acres) of unimproved land located approximately 400 feet west of Scenic Drive and an entrance ramp for Interstate 15 in Cedar City, Utah to develop, operate, and maintain as a new National Veterans Burial Ground. VA would develop the western approximately five acres (gently sloped) for the National Veterans Burial Ground. The eastern approximately three acres (steeply sloped) would remain an undeveloped buffer for the cemetery.

- **No Action Alternative**: VA would not implement the Proposed Action as identified (would not establish a new National Veterans Burial Ground near Cedar City in Iron County, Utah). Veterans and their families residing in the southwestern Utah region would continue to be underserved by a National Cemetery or State Veterans Cemetery and would continue to be required to travel a substantial distance to a National or State Veterans Cemetery. The distribution of National Cemeteries throughout the region would continue to be unbalanced and VA would not be in compliance with the requirements of the Rural Initiatives program. The Preferred Action Alternative Site likely would remain unimproved land.

The Preferred Action Alternative effectively provides a suitable combination of land, location, and existing access and meets the purpose of and need for the Proposed Action. The No Action Alternative would not enable VA to provide adequate, long-term National Cemetery facilities in southwestern Utah or comply with the requirements of the Rural Initiatives program. However, the No Action Alternative is assessed in this EA to provide a comparative baseline analysis, as required under the CEQ Regulations.

AFFECTED ENVIRONMENT

The approximately eight-acre Preferred Action Alternative Site (Site) is located west of Scenic Drive (also known as South Providence Center Drive), approximately 300 feet southwest of the intersection of Scenic Drive and an unpaved water tower access road in Cedar City, Utah. The Site is located in the southern portion of Cedar City in a mostly undeveloped area, although there is some commercial development along Scenic Drive. The Site is mostly unimproved naturally vegetated land with scattered trees with an intermittently used livestock enclosure in the northwestern portion. The Site is sloped gently in the western portion and steeply sloped in the eastern portion. The Site has been unimproved land with scattered trees since at least 1948.

The areas located to the north, south, and west of the Site are mostly unimproved naturally vegetated land with scattered trees. A water tower access road runs to the north and west of the Site. The municipal water tower is located approximately 200 feet southwest of the Site. The area located to the east of the Site is occupied by a state-operated liquor and wine store accessed from Scenic Drive and unimproved land. A Home Depot store is located approximately 300 feet northeast of the Site.

ENVIRONMENTAL CONSEQUENCES

The two considered alternatives, the Preferred Action Alternative and the No Action Alternative, are evaluated in this EA to determine their potential direct, indirect, and cumulative effect(s) on the physical, environmental, cultural, and socioeconomic aspects of the Proposed Actions region of influence (ROI). Technical areas evaluated include:

- *Aesthetics*
- *Air Quality*
- *Cultural Resources*
- *Geology, Topography, and Soils*
- *Hydrology and Water Quality*
- *Wildlife and Habitat*
- *Noise*
- *Land Use*
- *Floodplains, Wetlands, and Coastal Zone Management*
- *Socioeconomics*
- *Community Services*
- *Solid and Hazardous Materials*
- *Transportation and Parking*
- *Utilities*
- *Environmental Justice*
- *Cumulative Impacts*
- *Potential for Generating Substantial Controversy*

The Preferred Action Alternative would result in the impacts identified throughout Section 3 of this EA. These include potential less-than-significant adverse impacts to aesthetics, air quality, cultural resources, geology and soils, hydrology and water quality, wildlife and habitat, noise, solid and hazardous materials, transportation, and utilities. All of these impacts would be further reduced through careful implementation of the general Best Management Practices (BMPs), management measures, and compliance with regulatory requirements as identified in Section 5.

Under the No Action Alternative, the Proposed Action would not be implemented and Veterans and their families in southwestern Utah would continue to reside greater than 75 miles from the nearest National or State Veterans Cemetery. No positive impacts attributable to the Preferred Action Alternative would occur, and a significant adverse effect to the socioeconomic environment would occur. Specifically, Veterans and their families would have to travel a substantial distance to National or State Veterans Cemetery. In addition, VA would not comply with the Rural Initiatives program.

The EA also examines the potential cumulative effects of implementing each of the considered alternatives. This analysis finds that the Preferred Action Alternative, with the implementation of BMPs and the management measures specified in this EA, would not result in significant adverse cumulative impacts to onsite or regional natural or cultural resources, and would maintain or enhance the socioeconomic environment of the area through long-term provision of required National Cemetery facilities in the region. The No Action Alternative would not produce these potential positive socioeconomic gains from VA. No significant cumulative effects are identified.

AGENCY AND PUBLIC INVOLVEMENT

VA consulted with the following agencies during the preparation of this EA: the US Fish and Wildlife Service (USFWS); US Environmental Protection Agency (USEPA); US Army Corps of Engineers (USACE); Utah Department of Agriculture and Food (UDAF); Utah Department of Environmental Quality (UDEQ); Utah Department of Natural Resources (UDNR); Utah Department of Wildlife Resources (UDWR); Utah Division of Forestry, Fire & State Lands (FFSL); Utah Department of Transportation (UDOT); Utah Division of State History and State Historic Preservation Office (SHPO); Utah Division of Oil, Gas and Mining (UDOGM); Utah Division of Parks and Recreation (UDPR); Utah Division of Water Resources (UDWR); Utah Division of Water Rights (DWRi); Iron County Engineering and Surveying Department (ICESD); Iron County Natural Resources Department (ICDNR); Iron County Road Department (ICRD); Cedar City Building and Zoning Department (CCBZD); Cedar City Engineering Department (CCED); Cedar City Public Works Department (CCPWD).

Agency information and comments have been incorporated into this EA, as and where applicable. Copies of relevant correspondence is provided in Appendix A. The following summarizes the agency input:

- The **Utah Division of State History (State Historic Preservation Office or SHPO)** stated that they reviewed the information provided by VA (which included a Cultural Resource Survey

for the Site prepared by Commonwealth Heritage Group) and concurred with VA's determination of No Historic Properties Affected for the Preferred Action Alternative.

- The **US Fish and Wildlife Service (USFWS) – Utah Field Office** recommended using the USFWS Information for Planning and Conservation (IPaC) database to generate a list of Federally-protected species that may occur in the Site area and to evaluate potential impacts to these species as a result of the Proposed Action. VA completed this recommendation, as described in Section 3.7.

  The USFWS indicated that the main species of concern in the Site area is the Utah Prairie Dog (UPD), a Federally-listed threatened species. No critical habitat has been identified for this species; however, USFWS personnel indicated the Site is located in the range of the UPD. The USFWS reviewed maps for the Site area and USFWS and Utah Division of Wildlife Resources (UDWR) records for the UPD colonies in the Site vicinity. The USFWS indicated that the nearest UPD colonies are located over one mile from the Site and these colonies are physically separated from the Site by Interstate 15 or several tall hills. In addition, USFWS noted that the Site conditions (sloped foothill, mostly pinyon juniper vegetation) are not conducive for UPD. However, based on the Site's location within the range of the UPD, USFWS requires that a preconstruction Biological Assessment by a certified UPD surveyor be conducted within one year of cemetery construction activities. VA would conduct the required survey and submit the results to USFWS. In the unanticipated event that UPDs are identified at the Site, VA would consult with USFWS to minimize or mitigate potential UPD impacts.

- The **Iron County Engineering and Surveying Department (ICESD)** and **Iron County Road Department (ICRD)** indicated the Site is steeply sloping in areas with shallow bedrock that may be problematic for the development of a cemetery and recommended a soils investigation. Additionally, the ICESD and ICRD indicated that the Site is not quiet due to its proximity to Interstate 15. A geotechnical investigation of the Site was conducted for VA in April 2017, which included the excavation of five exploratory trenches. The geotechnical investigation found that the Site is generally excavatable with conventional earthwork equipment; however, it was very difficult to excavate (Section 3.5).

- The **UDEQ – Division of Environmental Response and Remediation (DERR)** stated that there are two hazardous waste and used oils facilities located within a one-mile radius of the proposed burial ground (Walmart Super Center and Home Depot). The DERR recommended contacting UDEQ DWMRC for further information regarding these off-site facilities.

- The **Utah Department of Environmental Quality (UDEQ) - Division of Waste Management and Radiation Control (DWMRC)** stated that there is no evidence of environmental concerns for the Site or adjacent properties that the UDEQ Resource Conservation and Recovery Act (RCRA) program would have authority over. DWMRC also indicated there are no known generators of hazardous waste or any known remediation activities associated with the Site.

VA identified twelve Native American Tribes including: Paiute Indian Tribe of Utah; Kaibab Band of Paiute Indians; Las Vegas Tribe of Paiute Indians; Moapa Band of Paiute Indians; Northwestern Band of Shoshone Nation; Shoshone-Bannock Tribes of the Fort Hall Reservation; Eastern Shoshone Tribe of the Wind River Reservation; Skull Valley Band of Goshute Indians of Utah; Confederated Tribes of Goshute Reservation, Nevada and Utah; Ute Mountain Tribe; Ute Indian Tribe of the Uintah and Ouray Reservation; and the Navajo Nation, as having possible ancestral ties to the Site area and invited the Tribes to provide input regarding the Proposed Action (Appendix B). The Paiute Indian Tribe of Utah and the Navajo Nation responded that they have no concerns or objections regarding the Preferred Action Alternative. No other Tribal responses were received.

VA, as the Federal proponent of this Proposed Action, will publish and distribute the Draft EA for a 30-day public comment period as announced by a Notice of Availability (NOA) to be published in the

Cedar City Daily News/Spectrum. A copy of the Draft EA will also be made available for public review at the Cedar City Library. VA will also make a copy of the Draft EA available for download via a link on the VA internet website (http://www.cem.va.gov/EA.asp). VA will respond to provided public comments within the Final EA.

CONCLUSIONS

The analysis performed in this Draft EA concludes there would be no significant adverse impact, either individually or cumulatively, to the local environment or quality of life associated with implementation of the Preferred Action Alternative, provided the management and regulatory compliance measures described in this EA are implemented.

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SECTION 1: INTRODUCTION

1.1 Introduction

This Section provides the reader with necessary introductory and background information concerning the Proposed Action for proper analytical context; identifies the purpose of and need for the Proposed Action; describes the Federal decision to be made concerning the Proposed Action; and identifies relevant environmental documents. Section 4 provides a summary of public and agency involvement. Section 11 identifies Federal, State, and local regulations applicable to the Proposed Action.

This Environmental Assessment (EA) has been prepared to identify, analyze, and document the potential physical, environmental, cultural, and socioeconomic effects associated with the Department of Veterans Affairs' (VA's), a Federal executive agency, Proposed Action. VA's Proposed Action is to acquire approximately three to five acres (net) of land located near Cedar City, Iron County, Utah to develop, operate, and maintain as a new National Veterans Burial Ground. The Proposed Action would be implemented in accordance with the VA National Cemetery Administration (NCA) Rural Initiatives Program, which is intended to establish a cemetery presence in rural areas where unserved Veterans populations are less than 25,000 Veterans within a 75-mile radius. The Rural Initiatives Program targets states with no National Cemeteries; no regional State Veterans Cemeteries; and no reasonably accessible National Cemeteries in adjacent states.

Preparation of this EA is required in accordance with the National Environmental Policy Act of 1969 ([NEPA]; 42 United States Code [USC] 4321 *et seq*.), the President's Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and 38 CFR Part 26 (*Environmental Effects of the Department of Veterans Affairs Actions*). This EA also has been prepared in accordance with VA's *NEPA Interim Guidance for Projects* (VA 2010).

In accordance with the above regulations, this EA: allows for public input into the Federal decision-making process; provides Federal decision-makers with an understanding of potential environmental effects of their decisions, before making these decisions; identifies measures the Federal decision-maker could implement to reduce potential environmental effects; and documents the NEPA process.

This EA examines in-depth two alternatives, the Preferred Action Alternative and the No Action Alternative as defined below:

- Preferred Action Alternative: VA would acquire approximately eight acres of unimproved land located approximately 400 feet west of Scenic Drive and an entrance ramp for Interstate 15 in Cedar City, Iron County, Utah, to develop, operate, and maintain as a new National Veterans Burial Ground. VA would develop the western approximately five acres (gently sloped) for the cemetery. The eastern three acres (steeply sloped) would remain an undeveloped buffer for the cemetery. The Preferred Action Alternative Site location and features are depicted on Figures 1 through 4.

- No Action Alternative: VA would not implement the Proposed Action as identified (would not establish a new National Veterans Burial Ground near Cedar City, Iron County, Utah) and would continue to operate only the existing National Cemeteries in the region.

1.2 Background

VA is proposing to acquire approximately eight acres of unimproved land located west of Scenic Drive and Interstate 15 in Cedar City, Iron County, Utah, to develop, operate, and maintain as a new National Veterans Burial Ground. The proposed National Veterans Burial Ground would provide additional burial capacity, as well as improved access to Veterans and their families to a National Cemetery, and would balance the current unequal geographic distribution of National Cemeteries in the region.

Currently there are no design plans for this proposed National Veterans Burial Ground. VA would follow the NCA *Facilities Design Guide* (VA 2008, or its successor) in developing the proposed cemetery, which would include preplaced crypts, columbarium niches, and in-ground burial sections. VA is seeking to acquire the site in 2018, design the cemetery in 2019, and would initiate construction in 2020.

The proposed National Veterans Burial Ground would be open to the public every day throughout the year. VA estimates that the cemetery, once fully established, would receive approximately 20 visitors per day. VA anticipates approximately 2 to 3 funeral processions per week to the cemetery, averaging approximately 20 cars per procession.

1.3 Purpose and Need

The purpose of the Proposed Action is to provide a National Veterans Burial Ground of sufficient size and capacity to serve the projected needs of Veterans in southwestern Utah, northwestern Arizona, and eastern Nevada for the next 100 or more years. The Proposed Action would provide burial facilities for eligible Veterans in the southwestern Utah area who are not served by a National Cemetery or State Veterans Cemetery.

A new National Cemetery is needed to better serve Veterans and their families in the southwestern Utah area. The new cemetery would provide additional burial capacity, as well as improved access to Veterans and their families to a National Cemetery and would balance the current unequal geographic distribution of National Cemeteries in this region. There are currently no open National or State Veterans Cemeteries located within 75 miles of Cedar City, Utah. In addition, the new National Veterans Burial Ground is needed for VA to comply with the Rural Initiatives program.

VA has established three objectives that define outcomes for VA burial programs. One of these objectives is to ensure that burial needs of Veterans and eligible family members are met. NCA further defines this objective on the assumption that the burial needs of a Veteran are met if they have reasonable access to burial option, where reasonable access to a burial option is defined as "…a first interment option (whether for casketed remains or cremated remains, either in-ground or in columbaria) in a National or State Veterans Cemetery…available within 75 miles of the Veteran's place of residence." VA established a 75-mile service area standard because NCA data show that more than 80 percent of persons interred in National Cemeteries resided within 75 miles of the cemetery at the time of death. VA has also developed unserved Veteran population thresholds for eligibility to establish a new National Cemetery or a National Veterans Burial Ground.

In the independent Evaluation of the VA Burial Benefits Program (August 2008), NCA reviewed where it has been and reflected on future burial strategy to continue meeting the needs of our Nation's Veterans. This evaluation also noted that there is a gap between the size of population centers served by a National Cemetery and State Veteran Cemeteries. Hence, based upon that study, NCA established a new Veteran population threshold to increase access to a burial option where the unserved Veteran population is at least 80,000.

In addition and to account for areas where Veteran populations do not exceed the threshold for a National Cemetery, the NCA Performance Plan of the 2013 VA Budget established a Rural Initiatives program which is intended to establish a cemetery presence in rural areas where Veterans populations are less than 25,000 Veterans within a 75-mile radius. The goal is to build small National Veterans Burial Grounds in certain rural areas where the Veteran population has been identified by VA to be underserved. The Rural Initiatives program targets states with no National Cemeteries open for first interments, and areas within those states that are not currently served by a State Veterans Cemetery or a National Cemetery in another state. NCA identified eight states (Idaho, Montana, Nevada, North Dakota, Maine, Utah, Wisconsin, and Wyoming) that met these criteria.

1.4 Decision-Making

This EA has been prepared to identify, analyze, and document the potential physical, environmental, cultural, and socioeconomic effects associated with VA's proposed acquisition, development, operation, and maintenance of approximately three to five acres (net) of land near Cedar City, Iron County, Utah as a new National Veterans Burial Ground.

VA, as a Federal agency, is required to incorporate environmental considerations into their decision-making process for the actions they propose to undertake. This is done in accordance with the regulations identified in Section 1.1.

In accordance with the NEPA regulations described above, this EA: allows for public input into the Federal decision-making process; provides Federal decision-makers with an understanding of potential environmental effects of their decisions, before making these decisions; identifies measures the Federal decision-maker could implement to reduce potential adverse environmental effects; and documents the NEPA process.

Ultimately, VA will decide, in part based on the analysis presented in this EA and after having taken potential physical, environmental, cultural, and socioeconomic effects into account, whether they should implement the Proposed Action, and, as appropriate, carry out management and avoidance measures to reduce effects to the environment.

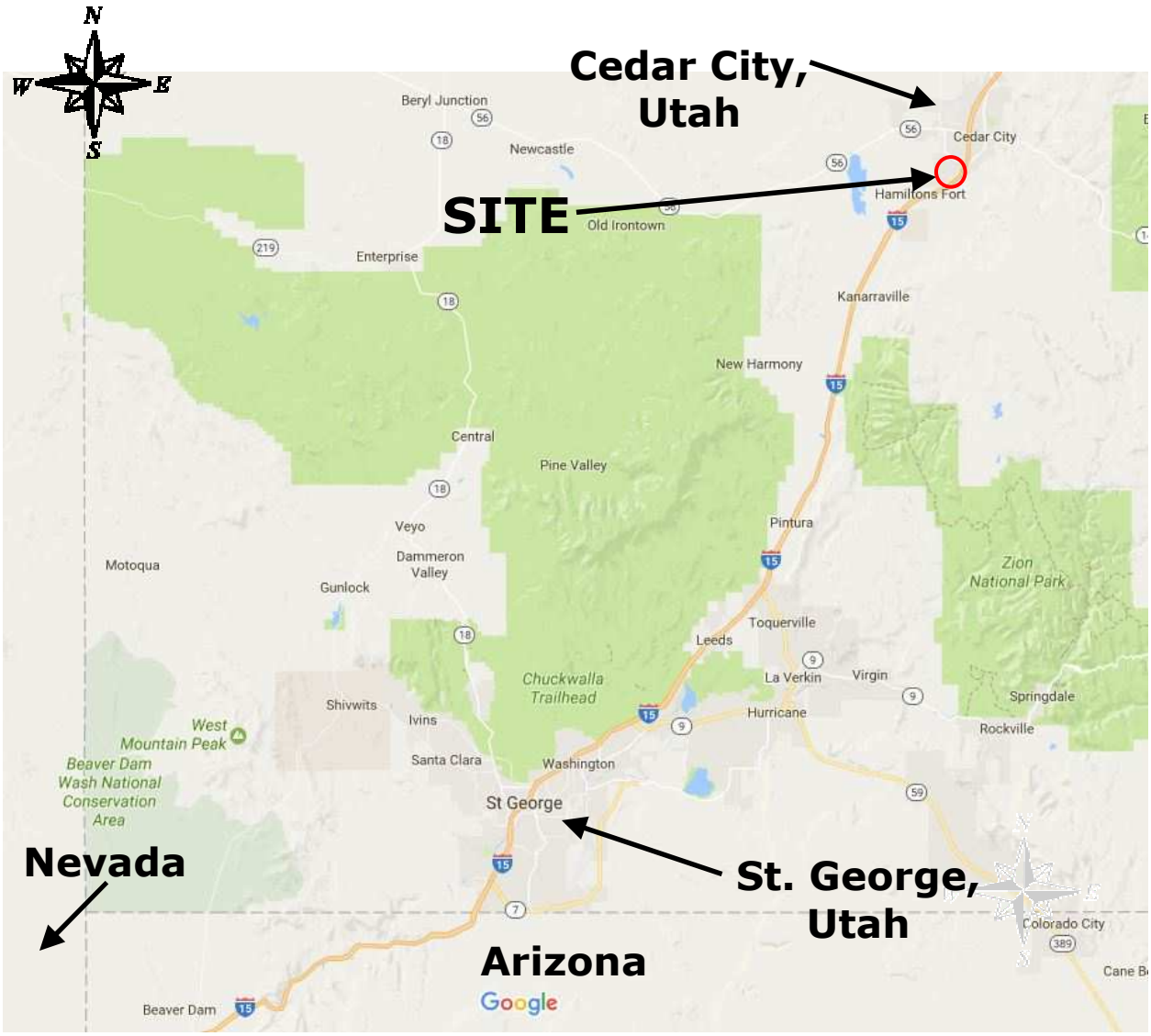

FIGURE 1 **SITE REGIONAL LOCATION MAP** ENVIRONMENTAL ASSESSMENT PROPOSED NATIONAL VETERANS BURIAL GROUND CEDAR CITY, IRON COUNTY, UTAH	PREPARED FOR **U.S. DEPARTMENT OF VETERANS AFFAIRS** **WASHINGTON, D.C.** TTL PROJECT NO. 14994.02

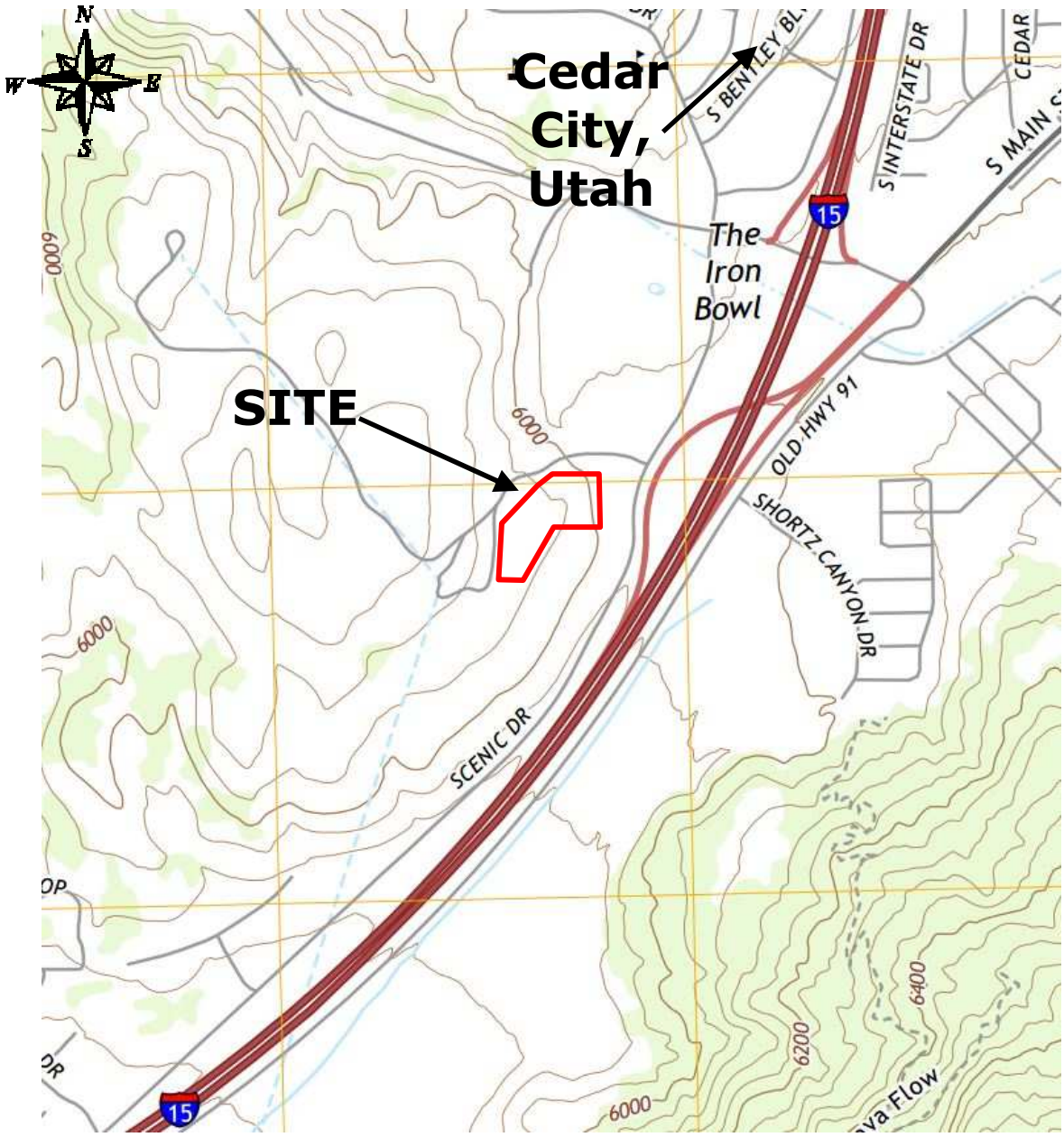

FIGURE 2
SITE VICINITY TOPOGRAPHIC MAP

ENVIRONMENTAL ASSESSMENT
PROPOSED NATIONAL VETERANS BURIAL GROUND
CEDAR CITY, IRON COUNTY, UTAH

PREPARED FOR

U.S. DEPARTMENT OF VETERANS AFFAIRS
WASHINGTON, D.C.

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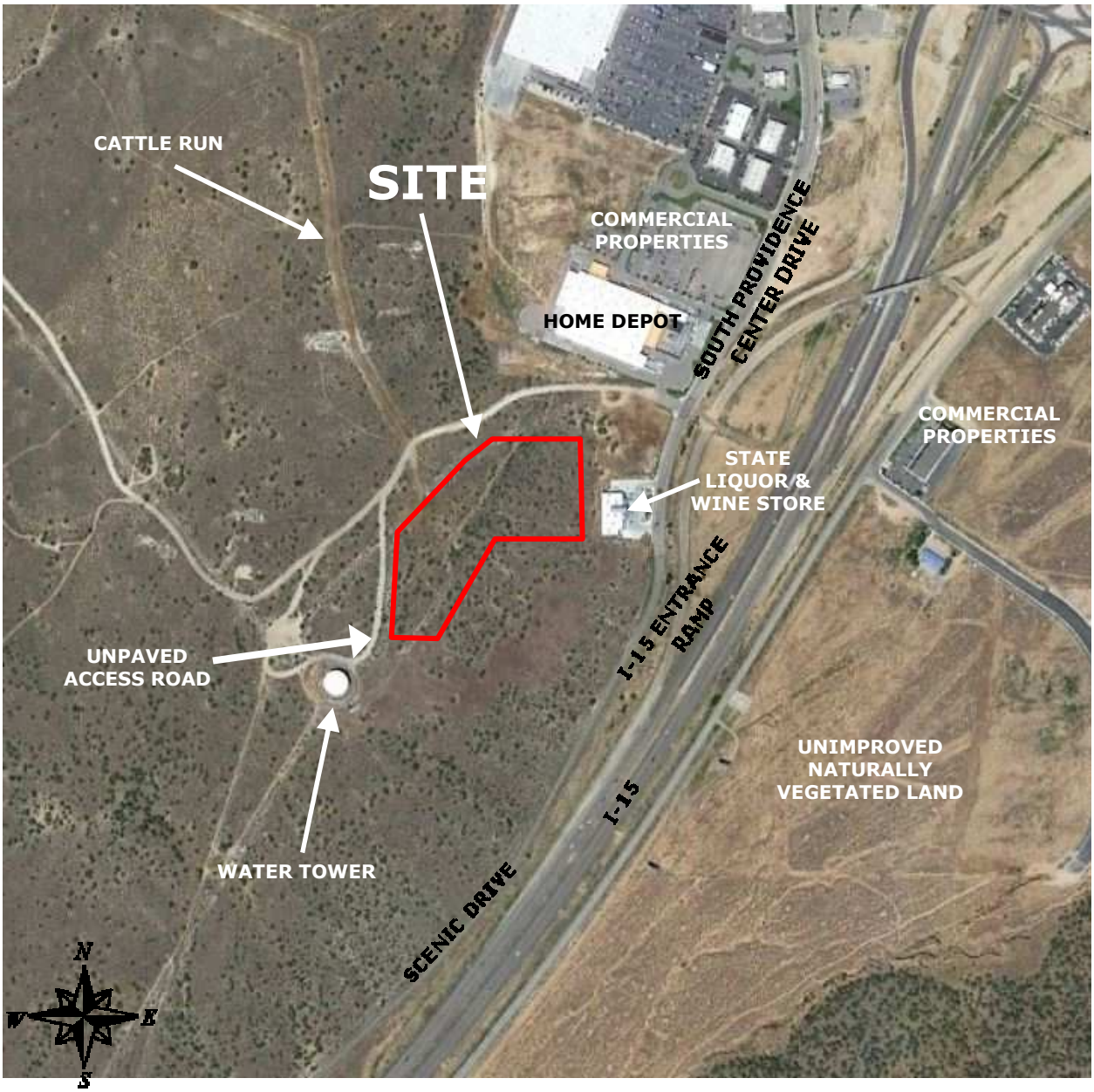

FIGURE 3
SITE VICINITY AERIAL MAP

ENVIRONMENTAL ASSESSMENT
PROPOSED NATIONAL VETERANS BURIAL GROUND
CEDAR CITY, IRON COUNTY, UTAH

PREPARED FOR

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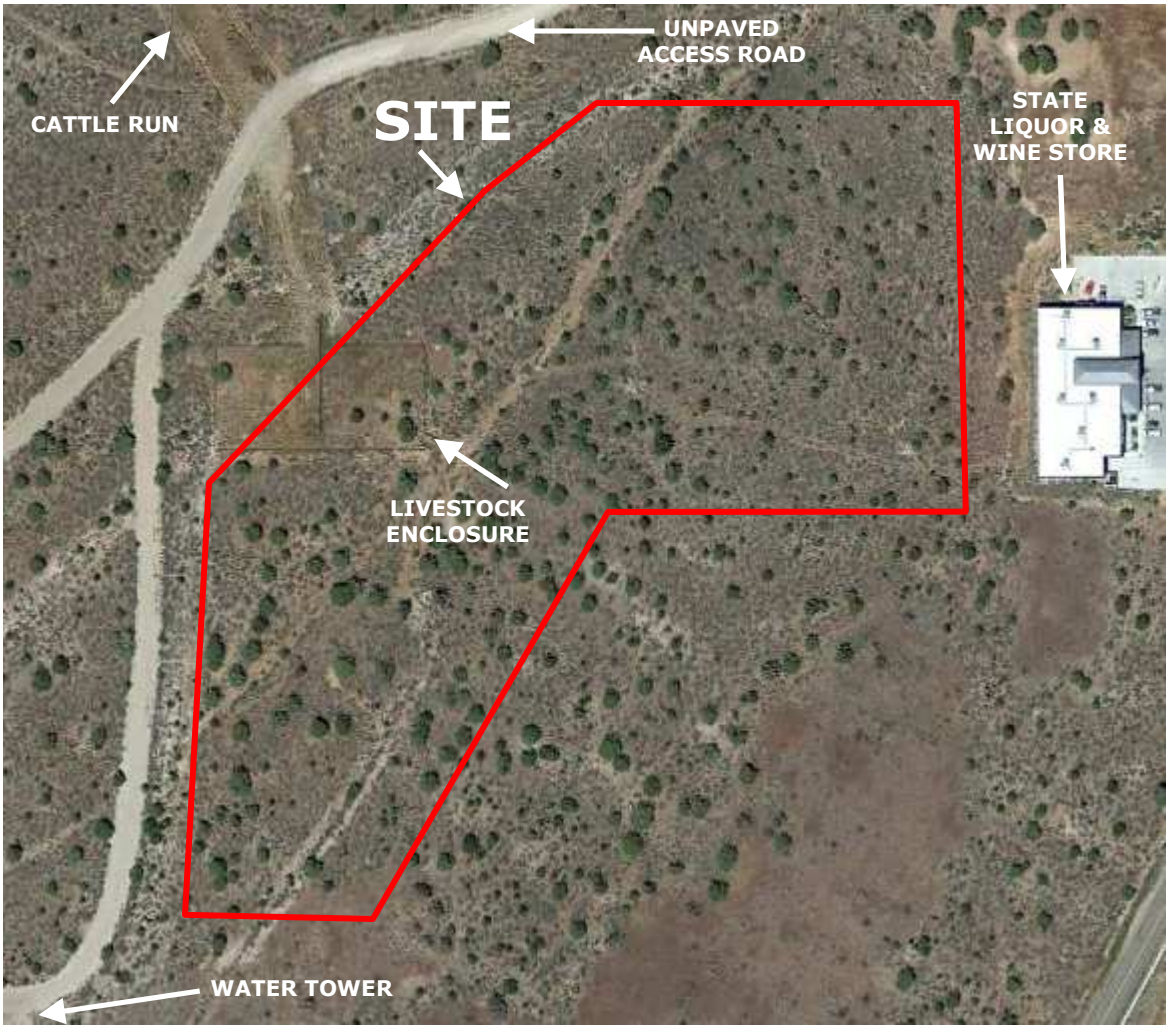


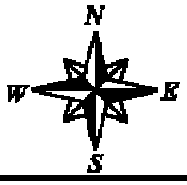


FIGURE 4
SITE AERIAL MAP

ENVIRONMENTAL ASSESSMENT
PROPOSED NATIONAL VETERANS BURIAL GROUND
CEDAR CITY, IRON COUNTY, UTAH

PREPARED FOR

U.S. DEPARTMENT OF VETERANS AFFAIRS
WASHINGTON, D.C.

TTL PROJECT NO.
14994.02

1.5 Related Environmental Documents

Related environmental documents include:

- Cultural Resource Due Diligence for the Proposed Acquisition of Land for the Construction of new National Cemetery, Cedar City, Iron County, Utah, prepared by Row 10 Historic Preservation Solutions, dated March 27, 2017.

- A Cultural Resource Survey for the Cedar City National Veterans Cemetery, Iron County, Utah, prepared by Commonwealth Heritage Group, Inc., dated March 14, 2018.

- Phase I Environmental Site Assessment, Proposed National Veterans Burial Ground, Cedar City, Utah, prepared by TTL Associates, Inc. and dated April 17, 2017.

- Geotechnical Investigation, Proposed – VA Cemetery Site, Approximately 1600 South Providence Center Drive, 5 Acre Parcel, Cedar City, Iron, Utah, prepared by GEM Engineering, Inc. and dated April 3, 2017.

SECTION 2: DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 Introduction

This Section provides the reader with necessary information regarding the Proposed Action and its alternatives, including those that VA initially considered, but eliminated, and the reasons for eliminating them. The screening criteria and process developed and applied by VA to hone the number of reasonable alternatives are described, providing the reader with an understanding of VA's rationale in ultimately retaining for analysis the Preferred Action Alternative Site, the approximately eight-acre unimproved property located west of Scenic Drive in Cedar City, Iron County, Utah, that best meets VA's purpose of and need for the Proposed Action.

2.2 Proposed Action

VA's Proposed Action is to acquire approximately three to five acres (net) of land located near Cedar City, Iron County, Utah, to develop, operate, and maintain as a new National Veterans Burial Ground. The proposed cemetery would provide additional capacity, as well as improved access to Veterans and their families to a National Cemetery, and would balance the currently unequal geographic distribution of National Cemeteries within the region. VA has identified approximately eight acres of unimproved land located west of Scenic Drive in Cedar City, Iron County, Utah as the Preferred Action Alternative Site for the Proposed Action.

The proposed National Veterans Burial Ground would be open to the public every day throughout the year. VA estimates that the cemetery would receive approximately 20 visitors per day, once fully established. VA anticipates approximately 2 to 3 funeral processions per week, averaging approximately 20 cars per procession.

Currently there are no specific design plans for this proposed National Veterans Burial Ground. VA would follow the NCA *Facilities Design Guide* (VA 2008, or its successor) in developing the proposed cemetery.

Based on the NCA Guide (VA 2008), the Rural Initiatives program (VA 2012), and preliminary conceptual design data, the initial development of the proposed National Veterans Burial Ground would, at minimum, include the following components:

- Provide a full range of burial options and control the operation and maintenance to the same "national shrine" standards as VA-run National Cemeteries.
- Planned areas for burial elements to include approximately double-depth, 3-foot by 8-foot pre-placed crypts.
- Columbarium niches in columbarium wall.
- In-ground 4-foot by 4-foot cremain urn vault sites.
- Private/oversized 4-foot by 10-foot casket burial sites.

- A connection to the municipal water supply system or the installation of a private non-potable water well and irrigation system.
- A committal shelter with wind screening.
- A gateway entrance sign and flag pole.

Prior to construction, VA would obtain all applicable Federal, State, and local permits for the proposed cemetery from appropriate government authorities.

2.3 Alternatives Analysis

The NEPA, CEQ Regulations, and 38 CFR Part 26 require that all reasonable alternatives to be rigorously explored and objectively evaluated. Alternatives that are eliminated from detailed study must be identified along with a brief discussion of the reasons for eliminating them. For purposes of analysis, an alternative was considered "reasonable" only if it would enable VA to accomplish the primary mission of providing a suitable cemetery site that meets the purpose of and need for the Proposed Action, including availability at a price consistent with the fair market value based on an independent appraisal, or donation. "Unreasonable" alternatives would not enable VA to meet the purpose of and need for the Proposed Action.

2.3.1 Alternatives Development (Screening Criteria)

After identifying a need for a National Veterans Burial Ground in southwestern Utah, VA considered various alternatives for establishing a National Cemetery in the region. VA published Solicitation for Federal Business Opportunity (FBO) VA101-16-N-0204 three times from 2013 to 2016, soliciting offers for between three to five acres of land suitable for a cemetery development located within five miles of Interstate 15 between Cedar City, Utah (mile marker 62) and St. George, Utah (mile marker 13).

VA received responses to each advertisement. Through a comprehensive screening process, VA narrowed the number of viable sites based on analyses of site-specific attributes, including: topography and natural aesthetics, soil/geology, environmental issues, site configuration, availability of utilities, existing structures and obstructions, site adjacencies, aesthetic quality and zoning, proximity to catchment area, and accessibility. Through this analysis, VA initially identified sites from the 2013 and 2015 solicitations that met all of the screening criteria; however, fair market value negotiations were not agreeable with property owners. VA received several responses to the 2016 solicitation that met the screening criteria; however, with the exception of a site owned by the City of Cedar City, the property owners of the offered sites did not agree to the fair market value appraisals for the properties. As a result, VA was left with a single location, the Cedar City property, which meets all of the screening criteria and fair market value negotiations.

2.3.2 Evaluated Alternatives

This EA examines in-depth two alternatives, the Preferred Action Alternative and the No Action Alternative, defined as follows:

Preferred Action Alternative

VA would acquire approximately eight acres (net five acres) of land located approximately 400 feet west of Scenic Drive and an entrance ramp for Interstate 15 in Cedar City, Utah, to develop, operate, and maintain as a new National Veterans Burial Ground. VA would develop the western approximately five acres (gently sloped) for the cemetery; the eastern approximately three acres (steeply sloped) would remain an undeveloped buffer for the cemetery. The Site is mostly unimproved land with natural vegetation and scattered trees.

An intermittently used livestock enclosure occupies the northwestern portion of the Site. The Site is accessible via an unpaved water tower access road that runs near the northern and western Site boundaries. This roadway would be used as an ingress/egress point for the cemetery. The Preferred Action Alternative would be implemented as described in Section 2.2.

The Preferred Action Alternative Site effectively provides a suitable combination of land, location, and existing access and meets the purpose of and need for the Proposed Action.

No Action Alternative

Under the No Action Alternative, the Proposed Action as identified (the acquisition of land and the development and operation of a new National Veterans Burial Ground near Cedar City, Iron County, Utah) would not be implemented. Veterans and their families residing in southwestern Utah would continue to be underserved by a National Cemetery or State Veterans Cemetery and would continue to be required to travel a substantial distance to a National or State Veterans Cemetery. The distribution of National Cemeteries throughout the region would continue to be unequal and VA would not be in compliance with the requirements of the Rural Initiatives program. The Preferred Action Alternative Site likely would remain unimproved.

While the No Action Alternative would not satisfy the purpose of or need for the Proposed Action, this alternative was retained to provide a comparative baseline against which to analyze the effects of the Proposed Action, as required under the CEQ Regulations (40 CFR Part 1502.14). The No Action Alternative reflects the *status quo* and serves as a benchmark against which the effects of the Proposed Action can be evaluated.

2.3.3 Alternatives Eliminated From Detailed Consideration

VA considered other offered sites along the Interstate 15 corridor between Cedar City and St. George, Utah for the development of the new cemetery. However, as discussed in Section 2.3.1, based on fair market value negotiations, VA was left with only the Preferred Action Alternative Site and the remaining sites were eliminated from further consideration.

SECTION 3: AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

This Section describes the baseline (existing) physical, environmental, cultural, and socioeconomic conditions at the proposed National Veterans Burial Ground site located west of Scenic Drive in Cedar City, Iron County, Utah (i.e., the Preferred Action Alternative Site or Site; see Figures 1-4) and its general vicinity (i.e., the Proposed Action's Region of Influence (ROI)), with emphasis on those resources potentially affected by the Proposed Action. Appendix C provides photographs, with captions, of the Site and its surroundings. Under each resource area (Sections 3.2 through 3.16), the potential direct, indirect, and cumulative effects of the Preferred Action Alternative and the No Action Alternative are identified. Section 3.17 discusses potential cumulative impacts.

In this EA, impacts are identified as either significant, less than significant (i.e., common impacts that would not be of the context or intensity to be considered significant under the NEPA or CEQ Regulations), or no or negligible impact. As used in this EA, the terms "effects" and "impacts" are synonymous. Where appropriate and clearly discernible, each impact is identified as either adverse or positive.

The CEQ Regulations specify that in determining the significance of effects, consideration must be given to both "*context*" and "*intensity*" (40 CFR 1508.27):

Context refers to the significance of an effect to society as a whole (human and national), to an affected region, to affected interests, or to just the locality. In other words, the context measures how far the effect would be "felt."

Intensity refers to the magnitude or severity of the effect, whether it is beneficial or adverse. Intensity refers to the "punch strength" of the effect within the context involved.

In this EA, the significance of potential direct, indirect, and cumulative effects has been determined through a systematic evaluation of each considered alternative in terms of its effects on each individual environmental resource component.

Resource areas considered in this EA are as follows:

- *Aesthetics*
- *Air Quality*
- *Cultural Resources*
- *Geology, Topography, and Soils*
- *Hydrology and Water Quality*
- *Wildlife and Habitat*
- *Noise*
- *Land Use*
- *Floodplains, Wetlands, and Coastal Zone Management*
- *Socioeconomics*
- *Community Services*
- *Solid and Hazardous Materials*
- *Transportation and Parking*
- *Utilities*
- *Environmental Justice*
- *Cumulative Impacts*
- *Potential for Generating Substantial Controversy*

3.2 Aesthetics

The Site is located at the southern end of Cedar City, Utah. The City of Cedar City currently owns the Site and surrounding land to the north, south, southeast, and west. The Site is mostly unimproved land with scattered trees and an intermittently used livestock enclosure in the northwestern portion. The western portion of the Site is gently sloped and the eastern portion is steeply sloped toward Scenic Drive. The Site has been mostly unimproved since at least 1948.

The area surrounding the Site is mostly undeveloped, with some commercial development along Scenic Drive. The areas located to the north, southeast, south, and west of the Site are unimproved land with scattered trees. A water tower access road runs to the north and west of the Site. The water tower, owned by the City of Cedar City, is located approximately 200 feet southwest of the Site. The area located to the east of the Site is occupied by a state-run liquor and wine store accessed from Scenic Drive. A Home Depot store is located approximately 300 feet northeast of the Site, with additional commercial development farther north. The surrounding land uses are depicted on Figure 3.

Aesthetics are managed by Cedar City through the Cedar City Code of Ordinances.

Currently there are no specific design plans for the proposed National Veterans Burial Ground. VA plans to develop the cemetery with preplaced crypts, a columbarium wall, in-ground cremain burial sections, and casket burial sites. The cemetery would include a gateway entrance sign and flagpole. No regularly occupied buildings are planned for the cemetery. Refer to Section 2.2 for additional details.

3.2.1 Effects of the Preferred Action Alternative

Development and operation of the Site as a National Veterans Burial Ground would produce minor visual changes. The Site is currently unimproved land with scattered trees. Development and operation of the Site by VA as a National Veterans Burial Ground would create a grassy, landscaped atmosphere suitable to its proposed use. Given the low visual impact of the cemetery development, aesthetics impacts would be less-than-significant.

3.2.2 Effects of the No Action Alternative

Under the No Action Alternative, no development or changes to the Site by VA would occur. The Site would likely remain in its current use for the foreseeable future and no aesthetics impacts would result.

3.3 Air Quality

3.3.1 Ambient Air Quality

The ambient air quality in an area can be characterized in terms of whether or not it complies with the primary and secondary National Ambient Air Quality Standards (NAAQS). The Clean Air Act, as amended (CAA and CAAA) requires the US Environmental Protection Agency (USEPA) to set NAAQS for pollutants considered harmful to public health and the environment. NAAQS are provided for principal pollutants, called "criteria pollutants", which include carbon monoxide, lead, nitrogen oxides, particulate matter, and sulfur dioxide.

Areas are designated by the USEPA as *attainment*, *non-attainment*, *maintenance* (formerly non-attainment), or *unclassified* (no monitoring data), based on compliance with the NAAQS standards. According to the USEPA Green Book, Iron County, Utah is designated as a full attainment area (USEPA Green Book, April 2018).

3.3.2 Sensitive Receptors

The Site is located in a mostly undeveloped area, with a commercially developed area to the east and northeast along Scenic Drive. No sensitive air quality receptors were identified within 0.5-mile of the Site.

3.3.3 Effects of the Preferred Action Alternative

Air emissions generated from the proposed cemetery would be expected to have less-than-significant direct and indirect, short-term and long-term adverse impacts to the existing air quality environment around the Site. Impacts would include short-term and long-term increased air emission levels as a result of: 1) Construction activities and 2) Operation of the proposed cemetery.

Construction-related emissions are generally short-term, but may still have adverse impacts on air quality, primarily due to the production of dust. Dust can result from a variety of activities, including excavation, grading, and vehicle travel on paved and unpaved surfaces. Dust from construction can lead to adverse health effects and nuisance concerns, such as reduced visibility on nearby roadways. The amount of dust is dependent on the intensity of the activity, soil type and conditions, wind speed, and dust suppression activities used. Dust control measures (BMPs) significantly reduce dust emissions from construction. Construction-related emissions also include the exhaust from the operation of construction equipment, including diesel particulate matter (DPM). The use of newer construction equipment with emissions controls and minimizing the time the equipment is idling (BMPs) reduce construction equipment exhaust emissions. Implementation of BMPs, as discussed in Section 5, would minimize these anticipated less-than-significant adverse, short-term construction-related air quality impacts.

During operation of the cemetery, there would be vehicular emissions associated with site visits by Veterans and their families. A minor long-term increase in local vehicle miles (and associated emissions) is anticipated, as visitors would travel to the Site. However, overall vehicle emissions would decrease because regional Veterans and their families would not be required to travel greater distances to other National and State Cemeteries.

3.3.4 Effects of the No Action Alternative

Under the No Action Alternative, no direct significant air quality impacts by VA would result. The additional driving required by area Veterans to visit more distant National and State Cemeteries, which would contribute to increased regional air emissions, would be a less-than-significant long-term adverse impact under the No Action Alternative. The likely continued unimproved use of the Site would have no air quality impacts.

3.4 Cultural Resources

Cultural resources are the physical evidence of our heritage. Cultural resources include: historic properties as defined in the National Historic Preservation Act (NHPA), cultural items as defined in the Native American Graves Protection and Repatriation Act (NAGPRA), archeological resources as defined in the Archaeological Resources Protection Act (ARPA), sacred sites as defined in EO 13007 to which access is provided under the American Indian Religious Freedom Act (AIRFA), and collections as defined in 36 CFR Part 79, *Curation of Federally Owned and Administered Collections*. Requirements set forth in NEPA, NHPA, ARPA, NAGPRA, AIRFA, 36 CFR Part 79, EO 13007, and Presidential Memorandum on *Government-to-Government Relations with Native American Tribal Governments* define the basis of VA's compliance responsibilities for management of cultural resources. Regulations applicable to VA's management of cultural resources include those promulgated by the Advisory Council on Historic Preservation (ACHP) and the National Park Service (NPS).

3.4.1 Architectural and Archaeological Resources

Row 10 Historic Preservation Solutions, LLC (Row 10) prepared a Cultural Resource Due Diligence (CRDD) report on behalf of VA for the Site in March 2017. The CRDD included a walking survey of the Site, a limited pedestrian survey and windshield survey of adjacent areas within one mile of the Site, and a records and literature search of Utah Division of State History (State Historic Preservation Office or SHPO) files for the Site and immediate surrounding area. The CRDD indicated the Site does not possess any buildings, objects, or structures that are eligible for inclusion in the National Register of Historic Places (NRHP) and no identified National Historic Landmarks or NRHP-listed properties are located on the Site or within one mile of the project area. The CRDD noted that the Utah SHPO does not have any record of previous archaeological investigations in the immediate Site area; however, 16 inventories have occurred between 1982 and 2012 within one mile of the project area. These inventories have resulted in the identification of 38 archaeological sites. Row 10 recommended an archaeological survey of the Site.

Commonwealth Heritage Group, Inc. (Commonwealth) completed a Cultural Resources Survey (CRS) for the Site in March 2018. The CRS included a review of Utah SHPO records for the Site area and an intensive pedestrian survey by an archaeologist. Based on the literature review, archaeological site density was expected to be low. Anticipated cultural resources included low density prehistoric lithic scatters along the ridge top and potential historic debris scatters along existing roads. The pedestrian survey identified one isolated find in the central portion of the Site, consisting of two obsidian artifacts. The isolated find was determined not to be eligible for inclusion in the NRHP. Commonwealth recommended a determination of No Historic Properties Affected for the proposed cemetery development at the Site. In April 2018, VA submitted the CRS to the Utah SHPO for review and concurrence. On April 30, 2018, the Utah SHPO concurred with VA's determination of No Historic Properties Affected for the Preferred Action Alternative.

3.4.2 Native American Consultation/Coordination

For all Federal proposed actions, Federal agencies are required to consult with Federally-recognized Native American Tribes in accordance with the NEPA, the NHPA, the NAGPRA, and EO 13175. VA consulted with 12 Federally-recognized Native American tribes as part of this NEPA process. These tribes, identified as having possible ancestral ties to the area by the Native American Consultation Database (NACD), were invited by VA to participate in the EA process as Sovereign Nations per EO 13175. VA sent a coordination and consultation letter to each of these tribes in April 2018. A list of tribes consulted, a sample letter sent to the tribes, and their responses are included in Appendix B. The Paiute Indian Tribe of Utah and the Navajo Nation responded that they have no concerns or objections regarding the proposed cemetery. No other tribal responses were received.

3.4.3 Effects of the Preferred Action Alternative

Based on the findings and conclusions of the March 2018 CRS and the Utah SHPO's April 2018 review of the project, no impacts to NRHP-listed or eligible historic properties would occur as a result of the Proposed Action. Tribal input identified no concerns or objections to the proposed cemetery. Cultural resources impacts would be less-than-significant.

3.4.4 Effects of the No Action Alternative

Under the No Action Alternative, no cultural resources impacts by VA would occur. The Site would likely remain unimproved and no cultural resources impacts would occur.

3.5 Geology and Soils

The Cedar City, Utah United States Geological Survey (USGS) Topographic Quadrangle (dated 2017) indicates that surficial topography at the Site [elevation ranging from approximately 6,070 feet above mean sea level (amsl) in the western portion to approximately 6,000 feet amsl in the eastern portion] slopes gently to the east in the western portion and steeply slopes to the east in the eastern portion. The Site is located in the southeastern portion of Cross Hollow Hills. Interstate 15, located approximately 700 feet east of the Site, is located within a valley with an elevation of approximately 5,960 feet amsl near the Site. Across Interstate 15, the topography rises up to approximately 10,000 feet amsl at the peak of Cedar Mountain, located approximately five miles east of the Site.

According to the Physiographic Provinces webpage of the Utah Geological Survey, the Site is located in the Basin and Range physiographic province, characterized by numerous north-south oriented, fault-tilted mountain ranges separated by intervening, broad, sediment filled basins. The mountain ranges are typically bounded on one, or sometimes two sides by high-angle normal faults. Typical mountain ranges are asymmetric in cross section, having a steep slope on one side and a gentle slope on the other. Rocks within the Basin and Range vary widely in age and composition. Older rocks consist mostly of sedimentary units and their metamorphic equivalents. Volcanic rocks and valley-fill units generally overlie the sedimentary and metamorphic rocks. Valley-fill deposits consist mostly of lakebeds and alluvium.

The Site is located in the Intermountain Seismic Belt (ISB); numerous earthquakes have occurred along the ISB from 1962 to 2008. Cedar City is located on or near the Hurricane fault and other widely spaced normal faults (Utah Geological Survey 2008). According to a geologic map of Cedar City (including Iron and Washington Counties), an inferred normal fault crosses the central portion of the Site (see Figure 5).

According to the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey, the Site soil consists of Denmark gravelly loam, 2 to 15 percent slopes. The Denmark soil series consists of alluvium derived from igneous and sedimentary rock and is well drained gravelly loam and indurated, with very low to moderately low permeability. Site soils are shown on Figure 6.

GEM Engineering, Inc. (GEM) completed a geotechnical investigation of the Site in March and April 2017. The Site was described as having a moderate to steep downward slope from west to east with a basalt bedrock outcrop in the central portion. The geotechnical investigation included the excavation of five exploratory trenches to a depth of approximately 10 feet below ground surface (bgs). Soils were characterized as loose clayey sand (top soil) to a depth of approximately 6 to 12 inches bgs, underlain by dense to very dense silty gravel with sand, cobbles, and boulders to the bottom of the trenches (10 feet bgs). GEM indicated the Site is generally excavatable with conventional earthwork equipment; however, it was very difficult to excavate. GEM indicated that excavation in the area of the basalt bedrock outcrop would require heavy duty excavation equipment.

3.5.1 Prime and Unique Farmland Soils

Prime and Unique Farmlands are regulated in accordance with the Farmland Protection Policy Act (FPPA) (7 USC 4201, *et seq*.) to ensure preservation of agricultural lands that are of statewide or local importance. Soils designated as prime farmland are capable of producing high yields of various crops when managed using modern farming methods. Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion. Unique farmlands are also capable of sustaining high crop yields and have special combinations of favorable soil and climate characteristics that support specific high-value foods or crops.

According to the USDA NRCS Web Soil Survey, the Site soils are not characterized as farmland of statewide importance.

3.5.2 Soil Erosion and Stormwater Management

Section 402 of the Clean Water Act established the National Pollution Discharge Elimination System (NPDES) program to control the discharge of pollutants into surface waters. In Utah, authority for NPDES permit issuance rests with the Utah Department of Environmental Quality (UDEQ) Division of Water Quality, Utah Pollutant Discharge Elimination System (UPDES). Construction projects that propose to disturb more than one acre of the ground surface must obtain and comply with the UDEQ UPDES *Construction General Permit*.

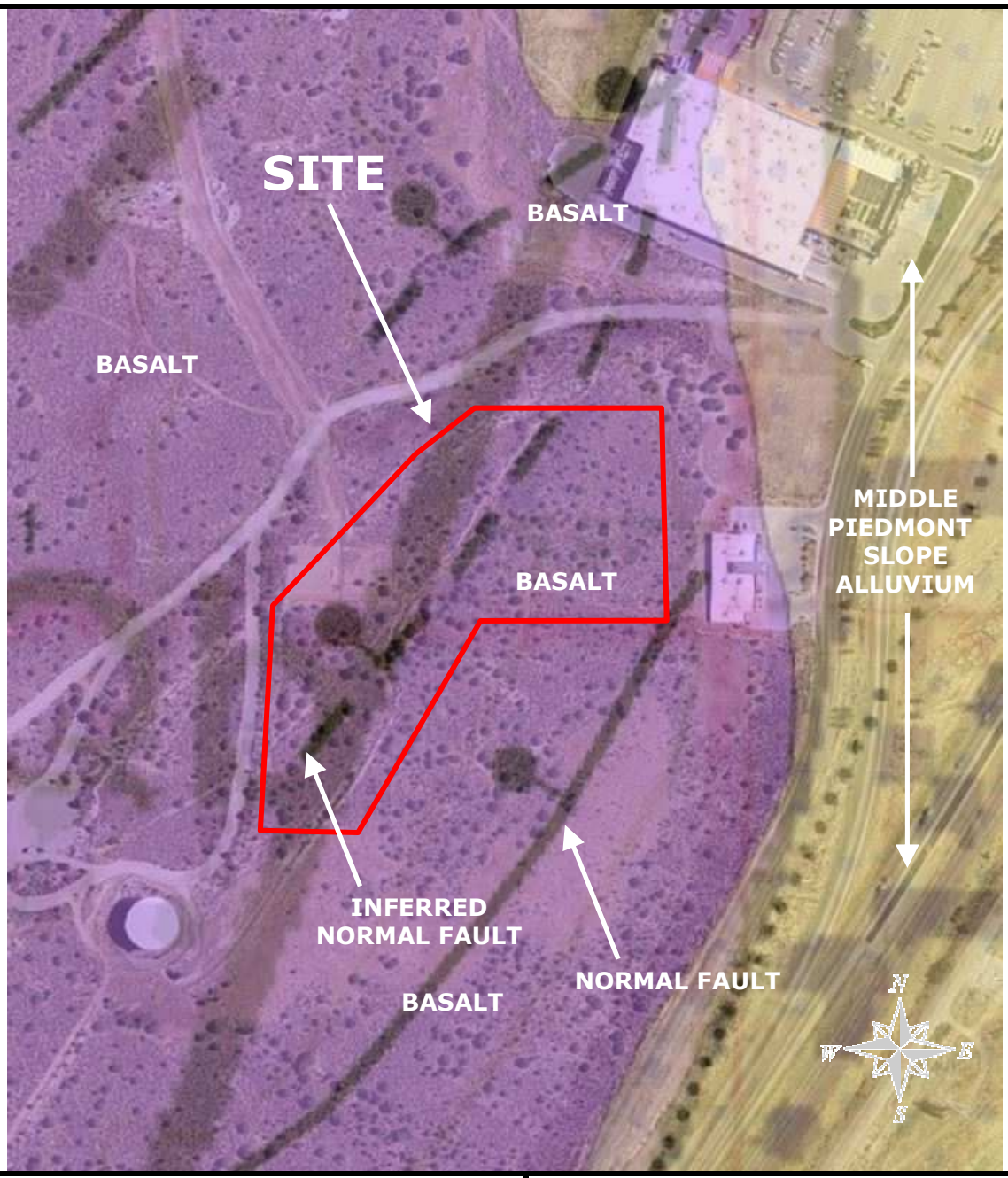


FIGURE 5
GEOLOGIC MAP

ENVIRONMENTAL ASSESSMENT
PROPOSED NATIONAL VETERANS BURIAL GROUND
CEDAR CITY, IRON COUNTY, UTAH

PREPARED FOR

U.S. DEPARTMENT OF VETERANS AFFAIRS
WASHINGTON, D.C.

TTL PROJECT NO.
14994.02

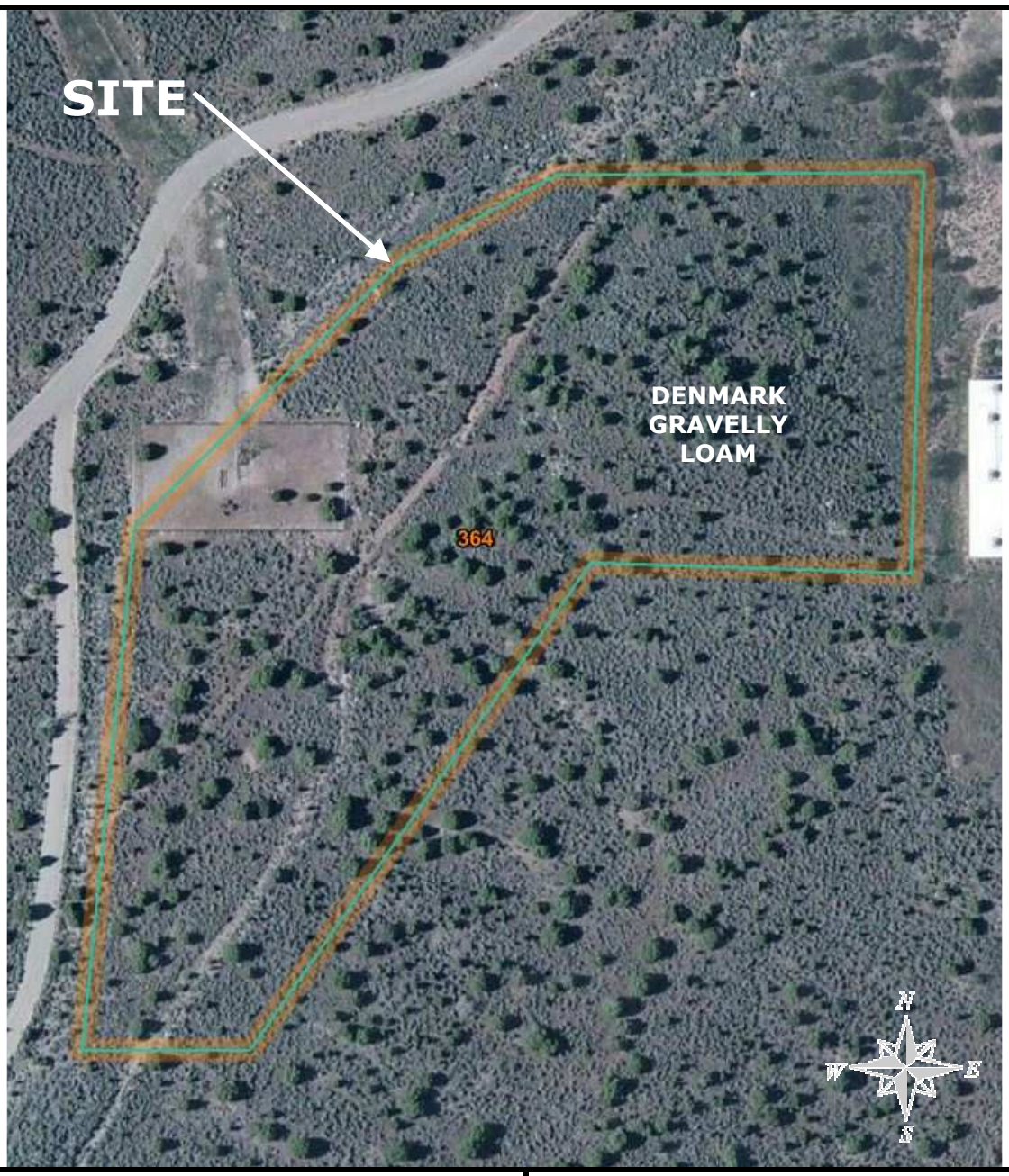


FIGURE 6
SOILS MAP

ENVIRONMENTAL ASSESSMENT
PROPOSED NATIONAL VETERANS BURIAL GROUND
CEDAR CITY, IRON COUNTY, UTAH

PREPARED FOR

U.S. DEPARTMENT OF VETERANS AFFAIRS
WASHINGTON, D.C.

TTL PROJECT NO.
14994.02

3.5.3 Effects of the Preferred Action Alternative

The Preferred Action Alternative is anticipated to have less-than-significant geology and soils effects. No significant changes to topography or drainage are expected at the Site due to the development of the cemetery. The steeply sloping area of the eastern portion of the Site would be used as an undeveloped buffer zone to the easterly adjoining commercial property. The cemetery development would occur in the more gently sloping western portion of the Site and would be designed in concert with the natural topography. No significant cutting or filling is anticipated.

Less-than-significant impacts to geology would be anticipated. One inferred fault runs through the central portion of the Site and the Hurricane fault is located in the vicinity of Cedar City. However, no permanently habitable structures are anticipated for the cemetery development; as such, no significant impacts associated with seismic hazards are identified. No significant impacts to mineral resources are anticipated, as the proposed cemetery would not involve the commercial extraction of mineral resources, nor affect mineral resources considered important on a local, State, national, or global basis. In addition, the cemetery development would not impact prime farmland; Site soils are not characterized as farmland soils of Statewide-importance.

During construction of the National Veterans Burial Ground, less-than-significant, direct and indirect, short-term soil erosion and sedimentation (E&S) impacts would be possible as roads, grave sites, and other cemetery improvements are constructed. Construction activities would remove the current vegetative cover, disturb the soil surface, and compact the soil. The soil would then be susceptible to erosion by wind and surface runoff.

Exposure of the soils during construction has the potential to result in offsite discharges of sediment-laden runoff. However, such potential adverse E&S effects would be prevented through utilization of appropriate BMPs and adherence to the terms of the UDEQ UPDES permit. Permit standards would be adhered to during all construction activities.

No long-term E&S impacts would be anticipated due to the nature of the Proposed Action. There would be limited impervious surfaces associated with the cemetery development and long-term soil erosion impact would be managed by maintaining on-site stormwater features as part of the cemetery development.

3.5.4 Effects of the No Action Alternative

Under the No Action Alternative, no construction by VA would occur. The Site would likely remain unimproved and no impacts to soils, topography, or geology would occur.

3.6 Hydrology and Water Quality

3.6.1 Surface Waters

The Site is located in the Shurtz Creek Watershed, a Sub-Watershed of the Great Basin Region, Escalante Desert-Sevier Lake Sub-Region and Basin, Escalante Desert Sub-Basin. The Cedar City, Utah USGS Topographic Quadrangle indicates that the nearest permanent surface water body is Coal Creek, located approximately 2.6 miles northeast of the Site. An unnamed intermittent stream is depicted beyond Interstate 15, approximately 1,000 feet southeast of the Site. Based on the topographic map, the unnamed intermittent stream generally flows southwest and dissipates. An erosional drainage ditch crosses the central portion of the Site from southwest to northeast. No other evidence of natural surface waters was observed on the Site or adjoining properties.

3.6.2 Groundwater

According to A Summary of the Geology and Hydrogeology of the Cedar Valley Drainage Basin, the Site vicinity is underlain by the valley-fill aquifer. Groundwater in this aquifer exists under perched, confined, and unconfined conditions. Depth to groundwater ranges from near the ground surface in the central portion of the valley to about 250 feet bgs along the valley margins. Groundwater was not encountered in the five geotechnical test pits completed at the Site in March 2017, which extended approximately 10 feet bgs.

3.6.3 Effects of the Preferred Action Alternative

Construction-related surface water impacts associated with the Preferred Action Alternative (associated with soil erosion and sedimentation) would be low as no significant grading of the Site is anticipated and there are no surface water resources at the Site or surrounding area. VA would implement the BMPs described in Section 5 to control construction-related impacts of soil erosion and sedimentation, and would provide proper onsite stormwater management. Based on the geotechnical investigation, groundwater is greater than 10 feet bgs and likely would not be encountered during Site construction activities. As such, constructed-related groundwater impacts are anticipated to be less-than-significant.

No significant long-term groundwater impacts are anticipated as a result of the Proposed Action. Based on standard modern burial practices, it is unlikely that embalming fluid or other decomposition byproducts would be released into the soil and/or groundwater. The standard NCA design incorporates (for full casket burials) sub-surface concrete crypts, an entire section of which would be installed during site construction. Using this technique, the caskets are not buried directly in the soil, but are rather set in a pre-placed concrete crypt (established turf and soil temporarily removed, crypt lid removed, casket placed, followed by the reverse process to complete). Modern embalming fluids are markedly less toxic as the primary active ingredients are no longer arsenic based. Additionally, as selection of either cremain interment or columbaria placement increase, the potential for soil or groundwater contamination commensurately decreases as no embalming fluids are used.

As part of the Proposed Action, VA may install an on-site water well to provide non-potable water for irrigation. The installation of a private water well would require State approval before drilling. Water rights in sufficient amounts to cover the proposed irrigation would be obtained from the Utah Division of Water Rights. The planned limited use of groundwater for irrigation of the cemetery would have a negligible impact on groundwater resources. In addition, NCA's modern cemetery development practices include the use of native grasses and other vegetation species, to the extent possible, thereby reducing the need for irrigation.

3.6.4 Effects of the No Action Alternative

Under the No Action Alternative, no impacts to hydrology or water quality by VA would occur. The Site would likely remain unimproved and no hydrology or water quality impacts would be anticipated.

3.7 Wildlife and Habitat

3.7.1 Vegetation and Wildlife

The Site is largely occupied by native vegetation including pinyon-juniper, big sagebrush, salt desert shrubs and some grass. Areas surrounding the Site are occupied by the same natural vegetation. Such vegetation communities support wildlife species associated with rural areas in Utah.

3.7.2 Threatened and Endangered Species

As part of the preparation of this EA, the U.S. Fish and Wildlife Service (USFWS) and various State natural resource agencies were contacted to identify any potential for the presence of State or Federally-protected species in the vicinity of the Site. The USFWS recommended using the USFWS Information for Planning and Conservation (IPaC) database to generate a list of Federally-protected species that may occur in the Site area and to evaluate potential impacts to these species as a result of the Proposed Action. The IPaC database identified two Federally-listed endangered bird species (California Condor and Southwestern Willow Flycatcher) and two Federally-listed threatened bird species (Mexican Spotted Owl and Yellow-billed Cuckoo) in the Site vicinity. However, the final critical habitat for the California Condor, Southwestern Willow Flycatcher, and Mexican Spotted Owl and proposed critical habitat area for the Yellow-billed Cuckoo are not located within the immediate Site area. These protected birds are not likely to be present at the Site.

One Federally-listed threatened flowering plant (Jones Cycladenia) was identified in the Site vicinity. No critical habitat has been identified for this species; however, it is unlikely that this plant is present at the Site due to the exacting soil requirements (gypsiferous saline soils) the Jones Cycladenia need to grow (National Park Service 2010), which are not present at the Site.

The USFWS indicated that the main species of concern in the Site area is the Federally-listed threatened Utah Prairie Dog (UPD). No critical habitat has been identified for this species; however, according to discussions with USFWS personnel, the Site is located in the range of the UPD. The USFWS reviewed maps for the Site area and USFWS and Utah Division of Wildlife Resources (UDWR) records for the UPD colonies in the Site vicinity. The USFWS indicated that the nearest UPD colonies are located over one mile from the Site and these colonies are physically separated from the Site by Interstate 15 or several tall hills. In addition, USFWS noted that the Site conditions (sloped foothill, mostly pinyon juniper vegetation) are not conducive for UPD. UPD are not likely to be present at the Site. However, based on the Site's location within the range of the UPD, USFWS requires that a preconstruction Biological Assessment by a certified UPD surveyor be conducted within one year of cemetery construction activities.

Based on the information received from the consulted agencies and the Site conditions and features, no Federal or State-listed threatened and/or endangered species or critical habitat for such species are likely to occur at the Site or adjacent areas.

3.7.3 Effects of the Preferred Action Alternative

Development and operation of a National Veterans Burial Ground on the Site is not likely to have significant biological resources effects. The Site is located within the range of the Federally-protected UPD; however, the Site conditions are not conducive to UPD and the nearest UPD colonies are located more than one mile away and are physically separated from the Site. UPD are not likely to be present or affected by the Proposed Action. However, VA would conduct a preconstruction Biological Assessment of the Site for UPD within one year of cemetery construction, as required by the USFWS. In the unanticipated event that UPDs are identified at the Site, VA would consult with USFWS to minimize or mitigate potential UPD impacts. No other Federal or State-listed protected species or critical habitat for such species was identified for the Site or adjacent areas.

3.7.4 Effects of the No Action Alternative

Under the No Action Alternative, no impacts to vegetation or wildlife habitat by VA would occur. The Site would likely remain unimproved with no biological resources impacts.

3.8 Noise

The existing noise environment around the Site is dominated by vehicle traffic along the Scenic Drive (aka South Providence Center Drive) and Interstate 15, located approximately 300 feet and 700 feet east of the Site, respectively. No other notable noise-generating sources are present in the immediate vicinity of the Site. As such, the Site's noise environment can be characterized as that typical of a rural area.

Cedar City does not maintain noise regulations.

3.8.1 Sensitive Receptors

The Site is located within a mostly undeveloped area, with a commercially developed area to the east and northeast along Scenic Drive. No sensitive noise receptors are located within 0.5-mile of the Site.

3.8.2 Effects of the Preferred Action Alternative

Based on the proposed use of the Site as a cemetery, no long-term noise impacts would be anticipated. Noise generated from the Proposed Action would have short-term impacts to the existing noise environment due to construction activities onsite associated with the cemetery. Noise generating sources during construction activities would be associated primarily with standard construction equipment and construction equipment transportation. These increased noise levels could directly affect the neighboring area; however, these increased noise levels would be less-than-significant and short term.

Construction activities generate noise by their very nature and are highly variable, depending on the type, number, and operating schedules of equipment. Construction projects are usually executed in stages, each having its own combination of equipment and noise characteristics and magnitudes. Construction activities are expected to be typical of other similar construction projects and would include mobilization, site preparation, excavation, placing foundations, utility development, heavy equipment movement, and paving roadways and parking areas.

The most prevalent noise source at typical construction sites is the internal combustion engine. General construction equipment using engines includes, but is not limited to: heavy, medium, and light equipment such as excavators; roller compactors; front-end loaders; bulldozers; graders; backhoes; dump trucks; water trucks; concrete trucks; pump trucks; utility trucks; and lube, oil, and fuel trucks.

Peak noise levels vary at a given location based on line of sight, topography, vegetation, and atmospheric conditions. In addition, peak noise levels would be variable and intermittent because each piece of equipment would only be operated when needed. However, peak construction noise levels would be considerably higher than existing noise levels. Relatively high peak noise levels in the range of 93 to 108 dBA (decibels, A-weighted scale) would occur within the active construction site, decreasing with distance from the construction areas. Table 1 presents peak noise levels that could be expected from a range of construction equipment during proposed construction activities.

Generally speaking, peak noise levels within 50 feet of active construction areas and material transportation routes would most likely be considered “striking” or “very loud”, comparable to peak crowd noise at an indoor sports arena. At approximately 200 feet, peak noise levels would be loud - approximately comparable to a garbage disposal or vacuum cleaner at 10 feet. At 0.25 mile, construction noise levels would generally be quiet enough so as to be considered insignificant, although transient noise levels may be noticeable at times.

Combined peak noise levels, or worst-case noise levels when several loud pieces of equipment are used in a small area at the same time as described in Table 1, are expected to occur rarely, if ever, during the project. However, under these circumstances, peak noise levels could exceed 90 dBA within 200 feet of the construction area, depending on equipment being used.

Although noise levels would be quite loud in the immediate area, the intermittent nature of peak construction noise levels would not create the steady noise level conditions for an extended duration that could lead to hearing damage. Construction workers would follow standard Federal Occupational Safety and Health Administration (OSHA) requirements to prevent hearing damage.

Areas that could be most affected by noise from construction include those closest to the construction footprint, including commercial areas east and northeast of the Site. No sensitive noise receptors are located within 0.5-mile of the Site. Indoor noise levels would be expected to be 15-25 decibels lower than outdoor levels.

Indirect impacts include noise from workers commuting and material transport. Area traffic volumes and noise levels would increase slightly as construction employees commute to and from work at the project area, and service vehicles (including trucks of various sizes) transit to and from the Site. Because trucks are present during most phases of construction and leave and enter the Site via local thoroughfares, truck noises tend to impact more people over a wider area. For this Proposed Action, persons associated with the commercial areas north and east of the Site would experience temporary increases in traffic noise during day-time hours. These effects are not considered significant because they would be temporary and similar to existing traffic noise levels in the area.

Table 1. Peak Noise Levels Expected from Typical Construction Equipment

Source	Peak Noise Level (dBA, attenuated)							
	Distance from Source (feet)							
	0	**50**	**100**	**200**	**400**	**1,000**	**1,700**	**2,500**
Heavy Truck	95	84-89	78-93	72-77	66-71	58-63	54-59	50-55
Dump Truck	108	88	82	76	70	62	58	54
Concrete Mixer	108	85	79	73	67	59	55	51
Jack-hammer	108	88	82	76	70	62	58	54
Scraper	93	80-89	74-82	68-77	60-71	54-63	50-59	46-55
Bulldozer	107	87-102	81-96	75-90	69-84	61-76	57-72	53-68
Generator	96	76	70	64	58	50	46	42
Crane	104	75-88	69-82	63-76	55-70	49-62	45-48	41-54
Loader	104	73-86	67-80	61-74	55-68	47-60	43-56	39-52
Grader	108	88-91	82-85	76-79	70-73	62-65	58-61	54-57
Pile driver	105	95	89	83	77	69	65	61
Forklift	100	95	89	83	77	69	65	61
Worst-Case Combined Peak Noise Level (Bulldozer, Jackhammer, Scraper)								
Combined Peak Noise Level	**Distance from Source (feet)**							
	50	**100**	**200**	**¼ Mile**	**½ Mile**			
	103	97	91	74	68			

Source: Tipler 1976

Proposed operational activities at the National Veterans Burial Ground would include vehicle traffic to and from the cemetery, use of powered equipment for grave site preparation, maintenance, and upkeep, and period ceremonial rifle discharges. These activities would not produce excessive noise, and would not produce an adverse noise impact on surrounding land uses. The facility would be a relatively quiet cemetery.

3.8.3 Effects of the No Action Alternative

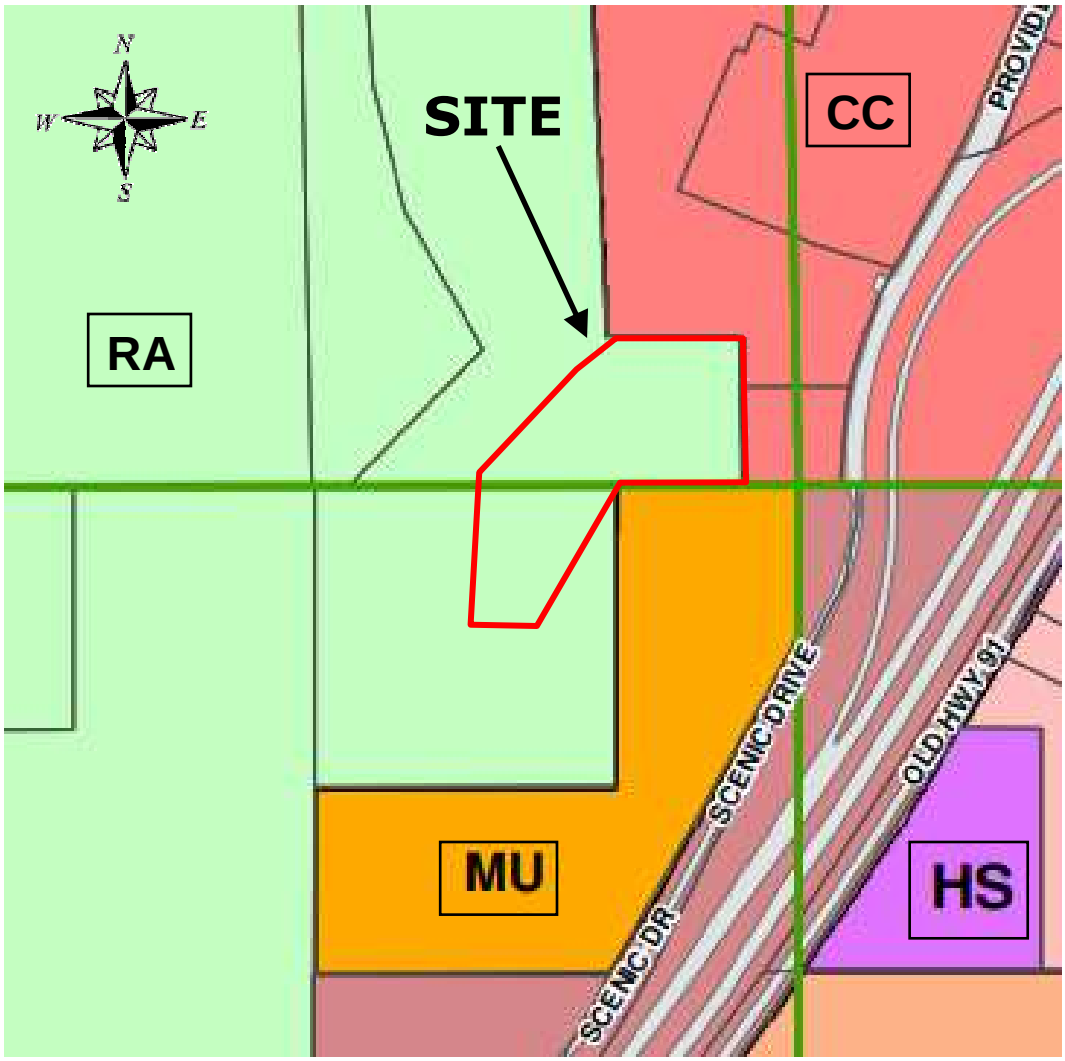
Under the No Action Alternative, the noise environment surrounding the Site would not change. No significant noise impacts presently occur at the Site.

3.9 Land Use

The Site is mostly unimproved land with scattered trees and an intermittently used livestock enclosure in the northwestern portion. The western portion of the Site is gently sloped and the eastern portion is steeply sloped toward Scenic Drive. The Site has been mostly unimproved since at least 1948. The livestock enclosure was added to the northwestern portion of the Site in the late 1990s/early 2000s.

The area surrounding the Site is mostly undeveloped with some commercial development along Scenic Drive. The areas located to the north, southeast, south, and west of the Site are unimproved land with scattered trees. A water tower access road runs to the north and west of the Site. The municipal water tower is located approximately 200 feet southwest of the Site. The area located to the east of the Site is occupied by a state-run liquor and wine store. A Home Depot store is located approximately 300 feet northeast of the Site, with additional commercial development farther north. The surrounding land uses are depicted on Figure 3.

Land use zoning for the Site and surrounding properties is regulated by Cedar City. The Site is currently zoned Residential/Agricultural. The areas northwest, south, and west of the Site are also zoned Residential/Agricultural. The area to the northeast of the Site is zoned Central Commercial and the area to the southeast is zoned General Commercial. The current zoning classifications for the Site and surrounding area are shown on Figure 7.



RA – Residential/Agricultural

CC – Central Commercial

MU – Mixed Use

HS – Highway Service

FIGURE 7
ZONING MAP

ENVIRONMENTAL ASSESSMENT
PROPOSED NATIONAL VETERANS BURIAL GROUND
CEDAR CITY, IRON COUNTY, UTAH

PREPARED FOR

U.S. DEPARTMENT OF VETERANS AFFAIRS
WASHINGTON, D.C.

TTL PROJECT NO.
14994.02

3.9.1 Effects of the Preferred Action Alternative

The Cedar City Code of Ordinances does not include cemeteries as a specific permitted use for its zoning districts. However, the use of the Site as a cemetery is generally compatible with the Site's Residential/Agricultural land use zoning designation. In addition, as a Federal agency, VA is not subject to local zoning regulations. No adverse land use effects would occur with the Preferred Action Alternative.

3.9.2 Effects of the No Action Alternative

Under the No Action Alternative, no land use impacts due to VA's Proposed Action would occur. The Site would likely remain unimproved.

3.10 Wetlands, Floodplains, and Coastal Zone Management

3.10.1 Wetlands

This section discusses wetlands at or near the Site and surface waters (streams) as they pertain to wetlands. Additional information regarding surface waters is provided in Section 3.6.

The USFWS National Wetland Inventory (NWI) Online Wetland Mapper indicates that no mapped wetlands are located on or near the Site. In addition, no wetlands were identified at the Site or surrounding properties during the Site reconnaissance or from the resources consulted as part of this EA.

3.10.2 Floodplains

According to available FEMA floodplain mapping, the Site and vicinity are not located in the 100-year or 500-year floodplains.

3.10.3 Coastal Zone

The Coastal Zone Management Act (CZMA) was promulgated to control nonpoint pollution sources that affect coastal water quality. The CZMA of 1990, as amended (16 USC 1451 *et seq.*) encourages States to preserve, protect, develop, and where possible, restore or enhance valuable natural coastal resources such as wetlands, floodplains, estuaries, beaches, dunes, barrier islands, and coral reefs, as well as the fish and wildlife using those habitats. The State of Utah does not contain any designated coastal zones.

3.10.4 Effects of the Preferred Action Alternative

No wetlands were identified on or adjacent to the Site and the Site is not located in a 100-year or 500-year floodplain, or a designated coastal zone. No impacts to wetlands, floodplains or coastal zones would occur with the Preferred Action Alternative.

3.10.5 Effects of the No Action Alternative

No impacts to wetlands, floodplains, or coastal zones resources would occur.

3.11 Socioeconomics

The following subsections identify and describe the socioeconomic environment of Cedar City, Iron County, Utah. Presented data provide an understanding of the socioeconomic factors that have developed the area. Socioeconomic areas of discussion include the local demographics of the area, regional and local economy, and local housing. Data used in preparing this section were collected from the 2010 Census of Population and Housing (US Census Bureau),

subsequent US Census Bureau data, and the US Department of Commerce Bureau of Economic Analysis (BEA).

3.11.1 Demographics

The Site is located in Cedar City, Iron County, Utah. Iron County's estimated population in 2016 was 49,937 residents. The estimated population total for Utah was 3,051,217 residents in 2016. Population totals for the Cedar City, Iron County, and Utah have all increased since 1990 (see Table 2).

Table 2. Population Totals for Cedar City, Iron County and Utah

Area	1990	2000	2010	2016 estimate
Utah	1,722,850	2,233,169	2,763,885	3,051,217
Iron County	20,789	33,779	46,163	49,937
Cedar City	13,443	20,527	28,857	Not Available

Sources: US Census Bureau, Profile of General Demographic Characteristics - 2016 estimate.

The State of Utah minority populations are greater than those for Cedar City and Iron County. Baseline information identified that Cedar City and Iron County have similarly low minority populations (Table 3). Minority populations specific to the Site area are discussed in Section 3.16 (Environmental Justice).

Table 3. Regional Population by Race and Ethnicity

Area	All Individuals	White (%)	African-American (%)	American Indian and Alaska Native (%)	Asian or Pacific Islander (%)	Other Race (%)	Hispanic or Latino* (%)
Utah	2,763,885	86.1	1.1	1.2	2.9	6.0	13.0
Iron County	46,163	90.7	0.5	2.2	1.1	3.3	7.7
Cedar City	28,857	89.4	0.7	2.7	1.2	3.3	7.9

Note: The six percentages reported by the US Census Bureau for each geographic region may total more than 100% because individuals may report more than one race.
Source: US Census Bureau, Census, Profile of General Demographic Characteristics - 2010.

According to the 2011-2015 US Census statistics, Cedar City has a similar percentage of high school graduates and a slightly higher percentage of persons with bachelor's degrees or higher than Iron County and the State of Utah as a whole. Educational attainment data are presented in Table 4.

Table 4. Educational Attainment: Cedar City, Iron County, and Utah

Educational Attainment	Cedar City (%)	Iron County (%)	Utah (%)
High school graduate (incl. equivalency)	91.3	91.6	91.2
Bachelor's degree or higher	33.6	28.6	31.1

Source: US Census Bureau, Census, American Community Survey 2011-2015.

3.11.2 Employment and Income

The region's employment is primarily centered on education, healthcare and social assistance (30.1%); arts, entertainment, and recreation, and accommodation and food services (13.3%); retail trade (12%); professional, scientific, and management, and administrative and waste management service (8.3%); manufacturing (7.4%); public administration (5.4%); and finance and insurance, and real estate and rental and leasing (5.4%).

Incomes for Cedar City and Iron County are lower, and poverty and unemployment rates are higher than Utah as a whole, as presented in Table 5. Incomes in the Site area are discussed in Section 3.16 (Environmental Justice).

Table 5. Regional Income

Area	Number of Households	Median Household Income ($)	Per Capita Income ($)	Population Below Poverty Level (%)	Unemployment Rate (%) February 2017
Utah	906,292	60,727	24,686	12.3	3.1
Iron County	15,095	43,855	18,995	21.0	4.4
Cedar City	9,548	41,632	18,887	22.9	4.1*

Source:
US Census Bureau, Census, American Community Survey 2011-2015 and US Bureau of Labor Statistics.
*Unemployment statistic for Cedar City is from April 2015.

3.11.3 Commuting Patterns

Residents of Cedar City are largely dependent on personal automobiles for transportation to and from work. Local commuting times are approximately 16 minutes (one-way). Public transportation is available via the Cedar Area Transportation Service (CATS) bus line in Cedar City. The bus line does not service the Site. The nearest bus stop is located approximately 2,000 feet north of the Site on West Cross Hollow Drive associated with the Walmart Supercenter (1330 South Providence Center Drive).

3.11.4 Housing

Rates of owner-occupied housing in Cedar City are lower than Iron County and Utah. Median housing values in Cedar City and Iron County are similar, and less than Utah as a whole (see Table 6).

Table 6. Regional Housing Characteristics

Area	Total Housing Units	Occupied (%)	Owner-Occupied (%)	Median Value ($)	Renter-Occupied (%)	Median Contract Rent ($)
Utah	1,011,099	89.6	69.5	215,900	30.5	887
Iron County	19,984	75.5	63.6	165,900	36.4	661
Cedar City	10,942	87.3	54.6	171,100	45.4	615

Source: US Census Bureau, Census, American Community Survey 2011-2015.

3.11.5 Protection of Children

Because children may suffer disproportionately from environmental health risks and safety risks, EO 13045, *Protection of Children From Environmental Health Risks and Safety Risks*, was introduced in 1997 to prioritize the identification and assessment of environmental health risks and safety risks that may affect children and to ensure that Federal agencies' policies, programs, activities, and standards address environmental risks and safety risks to children.

Children are not regularly present at the Site, which is unimproved land and contains no recreation areas. In addition, children are not regularly present on the neighboring properties. No residences, schools, or recreation facilities are located near the Site. The percentage of the population under age 18 for Cedar City, Iron County, and Utah are similar (see Table 7).

Table 7. Total Population Versus Population Under Age 18

Area	Total Population (2015 estimate)	Population Under 18	
		Number	Percent
Utah	2,903,379	897,518	30.9
Iron County	47,139	13,864	29.4
Cedar City	29,429	8,378	28.5

Source: US Census Bureau, Census, American Community Survey 2011-2015.

3.11.6 Effects of the Preferred Action Alternative

The land acquisition and development of the proposed National Veterans Burial Ground at the Site is anticipated to result in minor short-term, direct, positive socioeconomic impacts to local employment and personal income. Development of the proposed cemetery would potentially provide additional temporary construction jobs in the private sector, thus providing short-term socioeconomic benefit to the area. However, due to the intermittent and finite nature of this construction project, no long-term impacts to the construction labor force are anticipated. The Proposed Action would indirectly benefit the local economy through the spending of business and personal income generated from the construction and operation of the proposed facility, although these impacts would be minor and less-than-significant. The Proposed Action would result in long-term significant beneficial socioeconomic impacts by providing a regionally proximate National Cemetery to US Veterans.

No adverse health or safety risks to children are anticipated to result from operation of the National Veterans Burial Ground. In addition, children would only be present at the Site as visitors. Construction areas would be secured to prevent unauthorized access by children. The construction contractor would limit and control construction dust and noise, thereby minimizing adverse effects to children, if any, in the area.

3.11.7 Effects of the No Action Alternative

The No Action Alternative would result in no increased short-term or long-term socioeconomic benefit due to VA's action. Under this alternative, no new construction jobs would be created, and no additional incidental spending (e.g., at local restaurants, shops, and hotels) by an increased number of people potentially traveling to the National Veterans Burial Ground would occur.

Most importantly, the inability of VA to provide adequate regional burial sites commensurate with the need for these services would result in a significant adverse, long-term, impact to US Veterans and their families. US Veterans would have to rely on regional cemeteries or travel a

substantial distance to the nearest State Veterans Cemetery including: Southern Nevada Veteran's Memorial Cemetery in Boulder City, Nevada (at least 190 miles); Utah Veteran's Cemetery and Memorial Park in Bluffdale, Utah (at least 230 miles); and Arizona Veteran's Memorial Cemetery at Camp Navajo in Flagstaff, Arizona (at least 300 miles) or approximately 400 miles to the nearest National Cemetery (Prescott National Cemetery in Prescott, Arizona).

3.12 Community Services

The Site is located within the Iron County School District. The Iron County School District includes nine elementary schools (kindergarten through eighth grade), three high schools, two middle schools, three preschools and five alternative education schools. Cedar Middle School is located approximately one-half mile north of the Site. No other public schools are located with one mile of the Site.

The Cedar City Police Department provides police protection to the Site and its vicinity. The Cedar City Fire Department provides fire protection and emergency medical services to the Site and its vicinity. The Iron County Road Department and the Utah Department of Transportation (UDOT) provide local road and bridge maintenance to the Site and its vicinity. A small medical clinic is located approximately 4,300 feet northeast of the Site. Cedar City Hospital is located approximately five miles northeast of the Site.

Public transportation in Cedar City is provided by CATS. CATS operates one route originating at the Rock Church adjacent to City Hall downtown with 26 stops throughout the community. The bus line does not service the Site. The nearest bus stop is located approximately 2,000 feet north of the Site on West Cross Hollow Drive associated with the Walmart Supercenter (1330 South Providence Center Drive).

There are no developed recreational facilities on or in the immediate vicinity of the Site.

3.12.1 Effects of the Preferred Action Alternative

Use of the Site as a National Veterans Burial Ground would have minimal community services effects. No significant additional load is expected to be placed on the fire or police departments as the result of the Proposed Action. Use of other public or community services as a result of the proposed National Veterans Burial Ground would be minor. As such, the Proposed Action is expected to have a negligible impact on local public services.

3.12.2 Effects of the No Action Alternative

Under the No Action Alternative, the Site would likely remain unimproved with no community services impacts.

3.13 Solid and Hazardous Materials

Hazardous and toxic materials or substances are generally defined as materials or substances that pose a risk (i.e., through either physical or chemical reactions) to human health or the environment.

TTL conducted a Phase I Environmental Site Assessment (ESA) for the Site on behalf of VA in April 2017. The Phase I ESA included a site visit, interviews with persons knowledgeable about the Site, a review of historic information, and review of local, State, and Federal regulatory information for the Site and surrounding area. The Phase I ESA identified no significant hazardous substance or petroleum handling or storage at the Site and no recognized environmental conditions (RECs) at the Site. In addition, a review of reasonably ascertainable public documents did not identify evidence of known or reported environmental impacts

related to petroleum or hazardous materials in the vicinity of the Site that were considered likely to impact the Site.

3.13.1 Effects of the Preferred Action Alternative

The Preferred Action Alternative could result in short-term, less-than-significant adverse impacts due to the increased presence and use of solid and hazardous materials during construction of the cemetery. During construction, a small increase in construction vehicle traffic would increase the possibility of a release of vehicle operating fluids (e.g., oil, diesel, gasoline, antifreeze, etc.) and maintenance materials. As such, a less-than-significant, direct, short-term adverse impact is possible. Implementation of standard construction BMPs would serve to ensure this impact is further minimized.

No significant adverse long-term impacts during operation are anticipated; long-term operational solid and hazardous materials would be managed in accordance with applicable Federal and State laws. The Preferred Action Alternative would not result in a substantial increase in the generation of solid or hazardous substances or wastes, increase the exposure of persons to hazardous or toxic substances, increase the presence of hazardous or toxic materials in the environment, or place substantial restrictions on property use due to hazardous waste, materials, or site remediation. As noted in Section 3.6.3, based on standard modern burial practices, it is unlikely that embalming fluid would be released into the soil or groundwater.

3.13.2 Effects of the No Action Alternative

Under the No Action Alternative, no actions by VA would occur. The Site would likely remain unused, and no significant solid and hazardous materials use or effects would be anticipated.

3.14 Transportation and Parking

Access to the Site is currently via an unnamed, unpaved access road that leads from Scenic Drive (South Providence Center Drive) to a municipal water tower located approximately 200 feet southwest of the Site.

Interstate 15 provides primary access to Cedar City and the Site area. The intersection of Interstate 15 and Cross Hollow Road is located approximately 0.5 mile northeast of the Site. Interstate 15 is a four-lane divided highway. From the Interstate 15 exit ramp to South Providence Center Drive, Cross Hollow Road is four-lane divided road. South Providence Center Drive is a four-lane road with a center turn lane that reduces to a two-lane road with a center turn lane approximately 350 feet south of the intersection with Cross Hollow Road. The unnamed, unpaved access road has a paved entrance from South Providence Center Drive/Scenic Drive. Annual average daily traffic (AADT) data and Level of Service[1] (LOS) data for the roads in the Site area were generally unavailable, except for Interstate 15. However, based on the limited development in the Site area and TTL's site observations, it is estimated that the local roads operate at a LOC of C (stable flow) or better.

Traffic in the Site area is regulated by UDOT and the Iron County Road Department. Cedar City maintains the unpaved water tower access road.

[1] **Level of Service** – LOS represents a set of qualitative descriptions of a transportation system's performance. The Federal Highway Administration Highway Capacity Manual defines levels of service for intersections and highway segments, with ratings that range from A (best) to F (worst). Generally, a LOS of D or higher is considered acceptable by transportation planning agencies.

3.14.1 Effects of the Preferred Action Alternative

Construction traffic associated with VA's proposed cemetery development, consisting of trucks, workers' personal vehicles, and construction equipment, would temporarily increase traffic volumes in the local area, but would not likely cause significant delays. Thus, only less-than-significant, short-term adverse impacts would be anticipated.

During operation, public roadways in the vicinity of the proposed National Veterans Burial Ground would not experience significant additional traffic as a result of the cemetery. VA estimates that the cemetery would be used every day throughout the year by approximately 20 visitors. VA anticipates that there would be approximately 2 to 3 funeral processions per week (averaging approximately 20 cars per procession). Based on the anticipated burial and visitation rates, VA estimates that the proposed National Veterans Burial Ground would generate about 40 vehicles (80 vehicle trips) per day on average.

Given the proposed operational use, traffic generated by the Proposed Action would occur throughout the day, every day. Visitors to the National Veterans Burial Ground would travel at various times during the day during daylight hours. No permanent staff would be present at the cemetery. Contracted personnel would periodically travel to the Site for general maintenance and operations.

Based on the estimated low maximum usage estimates, operational traffic would not produce a significant adverse impact to local traffic conditions. The additional daily traffic associated with the Proposed Action (estimated 80 vehicle trips/day) would be a minimal increase over existing traffic conditions on local roads. Although funeral processions could have some traffic impacts at peak times, the overall impacts would be less-than-significant.

No parking impacts are anticipated. Parking at the cemetery would be designed to accommodate all required parking on-site.

3.14.2 Effects of the No Action Alternative

Under the No Action Alternative, no actions by VA would occur. The existing traffic conditions in the Site area would remain.

3.15 Utilities

No utilities are currently present at the Site; however, electricity, municipal drinking water, sanitary sewer services, and natural gas service are available in the Site vicinity. The Proposed Action would not require natural gas or sanitary sewer services.

VA would either access the Cedar City's municipal water system or install its own on-site water well to obtain irrigation water for the cemetery. The cemetery irrigation water source would be determined during the cemetery design process. VA would coordinate with the City to obtain potable water service at the cemetery, if applicable. The City has agreed to connect the cemetery to the municipal water system.

Rocky Mountain Power supplies the electrical service to the Site vicinity. The electrical service in the Site vicinity is likely adequate for the Proposed Action. VA would coordinate with Rocky Mountain Power to extend electrical service to the Site.

Various companies provide telecommunication services to the Site vicinity. The Proposed Action would not require telecommunication services.

3.15.1 Effects of the Preferred Action Alternative

The only public utilities necessary for the Proposed Action are electricity, and possibly, water. The Preferred Action Alternative is anticipated to have minimal electrical service requirements; as such, no electric utility impacts are anticipated. The primary, possible public utility need for the proposed cemetery is irrigation water to maintain the landscaped areas of the cemetery. VA would use native grasses and other vegetation, as applicable, to reduce irrigation water needs. Municipal water use at the cemetery, if any, would not result in a significant water utility impact.

3.15.2 Effects of the No Action Alternative

Under the No Action Alternative, no operations by VA would occur. No utility use at the Site would likely occur.

3.16 Environmental Justice

In 1994, EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, was issued to focus attention of Federal agencies on human health and environmental conditions in minority and low-income communities and to ensure that disproportionately high and adverse human health or environmental effects on these communities are identified and addressed.

According to the USEPA-developed EJSCREEN (an environmental justice mapping and screening internet application) the Site vicinity includes a lower minority population (9 percent) than the State of Utah as a whole (12 percent) and a larger low income population (44 percent) than the State of Utah (32 percent).

3.16.1 Effects of the Preferred Action Alternative

Development of a National Veterans Burial Ground at the Site is not anticipated to have environmental justice effects. Although the Site is located in an area with a disproportionately large low-income population, the Preferred Action Alternative would have very little impact on the residents in the area. No residential areas are located in the vicinity of the Site. No local groups are known to principally rely on fish or wildlife for subsistence. Consequently, no impacts to such disadvantaged segments of the population are anticipated.

The Preferred Action Alternative is likely to have minor short-term beneficial socioeconomic effects on local employment and personal income in the area. Given the ROI is a low-income community, such beneficial effects would be anticipated to extend to local low-income residents, a positive environmental justice effect.

3.16.2 Effects of the No Action Alternative

Under the No Action Alternative, no development by VA would occur at the Site, the Site would likely remain unimproved, and there would be no environmental justice effects.

3.17 Cumulative Impacts

As defined by CEQ Regulations in 40 CFR Part 1508.7, cumulative impacts are those which "result from the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions, without regard to the agency (Federal or non-Federal) or individual who undertakes such other actions." Cumulative impact analysis captures the effects that result from the Proposed Action in combination with the effects of other actions taken during the duration of the Proposed Action in the same geographic area.

Because of extensive influences of multiple forces, cumulative effects are the most difficult to analyze.

NEPA requires the analysis of cumulative environmental effects of a Proposed Action, or set of actions, on resources that may often be manifested only at the cumulative level, such as traffic congestion, air quality, noise, biological resources, cultural resources, socioeconomic conditions, utility system capacities, and others.

The Site is situated in a predominantly unimproved area in the southern portion of Cedar City. Interstate 15 is located approximately 700 feet east of the Site and the intersection of Interstate 15 and Cross Hollow Road is located approximately 0.5 mile northeast of the Site. The areas located adjoining to the north, southeast, south and west of the Site are mostly unimproved land. Commercial development is located east and northeast of the Site along Scenic Drive/South Providence Center Drive and Interstate 15, including a State operated liquor and wine store east of the Site and a Home Depot and a Walmart Super Center located northeast of the Site. The area around the intersection of Interstate 15 and Cross Hollow Road was mostly undeveloped in the early 1990s and began being developed in the late 1990s/early 2000s, with commercial development north of the Site along the west side of Interstate 15 and mostly residential development east of Interstate 15. Since approximately 2009, there has been little additional development.

The ROI for the Site is mostly unimproved vacant land with space for additional development. However, there has been limited recent development in the vicinity of the Site and most of the remaining vacant land in the immediate Site vicinity is sloping and less conducive for development. No other specific development plans were identified for the Site vicinity.

The Preferred Action Alternative would result in the impacts to the Site area identified in Sections 3.2 through 3.16. These primarily include potential impacts to aesthetics, air quality, cultural resources, geology and soils, hydrology and water quality, wildlife and habitat, noise, solid and hazardous materials, transportation, and utilities. All of these impacts are less-than-significant and would be further reduced through careful coordination and implementation of the general BMPs, avoidance and management measures, and compliance with regulatory requirements as identified in Section 5. Given the nature of the Proposed Action and the potential future additional development in the area surrounding the Site, no significant cumulative adverse effects to any of these resource areas are anticipated.

No adverse effects to land use; wetlands, floodplains, or coastal zones; socioeconomics; community services; parking; or environmental justice would occur as a result of the Preferred Action Alternative. As such, no cumulative adverse effects to any of these resource areas are anticipated.

No significant adverse cumulative impacts to the environment, induced by the Proposed Action, are anticipated within the region. Close coordination between State and local representatives would serve to manage and control cumulative effects within the region, including managing regional transportation increases with adequate infrastructure. Implementation of land use and resource management plans would serve to control the extent of environmental impacts, and proper planning would ensure future socioeconomic conditions maintain, if not improve the local standard of living. Implementation of effective resource management plans and programs should minimize or eliminate any potential cumulative degradation of the natural ecosystem, cultural or human environment within the ROI of the Proposed Action.

Under the No Action Alternative, no cumulative impacts are anticipated.

3.18 Potential for Generating Substantial Public Controversy

As discussed in Section 4.0, VA has solicited input from various Federal, State, and local government agencies regarding the Proposed Action. Several of these agencies have provided input; none of the input has identified opposition or controversy related to the Proposed Action. VA will publish and distribute the Draft EA for a 30-day public comment period. Based on the significant positive effects of the Proposed Action and the findings of this EA (no significant adverse environmental impact), it is not anticipated that there will be substantial public controversy regarding the Proposed Action or the Preferred Action Alternative.

SECTION 4: PUBLIC INVOLVEMENT

4.1 Public and Agency Involvement

VA invites public participation in decision-making on new proposals through the NEPA process. Public participation with respect to decision-making on the Proposed Action is guided by 38 CFR Part 26, the VA's policy for implementing the NEPA. Additional guidance is provided in the VA's NEPA Interim Guidance for Projects (VA 2010). Consideration of the views and information of all interested persons promotes open communication and enables better decision-making. Agencies, organizations, and members of the public with a potential interest in the Proposed Action, such as minority, low-income, and disadvantaged persons, are urged to participate. A record of agency coordination and public involvement associated with this EA is provided in Appendix A and Appendix E, respectively.

4.1.1 Public Review

VA, as the Federal proponent of this Proposed Action, will publish and distribute the Draft EA for a 30-day public comment period as announced by a Notice of Availability (NOA) to be published in the Cedar City Daily News/Spectrum. A copy of the Draft EA will also be made available for public review at the Cedar City Library. VA will also make a copy of the Draft EA available for download via a link on the VA internet website (http://www.cem.va.gov/ea.asp). VA will respond to provided public comments within the Final EA.

4.1.2 Agency Coordination

VA consulted with the following agencies during the preparation of this EA: the US Fish and Wildlife Service (USFWS); US Environmental Protection Agency (USEPA); US Army Corps of Engineers (USACE); Utah Department of Agriculture and Food (UDAF); Utah Department of Environmental Quality (UDEQ); Utah Department of Natural Resources (UDNR); Utah Department of Wildlife Resources (UDWR); Utah Division of Forestry, Fire & State Lands (FFSL); Utah Department of Transportation (UDOT); Utah Division of State History and State Historic Preservation Office (SHPO); Utah Division of Oil, Gas and Mining (UDOGM); Utah Division of Parks and Recreation (UDPR); Utah Division of Water Resources (UDWR); Utah Division of Water Rights (DWRi); Iron County Engineering and Surveying Department (ICESD); Iron County Natural Resources Department (ICDNR); Iron County Road Department (ICRD); Cedar City Building and Zoning Department (CCBZD); Cedar City Engineering Department (CCED); Cedar City Public Works Department (CCPWD).

VA received responses from the following agencies: USFWS, Utah SHPO, UDEQ, ICESD, and ICRD. Received agency information and comments have been fully incorporated and addressed in this EA. Copies of relevant correspondence can be found in Appendix A.

4.1.3 Native American Consultation

For proposed actions, Federal agencies are required to consult with Federally-recognized Native American Tribes in accordance with the NEPA, the National Historic Preservation Act (NHPA), the Native American Graves Protection and Repatriation Act (NAGPRA), and Executive Order (EO) 13175. VA identified 12 Native American Tribes as having possible ancestral ties to the Proposed Action's ROI and invited each Tribe to provide input on this Proposed Action (Appendix B). Section 10 contains a list of all of the Tribes invited to consult. The Paiute

Indian Tribe of Utah and the Navajo Nation responded that they have concerns or objections regarding the Proposed Action. No other Tribal responses were received.

SECTION 5: MANAGEMENT AND MINIMIZATION MEASURES

This section summarizes the management and minimization measures, if any, that are proposed to minimize and maintain potential adverse effects of the Preferred Action Alternative at acceptable, less-than-significant levels.

Per established protocols, procedures, and requirements, VA and its contractors would implement BMPs and would satisfy all applicable regulatory requirements in association with the design, construction, and operation of the National Veterans Burial Ground at the Site. These "management measures" are described in this Draft EA, and are included as components of each of the alternatives. "Management measures" are defined as routine BMPs and/or regulatory compliance measures that are regularly implemented as part of proposed activities, as appropriate, across Utah. In general, implementation of such management measures would maintain impacts at acceptable levels for all resource areas analyzed. These are different from "mitigation measures," which are defined as project-specific requirements, not routinely implemented as part of development projects, necessary to reduce identified potentially significant adverse environmental impacts to less-than-significant levels.

No project-specific mitigation measures are required for the Preferred Action Alternative.

The routine BMP and minimization measures summarized in Table 8 would be included in the Preferred Action Alternative to minimize and maintain adverse effects at less-than-significant levels.

Table 8. Best Management Practices and Minimization Measures Incorporated into the Proposed Action

Technical Resource Area	Best Management Practice/Minimization Measure
Aesthetics	Comply, to the extent practicable, with Cedar City land use and planning ordinances during the cemetery design.
Air Quality	Use appropriate dust suppression methods (such as the use of water, dust palliative, covers, suspension of earth moving in high wind conditions) during onsite construction activities.
	Stabilize disturbed areas through re-vegetation or mulching if the area would be inactive for several weeks or longer.
	Implement measures to reduce diesel particulate matter (DPM) emissions from construction equipment, such as reducing idling time and using newer equipment with emissions controls.
	Comply with the Utah Department of Environmental Quality (UDEQ) air quality regulations. Secure any required, individual minor air emissions permits from the UDEQ, as appropriate prior to construction.

Table 8. Best Management Practices and Minimization Measures Incorporated into the Proposed Action (continued)	
Technical Resource Area	**Best Management Practice/Minimization Measure**
Cultural Resources	Should human remains or other potentially historic or culturally significant items be discovered during project construction, the construction contractor would immediately cease work until VA, the Pasco County Coroner (if human remains are discovered), a qualified archaeologist, and the Utah SHPO are contacted to properly identify and appropriately treat discovered items in accordance with applicable State and Federal law(s).
Geology, Topography, and Soils	Control soil erosion and sedimentation impacts during construction by implementing erosion prevention measures and complying with the UDEQ National Pollution Discharge Elimination System (UPDES) permitting process. Prior to construction, VA would develop, submit to UDEQ, and have approved, an UPDES Construction General Permit, which would include an Erosion and Sedimentation Control (E&SC) Plan. The UDEQ UPDES permit would require stormwater runoff and erosion management using BMPs, such as earth berms, vegetative buffers and filter strips, and spill prevention and management techniques. The construction contractor would implement the sedimentation and erosion control measures specified in the UPDES permit to protect surface water quality.
Hydrology and Water Quality	Control soil erosion and sedimentation impacts during construction by complying with the UDEQ UPDES permit.
	Obtain water rights in sufficient amount to cover cemetery irrigation requirements from the Utah Division of Water Rights if an on-site water well is used.
	Ensure the site includes sufficient on-site stormwater management so as not to adversely affect the water quantity/quality in receiving water and/or offsite areas.
Wildlife and Habitat	A certified Utah Prairie Dog (UPD) surveyor would conduct a Biological Assessment of the Site within 12 months of the start of cemetery construction. The Biological Assessment report would be submitted to the US Fish and Wildlife Service (USFWS) for approval. In the unanticipated event that UPD are identified at the Site, VA would consult with USFWS to minimize or mitigate potential UPD impacts.
	Construction activities would be timed to avoid migratory birds on the Site protected under the Migratory Bird Treaty Act. Tree removal at the Site would be conducted outside the migratory bird nesting season so that nests are not disturbed. If it is not practical to clear the Site outside of this timeframe, a qualified biologist would survey the Site prior to tree clearing to ensure that no active nests are disturbed.
	Native species should be used to the extent practicable when re-vegetating land disturbed by construction to avoid the potential introduction of non-native or invasive species.

Table 8. Best Management Practices and Minimization Measures Incorporated into the Proposed Action (continued)	
Technical Resource Area	**Best Management Practice/Minimization Measure**
Noise	Limit, to the extent possible, construction and associated heavy truck traffic to occur between 7:00 a.m. and 6:00 p.m. on Monday through Friday.
	Locate stationary operating equipment as far away from sensitive receptors as possible.
	Select material transportation routes as far away from sensitive receptors as possible.
	Shut down noise-generating heavy equipment when it is not needed.
	Maintain equipment per manufacturer's recommendations to minimize noise generation.
	Encourage construction personnel to operate equipment in the quietest manner practicable (e.g., speed restrictions, retarder brake restrictions, engine speed restrictions, etc.).
Land Use	None required.
Wetlands, Floodplains, and Coastal Zone Management	None required.
Socioeconomics	None required.
Community Services	None required.
Solid and Hazardous Materials	Comply with existing VA Standard Operating Procedures and applicable Federal and State laws governing the use, generation, storage, and transportation of solid and hazardous materials.
Transportation and Parking	Coordinate with Cedar City regarding any necessary improvements to the unpaved water tower access road.
	Coordinate with the Utah Department of Transportation (UDOT), the Iron County Road Department, and Cedar City to ensure that construction and operational traffic are considered in the planning of future transportation improvements in this vicinity
	Ensure construction activities associated with cemetery construction do not adversely affect traffic flow on local roadways; construction would be timed to avoid peak travel hours.
	Ensure debris and/or soil is not deposited on local roadways during the construction of the cemetery.
Utilities	Coordinate with local utility providers to determine connection/extension requirements to service the cemetery.
Environmental Justice	None required.

SECTION 6: CONCLUSIONS

This Draft EA evaluates the Proposed Action of the Department of Veterans Affairs (VA) to acquire, develop, operate, and maintain a site in the Cedar City, Iron County, Utah area as a new National Veterans Burial Ground (rural National Veterans Cemetery). This EA discusses two alternatives: (1) *Preferred Action Alternative* – Acquire approximately eight acres (net five acres) of unimproved land located approximately 400 feet west of Scenic Drive and an entrance ramp for Interstate 15 in Cedar City, to develop, operate, and maintain as a new National Veterans Burial Ground; and (2) the *No Action Alternative*. This Draft EA evaluates possible effects to aesthetics; air quality; cultural resources; geology and soils; hydrology and water quality; wildlife and habitat; noise; land use; floodplains, wetlands, and coastal zone management; socioeconomics; community services; solid and hazardous materials; transportation and parking; utilities; and environmental justice. The EA concludes there would be no significant adverse impact, either individually or cumulatively, to the local environment or quality of life associated with implementing the Preferred Action Alternative, provided the management measures and best management practices identified in this EA are implemented.

SECTION 7: LIST OF PREPARERS

DEPARTMENT OF VETERANS AFFAIRS STAFF

Ms. Jill Schattel
Environmental Engineer
Office of Construction and Facilities Management
Department of Veterans Affairs

Mr. Glenn Madderom
Chief, Cemetery Development & Improvement Service
National Cemetery Administration
Department of Veterans Affairs

Ms. Marianne Marinucci
Realty Specialist
Office of Real Property
Office of Construction and Facilities Management
Department of Veterans Affairs

TTL ASSOCIATES, INC. (CONSULTANTS)

Name		Degree	Years of Experience
Carrie Hess	Site Reconnaissance, Research and Document Preparation	B.S, Geology, 2003	11
Paul Jackson	Research, Affected Environment, Environmental Impact Analysis, and Scoping Coordination	B.A., Biology/English, 1992	20
Rob Clark	Project Manager, Technical Lead Technical QA/QC Review, Program Management/Project Coordination	B.S., Aquatic Environments/Environmental Science, 1985	32

SECTION 8: REFERENCES CITED

Association of Natural Burials, 2013. -

Cedar City Building and Zoning Department, 2017. -

Cedar City Engineering Department, 2017. -

Cedar City Public Works Department, 2017. -

Clean Air Act of 1970 (42 USC 7401 *et. seq.*; 40 CFR Parts 50-87) Section 176(c). -

Coastal Zone Management Act of 1990, as amended (16 USC 1451 *et seq*.) -

Code of Federal Regulations 40 CFR 261.3 -

Cultural Resource Survey for the Cedar City National Veterans Cemetery, Iron County, Utah, - prepared by Commonwealth Heritage Group, Inc., dated March 14, 2018.

Phase I Environmental Site Assessment, prepared by TTL, April 2017.

Endangered Species Act of 1973, as amended (7 USC 136; 16 USC 1531 et seq.).

EO 11988, *Floodplain Management*. 1977.

EO 11990, *Protection of Wetlands*. 1977.

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.* 1994.

EO 13045, *Protection of Children From Environmental Health Risks and Safety Risks*. 1997.

EO 13175, *Consultation and Coordination with Indian Tribal Governments.* 6 November 2000.

EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management.* 24 January 2007.

EO 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*. 5 October 2009.

Farmland Protection Policy Act (FFPA) (7 USC 4201, *et seq.*).

Federal Clean Air Act of 1990 (42 USC 7401 et seq., as amended).

Federal Clean Water Act (Federal Water Pollution Control Act) of 1948, as amended (1972, 1977) (33 USC 1251 et seq.); Sections 401 and 404.

Federal Emergency Management Agency (FEMA), Flood Insurance Rate Maps.

Geotechnical Subsurface Investigation, prepared by GEM Engineering, Inc., April 2017.

Initial Cultural Resources Impact Prediction, Row 10 Historic Preservation Solutions, LLC, dated March 2017.

Iron County Engineering and Surveying Department, 2017.

Iron County Natural Resources Department, 2017.

Iron County Road Department, 2017.

Migratory Bird Treaty Act (16 USC 703-712, 3 July 1918; as amended 1936, 1960, 1968, 1969, 1974, 1978, 1986, and 1989).

National Historic Preservation Act of 1966, as amended (36 CFR Part 800).

Native American Graves Protection and Repatriation Act, as amended (NAGPRA) (25 USC 3001 et seq.), 1990.

National Oceanic and Atmospheric Association, 2017.

NCA Performance Plan of the 2013 VA Budget, Rural Initiatives Program.

US Army Corps of Engineers (USACE), 2017.

US Fish and Wildlife Service (USFWS), 2017.

US Environmental Protection Agency (USEPA), 2017.

US Department of Commerce Bureau of Economic Analysis, American Community Survey 2011-2015.

US Census Bureau 2000 and 2010.

US Department of Agriculture, Natural Resources Conservation Service Web Soil Survey, 2017.

US Environmental Protection Agency (USEPA) National Ambient Air Quality Standards (NAAQS), 2008.

US Geological Survey, 2017.

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USFWS National Wetlands Inventory Online Mapper, 2017.

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Utah Department of Natural Resources, 2017.

Utah Department of Transportation, 2017.

Utah Department of Wildlife Resources, 2017.

Utah Division of Forestry, Fire & State Lands, 2017.

Utah Division of Oil, Gas and Mining, 2017.

Utah Division of Parks and Recreation, 2017.

Utah Division of State History and State Historic Preservation Office, 2017.

Utah Division of Water Resources, 2017.

Utah Division of Water Rights, 2017.

VA 2010 NEPA Interim Guidance for Projects. PG-18-17 (rev.). 30 September 2010.

Other internet searches and data:

Cedar City, Utah: http://www.cedarcity.org/

Iron County, Utah: https://www.ironcounty.net/

Iron County School Districts: http://irondistrict.org/

FEMA Flood Hazard Insurance Map: http://msc.fema.gov -

Groundwater Atlas of the United States: http://pubs.usgs.gov/ha/ha730/gwa.html -

Utah Department of Environmental Quality: https://deq.utah.gov/ -

Utah Department of Wildlife Resources: https://wildlife.utah.gov/ -

Utah Division of Forestry, Fire & State Lands: http://www.ffsl.utah.gov/ -

Utah Division of Oil, Gas and Mining: https://www.ogm.utah.gov/ -

Utah Department of Transportation: https://www.udot.utah.gov/ -

Utah Division of State History and State Historic Preservation Office: - https://heritage.utah.gov/history/shpo-compliance

Utah Geological Survey: https://geology.utah.gov/

Utah Division of Water Rights: https://www.waterrights.utah.gov/

National Wetland Inventory: http://www.fws.gov/wetlands/Data/mapper.html

National Register of Historic Places: http://www.nps.gov/nr/

Native American Consultation Database: http://grants.cr.nps.gov/nacd/index.cfm

U.S. Geological Survey: http://www.usgs.gov/ -

USDA NRCS Web Soil Survey: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx -

U.S. Environmental Protection Agency, website: http://www.epa.gov/ -

US Bureau of Census (2010 US Census Data): http://www.census.gov/ -

Various internet mapping tools: www.mapquest.com, www.maps.google.com, - www.google.earth.com, etc.

SECTION 9: LIST OF ACRONYMS AND ABBREVIATIONS

AADT	Annual Average Daily Traffic
ACHP	Advisory Council on Historic Preservation
AIRFA	American Indian Religious Freedom Act
amsl	above mean sea level
ARPA	Archaeological Resources Protection Act
BEA	Bureau of Economic Analysis
bgs	below ground surface
BMP	Best Management Practice
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CATS	Cedar Area Transportation Service
CCBZD	Cedar City Building and Zoning Department
CCED	Cedar City Engineering Department
CCPWD	Cedar City Public Works Department
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CZMA	Coastal Zone Management Act
dBA	decibel
DERR	Utah Division of Environmental Response and Remediation
DWMRC	Utah Division of Waste Management and Radiation Control
E&S	Erosion and Sedimentation
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
FBO	Federal Business Opportunity
FFSL	Utah Division of Forestry, Fire and State Lands
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
GHG	Greenhouse Gases
ICDNR	Iron County Department of Natural Resources
ICESD	Iron County Engineering and Surveying Department
ICRD	Iron County Road Department
ICRIP	Initial Cultural Resource Impact Prediction
IICEP	Interagency and Intergovernmental Coordination for Environmental Planning
IPaC	Information for Planning and Conservation
LOS	Level of Service
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NCA	National Cemetery Administration
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act
NOA	Notice of Availability
NOAA	National Oceanic and Atmospheric Association
NPDES	National Pollution Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OSHA	Occupational Safety and Health Administration
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
ROI	Region of Influence
RONA	Record of Non-applicability
SHPO	Utah Division of State History and State Historic Preservation Office
SIP	State Implementation Plan
UDAF	Utah Department of Agriculture and Food
UDEQ	Utah Department of Environmental Quality
UDNR	Utah Department of Natural Resources
UDOGM	Utah Division of Oil, Gas and Mining

UDOT	Utah Department of Transportation
UDPR	Utah Division of Parks and Recreation
UDWR	Utah Department of Wildlife Resources
UDWRe	Utah Division of Water Resources
UDWRi	Utah Division of Water Rights
UPD	Utah Prairie Dog
UPDES	Utah Pollutant Discharge Elimination System
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VA	Department of Veterans Affairs

SECTION 10: AGENCIES AND INDIVIDUALS CONSULTED

Agencies Consulted

U.S. Fish and Wildlife Service
Mountain-Prairie Region
Utah Ecological Services Field Office -
2369 West Orton Circle, Suite 50 -
West Valley City, Utah 84119-7603 -
Phone: (801) 975-3330 -

US Environmental Protection Agency, Region 8
8OC-EISC -
1595 Wynkoop Street -
Denver, Colorado 80202-1129 -
Phone: (303) 312-6312 -

US Army Corps of Engineers – Sacramento District
1325 J Street, Room 1350 -
Sacramento, California 95814 -
Phone: (916) 557-5250 -

Utah Department of Environmental Quality
Division of Air Quality
P.O. Box 144820 -
Salt Lake City, Utah 84114-4820 -
Phone: (801) 536-4000 -

Utah Department of Environmental Quality
Division of Drinking Water
P.O. Box 144830 -
Salt Lake City, Utah 84114-4830 -
Phone: (801) 536-4200 -

Utah Department of Environmental Quality
Division of Environmental Response and Remediation
P.O. Box 144840 -
Salt Lake City, Utah 84114-4840 -
Phone: (801) 536-4100 -

Utah Department of Environmental Quality
Division of Waste Management and Radiation Control
P.O. Box 144880 -
Salt Lake City, Utah 84114-4880 -
Phone: (801) 536-0200 -

Utah Department of Environmental Quality
Division of Water Quality
P.O. Box 144870 -
Salt Lake City, Utah 84114-4870 -
Phone: (801) 536-4300 -

Utah Division of State History
State Historic Preservation Office
Mr. Chris Hansen -
300 South Rio Grande Street -
Salt Lake City, Utah 84101 -
Phone: (801) 245-7239 -

Utah Department of Agriculture and Food
350 North Redwood Road
P.O. Box 146500 -
Salt Lake City, Utah 84114-6500 -
Phone: (435) 893-4799 -

Utah Department of Transportation, Region 4
210 West 800 South -
Richfield, Utah 84701 -
Phone: (435) 893-4799 -

Utah Division of Wildlife Resources
Southern Region
1470 North Airport Road -
Cedar City, Utah 84720 -
Phone: (435) 865-6100 -

Utah Department of Natural Resources
Cedar City DNR Regional Complex -
646 North Main Street -
Cedar City, Utah 84720 -
Phone: (435) 586-4321 -

Utah Division of Forestry, Fire & State Lands
1594 West North Temple, Suite 3520 -
PO Box 145703 -
Salt Lake City, Utah 84114 -
Phone: (801) 538-5555 -

Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210 -
P.O. Box 145801 -
Salt Lake City, Utah 84114 -
Phone: (801) 538-5340 -

Utah Division of Parks and Recreation
1594 West North Temple, Suite 116
P.O. Box 146001
Salt Lake City, Utah 84114
Phone: (801) 538-7230

Utah Division of Water Resources
1594 West North Temple, Suite 310
P.O. Box 146201
Salt Lake City, Utah 84114
Phone: (801) 538-7220

Utah Division of Water Rights
1594 West North Temple, Suite 220
P.O. Box 146300
Salt Lake City, Utah 84114
Phone: (801) 538-7240

Iron County Engineering and Surveying Department
82 North 100 E, Suite 104
Cedar City, Utah 84720
Phone: (435) 865-5370

Iron County Natural Resources Department
82 North 100 E, Suite 102
Cedar City, Utah 84720
Phone: (435) 865-5357

Iron County Road Department
1105 N Bulldog Road
Cedar City, Utah 84721
Phone: (435) 865-5400

Cedar City Building and Zoning Department
10 North Main Street
Cedar City, Utah 84720
Phone: (435) 865-4519

Cedar City Engineering Department
10 North Main Street
Cedar City, Utah 84720
Phone: (435) 586-2963

Cedar City Public Works Department
716 North Airport Road
Cedar City, Utah 84721
Phone: (435) 586-2912

List of Tribes Consulted

Confederated Tribes of the Goshute Reservation, Nevada and Utah
Rupert Steele, NAGPRA Contact
P.O. Box 6104
Ibapah, Utah 84034

Kaibab Band of Paiute Indians of the Kaibab Indian Reservation, Arizona
Cultural Preservation Office
Ganivan Timcan, NAGPRA Contact
Qualla Boundary Reservation
HC65, Box 2
Fredonia, Arizona 86022

Las Vegas Tribe of Paiute Indians of the Las Vegas Indian Colony, Nevada
Ramona Salazar, NAGPRA Contact
1 Paiute Drive
Las Vegas, Nevada 89106

Moapa Band of Paiute Indians of the Moapa River Indian Reservation, Nevada
Moapa Band of Paiute Indians Cultural Committee
Ural Begaye, NAGPRA Contact
P.O. Box 340
Moapa, Nevada 89025

Navajo Nation, Arizona, New Mexico and Utah
Tribal Historic Preservation Department
Billie Tamara, Tribal Historic Preservation Officer
P.O. Box 4950
Window Rock, Arizona 86515

Northwestern Band of Shoshone Nation
Cultural Resource Department
Patty Timbimboo-Madsen, NAGPRA Contact
707 North Main Street
Brigham City, Utah 84302

Paiute Indian Tribe of Utah
Doreen Martineau, NAGPRA Contact
440 North Paiute Drive
Cedar City, Utah 84721

Shoshone-Bannock Tribes of the Fort Hall Reservation
Carolyn Boyer Smith, NAGPRA Contact
P.O. Box 306
97 Yakima Street
Fort Hall, Idaho 83203

Skull Valley Band of Goshute Indians of Utah
Skull Valley Goshute General Council
Candace Bear, Chairperson
P.O. Box 448
1198 North Main Street
Grantsville, Utah 84029

Ute Indian Tribe of the Uintah & Ouray Reservation, Utah
Cultural Rights and Protection Office
Betsy Chapoose, NAGPRA Contact
P.O. Box 190
Ft. Duchesne, Utah 84026

Eastern Shoshone Tribe of the Wind River Reservation, Wyoming
Wilferd Ferris III, NAGPRA Contact
P.O. Box 538
Fort Washakie, Wyoming 82514

Ute Mountain Ute Tribe
Cultural Preservation Program
Terry Knight, NAGPRA Contact
P.O. Box 468
Towoac, Colorado 81334

SECTION 11: LIST OF ENVIRONMENTAL PERMITS REQUIRED

11.1 Regulatory Framework

This EA has been prepared under the provisions of, and in accordance with the NEPA, the CEQ Regulations Implementing the Procedural Provisions of NEPA, and 38 CFR Part 26. In addition, the EA has been prepared as prescribed in VA's *NEPA Interim Guidance for Projects* (VA 2010b). Federal, State, and local laws and regulations specifically applicable to this Proposed Action are specified, where appropriate, within this EA, and include:

- Migratory Bird Treaty Act (MBTA; 16 USC 703-712, 3 July 1918; as amended 1936, 1960, 1968, 1969, 1974, 1978, 1986, and 1989).
- Endangered Species Act (ESA) of 1973, as amended (7 USC 136; 16 USC 1531 et seq.).
- Native American Graves Protection and Repatriation Act, as amended (NAGPRA) (25 USC 3001 et seq.).
- National Historic Preservation Act (NHPA) of 1966, as amended (36 CFR Part 800).
- Federal Clean Air Act (CAA) of 1990 (42 USC 7401 *et seq*., as amended).
- Federal Clean Water Act (Federal Water Pollution Control Act) of 1948, as amended (1972, 1977) (33 USC 1251 *et seq*.); Sections 401 and 404.
- Executive Order 11988, *Floodplain Management* (24 May 1977).
- Executive Order 11990, *Protection of Wetlands* (24 May 1977).
- Executive Order 12898, *Environmental Justice* (11 February 1994).
- Executive Order 13423, *Strengthening Federal Environmental, Energy, and Transportation Management* (24 January 2007).
- Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance* (5 October 2009).
- Servicemembers Civil Relief Act, also known as the Veteran's Benefit Act of 2010, Public Law 111-275, Sec.503. Reports on Selection of New National Cemeteries (38 USC 2400).
- NCA Performance Plan of the 2013 VA Budget, Rural Initiatives Program.
- UDEQ National Pollution Discharge Elimination System (UPDES) permit for General Construction Activity.
- Cedar City Code of Ordinances

11.2 Environmental Permits Required

In addition to the regulatory framework of the NEPA, the CEQ Regulations Implementing the Procedural Provisions of NEPA, 38 CFR Part 26, and VA's *NEPA Interim Guidance for Projects,* the following Federal, State, and/or local environmental permits are required as part of this Proposed Action, and include:

- UDEQ National Pollution Discharge Elimination System (UPDES) Stormwater Discharge General Permit Associated with Construction Activity (General Permit).
- Utah Division of Water Rights approval for groundwater well installation, if applicable.

SECTION 12: GLOSSARY

100-Year Flood – A flood event of such magnitude that it occurs, on average, every 100 years; this equates to a one percent chance of its occurring in a given year.

Aesthetics – Pertaining to the quality of human perception of natural beauty.

Ambient - The environment as it exists around people, plants, and structures.

Ambient Air Quality Standards - Those standards established according to the CAA to protect health and welfare (AR 200-1).

Aquifer - An underground geological formation containing usable amounts of groundwater which can supply wells and springs.

Asbestos - Incombustible, chemical-resistant, fibrous mineral forms of impure magnesium silicate used for fireproofing, electrical insulation, building materials, brake linings, and chemical filters. Asbestos is a carcinogenic substance.

Attainment Area - Region that meets the National Ambient Air Quality Standard (NAAQS) for a criteria pollutant under the CAA.

Bedrock - The solid rock that underlies all soil, sand, clay, gravel and loose material on the earth's surface.

Best Management Practices (BMPs) - Methods, measures, or practices to prevent or reduce the contributions of pollutants to U.S. waters. Best management practices may be imposed in addition to, or in the absence of, effluent limitations, standards, or prohibitions (AR 200-1).

Commercial land use – Land use that includes private and public businesses (retail, wholesale, etc.), institutions (schools, churches, etc.), health services (hospitals, clinics, etc.), and military buildings and installations.

Compaction - The packing of soil together into a firmer, denser mass, generally caused by the pressure of great weight.

Contaminants - Any physical, chemical, biological, or radiological substances that have an adverse effect on air, water, or soil.

Council on Environmental Quality (CEQ) - An Executive Office of the President composed of three members appointed by the President, subject to approval by the Senate. Each member shall be exceptionally qualified to analyze and interpret environmental trends, and to appraise programs and activities of the Federal Government. Members are to be conscious of and responsive to the scientific, economic, social, aesthetic, and cultural needs of the Nation; and to formulate and recommend national policies to promote the improvement of the quality of the environment.

Criteria Pollutants - The CAA of 1970 required the USEPA to set air quality standards for common and widespread pollutants in order to protect human health and welfare. There are six "criteria pollutants": ozone (O_3), carbon monoxide (CO), sulfur dioxide (SO_2), lead (Pb), nitrogen dioxide (NO_2), and particulate matter.

Cultural Resources - The physical evidence of our Nation's heritage. Included are: archaeological sites; historic buildings, structures, and districts; and localities with social significance to the human community.

Cumulative Impact - The impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

Decibel (dB) - A unit of measurement of sound pressure level.

Direct Impact - A direct impact is caused by a Proposed Action and occurs at the same time and place.

Emission - A release of a pollutant.

Endangered Species - Any species which is in danger of extinction throughout all or a significant portion of its range.

Environmental Assessment (EA) - An EA is a publication that provides sufficient evidence and analyses to show whether a proposed system will adversely affect the environment or be environmentally controversial.

Erosion - The wearing away of the land surface by detachment and movement of soil and rock fragments through the action of moving water and other geological agents.

Farmland - Cropland, pastures, meadows, and planted woodland.

Fauna - Animal life, especially the animal characteristics of a region, period, or special environment.

Flora - Vegetation; plant life characteristic of a region, period, or special environment.

Floodplain - The relatively flat area or lowlands adjoining a river, stream, ocean, lake, or other body of water that is susceptible to being inundated by floodwaters.

FONSI - Finding of No Significant Impact, a NEPA document.

Fugitive Dust - Particles light enough to be suspended in air, but not captured by a filtering system. For this document, this refers to particles put in the air by moving vehicles and air movement over disturbed soils at construction sites.

Geology - Science which deals with the physical history of the earth, the rocks of which it is composed, and physical changes in the earth.

Groundwater - Water found below the ground surface. Groundwater may be geologic in origin and as pristine as it was when it was entrapped by the surrounding rock or it may be subject to daily or seasonal effects depending on the local hydrologic cycle. Groundwater may be pumped from wells and used for drinking water, irrigation, and other purposes. It is recharged by precipitation or irrigation water soaking into the ground. Thus, any contaminant in precipitation or irrigation water may be carried into groundwater.

Hazardous Substance - Hazardous materials are defined within several laws and regulations to have certain meanings. For this document, a hazardous material is any one of the following:

Any substance designated pursuant to section 311 (b)(2)(A) of the Clean Water Act.

Any element, compound, mixture, solution, or substance designated pursuant to Section 102 of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

Any hazardous substance as defined under the Resource Conservation and Recovery Act (RCRA).

Any toxic pollutant listed under TSCA.

Any hazardous air pollutant listed under Section 112 of CAA.

Any imminently hazardous chemical substance or mixture with respect to which the EPA Administrator has taken action pursuant to Subsection 7 of TSCA.

The term does not include: 1) Petroleum, including crude oil or any thereof, which is not otherwise specifically listed or designated as a hazardous substance in a above. 2) Natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). A list of hazardous substances is found in 40 CFR Part 302.4.

Hazardous Waste - A solid waste which, when improperly treated, stored, transported, or disposed of, poses a substantial hazard to human health or the environment. Hazardous wastes are identified in 40 CFR Part 261.3 or applicable foreign law, rule, or regulation.

Hazardous Waste Storage - As defined in 40 CFR Part 260.10, ". . . the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere".

Hydric Soil - A soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic (oxygen-lacking) conditions that favor the growth and regeneration of hydrophytic vegetation. A wetland indicator.

Indirect Impact - An indirect impact is caused by a Proposed Action that occurs later in time or farther removed in distance, but is still reasonably foreseeable. Indirect impacts may include induced changes in the pattern of land use, population density or growth rate, and related effects on air, water, and other natural and social systems. For example, referring to the possible direct impacts described above, the clearing of trees for new development may have an indirect impact on area wildlife by decreasing available habitat.

Industrial Land Use – Land uses of a relatively higher intensity that are generally not compatible with residential development. Examples include light and heavy manufacturing, mining, and chemical refining.

Isolated Wetland – Areas that meet the wetland hydrology, vegetation, and hydric soil characteristics, but do not have a direct connection to the Waters of the US.

Jurisdictional Wetland – Areas that meet the wetland hydrology, vegetation, and hydric soil characteristics, and have a direct connection to the Waters of the US. These wetlands are regulated by the USACE.

Listed Species - Any plant or animal designated as a State or Federal threatened, endangered, special concern, or candidate species.

Mitigation - Measures taken to reduce adverse impacts on the environment.

Mobile Sources - Vehicles, aircraft, watercraft, construction equipment, and other equipment that use internal combustion engines for energy sources.

Monitoring - A process of inspecting and recording the progress of mitigation measures implemented.

National Ambient Air Quality Standards (NAAQS) - Nationwide standards set up by the USEPA for widespread air pollutants, as required by Section 109 of the Clean Air Act (CAA). Currently, six pollutants are regulated by primary and secondary NAAQS: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter, and sulfur dioxide (SO_2).

National Environmental Policy Act (NEPA) - U.S. statute that requires all Federal agencies to consider the potential effects of Proposed Actions on the human and natural environment.

Non-attainment Area - An area that has been designated by the EPA or the appropriate State air quality agency as exceeding one or more National or State ambient air quality standards.

Parcel - A plot of land, usually a division of a larger area.

Particulates or Particulate Matter - Fine liquid or solid particles such as dust, smoke, mist, fumes, or smog found in air.

Physiographic Region - A portion of the Earth's surface with a basically common topography and common morphology.

Pollutant - A substance introduced into the environment that adversely affects the usefulness of a resource.

Potable Water - Water which is suitable for drinking.

Prime Farmland - A special category of highly productive cropland that is recognized and described by the US Department of Agriculture's Soil Conservation Service and receives special protection under the Surface Mining Law.

Remediation - A long-term action that reduces or eliminates a threat to the environment.

Riparian Areas - Areas adjacent to rivers and streams that have a high density, diversity, and productivity of plant and animal species relative to nearby uplands.

River Basin - The land area drained by a river and its tributaries.

Sensitive Receptors - Include, but are not limited to, asthmatics, children, and the elderly, as well as specific facilities, such as long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, and childcare centers.

Significant Impact - According to 40 CFR Part 1508.27, "significance" as used in NEPA requires consideration of both context and intensity.

Context. The significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the Proposed Action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action.

Small quantity generator - A generator who generates greater than 220 pounds but less than 2,200 pounds of hazardous waste in a calendar month and who does not accumulate more than 13,200 pounds of hazardous waste at any one time (if either threshold is exceeded, the generator becomes a large quantity generator). A small quantity generator may accumulate hazardous waste up to 180 days from the accumulation start date.

Soil - The mixture of altered mineral and organic material at the earth's surface that supports plant life.

Solid Waste - Any discarded material that is not excluded by section 261.4(a) or that is not excluded by variance granted under sections 260.30 and 260.31.

Threatened species - Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Topography - The relief features or surface configuration of an area.

Toxic Substance - A harmful substance which includes elements, compounds, mixtures, and materials of complex composition.

Waters of the United States - Include the following: (1) All waters which are currently being used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide. (2) All interstate waters including interstate wetlands. (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds; the use, degradation or destruction of which could affect interstate or foreign commerce.

Watershed - The region draining into a particular stream, river, or entire river system.

Wetlands - Areas that are regularly saturated by surface or groundwater and, thus, are characterized by a prevalence of vegetation that is adapted for life in saturated soil conditions. Examples include swamps, bogs, fens, marshes, and estuaries.

Wildlife Habitat - Set of living communities in which a wildlife population lives.

APPENDIX A

Agency Correspondence

44265 Plymouth Oaks Blvd.
Plymouth, MI 48170
T 734-455-8600
F 734-455-8608
www.ttlassoc.com

March 15, 2017

U.S. Fish and Wildlife Service
Mountain-Prairie Region
Utah Ecological Services Field Office
2369 West Orton Circle, Suite 50
West Valley City, Utah 84119-7603

SUBJECT: Intergovernmental and Interagency Coordination of Environmental Planning (NEPA Scoping Letter) for the: Department of Veterans Affairs (VA) Proposed National Veterans Burial Ground Cedar City, Iron County, Utah

To Whom It May Concern:

The US Department of Veterans Affairs (VA) is preparing environmental documentation to assist in the Federal decision-making process concerning the acquisition of approximately 8.2 acres of land in Cedar City, Iron County, Utah (Site) for the establishment of a National Veterans Burial Ground. This project is part of VA's Rural Veterans Burial Initiative, whereby the VA National Cemetery Administration (NCA) is seeking to establish small NCA-managed Veterans cemeteries in rural areas not served by a nearby National or State Veterans cemetery. Utah was one of eight locations across the country that was targeted for the establishment of a National Veterans Burial Ground.

The preferred site is part of a 43-acre parcel of land owned by Cedar City and is located approximately 400 feet west of Scenic Drive and an entrance ramp for Interstate 15. The Site is currently undeveloped, gently to steeply sloping land with scattered trees. A livestock enclosure is located in the northwestern portion of the Site. VA would develop the western approximately 5 acres (gently sloped) for the National Veterans Burial Ground and the eastern approximately 3 acres (steeply sloped) would remain an undeveloped buffer for the cemetery. The site location is depicted in **Attachments 1a, 1b and 1c**.

VA is conducting an Environmental Assessment (EA) to evaluate the environmental, cultural, and socioeconomic issues associated with the proposed acquisition, development, operation, and maintenance of a National Veterans Burial Ground at the site pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 *et seq*.); the Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508); and VA's Implementing Regulations (38 CFR Part 26 (*Environmental Analysis of VA Actions*).

Information Request: *Information your agency can provide on any of the following environmental issue areas (at or in the vicinity of the proposed site) would be appreciated*. Examples of such information includes, but not limited to:

- Potential environmental concerns or issues;
- Surface and groundwater resources, including streams, wetlands, floodplains, open water features, wells, and local aquifers;

- Federally or state listed threatened or endangered species, or any species proposed for such listing, or critical habitat for such species that may occur within a one-mile radius around the proposed site;
- Parks, nature preserves, conservation areas, designated wild or scenic rivers, migratory bird habitats, or special wildlife issues;
- Natural resource issues;
- Soils and geologic data, including lists of hydric soils;
- Prime and unique farmland (*National Resources Conservation Services (NRCS) only*);
- Traffic, noise, or socioeconomic concerns;
- Air quality concerns; and
- Additional environmental, cultural, land use, or socioeconomic information or concerns your agency may have with regard to the referenced site.

Data that you make available will provide valuable and necessary input into the NEPA process and will be used to scope the NEPA analysis. As part of the NEPA process, local citizens, groups, and agencies, among others, will have opportunity to review and comment on the information and alternatives addressed in the EA.

Other Agencies and Organizations: A listing of agencies and organizations to which this request was sent is provided in **Attachment 2**. VA will conduct separate consultation with the Utah State Historic Preservation Office (SHPO) and Federally-recognized Native American Tribes that may have ties to the Site area. *Should you know of any additional agencies or organizations that may have data or concerns relevant to this project or site, please forward them a copy of this letter, include their information in your response, or contact us directly with this information.*

We look forward to and welcome your participation in this process. **Please respond by April 14, 2017** to enable us to complete this scoping phase of the project within the scheduled timeframe. TTL Associates, Inc. is assisting the VA in conducting this NEPA process.

Please send your written responses via regular or e-mail (preferred) to:

TTL Associates, Inc.
44265 Plymouth Oaks Boulevard
Plymouth, Michigan 48170
ATTN: Paul J. Jackson, Environmental Scientist
pjackson@ttlassoc.com

If you have any questions concerning this request, please direct them to Mr. Jackson at (734) 582-4960.

Sincerely,

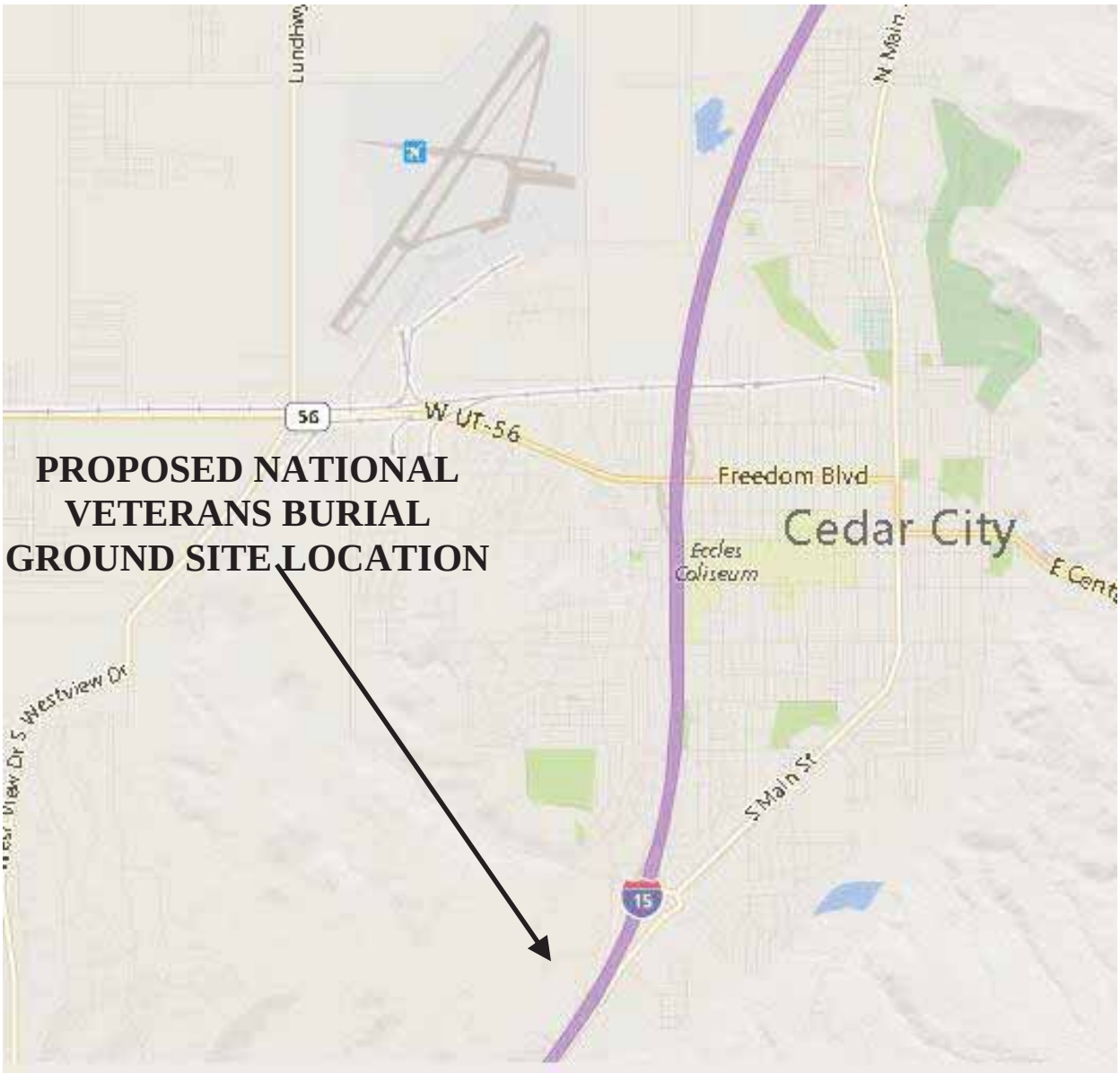
Paul J. Jackson
Environmental Scientist

Attachment 1a – 1c: Site Location Maps
Attachment 2: List of Agencies and Organizations Contacted

ATTACHMENT 1A

SITE LOCATION MAP (STREET MAP)

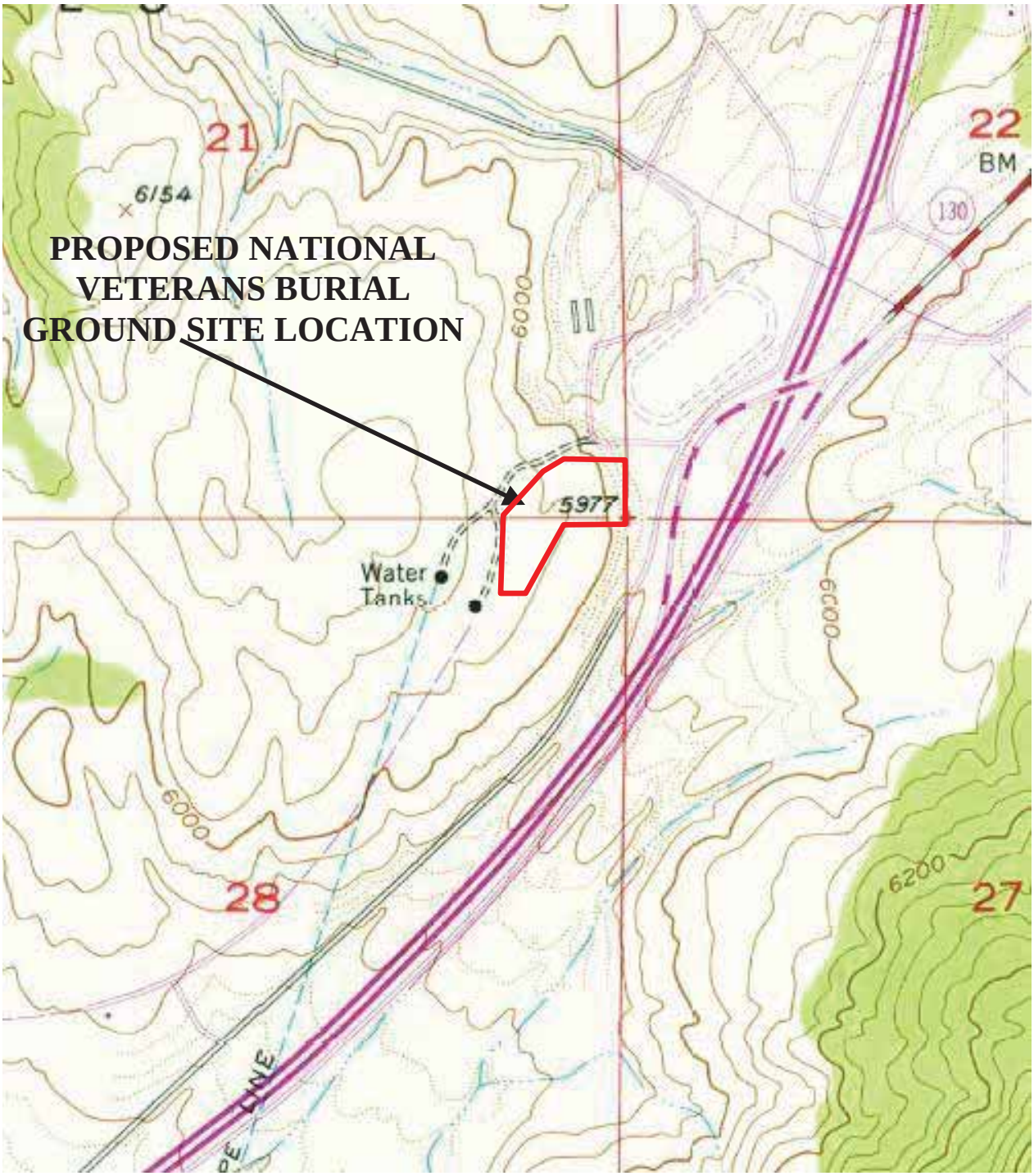
Proposed National Veterans Burial Ground
Cedar City, Iron County, Utah



ATTACHMENT 1B

SITE LOCATION MAP
(1950 PHOTOREVISED 1978 TOPOGRAPHIC MAP)

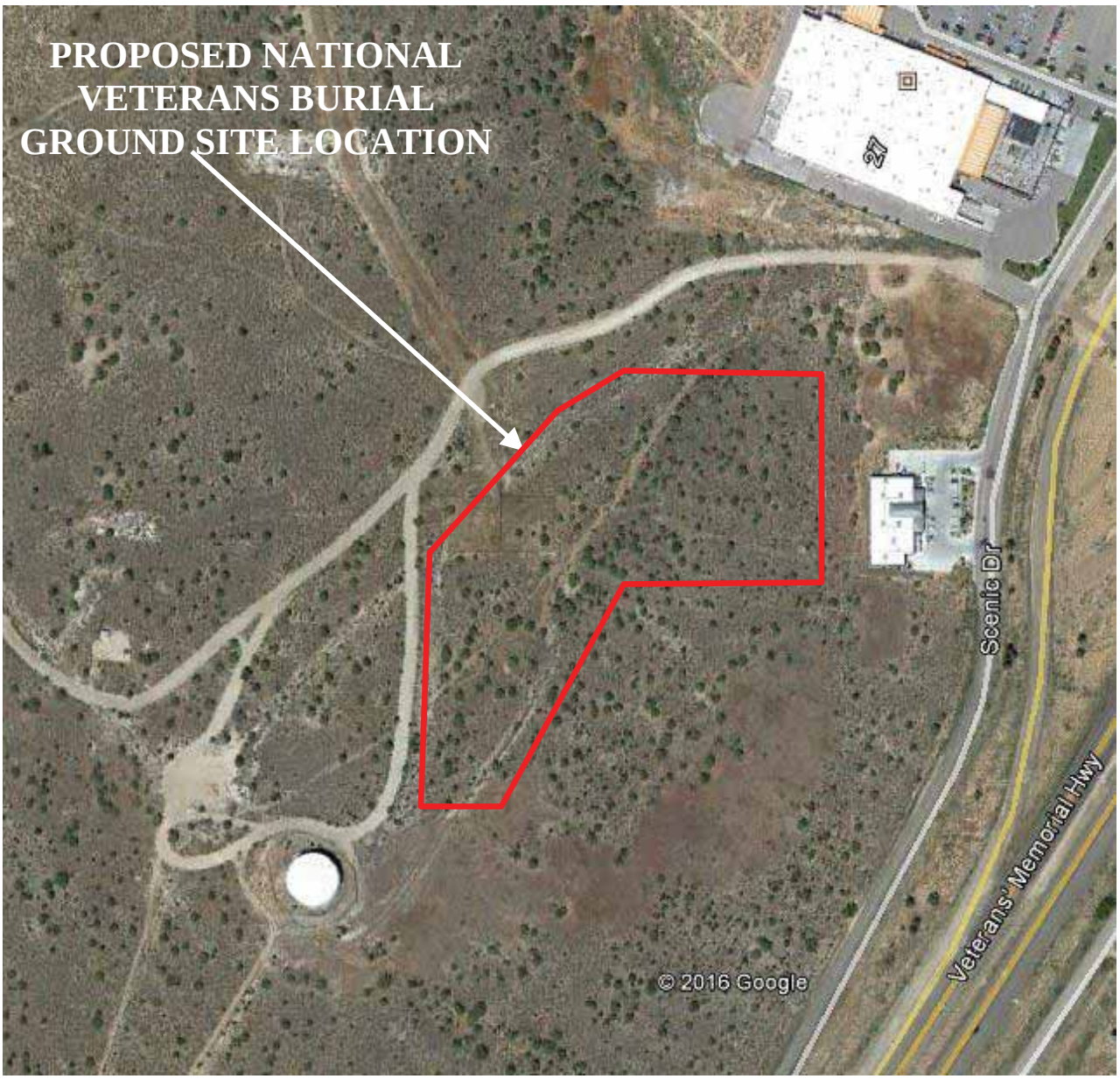
Proposed National Veterans Burial Ground
Cedar City, Iron County, Utah



ATTACHMENT 1C

SITE LOCATION MAP (2015 AERIAL PHOTOGRAPH)

Proposed National Veterans Burial Ground
Cedar City, Iron County, Utah



Attachment 2
List of Agencies and Organizations Contacted
Department of Veterans Affairs
NEPA Environmental Assessment
Proposed National Veterans Burial Ground
Cedar City, Iron County, Utah

U.S. Fish and Wildlife Service
Mountain-Prairie Region
Utah Ecological Services Field Office
2369 West Orton Circle, Suite 50
West Valley City, Utah 84119-7603
Phone: (801) 975-3330

US Environmental Protection Agency, Region 8
8OC-EISC
1595 Wynkoop Street
Denver, Colorado 80202-1129
Phone: (303) 312-6312

US Army Corps of Engineers – Sacramento District
1325 J Street, Room 1350
Sacramento, California 95814
Phone: (916) 557-5250

Utah Department of Environmental Quality
Division of Air Quality
P.O. Box 144820
Salt Lake City, Utah 84114-4820
Phone: (801) 536-4000

Utah Department of Environmental Quality
Division of Drinking Water
P.O. Box 144830
Salt Lake City, Utah 84114-4830
Phone: (801) 536-4200

Utah Department of Environmental Quality
Division of Environmental Response and Remediation
P.O. Box 144840
Salt Lake City, Utah 84114-4840
Phone: (801) 536-4100

Utah Department of Environmental Quality
Division of Waste Management and Radiation Control
P.O. Box 144880
Salt Lake City, Utah 84114-4880
Phone: (801) 536-0200

Utah Department of Environmental Quality
Division of Water Quality
P.O. Box 144870
Salt Lake City, Utah 84114-4870
Phone: (801) 536-4300

Utah Division of State History
State Historic Preservation Office
Mr. Chris Hansen
300 South Rio Grande Street
Salt Lake City, Utah 84101
Phone: (801) 245-7239

Utah Department of Agriculture and Food
350 North Redwood Road
P.O. Box 146500
Salt Lake City, Utah 84114-6500
Phone: (435) 893-4799

Utah Department of Transportation, Region 4
210 West 800 South
Richfield, Utah 84701
Phone: (435) 893-4799

Utah Division of Wildlife Resources
Southern Region
1470 North Airport Road
Cedar City, Utah 84720
Phone: (435) 865-6100

Utah Department of Natural Resources
Cedar City DNR Regional Complex
646 North Main Street
Cedar City, Utah 84720
Phone: (435) 586-4321

Utah Division of Forestry, Fire & State Lands
1594 West North Temple, Suite 3520
PO Box 145703
Salt Lake City, Utah 84114
Phone: (801) 538-5555

Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114
Phone: (801) 538-5340

Attachment 2 (continued)
List of Agencies and Organizations Contacted
Department of Veterans Affairs
NEPA Environmental Assessment
Proposed National Veterans Burial Ground
Cedar City, Iron County, Utah

Utah Division of Parks and Recreation
1594 West North Temple, Suite 116
P.O. Box 146001
Salt Lake City, Utah 84114
Phone: (801) 538-7230

Utah Division of Water Resources
1594 West North Temple, Suite 310
P.O. Box 146201
Salt Lake City, Utah 84114
Phone: (801) 538-7220

Utah Division of Water Rights
1594 West North Temple, Suite 220
P.O. Box 146300
Salt Lake City, Utah 84114
Phone: (801) 538-7240

Iron County Engineering and Surveying Department
82 North 100 E, Suite 104
Cedar City, Utah 84720
Phone: (435) 865-5370

Iron County Natural Resources Department
82 North 100 E, Suite 102
Cedar City, Utah 84720
Phone: (435) 865-5357

Iron County Road Department
1105 N Bulldog Road
Cedar City, Utah 84721
Phone: (435) 865-5400

Cedar City Building and Zoning Department
10 North Main Street
Cedar City, Utah 84720
Phone: (435) 865-4519

Cedar City Engineering Department
10 North Main Street
Cedar City, Utah 84720
Phone: (435) 586-2963

Cedar City Public Works Department
716 North Airport Road
Cedar City, Utah 84721
Phone: (435) 865-649

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Jill Remington Love
Executive Director
Department of
Heritage & Arts

Utah Division of
State History

Brad Westwood
Director

April 30, 2018

Marianne Marinucci
Realty Specialist
Office of Construction and Facilities Management
Washington D.C., 20420

RE: Proposed National Veterans Burial Ground, Cedar City, Iron County, Utah

For future correspondence, please reference Case No. 18-0877

Dear Ms Marinucci,

The Utah State Historic Preservation Office received your request for our comment on the above-referenced undertaking on April 23, 2018. From the information you provided, it appears that no cultural resources were located in the undertaking's Area of Potential Effects. We concur with your determination of No Historic Properties Affected for this undertaking as per §36CFR800.4(d)(1).

This letter serves as our comment on the determinations you have made, within the consultation process specified in §36CFR800.4. If you have questions, please contact me at (801)245-7241 or by email at ehora@utah.gov. Please note that beginning November 23, 2017 the Utah SHPO implemented online consultation, more information is available at community.utah.gov or please contact me.

Sincerely,

Elizabeth Hora
Cultural Compliance Reviewer

Rob Clark

Subject: RE: [EXTERNAL] RE: Follow-up on VA Burial Ground, Cedar City, Utah

From: Novak, Kate [mailto:kate_novak@fws.gov]
Sent: Thursday, April 12, 2018 2:36 PM
To: Paul Jackson
Subject: Re: [EXTERNAL] RE: Follow-up on VA Burial Ground, Cedar City, Utah

Paul.

I just heard back from the State Wildlife folks and currently the nearest Utah prairie dog colonies are over 1 mile away. Two of those colonies are on the east side of I-15 and the other has lots of tall hills that may act as natural barriers between this proposed site and that colony.

The proposed site for your project also appears to be situation in the foothills which is mostly pinyon juniper.

That said, conditions and occupancy could change in time- especially sine you are 5 years out on this project. However, currently it is possible that a fence may not be needed.

Anyways, there is a bit more information for you for now. Let me know on any further questions and as you get closer to working on a section 7 consultation and biological assessment.

Kate

On Thu, Apr 12, 2018 at 10:38 AM, Paul Jackson <pjackson@ttlassoc.com> wrote:

Much appreciated.

Thanks,

Paul Jackson
Environmental Scientist
TTL Associates, Inc.
44265 Plymouth Oaks Boulevard | Plymouth, MI 48170 | ttlassoc.com
Direct: (734) 582-4960 | Fax: (734) 582-4961

From: Novak, Kate [mailto:kate_novak@fws.gov]
Sent: Thursday, April 12, 2018 12:29 PM
To: Paul Jackson

Subject: Re: [EXTERNAL] RE: Follow-up on VA Burial Ground, Cedar City, Utah

Thanks Paul!

If needed here are the specs for a Utah prairie dog proof fence.

I will also keep you in the loop on what the Utah Division of Wildlife Resources indicates about the current condition of the site.

Kate

On Thu, Apr 12, 2018 at 10:16 AM, Paul Jackson <pjackson@ttlassoc.com> wrote:

Kate:

Attached are some maps of the Site. The nearest identifiable address is for the north adjoining Home Depot – 1518 South Providence Center Drive, Cedar City, UT.

Thanks,

Paul Jackson
Environmental Scientist
TTL Associates, Inc.
44265 Plymouth Oaks Boulevard | Plymouth, MI 48170 | ttlassoc.com
Direct: (734) 582-4960 | Fax: (734) 582-4961

From: Novak, Kate [mailto:kate_novak@fws.gov]
Sent: Monday, April 9, 2018 7:48 PM
To: Paul Jackson
Cc: Laura Romin
Subject: Re: [EXTERNAL] RE: Follow-up on VA Burial Ground, Cedar City, Utah

Paul,

Thanks for your email on this pending project. As there are several areas to clarify and discuss here, as phone call would be best.

Let me know your availability and we can plan to talk this week.

Kate

On Fri, Apr 6, 2018 at 2:00 PM, Paul Jackson <pjackson@ttlassoc.com> wrote:

Kate:

So our project took about a 1-year hiatus, but has now begun to get back on track.

I wanted to refresh/update you on the status things and our plan moving forward.

We conducted a site visit of the property in the past year. The site is moderately sloped with shallow bedrock and rocky outcropings. Based on my limited knowledge, it doesn't sound like ideal Utah Prairie Dog habitat. In addition, we did not observe any evidence of Utah Prairie Dogs on the site; although, our personnel were not certified to conduct a formal survey.

Our plan moving forward is to recommend to VA to conduct a Biological Assessment of the site within one year of the start of construction and to install appropriate engineering controls to prevent the Utah Prairie Dogs from colonizing the cemetery after construction.

Where I am seeking your input is in regard to the actions needed in the event that the Biological Assessment identifies Utah Prairie Dogs at the site. From the September 2009 Recommended Translocation Procedures for Utah Prairie Dogs, it seems that the process for relocating any identified Utah Prairie Dog is pretty straight forward, or at least the instructions for doing so are pretty straight forward.

So am I correct to recommend to VA:

1) Do a Biological Assessment within one year of construction;

2) If no Utah Prairie Dogs are identified, then proceed, but install appropriate engineering controls to prevent the Utah Prairie Dogs from colonizing the cemetery after construction.

3) If Utah Prairie Dogs are identified, then follow the September 2009 Recommended Translocation Procedures for Utah Prairie Dogs and install appropriate engineering controls to prevent the Utah Prairie Dogs from colonizing the cemetery after construction.

Does this seem reasonable?

We have not yet talked with the Cedar City Cemetery folks to get a perspective of just what's involved to manage Utah Prairie Dogs if they were to somehow colonize the cemetery, but it seems that the protocols for handling that situation are already in place.

Thanks,

Paul Jackson
Environmental Scientist
TTL Associates, Inc.
44265 Plymouth Oaks Boulevard | Plymouth, MI 48170 | ttlassoc.com
Direct: (734) 582-4960 | Fax: (734) 582-4961

From: Novak, Kate [mailto:kate_novak@fws.gov]
Sent: Tuesday, April 11, 2017 7:16 PM
To: Paul Jackson
Subject: Follow-up on VA Burial Ground, Cedar City, Utah

Paul,

Thanks for the discussion this evening. Per our conversation, I recommend that you use ECOS, IPAC to generate a species list and look at potential impacts to threatened/endangered species from your proposed project.

The main species of concern in that area is the Utah prairie dog (threatened). There is no designated critical habitat for Utah prairie dogs, however. A certified surveyor would need to survey the proposed project site and a Biological Assessment submitted to our office if you decide to move forward with the project.

Also, as I mentioned there can be management concerns for cemeteries in the area and Utah prairie dog habitat. However, we do have a revised 4(d) rule for the species that does have flexibility for areas where Utah prairie dogs disturb the sanctity of significant human cultural or burial sites. That said I wanted to give you a heads up on local concerns.

Here is a (dated- from 2010) article that provides info on the Paragonah Cemetary-

http://www.heraldextra.com/news/state-and-regional/trappers-kicking-prairie-dogs-out-of-utah-cemetery/article_1e49dc82-8ca2-5862-a77c-b4bb3febcbce.html

Kate Novak
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~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Kate Novak
Fish and Wildlife Biologist
US Fish and Wildlife Service, Utah Field Office
2369 West Orton Circle, Suite 50
West Valley City, Utah 84119

kate_novak@fws.gov
(801)975-3330 x132
(801)975-3331 (fax)
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

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P.O. Box 429
68 South 100 East
Parowan, Utah 84761
P 435.477.8300
F 435.477.8847

March 30, 2017

TTL Associates, Inc.
Attn: Paul J. Jackson
44265 Plymouth Oaks Blvd.
Plymouth, MI 48170

RE: Establishment of a National Veterans Burial Ground in Cedar City, Iron County, Utah

Dear Mr. Jackson,

I am answering your letter of March 15, 2017 for the Iron County Engineering and Surveying Department and the Iron County Road Department.

- First, we think this is a rather sloping site for a cemetery but you seem to be aware of that, judging from the 2nd paragraph of your letter.
- Second, this is certainly not a quiet site being so close to the I-15 Freeway. You know this traffic rolls 24/7.
- Third, we believe the most serious issue is as soon as you dig a grave you will hit serious lava rock. It will not be easy and in certain spots may be impossible without blasting. We certainly recommend a soils investigation; with eyes wide open.

Thank you for the opportunity to comment on this site.

Respectfully,

Stephen R. Platt, P.E.
Iron County Engineer

rf
cc: Iron County Road Department

State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Alan Matheson
Executive Director

DIVISION OF ENVIRONMENTAL
RESPONSE AND REMEDIATION

Brent H. Everett
Director

ERRC-053-17

April 11, 2017

TTL Associates, Inc
Attn: Mr. Paul J. Jackson, Environmental Scientist
44265 Plymouth Oaks Boulevard
Plymouth, Michigan 48170

RE: Your request for information about the Department of Veterans Affairs Proposed National Veterans Burial Ground Project in Cedar City, Utah

Dear Mr. Jackson:

I am writing in response to your letter dated March 15, 2017, requesting that the Division of Environmental Response and Remediation (DERR) notify you of any issues regarding environmental concerns at, or in, the vicinity of the proposed site.

There are two Hazardous Waste and Used Oil facilities within a one-mile radius of the proposed burial ground. These facilities are:

- Walmart Super Center (Facility ID – UTR000006536)
- Home Depot (Facility ID – UTR000008607)

We suggest you get in touch with the Division of Waste Management and Radiation Control (DWMRC) within the Utah Department of Environmental Quality (UDEQ) for further information regarding these facilities and their possible impact to your proposed project.

The DERR recommends that you retain an environmental professional to provide research and advice concerning environmental issues at specific properties. Information is available online about DERR-regulated facilities and public records. Please visit http://enviro.deq.utah.gov and http://eqedocs.utah.gov/ to view facility-specific information. Some properties may also have an Environmental Covenant attached to the property to address contamination left in place in lieu of, or following, site remediation.

Not all UDEQ divisions publish information in the DERR databases. Additional environmental issues may be identified by requesting public records from other UDEQ divisions. Instructions for requesting public records are available online at http://www.deq.utah.gov/ProgramsServices/services/grama/GRAMA.htm.

If you have any questions regarding this matter, please feel free to call me at (801) 536-0026.

Sincerely,

Melissa Ottley
Environmental Scientist, Project Manager
Division of Environmental Response and Remediation

MO/ab

cc: Robert Beers, Environmental Health Director, Southwest Utah Public Health Department

Carrie Hesso

From: Paul JacksoFF
Sent: ThurFday, March 30, 2017 6:49 PMF
To: Carrie HessF
Subject: W: PrF pF ed National Veterans Burial GrF und, Cedar City, UtahF

Thanks,
Paul Jackson
Environmental Scientist
TTL A ciate s, Inc.
44265 Plymouth Oaks Boulevard | Plymouth, MI 48170 | ttlassoc.com..
Direct: (734) 582-4960 | Fax: (734) 582-4961

From: Brad Maulding [ma7to:bmau d ng@utah.gov] 7
Sen : Thursday, March 30, 2017 5:29 PM 7
o: Paul Jackson 7
Subject: Proposed National Veterans Burial Ground, Cedar C ty, Utah 7

Mr. Jacksbn, b
The Utah Divibibn bf Wabte Management and Radiatibn Cobntrbl habreviewed the infbrmatibn ybu submitted b n March 21, 2017 regarding a probbsed Natibnal Veteranb Burial Grbund tb be lbcated in Cedar City, b Utah. Babed bn bur evaluatibn, we cbuld find nb evidence bf envirobnmental cobncernb fbr the probbsed probperty b r adjacent prbpertiesb that our RCRA probgram wobuld have authbrity obver. There are nb knbwn generatorb bf b hazardobus wastbe or any known remediatibn activitiesb b

If ybu have any further questibnb, pleabse feel free to cbntact me at the number belbw. b
Thanks, Brad b

Brad Maulding | Section Manager | Corrective Actio Section b

Phone: 80 -536- 2 5 b

b

Office Hours: Monday-Friday, 9:00 a.m.– 6:30 p. . b

195 North 1950 West, Salt Lake City, Utah 84 6 b

Disclaimer:, b
Statements made in this e-mail do not constitute the official position of the Director of the Division of Waste Management and Radiation Control. If you desire a statement of the , Director's position, please submit a w,itten request to this office, on paper, including documents , elevant to your request. b

APPENDIX B

Native American Consultation

DEPARTMENT OF VETERANS AFFAIRS
Office of Construction & Facilities Management
Washington DC 20420

April 20, 2018

Paiute Indian Tribe of Utah
Doreen Martineau, NAGPRA Contact
440 North Paiute Drive
Cedar City, Utah 84721

SUBJECT: Consultation
Proposed National Veterans Burial Ground
Cedar City, Iron County, Utah

Dear Ms. Martineau,

The US Department of Veterans Affairs (VA) is preparing environmental documentation to assist in the Federal decision-making process concerning the acquisition of approximately 8.2 acres of land in Cedar City, Iron County, Utah (Site) for the establishment of a National Veterans Burial Ground (Proposed Action). This project is part of VA's Rural Veterans Burial Initiative, whereby the VA National Cemetery Administration (NCA) is seeking to establish small NCA-managed Veterans cemeteries in rural areas not served by a nearby National or State Veterans cemetery. Utah was one of eight locations across the country that was targeted for the establishment of a National Veterans Burial Ground.

The Site is part of a 43-acre parcel of land owned by Cedar City and is located approximately 400 feet west of Scenic Drive and an entrance ramp for Interstate 15. The Site is currently undeveloped, gently to steeply sloping land with scattered trees. A livestock enclosure is located in the northwestern portion of the Site. VA would develop the western approximately 5 acres (gently sloped) for the National Veterans Burial Ground and the eastern approximately 3 acres (steeply sloped) would remain an undeveloped buffer for the cemetery. The Site location is depicted in Attachments 1a, 1b and 1c.

VA is conducting an Environmental Assessment (EA) to evaluate the environmental, cultural, and socioeconomic issues associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code (USC) §4321 *et seq*.); the Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508); and VA's Implementing Regulations (38 CFR Part 26 (*Environmental Analysis of VA Actions*)).

As part of this evaluation, a Cultural Resource Survey for the Site was completed, which included a review of the Utah Division of State History (UDSH) records to identify previously identified cultural resources in the project area and a field survey of the Site by an archaeologist. No National Register of Historic Places (NRHP)-listed or eligible-for-listing resources were identified at the Site or within the area of potential effect of the Proposed Action.

To the best of our knowledge and belief, the Proposed Action would have no effect on Native American graves or cultural items, historic properties, or archaeological, historic, or scientific data, but we would appreciate your advice about this, and would be happy to undertake government-to-government consultation with your Tribe in accordance with Executive Order 13175, NAGPRA, and NHPA. We would also be glad to discuss any other concerns you may have about this project as we carry out our analyses under NEPA. With your advice and assistance, we hope to establish an ongoing cooperative relationship.

Thank you for your review of this VA undertaking. If you have any questions or comments about this project, please contact me at marianne.marinucci@va.gov, (202) 632-5468.

Sincerely,

Marianne Marinucci

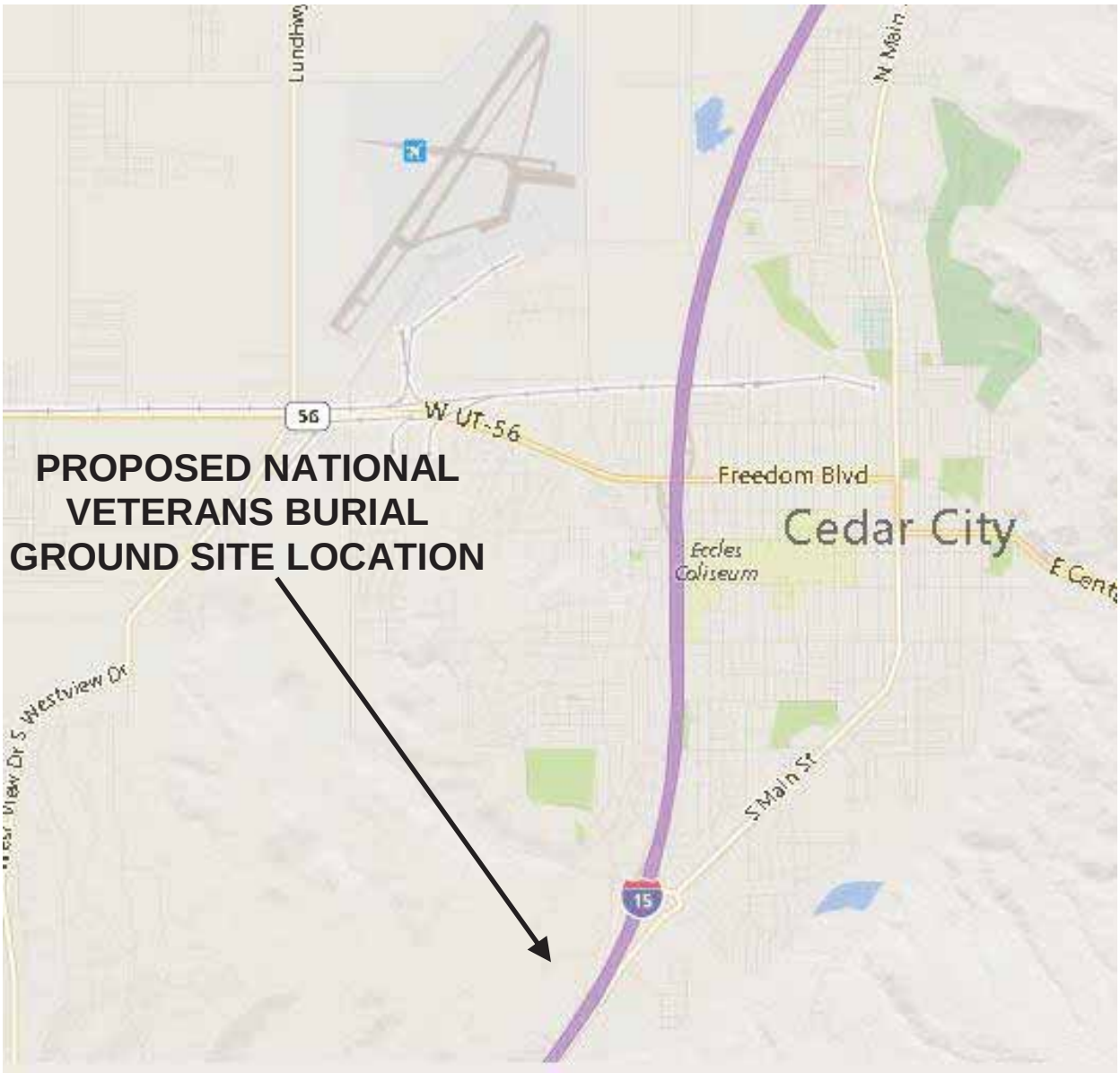
Marianne Marinucci
Realty Specialist
U.S. Department of Veterans Affairs
Office of Real Property

Attachment 1a – 1c: Site Location Maps
Attachment 2: List of Tribes Consulted

ATTACHMENTS 1A, 1B, and 1C
LOCATION MAPS

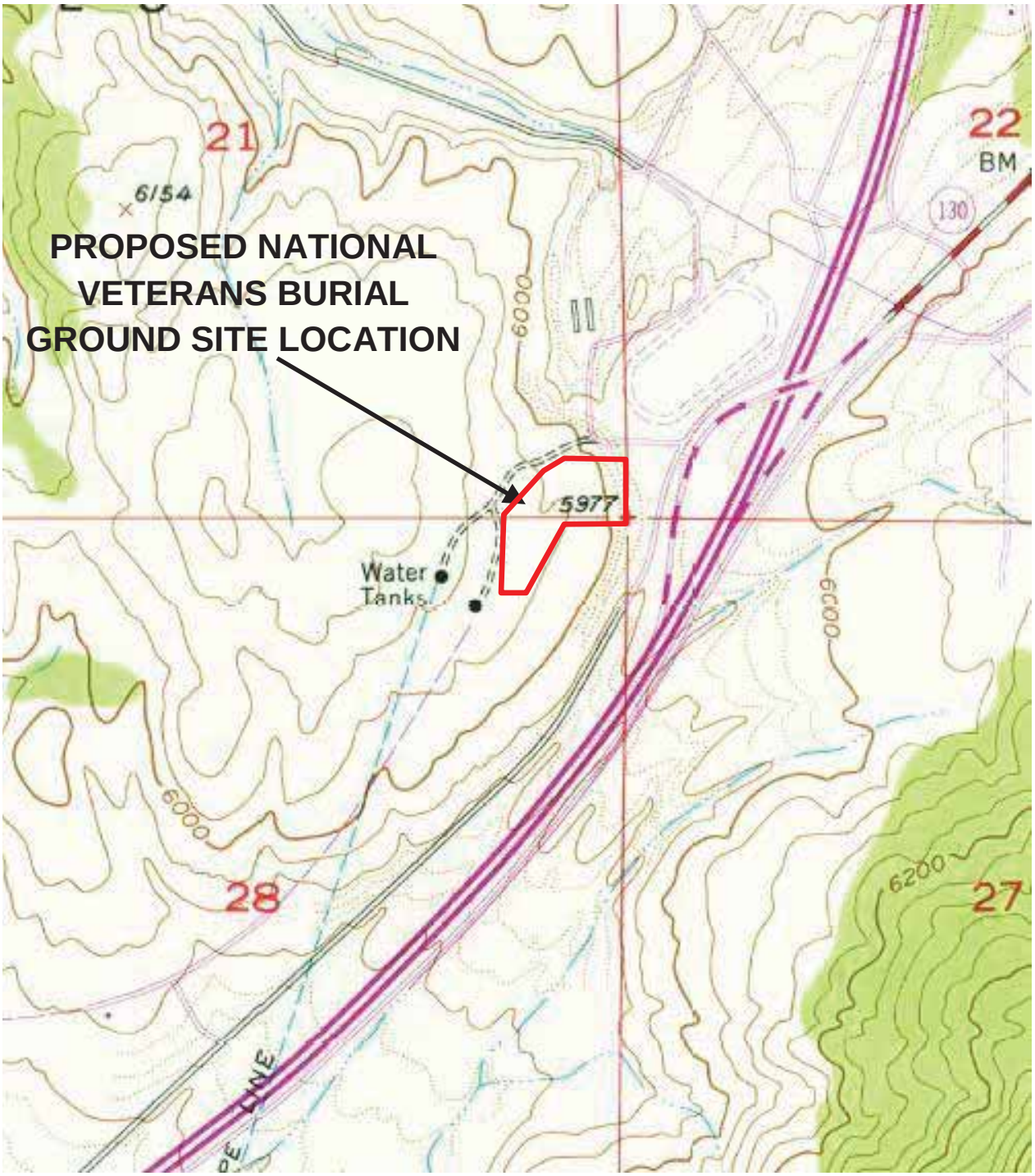
ATTACHMENT 1A

SITE LOCATION MAP (STREET MAP)
Proposed National Veterans Burial Ground
Cedar City, Iron County, Utah



ATTACHMENT 1B

SITE LOCATION MAP
(1950 PHOTOREVISED 1978 TOPOGRAPHIC MAP)
Proposed National Veterans Burial Ground
Cedar City, Iron County, Utah



ATTACHMENT 1C

SITE LOCATION MAP (2015 AERIAL PHOTOGRAPH)
Proposed National Veterans Burial Ground
Cedar City, Iron County, Utah

Attachment 2
List of Tribes Consulted
Department of Veterans Affairs
NEPA Environmental Assessment
Proposed National Veterans Burial Ground
Cedar City, Iron County, Utah

Confederated Tribes of the Goshute Reservation, Nevada and Utah
Rupert Steele, NAGPRA Contact
P.O. Box 6104
Ibapah, Utah 84034

Kaibab Band of Paiute Indians of the Kaibab Indian Reservation, Arizona
Cultural Preservation Office
Ganivan Timcan, NAGPRA Contact
Qualla Boundary Reservation
HC65, Box 2
Fredonia, Arizona 86022

Las Vegas Tribe of Paiute Indians of the Las Vegas Indian Colony, Nevada
Ramona Salazar, NAGPRA Contact
1 Paiute Drive
Las Vegas, Nevada 89106

Moapa Band of Paiute Indians of the Moapa River Indian Reservation, Nevada
Moapa Band of Paiute Indians Cultural Committee
Ural Begaye, NAGPRA Contact
P.O. Box 340
Moapa, Nevada 89025

Navajo Nation, Arizona, New Mexico and Utah
Tribal Historic Preservation Department
Billie Tamara, Tribal Historic Preservation Officer
P.O. Box 4950
Window Rock, Arizona 86515

Northwestern Band of Shoshone Nation
Cultural Resource Department
Patty Timbimboo-Madsen, NAGPRA Contact
707 North Main Street
Brigham City, Utah 84302

Paiute Indian Tribe of Utah
Doreen Martineau, NAGPRA Contact
440 North Paiute Drive
Cedar City, Utah 84721

Shoshone-Bannock Tribes of the Fort Hall Reservation
Carolyn Boyer Smith, NAGPRA Contact
P.O. Box 306
97 Yakima Street
Fort Hall, Idaho 83203

Skull Valley Band of Goshute Indians of Utah
Skull Valley Goshute General Council
Candace Bear, Chairperson
P.O. Box 448
1198 North Main Street
Grantsville, Utah 84029

Ute Indian Tribe of the Uintah & Ouray Reservation, Utah
Cultural Rights and Protection Office
Betsy Chapoose, NAGPRA Contact
P.O. Box 190
Ft. Duchesne, Utah 84026

Eastern Shoshone Tribe of the Wind River Reservation, Wyoming
Wilferd Ferris III, NAGPRA Contact
P.O. Box 538
Fort Washakie, Wyoming 82514

Ute Mountain Ute Tribe
Cultural Preservation Program
Terry Knight, NAGPRA Contact
P.O. Box 468
Towoac, Colorado 81334

THE PAIUTE INDIAN TRIBE OF UTAH

440 North Paiute Drive • Cedar City, Utah 84721 • (435) 586-1112 • Fax (435) 586-7388

May 11, 2018

Marianne Marinucci/Realty Specialist
U.S. Department of Veteran's Affairs
Office of Construction & Facilities Management
Washington DC 20420

Dear Ms. Marinucci,

Subject: Proposed National veterans Burial Ground

The Paiute Indian Tribe of Utah is in receipt of your letter dated April 20, 2018 and has reviewed the material and do not have any objections pertaining to the above named subject.
At this time we are not aware of any cultural resource sites, practices, or locations of importance in the tribe's traditional religions or culture. As you are aware the tribes supports the identification and avoidance of prehistoric archaeological sites and traditional cultural properties.

The Paiute Tribe sincerely appreciates your accomplishments and consideration you and your staff have made to consult with the Tribes.

Sincerely,

Dorena Martineau/Cultural Resources
Paiute Indian Tribe of Utah
435-586-1112 ext. 107

cc: Tylia Varilek, BLM RFO Archaeologist

Rob Clark

From: Timothy Begay <tbegay@navajo-nsn.gov>
Sent: Friday, April 27, 2018 11:44 AM
To: Marinucci, Marianne (CFM)
Subject: [EXTERNAL] National Veterans Burial Ground

Dear Ms. Marinucci :

The Navajo Nation Heritage and Historic Preservation Department has reviewed your letter dated April 20, 2018, and the Navajo Nation has no concerns or questions regarding establishment an 8.2 acrcs National Veterans burial Ground in Cedar City, Iron County, Utah. You may proceed without further consultation with the Navajo Nation. Thank you for consulting the Navajo Naton.

Timothy C. Begay, Navajo Cultural Specialist NN Heritage & Historic Preservation Dep't PO Box 4950 Window Rock, AZ 86515
Office: 928-871-7152

APPENDIX C

Photograph Log

SITE PHOTOGRAPHS

Photo #1: Looking southerly at the livestock enclosure located in the northwest portion of the site.

Photo #2: Looking westerly at the livestock enclosure.

Photo #3: Looking easterly across the northern portion of the site.

Photo #4: Looking southeasterly across the northern portion of the site.

Photo #5: Looking southerly across the central portion of the site.

Photo #6: Looking westerly across the southern portion of the site.

SITE PHOTOGRAPHS

Photo #7: Looking easterly across the southern site boundary.

Photo #8: Looking northerly along the western site boundary.

Photo #9: Household debris at the site.

Photo #10: Drainage ditch located in the central portion of the site.

Photo #11: Concrete, brick and vegetation debris located at the site.

Photo #12: Northerly adjoining driveway, unpaved access road, and cattle run.

SITE PHOTOGRAPHS

Photo #13: Northerly adjoining unimproved land.

Photo #14: Easterly adjoining unimproved land.

Photo #15: Southeasterly adjoining unimproved land.

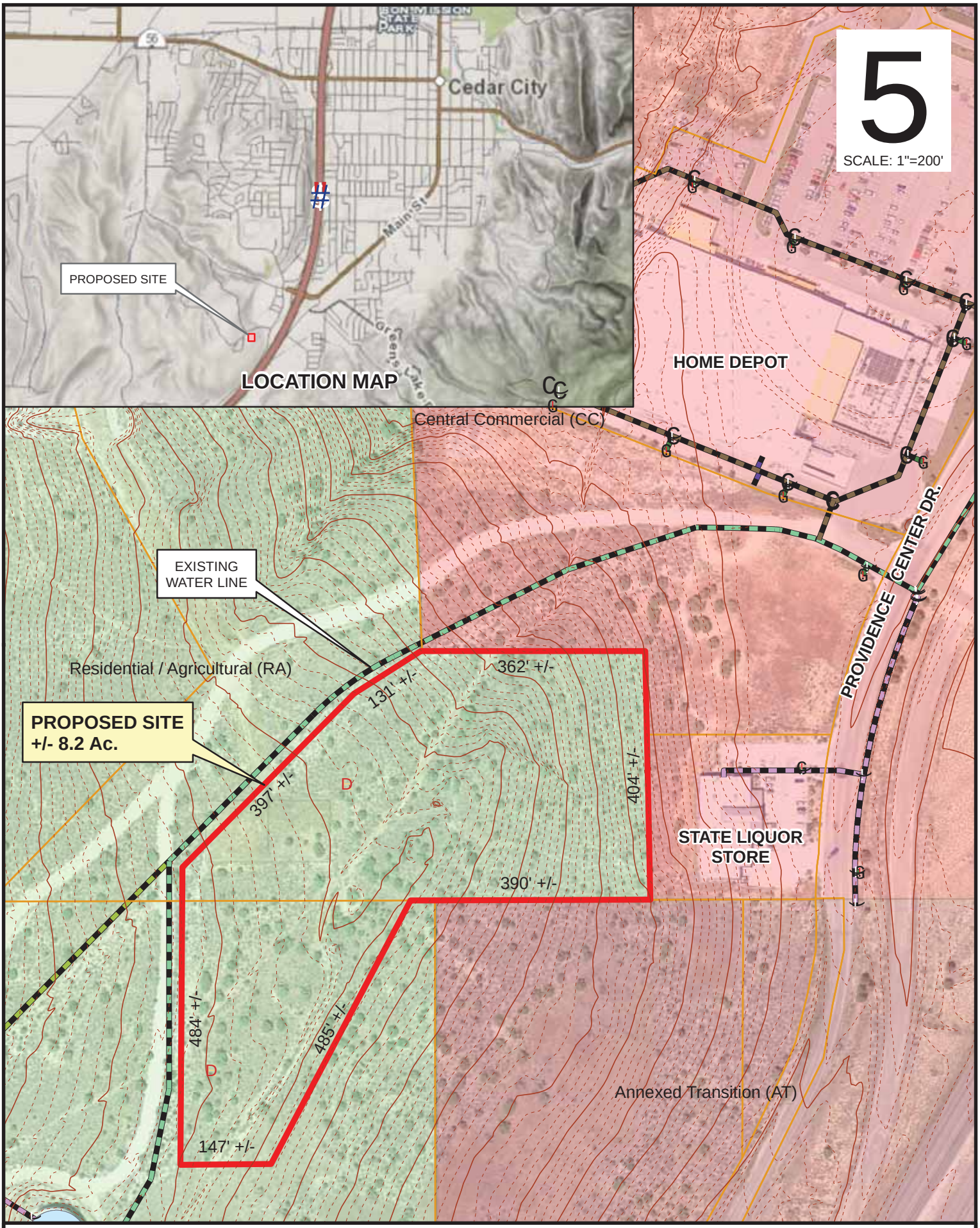
Photo #16: Southerly adjoining unimproved land.

Photo #17: Southwesterly located water tower.

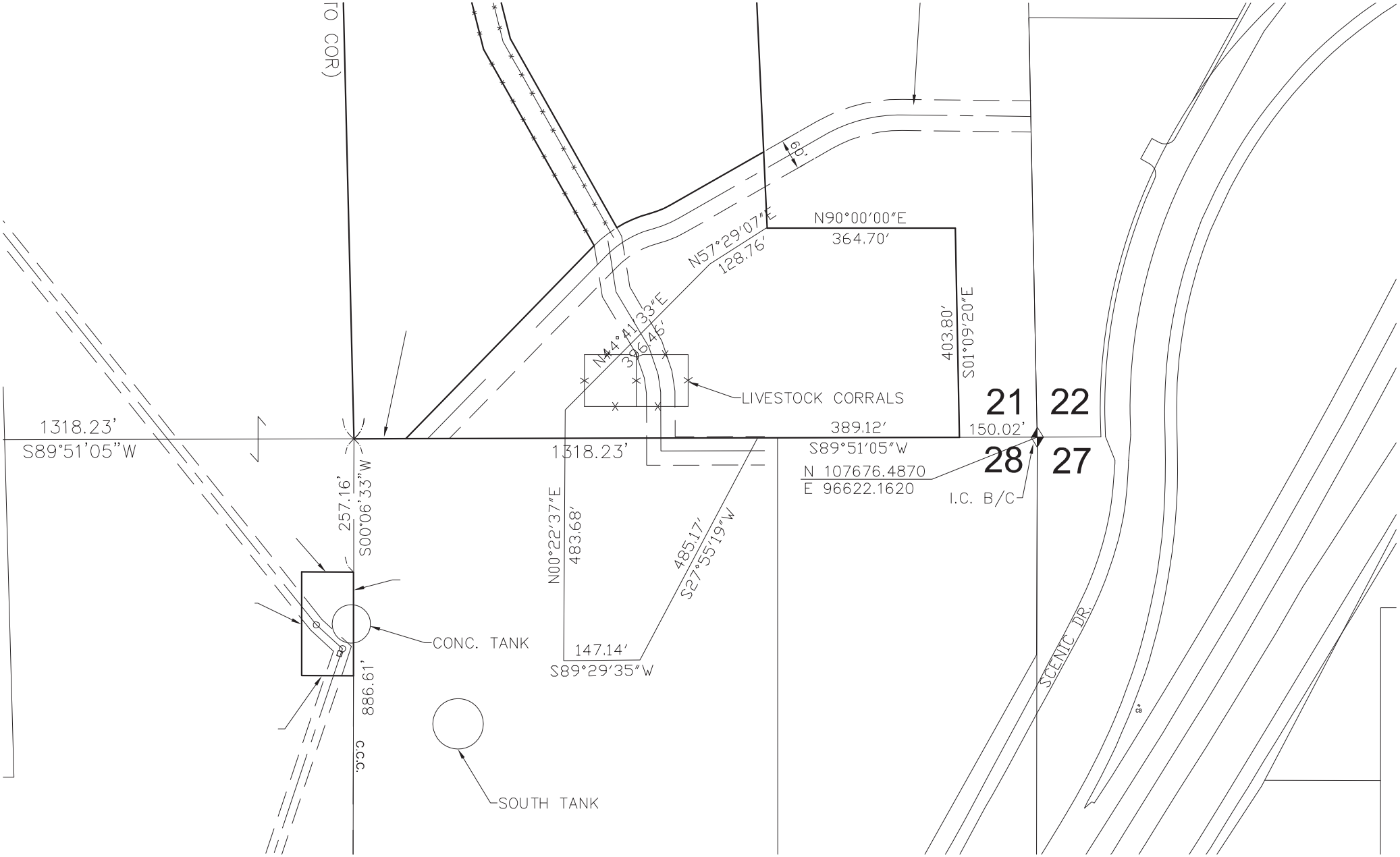
Photo #18: Westerly adjoining unimproved land located beyond an unpaved access road.

APPENDIX D

Other Relevant Environmental Data



CEDAR CITY PROPOSED VA CEMETERY SITE


(TO COR)
1318.23'
S89°51'05"W
257.16'
S00°06'33"W
886.61'
C.C.C.
CONC. TANK
SOUTH TANK
N00°22'37"E
483.68'
147.14'
S89°29'35"W
485.17'
S27°55'19"W
1318.23'
N44°41'33"E
396.46'
N57°29'07"E
128.76'
N90°00'00"E
364.70'
403.80'
S01°09'20"E
389.12'
S89°51'05"W
LIVESTOCK CORRALS
N 107676.4870
E 96622.1620
150.02'
I.C. B/C
21
22
28
27
SCENIC DR.
60'

Short Cultural Resources Inventory Report Form

State Project Number: U18HP0084

Report Title: A Cultural Resource Survey for the Cedar City National Veterans Cemetery, Iron County, Utah

Report Date: 3/14/2018 **Report Author(s):** Marcel Corbeil

Principal Investigator: Marcel Corbeil

Person-Days for Survey: 0.5

Acreage: APE: 9.52 Acres
Intensive: 9.52 Acres
Recon/Intuitive: N/A

Project Background:

Commonwealth Heritage Group, Inc. (Commonwealth) completed a cultural resource inventory of approximately 9.5 acres for the Cedar City National Cemetery. The purpose of the inventory is to identify, record, and evaluate any cultural resources within the project area for their eligibility to the National Register of Historic Places (NRHP). Fieldwork was conducted under the authority of State of Utah Archaeological Survey Permit No. 195 issued by the Public Lands Policy Coordination Office.

The National Cemetery project area is located on Cedar City Corporation Lands, south of Cross Hollow Road and west of the Interstate 15 (I-15) corridor, in Iron County, Utah. The project APE in located in the southeastern portion of the Cross Hollow Hills, west of Hurricane Cliffs. The project is located in Sections 21 and 28 of T36N, R11W, Salt Lake Meridian (Figure 1). Landforms in the project area are generally characterized by mountain slopes with hills, fan remnants, and stream terraces in the valley (NRCS 2018). The elevation of the project area ranges from 6,000 ft to 6,080 ft AMSL on the eastern slopes of the Cross Hollow Hills. Soils consists largely of alluvium derived from igneous and sedimentary rock parent material. Vegetation is dominated by Utah juniper, sagebrush, and various native and invasive grasses and flowering plants. The nearest permanent water source is Coal Creek, located approximately 2.6 miles northeast of the project area.

The present built environment within the project area (see Figures 2 and 3) includes improved dirt roads, a modern chain link corral, an overhead power transmission line, the south Cedar City water tank, a buried city water main, and modern tertiary ditches. The south Cedar City water tank and support structures, telecommunication towers, various commercial buildings, streets, frontage roads, and I-15, all within the Cedar City Corporation limits, surround the project area. In addition, several modern transient camp sites are located near rocky outcrops in the project area.

Area of Potential Effect Definition:

The survey area, or area of potential effects (APE), included 8.14 acres for the National Cemetery APE and 1.38 acres for the 60 ft-wide roadway and utility easement and 20 ft-wide water line access and maintenance easement. The Cedar City Corporation provided shapefiles for the proposed National Cemetery APE and the area was previously surveyed and marked with labeled survey stakes and property corner survey markers.

Identification Strategies (*archaeological, historical, and ethnographic*):
The entire project area was surveyed on March 9, 2018 by the author walking parallel transects at intervals no greater than 15 meters. There was no snow cover on the ground surface in the project APE at the time of inventory and field conditions were generally good. Trimble GPS receivers with shapefiles were used to orient transects and navigate the project area. Existing survey stakes and markers were located to ensure the accuracy of the GIS data.

Location(s) and Date(s) of Pre-Field Records Search:

1. Utah Division of State History: 2/16/2018
2. Federal/State Office: N/A
3. Historic Records/Maps: 2/16/2018
4. Other: N/A

Results of Pre-Field Records Search (*sites & projects within agency-defined APE buffer and/or site leads from research*):
Prior to fieldwork, a GIS files search was completed by the Utah Division of State History (UDSH) staff to identify previous projects and recorded cultural resources located within ½ mile of the project area. Searches of the General Land Office (GLO) online records, the UDSH Historic Buildings database, and the NRHP database were also completed. These records indicated that 11 previous inventories were completed and 20 sites were previously recorded within ½ mile of the project area (Tables 1 and 2). Two linear historic features, the *Road to Cedar and Salt Lake Cities* and a telegraph line were identified on the 1870 GLO cadastral survey plat (GLO 1870), southeast of the current project area.

The previously recorded sites include 16 prehistoric lithic scatters, 1 historic roadside debris scatter, 1 multicomponent lithic and historic roadside debris scatter, 1 historic livestock trail and 1 multicomponent rock art site. None of the previously recorded sites or identified historic features intersect the inventory APE. No historic standing structures were noted within ½ mile of the project area. The recorded sites in the vicinity of the National Cemetery APE largely consists of dispersed lithic scatters that represent lithic procurement in areas of naturally occurring lithic raw material in the area. Based on the literature review, site density is expected to be low. Anticipated cultural resources include low density prehistoric lithic scatters along the ridgetop with the potential for historic debris scatters along existing roads.

Table 1. Previous Projects within One-half Mile of Current Project Area.

Report #	Company	Project
U82BL0115	Bureau of Land Management	021-203 Cross Hollow R & PP
U82BL0116	Bureau of Land Management	021-204 Road R/W vic. 2d Mound
U88PD0525	P-III Associates	Hamilton Fort to North Cedar
U99HQ0382	HRA Inc.	Cross Hollow Hills Development Area
U99BL0746	Bureau of Land Management	Cross Hollow Rock Art
U02HQ0065	HRA Inc.	Cross Hollow Hills II Revisited
U05EP0133	Earth Touch Inc.	Cross Hollow Road
U05UM0185	SITLA	Cross Hollow Hills Visit
U05HQ1255	HRA Inc.	Data Recovery on 42In853
U11HO0593	Bighorn Archaeological Consultants	CRI Of I-15 Milepost 46.2 To 62 Wildlife Fencing
U12SQ0345	William Self Associates	Lochner Cedar City I-15 Project

Table 2. Sites within One-Half Mile of Current Project Area.

Site #	Associated Report	Site Type	NRHP Status	Distance to APE from Datum
42IN30	1954, 1980, U05EP0133	Prehistoric lithic scatter	Eligible	634 m
42IN216	1968, U99HQ0382, U05UM0185, U05HQ1255	Prehistoric artifact scatter	Not Eligible	1358 m
42IN853	1982, U02HQ0065, U05UM0185, U05HQ1255	Prehistoric lithic scatter	Not Eligible	488 m
42IN854	1982	Prehistoric lithic scatter	Not Eligible	186 m
42IN855	1982, U02HQ0065, U05UM0185, U05HQ1255	Prehistoric lithic scatter	Not Eligible	541 m
42IN856/ 42IN857	1982, U99HQ0382, U02HQ0065, U05HQ1255	Prehistoric lithic scatter	Not Eligible	638 m
42IN858	1982, U02HQ0065, U05UM0185, U05HQ1255	Prehistoric lithic scatter	Not Eligible	685 m
42IN1154	U88PD0525, U11HO0593	Prehistoric lithic scatter Historic debris scatter	Not Eligible	594 m
42IN1308	U93NP0100	Historic livestock trail	Not Eligible	828 m
42IN1762	U99HQ0382, U05UM0185	Prehistoric lithic scatter	Not Eligible	541 m
42IN1763	U99HQ0382, U05UM0185	Prehistoric lithic scatter	Not Eligible	370 m
42IN1764	U99HQ0382, U05UM0185	Prehistoric lithic scatter	Not Eligible	353 m
42IN1779	U99BL0746	Multicomponent rock art	Eligible	542 m
42IN1932	U02HQ0065, U05UM0185	Prehistoric lithic scatter	Not Eligible	197 m
42IN1933	U02HQ0065, U05UM0185, U05HQ1255	Prehistoric lithic scatter	Not Eligible	592 m
42IN1936	U02HQ0065, U05UM0185	Prehistoric lithic scatter	Not Eligible	931 m
42IN1937	U02HQ0065, U05UM0185	Prehistoric lithic scatter	Not Eligible	750 m
42IN2291	U05EP0133	Prehistoric lithic scatter	Eligible	607 m
42IN2292	U05EP0133	Historic debris scatter	Not Eligible	771 m
42IN2293	U05EP0133	Prehistoric lithic scatter	Not Eligible	77 m

Date(s) of Survey: March 9, 2018

Description of Findings:

During the inventory, one isolated find was identified (Figure 4). The isolated find (IF-1) consists of two obsidian artifacts, a tertiary decortication flake and one piece of shatter, located in a 5-meter area. Both are 2 to 3 cm in size. The isolated find is recommended as not eligible for inclusion in the NRHP.

Conclusion & Management Recommendations:

Commonwealth conducted a cultural resources survey for the Cedar City National Cemetery located on Cedar City Corporation lands. No new sites were identified during inventory. One isolate find was documented within the project APE. A determination of no historic properties affected is recommended for this project.

Required Materials:

☒7.5' Quadrangle Base map(s) for Project Area

☐7.5' Quadrangle Base map (s) for Surveyed Area (if different than #1)

References Cited:

General Land Office (GLO)

1870 Map for T36S, R11W. Electronic map, available from U.S. DOI BLM Land Records, Access online at https://www.ut.blm.gov/LandRecords/search_plats.cfm. Accessed February 16, 2018.

Natural Resources Conservation Service (NRCS)

2018 *Custom Soil Resources report for Iron-Washington Area, Utah, Western*. Accessed online at https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed February 16, 2018.

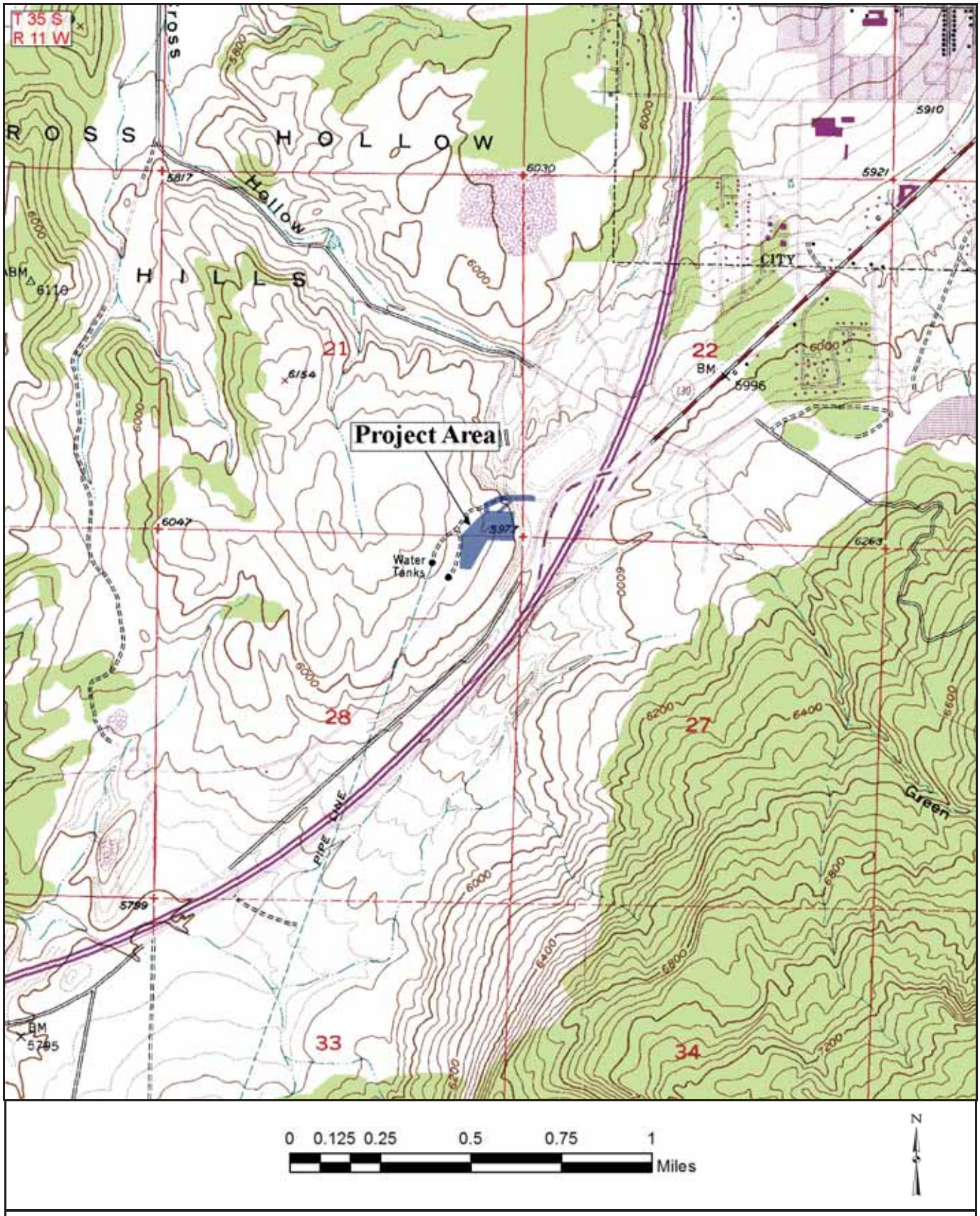


Figure 1. Location of the project area for the Cedar City National Veterans Cemetery. Taken from USGS 7.5' Quadrangle Cedar City, Utah (1950; PR 1978).

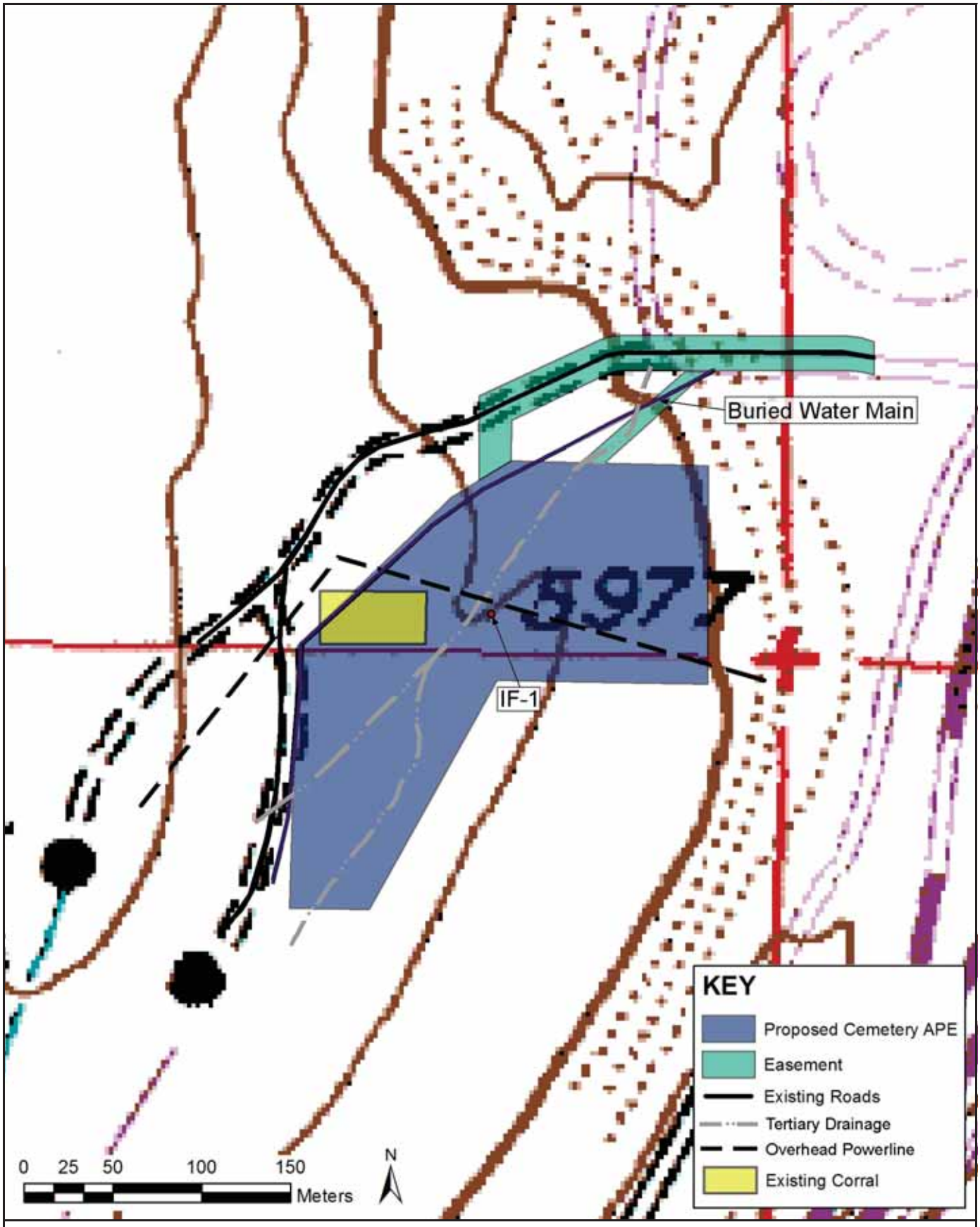


Figure 2. Close-up showing the project area.

Figure 3. Project area overview looking northeast. Photo taken by Marcel Corbeil on March 9, 2018.

Figure 4. Close-up of IF-1. Photo taken by Marcel Corbeil on March 9, 2018.

113° 5' 28" W
113° 5' 16" W
315560
315600
315640
315680
315720
315760
315800
37° 39' 1" N
4169050
4169010
4168970
4168930
4168890
4168850
4168810
4168770
4168730
4168690
364
Soil Map may not be valid at this scale.
37° 38' 48" N
315520
Map Scale: 1:1,900 if printed on A portrait (8.5" x 11") sheet.
N
Meters
0
25
50
100
150
Feet
0
50
100
200
300
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Iron-Washington Area, Utah, Parts of Iron, Kane, and Washington Counties
Survey Area Data: Version 9, Sep 13, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 11, 2010—Nov 3, 2010

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Iron-Washington Area, Utah, Parts of Iron, Kane, and Washington Counties (UT634)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
364	Denmark gravelly loam, 2 to 15 percent slopes	8.2	100.0%
Totals for Area of Interest		**8.2**	**100.0%**

GEM

Engineering, Inc.

Geotechnical Investigation

Proposed - VA Cemetery Site

Approximately 1600 South Providence Center Drive

5 Acre Parcel (See Plate 1 For Location)

Cedar City, Iron, Utah

Prepared For:

Department of Veterans Affairs
C/O - Carpenter/Robbins Commercial Real Estate, Inc.
3160 Crow Canyon Road, Suite 200
San Ramon, CA 94583

April 3, 2017

Report Number: RG1725

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GEM **ENGINEERING, INC**. ♦ 485 North Aviation Way ♦ Cedar City, UT 84721
Phone (435) 867-6478 ♦ Fax (435) 867-4372
www.gemengineeringinc.com

GEM ENGINEERING, INC.
485 North Aviation Way ♦ Cedar City, UT 84721
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www.gemengineeringinc.com

April 3, 2017

Department of Veterans Affairs
C/O - Carpenter/Robbins Commercial Real Estate, Inc.
3160 Crow Canyon Road, Suite 200
San Ramon, CA 94583

Subject: Proposed VA Cemetery Site
Approximately 1600 South Providence Center Drive
5 Acre Parcel (See Plate 1 For Location)
Cedar City, Utah

Enclosed is our geotechnical investigation report for the subject proposed VA Cemetery to be constructed at the subject site in Cedar City, Utah.

The report details our field exploration and laboratory testing program and presents our analysis, opinions and recommendations for the proposed project.

We appreciate this opportunity to be of service on this phase of the project and look forward to being of service as the project progresses. If you have any questions, please contact this office at your convenience.

Sincerely,
GEM Engineering, Inc.

LICENSED PROFESSIONAL ENGINEER
4-12-17
No. 179058
JOEL A. MYERS

Joel A. Myers, P.E.
President

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Appendix B - Soil Analysis Reports

1.0 INTRODUCTION

1.1 General

This report presents the results of a geotechnical investigation performed for a proposed VA Cemetery in Cedar City, Iron County, Utah. The study was conducted in accordance with the client's authorization.

The purposes of this investigation were to: (1) evaluate the general nature and engineering properties of the subsurface soils at the site; and (2) provide recommendations and opinions regarding general site grading and the design and construction of foundations, concrete slabs-on-grade and soil analysis for the purpose of constructing a cemetery at the site. The investigation included a site reconnaissance, subsurface exploration, representative soil sampling, laboratory testing, engineering analyses, and preparation of this report.

The recommendations contained in this report are subject to the limitations presented in the "Limitations" section of the report. We recommend that all individuals reading this report read the limitations section of this document.

1.2 Project Description

We understand that a proposed VA Cemetery will be constructed at the location described in Cedar City, Utah. Structural loads are expected to be relatively low to moderate. It is also our understanding that the site will graded and planted with turf. Some small structures for restrooms and maintenance buildings will also be constructed.

The site plan on Plate 1 shows the approximate trench locations with respect to the approximate property lines.

2.0 FIELD EXPLORATION

The subsurface soil conditions were explored by excavating, 5 exploratory trenches to a depth of approximately 10 feet below the existing site grade. The approximate locations of these explorations are shown on Plate 1. Soils and subsurface conditions encountered in the explorations were classified, logged and recorded at the time of excavation by our field geologists. The results of the explorations are presented on the enclosed Plates 2 through 6. A key to soil symbols and terms is found on Plate 8.

3.0 LABORATORY TESTING

Representative soil samples from the explorations were tested in the laboratory to verify the field classifications and to evaluate other pertinent engineering characteristics. The soil samples were tested for solubility, Atterberg limits and maximum density. Results are presented on Plate 7. Additional testing was preformed to evaluate the Ph, Organic Matter, Nitrogen, Phosphorus, Potassium and Salinity of the onsite soils. There results of these tests are contained in Appendix B.

4.0 SITE CONDITIONS

4.1 Surface Conditions

As stated previously the site is located in Cedar City, Iron County, Utah, as shown on Plate 1. At the time of our investigation of the proposed site, the site was found to have native trees, bushes and grasses. The site generally had a moderate to steep downward slope from west to east. The site was bordered on the north and west by an existing dirt road, on the east by an existing commercial building and on the south by land with similar native vegetation and topography. There is a basalt bedrock outcrop exposed on the site at about the mid-way point from west to east on the site.

4.2 Subsurface Conditions

The on site soils encountered in the excavations generally consisted of loose red brown clayey sand(top soil) to a depth of approximately 6 to 12 inches below the existing site grade. This material was underlain by dense to very dense gray to white silty gravel with sand, cobbles and boulders to the bottom of the exploratory trenches at approximately 10 feet below the existing site grade.

Numerous factors contribute to fluctuations in groundwater levels and locations. The evaluation of these factors was beyond the scope of this study. However, groundwater was not encountered during the exploration. The soils were in a slightly moist to moist condition throughout the depths explored.

The encountered subsurface conditions are described in detail on the enclosed trench logs, Plates 2 through 6. Due to the nature and depositional characteristics of the native soils, care should be taken in extrapolating subsurface conditions beyond the exploration loctations.

The laboratory tests results indicated that the on-site soils exhibited a relatively low solubility, low plasticity and a low collapse potential. The top soil anaysis results are contained in Appendix B.

5.0 ENGINEERING ANALYSIS AND RECOMMENDATIONS

5.1 General

Based on our investigation it is our opinion that the subject site is could be utilized as a cemetery. However, while the soil generally excavatable with conventional earthwork equipment , all five trenches were **very difficult to excavate**. It takes approximately 1 hour to excavate a hole to 10 feet with and mid sized track hoe. Additionally, there is a basalt bedrock outcrop exposed at the site at about the mid point from west to east that would require a heavy duty excavation equipment to excavate.

There is approximately 6 to 12 inches of top soil on the site, however, after removing the existing vegetation the remaining usable top soil would likely be only 3 to 6 inches. The remaining top soil would need to be augmented with additional top soil and fertilizer as recommend in Appendix B.

Additionally, the silty gravel soils with cobbles and boulders would make if difficult to install irrigation pipes for landscape irrigation systems.

The site suitable for the support structures and pavement provided that the recommendations contained in this report are followed.

The following sections of this report present our recommendations to reduce the potential for structural damage. They contain specific opinions and recommendations concerning construction considerations, site preparation and grading, structural fill, foundation design, retaining walls, concrete slabs-on-grade, soil corrosion, moisture protection and top soil recommendations.

One of the most critical recommendations to follow in order to reduce potential for structural damage is to set the finished floor slab elevations high enough to facilitate proper drainage away from the structure.

5.2 Construction Considerations

5.2.1 Foundation Systems - Admin/Maintenance, Flag Poles and Bathrooms

After excavation and compaction are completed, the structures can be supported by conventional strip and/or spread footings founded on properly placed and compacted structural fill. Flag poles can be supported by drilled piers if desired, however, drilling will be difficult.

5.3 Earthwork

5.3.1 Site Preparation and Grading

Within the areas to be graded, existing vegetation, loose soils, and debris, should be removed and hauled off the site. Any undocumented fill soils, and soft, loose, collapsible and/or disturbed native soils should be excavated to expose competent, dense or medium dense granular soils.

It is anticipated that competent medium dense granular soils will be encountered at footing depth. A GEM Engineering representative should observe the excavation to verify that competent granular soils have been reached, that the competent granular soils extend at least 2 feet below the bottom of footing elevation and that no additional overexcavation is required. If additional overexcavation is required the width of overexcavation should extend laterally at least 5 feet beyond the edge of footing on each side or to a distance equal to the depth of overexcavation, whichever is greater. In some circumstances, after review of the excavation, GEM Engineering may approve a width of lateral overexcavation less than 5 feet but in no case shall this width be less than the required depth of overexcavation.

Slabs-on-grade, exterior concrete flatwork, and pavements should be supported by a zone of properly placed and compacted structural fill. Excavations shall extend

laterally at least 2 feet beyond exterior flatwork and pavement areas. Excavations may be terminated if competent, medium dense native soils are encountered.

If loose soft or pumping soils are encountered at the bottom of the excavations, stabilization and/or additional overexcavation will be required prior to the placement of structural fill. Overexcavations may be terminated if competent, medium-dense granular soils are encountered. A GEM Engineering representative should observe excavation and determine if it is acceptable to terminate the excavation or reduce the overexcavation depth.

The majority of on-site soils, free of organics and debris, should be suitable for reuse as structural fill. If using on-site soils for backfill or structural fill a shrinkage factor of up to 10 percent can be expected.

Following excavation of the unsuitable soils as described above, a representative of this office should observe the excavation bottoms prior to the continuance of grading to verify that unsuitable materials have been removed and that competent soils have been exposed. The native soils exposed after excavation should be scarified to a depth of 6 inches and brought to within 2 percent of the optimum moisture content for granular soils and slightly above optimum for fine-grained soils. Soil shall then be compacted to at least 90 percent of the maximum dry density for granular soils and 85 percent of the maximum dry density for fine grained soils as determined by ASTM D1557. The site should then be brought to the proper grade with structural fill as described in the Structural Fill section.

Subgrade materials supporting slabs-on-grade, exterior concrete flatwork, and pavements should be kept moist and not be allowed to dry out and crack. If the subgrade has been disturbed or dried out prior to placement of aggregate base, the exposed soils should be moisture-conditioned and recompacted as outlined in the Structural Fill section of this report.

We recommend that a GEM Engineering representative be allowed to review the grading plans when prepared to evaluate their compatibility with the recommendations of this report.

5.3.2 Excavations

The majority of the soils encountered in our explorations should be excavatable with conventional earthwork equipment. However, while the soil generally can be excavated with conventional earthwork equipment, it is **very difficult to excavate**. It takes approximately 1 hour to excavate a hole to 10 feet with and mid sized track hoe. Additionally, there is a basalt bedrock outcrop exposed at the site at about the mid point from west to east that would require a heavy duty excavation equipment to excavate. It is also possible that soft pumping soils may be encountered. Pumping soils will need to be stabilized prior to placing of structural fill. Safety of construction personnel is the responsibility of the Contractor.

5.3.3 Material Volume Changes

There will be shrinkage losses when excavating and compacting the on-site soils. An estimated average shrinkage factor of 10 percent is applicable for the loose to medium-dense near-surface native soils. A subsidence factor of 0.1 should be used in all areas where the surficial soils are scarified and recompacted to a depth of 6 inches.

5.3.4 Structural Fill

All fill placed for the support of slabs-on-grade, exterior concrete flatwork, and pavements should be structural fill. Structural fill may consist of approved excavated on-site or imported fill materials. Structural fill should have a swell potential less than 4 percent under a 60 psf surcharge, have a solubility of less than 3 percent, be free of organics, salts, or inert materials larger than 4 inches nominal size, and be similar in gradation to the on-site soils.

Structural fill should be placed in maximum eight-inch loose lifts and compacted on a horizontal plane, unless otherwise approved by the Geotechnical Engineer. Soils in compacted fills should be compacted to at least 90 percent of the maximum dry density as determined by ASTM D1557 for fine grained soils and 95 percent for granular soils. The moisture content should be within 2 percent of optimum for granular soils and at least 2 percent above optimum for fine-grained soils. Any imported fill materials should be approved prior to importing. Also, prior to placing any fill, the excavations should be observed by a GEM Engineering representative to observe that unsuitable materials have been removed.

5.4 Foundations

5.4.1 Conventional Foundations

General: Conventional shallow foundations consisting of strip and/or spread footings can be utilized for the support of the proposed building provided that excavation is completed in accordance with the requirements and recommendations of this report as described in the Earthwork section.

For frost protection the bottom of exterior conventional spread and strip footings shall be at least 30 inches below the lowest adjacent final compacted subgrade.

Foundations for structures constructed on soils, prepared in accordance with the recommendations and requirements of this report, may be designed for an allowable net bearing pressure of 2500 psf. This bearing pressure may be increased by one-third for load combinations containing seismic or wind loads.

Prior to constructing the foundations, the footing excavations should be observed by a GEM Engineering representative to confirm that the soil preparation has been completed in accordance with the requirements and recommendations of this report.

Seismicity: The soil meets the 2015 International Building Code (IBC) requirements for a site class C. The seismic design category for the 2015 International Residential Code (IRC) is D1.

Settlement: Foundations established in accordance with the recommendations and requirements of this report are estimated to be subject to 1 ½" or less of settlement if the soils beneath the overexcavation do not become moistened. Estimated differential settlement could be on the order of ½ the total settlement.

Lateral Earth Pressures: The following lateral earth pressure equivalent fluid densities shall be used in the design of the structure.

Properly Compacted On-Site Soils	
Active Pressure	31 pcf
At Rest Pressure	47 pcf
Passive Pressure	251 pcf

Equivalent fluid densities presented above assume that there will be no build-up of hydrostatic pressure. Any surcharge from adjacent structures or traffic loads should be added to this pressure. When passive pressure is used for resistance to lateral loads the top one foot of soil should be neglected. The maximum allowable passive pressure for lateral load resistance should not exceed 1,600 psf.

The seismic lateral earth pressure coefficient (k_h) is 0.12.

Lateral Load Resistance: Horizontal loads acting on foundations will be resisted by friction acting at the base of foundations and/or passive earth pressures acting against the side of footings and concrete walls. If design makes use of passive earth pressures, it is important that a GEM Engineering representative be present during backfill placement.

The friction force acting along the base of footings founded on suitable foundation soils may be calculated using a coefficient of friction of 0.40.

Lateral loads acting on buried utility lines may be resisted by thrust blocks reacting against undisturbed native soil or properly placed and compacted structural fill. The passive lateral earth pressure equivalent fluid density and coefficient of friction, previously listed, may be used for thrust block design.

5.5 Concrete Slabs-On-Grade

Satisfactory support for concrete slabs-on-grade and exterior concrete flatwork may be provided by a 6 inch layer of compacted gravel overlying properly placed and compacted structural fill as recommended in the Site Grading section of this report. The layer of compacted gravel may consist of road base or pit-run gravel with a 2-inch maximum particle size and not more than 12% fines passing the No. 200 sieve. The gravel layer should be compacted to at least 95% of the maximum dry density as determined by ASTM D1557.

All concrete slabs should be designed to minimize cracking as a result of shrinkage. Reinforcement requirements shall be provided by the Structural Engineer. Reinforcement should be installed at the mid-height of the slab unless directed otherwise by the Structural Engineer.

Special precautions must be taken during the placement and curing of all concrete slabs. Excessive slump (high water-cement ratio) of the concrete and/or improper curing procedures used during either hot or cold weather conditions could lead to excessive shrinkage, cracking or curling in the slabs. All concrete placement and curing operations shall be performed in accordance with the American Concrete Institute (ACI) Manual.

5.6 Soil Corrosion and Weathering Considerations

Based on similar studies performed in the area, the on-site soils contain salts in sufficient concentration to be considered corrosive to both concrete and metal. Therefore, all concrete in contact with the on-site soils and used in stem walls should contain Type V or equivalent sulfate-resistant cement, and should be placed with a maximum four inch slump. Furthermore concrete shall meet requirements specified in Table R402.2 of the 2015 International Residential Code (IRC) for severe weathering potential. Special protection to buried metal pipes and water lines should be considered for long term performance of these underground utilities. Consideration should be given to cathodic protection of buried metal pipes, or to the use of PVC pipe where permitted by local building codes.

5.7 Moisture Protection and Drainage

It is imperative that precautions are taken during and after construction to eliminate, or at least minimize, wetting of foundation soils. Drainage and grading shall be constructed in accordance with the requirements of sections R401.3 and R801.3 of the 2015 International Residential Code (IRC). Positive drainage shall be established away from the exterior walls of the structure. The required minimum slope is five percent (5%) in landscape areas and two percent (2%) in pavement areas, for a minimum distance of 10 feet from the structure. Roof runoff and other sources of moisture should not be allowed to infiltrate the soils in the vicinity of, or upslope from, the structure. No roof moisture should infiltrate the soils beneath the foundations.

All utility trenches leading into the structures should be backfilled with compacted non-pervious fill. Special care should be taken during installation of sub floor sewer and water lines to reduce the possibility of future subsurface saturation.

Landscape watering adjacent to the structure should be eliminated. As an additional protection a concrete slab could be placed around the structure to facilitate drainage away from the structure as described above. Any planters adjacent to the structure should have sealed bottoms. It is recommended that desert landscaping techniques be utilized.

5.8 Top Soil and Organic Content for Cemetery Turf

Based on the tests results contained in Appendix B, the organic matter content in the top soil which is represented by samples taken from explorations T-1 and T-4 ranges from 2.6 to 2.8 percent. The organic matter content in the silty gravel below the top soil which is represented by samples taken from explorations T-2 and T-3 ranges from 0.6 to 1.2 percent . Based on the test results contained in Appendix B it is our opinion that only 3 to 6 inches of native top soil will be usable from the site. Additionally, this top soil will need to be augmented with additional off site top soil and fertilizer to facilitate turf growth. The Ph of the top soil appear to be in the range to support turf growth, however, the underlying silty gravel with cobbles and boulders has a Ph of 7.9 to 8.1 which is out of the normal range for turf growth. The test results in Appendix B states the recommendations for additional fertilizer application for turf growth.

5.9 Asphaltic Concrete Pavements for Cemetery Roads and Parking

Asphaltic concrete pavement sections were developed for non-dedicated areas. In developing our recommendations, we have assumed that: (1) a minimum of 6 inches of compacted subgrade will be provided beneath the pavement section; (2) a Traffic Index value of 5.5 for automobile traffic and parking areas is appropriate; and (3) an R-value of 35 is representative of recompacted native soils. The following table presents the minimum recommended structural pavement sections:

Asphaltic Concrete Pavements

Traffic Condition	Assumed Traffic Index (T.I.)	Asphalt Thickness (in)	Road Base Thickness (in)	Compacted Subgrade (in)
Light Traffic/Parking	5.5	2.5	6	6

Asphalt and aggregate base material should conform to local requirements. All base material should be compacted to at least (95%) of the maximum dry density (ASTM D1557). Asphalt should be compacted to minimum of (96%) of the Marshall maximum

density. Asphaltic concrete and base materials should be tested prior to delivery to the site and during placement to determine conformance with the project specifications.

It is important that parking area grades be set to provide positive drainage to suitable drainage structures. A desirable slope for drainage in paved areas is two percent.

6.0 CLOSURE

6.1 Limitations

The recommendations contained in this report are based on the field exploration, laboratory tests, and our understanding of the proposed construction. The subsurface data used in the preparation of this report were obtained from the exploration made during this investigation. It is possible that variations in the soil and groundwater conditions could exist elsewhere on the site. The nature and extent of variations may not be evident until construction occurs. If any conditions are encountered at the site which are different from those described in this report, GEM Engineering should be immediately notified so that we may make any necessary revisions to recommendations contained in this report. In addition, if the scope of the proposed construction changes from that described in this report, GEM Engineering should likewise be notified.

This report was prepared in accordance with the generally accepted standard of practice at the time the report was written. Although some potential geologic hazards may be indentified in this Geotechnical Investigation Report, this is NOT a Geologic Hazards Report and should not be regarded as such. No warranty, express or implied, is made. It is the Client's responsibility to see that all parties to the project, including the Designer, Contractor, Subcontractors, etc., are made aware of this report in its entirety. The use of information contained in this report for bidding purposes should be done at the Contractor's option and risk. GEM Engineering will not accept the responsibility for damage caused by the uncontrolled action of water at the site.

6.2 Additional Services

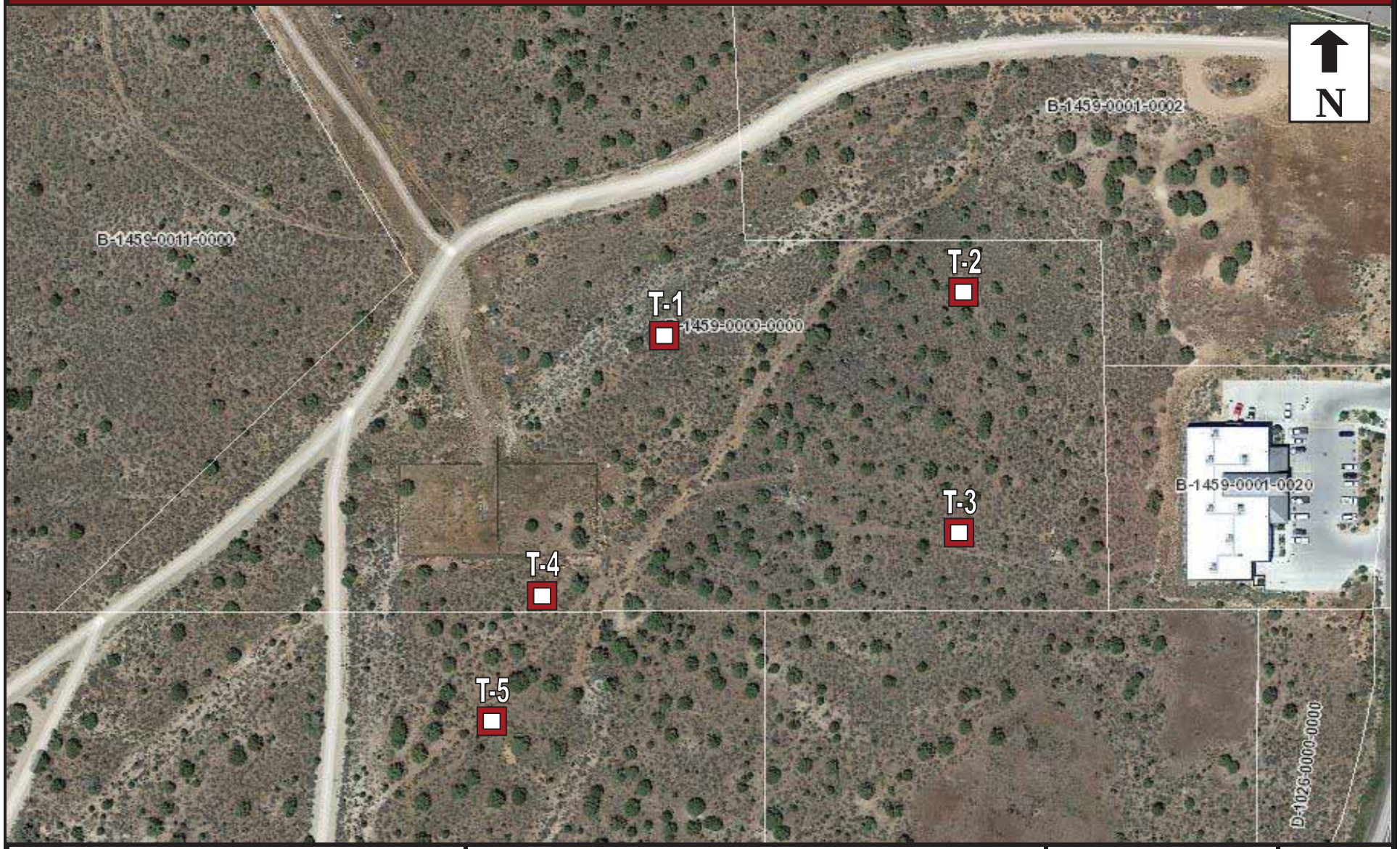
The recommendations made in this report are based on the assumption that an adequate program of tests and observations will be made during the construction to verify compliance with the recommendations. These tests and observations should include, but not necessarily be limited to, the following:

- Observations and testing during site preparation, earthwork and structural fill placement
- Observations of footing excavations
- Consultation as may be required during construction

We also recommend that project plans and specifications be reviewed by us to verify compatibility with our conclusions and recommendations. Additional information concerning the scope and cost of these services can be obtained from our office.

Appendix A

SITE PLAN



Notes:

Key: Approximate Trench Location

Plan: Not to Scale

PROJECT:	**VA Cemetary**
Client:	Department of Veterans Affairs
Report No:	RG1725

GEM ENGINEERING, INC.

Plate: 1

TRENCH LOG Trench No. 1

Location: See Site Plan | **Elevation:** Not Measured | **Date Excavated:** 3/22/2017

Depth (ft)	Tests [1]	Sample	USCS Symbol [2]	Soil Description (Additional comments below)	Color	Relative Moisture [3]	Density [4]	Cementation [5]	Max size [6] Particle
0			SC	- Clayey Sand - Organics	Red Brown	M	L	--	CG
5 10	At, M Sol, P		GM	- Silty Gravel with Sand - Cobbles and Boulders	Gray to White	SM	D to VD	--	B (3')
15 20				Bottom @ 10'					

Sample: Drive Sample | Bag Sample | Bucket Sample

1) At = Atterberg, M = Moisture, Sol = Solubility, E = Expansion, C = Consol, P = Proctor, CS =Coarse Sieve
2) See Plate 8 for explanation of Unified Soil Classification System
3) D = Dry, SM = Slightly Moist, M = Moist, VM = Very Moist, W = Wet
4) Coarse Grain: VL = Very Loose, L = Loose, MD = Medium Dense, D = Dense, VD = Very Dense
Fine Grain: VSF = Very Soft, SF = Soft, MS = Medium Stiff, S = Stiff, VS = Very Stiff, H = Hard
5) W = Weak cementation, M = Moderate cementation, S = Strong cementation
6) B=Boulder, C= Cobble, CG=Coarse Gravel (3" - 3/4"), FG=Fine Gravel (3/4" - 1/4"), CS=Coarse Sand (#10-#4), MS=Medium Sand (#40 - #10), FS=Fine Sand (#200 - #40), F=Fines

Notes:
Groundwater:
Not encountered

Caving of side walls:
None noted

PROJECT: VA Cemetary
Client: Department of Veterans Affairs
Report No: RG1725

GEM ENGINEERING, INC.

Plate: 2

TRENCH LOG Trench No. 2

Location: See Site Plan | **Elevation:** Not Measured | **Date Excavated:** 3/22/2017

Depth (ft)	Tests [1]	Sample	USCS Symbol [2]	Soil Description (Additional comments below)	Color	Relative Moisture [3]	Density [4]	Cementation [5]	Max size [6] Particle
0			SC	- Clayey Sand	Red Brown	M	L	--	CG
	At, M Sol		GM	- Silty Gravel with Sand - Cobbles and Boulders	Gray to White	SM	MD to VD	--	B (3')
5									
10									
				Bottom @ 10'					
15									
20									

Sample: Drive Sample | Bag Sample | Bucket Sample

1) At = Atterberg, M = Moisture, Sol = Solubility, E = Expansion, C = Consol, P = Proctor, CS =Coarse Sieve
2) See Plate 8 for explanation of Unified Soil Classification System
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Fine Grain: VSF = Very Soft, SF = Soft, MS = Medium Stiff, S = Stiff, VS = Very Stiff, H = Hard
5) W = Weak cementation, M = Moderate cementation, S = Strong cementation
6) B=Boulder, C= Cobble, CG=Coarse Gravel (3" - 3/4"), FG=Fine Gravel (3/4" - 1/4"), CS=Coarse Sand (#10-#4), MS=Medium Sand (#40 - #10), FS=Fine Sand (#200 - #40), F=Fines

Notes:
Groundwater:
Not encountered

Caving of side walls:
None noted

PROJECT: VA Cemetary
Client: Department of Veterans Affairs
Report No: RG1725

GEM ENGINEERING, INC.

Plate: 3

TRENCH LOG Trench No. 3

Location: See Site Plan | **Elevation:** Not Measured | **Date Excavated:** 3/22/2017

Depth (ft)	Tests [1]	Sample	USCS Symbol [2]	Soil Description (Additional comments below)	Color	Relative Moisture [3]	Density [4]	Cementation [5]	Max size [6] Particle
0			SC	- Clayey Sand - Organics	Red Brown	M	L	--	CG
	At, M Sol, P		GM	- Silty Gravel with Sand - Cobbles and Boulders	Gray to White	SM	MD to VD	--	B (3')
5									
10									
				Bottom @ 10'					
15									
20									

Sample: Drive Sample | Bag Sample | Bucket Sample

1) At = Atterberg, M = Moisture, Sol = Solubility, E = Expansion, C = Consol, P = Proctor, CS =Coarse Sieve
2) See Plate 8 for explanation of Unified Soil Classification System
3) D = Dry, SM = Slightly Moist, M = Moist, VM = Very Moist, W = Wet
4) Coarse Grain: VL = Very Loose, L = Loose, MD = Medium Dense, D = Dense, VD = Very Dense
Fine Grain: VSF = Very Soft, SF = Soft, MS = Medium Stiff, S = Stiff, VS = Very Stiff, H = Hard
5) W = Weak cementation, M = Moderate cementation, S = Strong cementation
6) B=Boulder, C= Cobble, CG=Coarse Gravel (3" - 3/4"), FG=Fine Gravel (3/4" - 1/4"), CS=Coarse Sand (#10-#4), MS=Medium Sand (#40 - #10), FS=Fine Sand (#200 - #40), F=Fines

Notes:
Groundwater:
Not encountered

Caving of side walls:
None noted

PROJECT: VA Cemetary
Client: Department of Veterans Affairs
Report No: RG1725

GEM ENGINEERING, INC.

Plate: 4

TRENCH LOG Trench No. 4

Location: See Site Plan | **Elevation:** Not Measured | **Date Excavated:** 3/22/2017

Depth (ft)	Tests [1]	Sample	USCS Symbol [2]	Soil Description (Additional comments below)	Color	Relative Moisture [3]	Density [4]	Cementation [5]	Max size [6] Particle
0			SC	- Clayey Sand - Organics	Red Brown	M	L	--	CG
5	At, M Sol		GM	- Silty Gravel with Sand - Cobbles and Boulder	Gray to White	SM	MD to VD	--	B (4')
10									
15									
20									

Sample: Drive Sample | Bag Sample | Bucket Sample

1) At = Atterberg, M = Moisture, Sol = Solubility, E = Expansion, C = Consol, P = Proctor, CS =Coarse Sieve
2) See Plate 8 for explanation of Unified Soil Classification System
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4) Coarse Grain: VL = Very Loose, L = Loose, MD = Medium Dense, D = Dense, VD = Very Dense
Fine Grain: VSF = Very Soft, SF = Soft, MS = Medium Stiff, S = Stiff, VS = Very Stiff, H = Hard
5) W = Weak cementation, M = Moderate cementation, S = Strong cementation
6) B=Boulder, C= Cobble, CG=Coarse Gravel (3" - 3/4"), FG=Fine Gravel (3/4" - 1/4"), CS=Coarse Sand (#10-#4), MS=Medium Sand (#40 - #10), FS=Fine Sand (#200 - #40), F=Fines

Notes:
Groundwater:
Not encountered

Caving of side walls:
None noted

PROJECT: VA Cemetary
Client: Department of Veterans Affairs
Report No: RG1725

GEM ENGINEERING, INC.

Plate: 5

TRENCH LOG Trench No. 5

Location: See Site Plan | **Elevation:** Not Measured | **Date Excavated:** 3/22/2017

Depth (ft)	Tests [1]	Sample	USCS Symbol [2]	Soil Description (Additional comments below)	Color	Relative Moisture [3]	Density [4]	Cementation [5]	Max size [6] Particle
0			SC	- Clayey Sand	Red Brown	M	L	--	CG
5	At, M Sol, P		GM	- Silty Gravel Gravel with Sand - Cobbles and Boulders	Gray to White	SM	MD to VD	--	B (4')
10									
				Bottom @ 10'					
15									
20									

Sample: Drive Sample | Bag Sample | Bucket Sample

1) At = Atterberg, M = Moisture, Sol = Solubility, E = Expansion, C = Consol, P = Proctor, CS =Coarse Sieve
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Fine Grain: VSF = Very Soft, SF = Soft, MS = Medium Stiff, S = Stiff, VS = Very Stiff, H = Hard
5) W = Weak cementation, M = Moderate cementation, S = Strong cementation
6) B=Boulder, C= Cobble, CG=Coarse Gravel (3" - 3/4"), FG=Fine Gravel (3/4" - 1/4"), CS=Coarse Sand (#10-#4), MS=Medium Sand (#40 - #10), FS=Fine Sand (#200 - #40), F=Fines

Notes:
Groundwater:
Not encountered

Caving of side walls:
None noted

PROJECT: VA Cemetary
Client: Department of Veterans Affairs
Report No: RG1725

GEM ENGINEERING, INC.

Plate: 6

LABORATORY TESTS SUMMARY

Trench / Boring No.	Sample Depth (ft)	UCSC Symbol	Soil Description	Field Moisture (%)	Field Dry Density (pcf)	Solubility (%)	Fine Sieve % Passing #4	Fine Sieve % Passing #10	Fine Sieve % Passing #40	Fine Sieve % Passing #200	Atterberg Limits Liquid Limit	Atterberg Limits Plastic Limit	Atterberg Limits Plasticity Index	Expansion Load	Expansion %	Net Percent Consolidation @ 2000 lb	Net Percent Consolidation @ H_2O + 2000 lb	Modified Proctor Dry Density	Modified Proctor Optimum Moisture
T-1	4'	GM	Silty Gravel with Sand	5.0	--	0.3	34.6	29.7	24.3	13.9	NP	NP	NP	--	--	--	--	115.5	13.0
T-2	1'	GM	Silty Gravel with Sand	3.7	--	0.6	39.6	31.0	18.6	6.6	NP	NP	NP	--	--	--	--	--	--
T-3	2'	GM	Silty Gravel with Sand	6.8	--	0.6	47.2	41.2	33.5	21.0	NP	NP	NP	--	--	--	--	113.0	15.0
T-4	5'	GM	Silty Gravel with Sand	5.5	--	0.7	43.3	35.6	25.4	13.6	NP	NP	NP	--	--	--	--	--	--
T-5	6'	GM	Silty Gravel with Sand	2.7	--	0.3	28.3	22.8	14.1	5.0	NP	NP	NP	--	--	--	--	115.5	12.0

Notes:

Key: NP = Non Plastic, -- indicates no test performed

Atterberg Limits are for classification of fine-grained and fine-grained fraction of coarse-grained soils

PROJECT: **VA Cemetary**

Client: Department of Veterans Affairs

Report No: RG1725

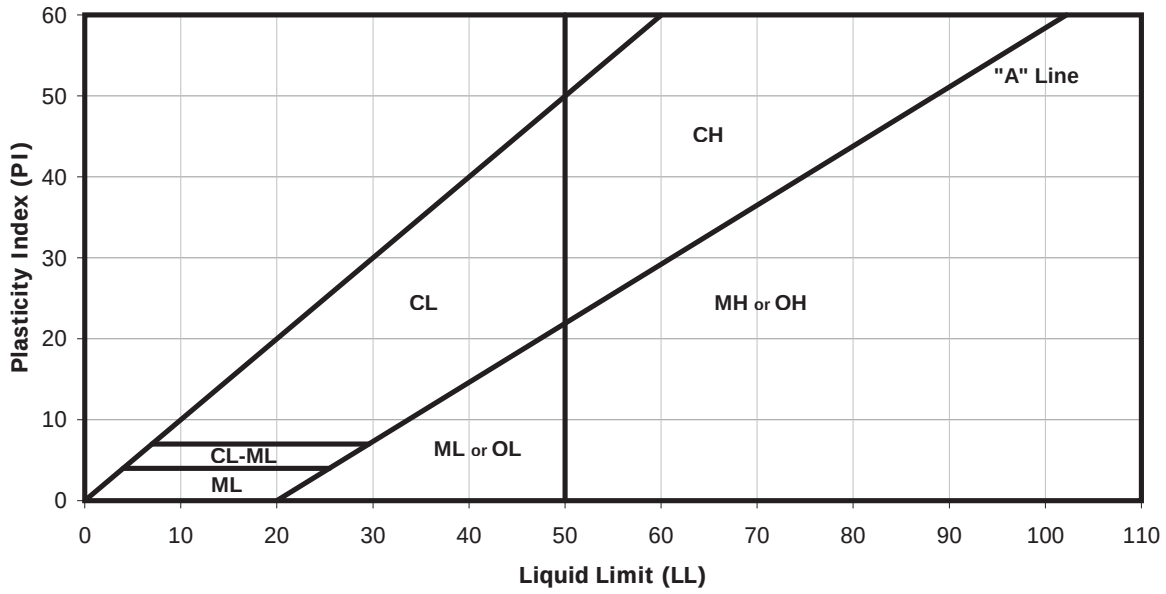
GEM ENGINEERING, INC.

Plate: 7

THE UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)

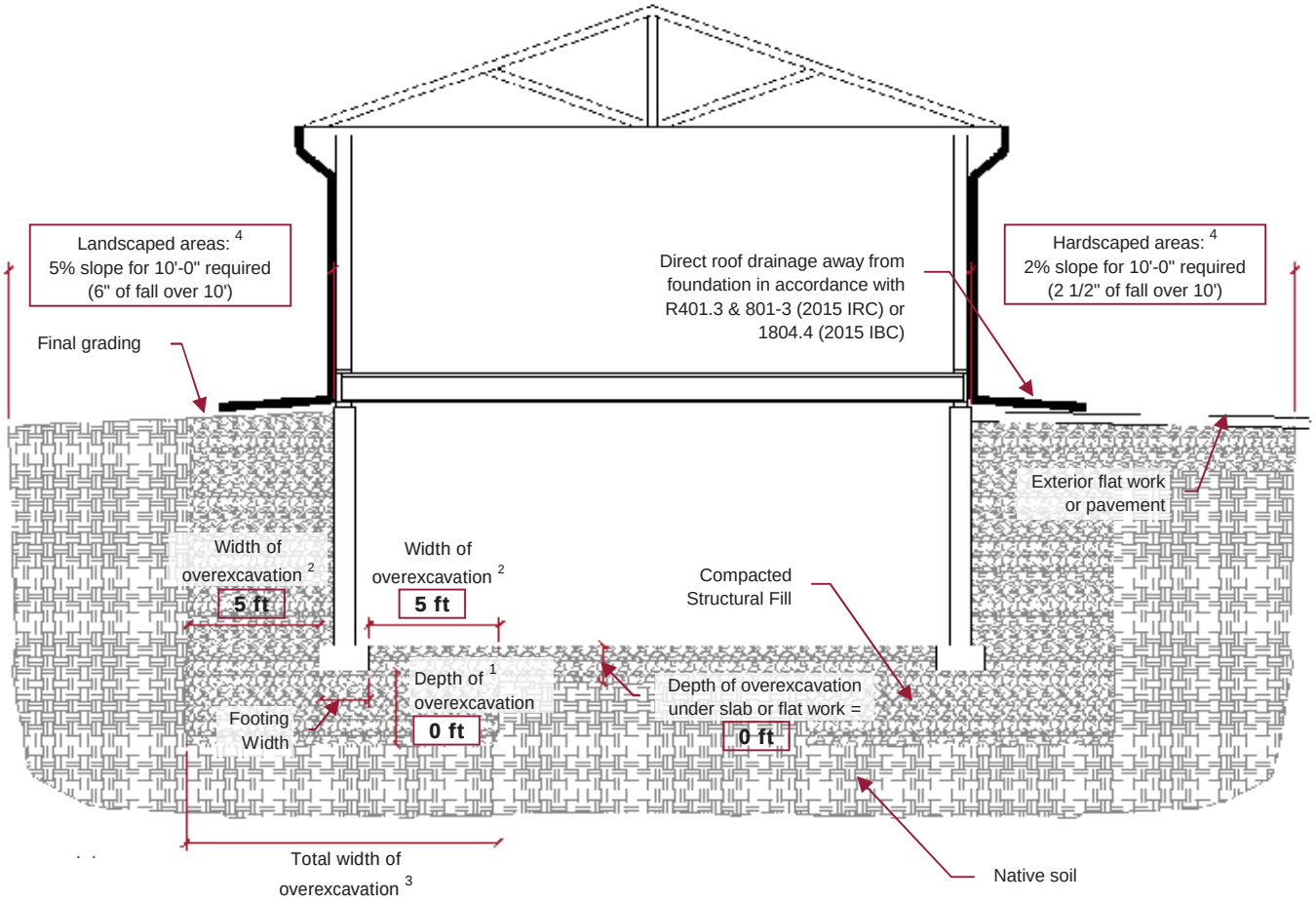
Major Division			Symbol	Color	Typical Group Names
COARSE GRAINED SOILS 50% or more is retained (larger than) the No. 200 sieve.	**Gravels**	**Clean Gravels**	**GW**		Well graded gravels, gravel sand mixtures, little or no fines
	More than 50 % of coarse part is larger than the No. 4 sieve.	Less than 5% fines	**GP**		Poorly graded gravels/gravel sand mixtures
		Gravels with Fines	**GM**		Silty gravels, gravel-sand-silt mixtures
		More than 12% fines	**GC**		Clayey gravels, gravel-clay-sand mixtures
	Sands	**Clean Sands**	**SW**		Well graded sands, gravely sands, little or no fines
	More than 50 % of coarse part is smaller than the No. 4 sieve.	Less than 5% fines	**SP**		Poorly graded sands or gravely sands, little or no fines
		Sands w/ Fines	**SM**		Silty sands, sand-silt mixtures
		More than 12% fines	**SC**		Clayey sands, sand clay mixtures
FINE GRAINED SOILS 50% or more passes (smaller than) the No. 200 sieve.	**Silts and Clays** Liquid Limit less than 50		**ML**		Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with low plasticity
			CL-ML		Inorganic clay-silt mixture and very fine sand, silty or clayey fine sands or clayey silts with low plasticity.
			CL		Inorganic clays of low to medium plasticity, gravely clays, sandy clays, silty clays, lean clays
			OL		Organic silts and organic silty clays of low plasticity
	Silts and Clays Liquid Limit 50 or more		**MH**		Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
			CH		Inorganic clays of high plasticity, fat clays
			OH		Organic clays or medium to high plasticity, organic silts
	Highly Organic Soils		**PT**		Peat and other highly organic silts

PLASTICITY CHART

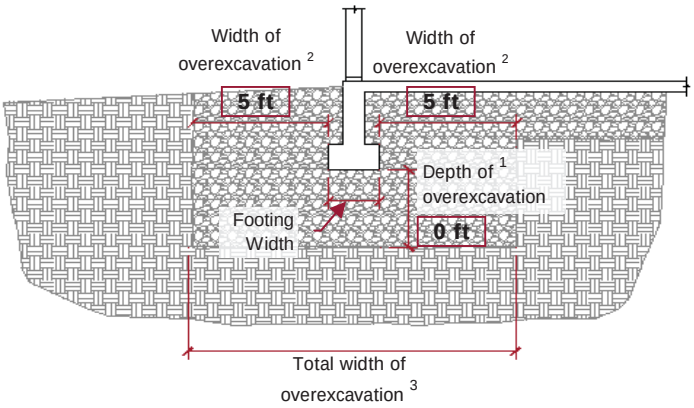


PROJECT:	**VA Cemetary**	GEM ENGINEERING, INC.	**Plate:** 8
Client:	Department of Veterans Affairs		
Report No:	RG1725		

OVEREXCAVATION, DRAINAGE AND MOISTURE PROTECTION DIAGRAM



Basement Foundation



Slab-On-Grade Foundation

1 The depth of overexcavation shall extend from the bottom of the footing or existing site grade whichever is **GREATER**.

2 The width of overexcavation is equal to 5ft past the edge of ftg or equal to the depth of overexcavtion which is **GREATER**.

In some casses GEM Engineering may approve a width of lateral overexcavation less than 5'-0" but it shall never be less than the required depth of overexcavation.

3 The total width of overexcavation is euqal to the width of the footing plus 2x the width of lateral overexcavation.

4 Drainage and gradation shall be constructed in accordance with the requirements of section R401.3 & R801.3 of the 2015 IRC or section 1804.4 of the 2015 IBC. Refer to geotechnical report for additional drainage & grading requirements & recommendations.

PROJECT:	**VA Cemetary**	GEM ENGINEERING, INC.	**Plate:**
Client:	Department of Veterans Affairs		**9**
Report No:	RG1725		

Appendix B

BRIGHAM YOUNG UNIVERSITY

Environmental Analytical Laboratory
1026 LSB
Provo, UT 84602
801-422-2147

Plant and Wildlife Sciences Department

Name GEM Engineering, Inc.
Street 485 N. Aviation Way
Cedar City Utah 84721
City State Zip

SOIL TEST REPORT AND RECOMMENDATIONS

Date: 5-Apr-17
Telephone: 435-867-6478
Work Order: 888

Sample Identification	Crop to be grown	pH	% Sand	% Silt	% Clay	Soil Texture	Cation Exchange meq/100g	% Organic Matter
VA cemetery T-1	Turf	7.3						2.8

Test	Results	Very Low	Low	Medium	High	Very High	Recommendations
Nitrate-Nitrogen ppm N	1	X					apply 2.8 lbs of N/1000 sq ft
Phosphorus ppm P	9		X				apply 1 lbs of P2O5/1000 sq ft
Potassium ppm K	202					X	no fertilizer needed
Salinity-ECe dS/m	0.4		X				no salinity problem

Notes:

BRIGHAM YOUNG UNIVERSITY

Environmental Analytical Laboratory
1026 LSB
Provo, UT 84602
801-422-2147

Plant and Wildlife Sciences Department

Name: GEM Engineering, Inc.
Street: 485 N. Aviation Way
City: Cedar City State: Utah Zip: 84721

SOIL TEST REPORT AND RECOMMENDATIONS

Date: 5-Apr-17
Telephone: 435-867-6478
Work Order: 888

Sample Identification	Crop to be grown	pH	% Sand	% Silt	% Clay	Soil Texture	Cation Exchange meq/100g	% Organic Matter
VA cemetery T-2	Turf	8.1						0.6

Test	Results	Very Low	Low	Medium	High	Very High	Recommendations
Nitrate-Nitrogen ppm N	0.4	X					apply 2.8 lbs of N/1000 sq ft
Phosphorus ppm P	1	X					apply 2.1 lbs of P2O5/1000 sq ft
Potassium ppm K	31	X					apply 4.1 lbs of K2O/1000 sq ft
Salinity-ECe dS/m	1.7			X			no salinity problem

Notes:

BRIGHAM YOUNG UNIVERSITY

Environmental Analytical Laboratory
1026 LSB
Provo, UT 84602
801-422-2147

Plant and Wildlife Sciences Department

Name GEM Engineering, Inc.
Street 485 N. Aviation Way
Cedar City (City) Utah (State) 84721 (Zip)

SOIL TEST REPORT AND RECOMMENDATIONS

Date: 5-Apr-17
Telephone: 435-867-6478
Work Order: 888

Sample Identification	Crop to be grown	pH	% Sand	% Silt	% Clay	Soil Texture	Cation Exchange meq/100g	% Organic Matter
VA cemetery T-3	Turf	7.9						1.2

Test	Results	Very Low	Low	Medium	High	Very High	Recommendations
Nitrate-Nitrogen ppm N	2	X					apply 2.8 lbs of N/1000 sq ft
Phosphorus ppm P	5	X					apply 2.1 lbs of P2O5/1000 sq ft
Potassium ppm K	344					X	no fertilizer needed
Salinity-ECe dS/m	1.0			X			no salinity problem

Notes:

BRIGHAM YOUNG UNIVERSITY

Environmental Analytical Laboratory
1026 LSB
Provo, UT 84602
801-422-2147

Plant and Wildlife Sciences Department

Name GEM Engineering, Inc.
Street 485 N. Aviation Way
Cedar City (City) Utah (State) 84721 (Zip)

SOIL TEST REPORT AND RECOMMENDATIONS

Date: 5-Apr-17
Telephone: 435-867-6478
Work Order: 888

Sample Identification	Crop to be grown	pH	% Sand	% Silt	% Clay	Soil Texture	Cation Exchange meq/100g	% Organic Matter
VA cemetery T-4	Turf	7.0						2.6

Test	Results	Very Low	Low	Medium	High	Very High	Recommendations
Nitrate-Nitrogen ppm N	2	X					apply 2.8 lbs of N/1000 sq ft
Phosphorus ppm P	19				X		no fertilizer needed
Potassium ppm K	244					X	no fertilizer needed
Salinity-ECe dS/m	0.4		X				no salinity problem

Notes:

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Utah Ecological Services Field Office
2369 West Orton Circle, Suite 50
West Valley City, UT 84119-7603
Phone: (801) 975-3330 Fax: (801) 975-3331
http://www.fws.gov
http://www.fws.gov/utahfieldoffice/

In Reply Refer To: April 18, 2017
Consultation Code: 06E23000-2017-SLI-0251
Event Code: 06E23000-2017-E-00728
Project Name: Proposed Cedar City UT National Veterans Burial Ground

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having

similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Utah Ecological Services Field Office
2369 West Orton Circle, Suite 50
West Valley City, UT 84119-7603
(801) 975-3330

Project Summary

Consultation Code: 06E23000-2017-SLI-0251

Event Code: 06E23000-2017-E-00728

Project Name: Proposed Cedar City UT National Veterans Burial Ground

Project Type: LAND - ACQUISITION

Project Description: Approximately 8.2 acres of unimproved land

Project Location:

Approximate location of the project can be viewed in Google Maps:
https://www.google.com/maps/place/37.64853069722181N113.09010184747817W

Counties: Iron, UT

Endangered Species Act Species

There is a total of 6 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area. Please contact the designated FWS office if you have questions.

Mammals

NAME	STATUS
Utah Prairie Dog *(Cynomys parvidens)*	Threatened

No critical habitat has been designated for this species.
This species only needs to be considered under the following conditions:

- Low intensity surveys, as defined by the Utah Prairie Dog Survey Protocol (http://www.fws.gov/utahfieldoffice/), are required for all projects with temporary or permanent impacts.
- High intensity surveys, as defined by the Utah Prairie Dog Survey Protocol (http://www.fws.gov/utahfieldoffice/), are required for all projects with temporary or permanent impacts.

Species profile: https://ecos.fws.gov/ecp/species/5517

Birds

NAME	STATUS
California Condor *(Gymnogyps californianus)*	Endangered

Population: U.S.A. only, except where listed as an experimental population
There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/8193

Mexican Spotted Owl *(Strix occidentalis lucida)*	Threatened

There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/8196

Southwestern Willow Flycatcher *(Empidonax traillii extimus)*	Endangered

There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/6749

Yellow-billed Cuckoo *(Coccyzus americanus)*	Threatened

Population: Western U.S. DPS
There is a **proposed** critical habitat for this species. Your location is outside the proposed critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/3911

Flowering Plants

NAME	STATUS
Jones Cycladenia *(Cycladenia humilis var. jonesii)*	Threatened

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/3336

Critical habitats

There are no critical habitats within your project area.

U.S. Fish & Wildlife Service

Search ECOS

ECOS Environmental Conservation Online System

Conserving the Nature of America

ECOS / Species Profile for Utah prairie dog (Cynomys parvidens)

Utah prairie dog (Cynomys parvidens)

Range Information | Federal Register | Recovery | Critical Habitat | Conservation Plans | Petitions | Biological Opinions | Life History

Search for images on digitalmedia.fws.gov

Taxonomy: View taxonomy in ITIS

Listing Status: Threatened

Where Listed: WHEREVER FOUND

General Information

Prairie dogs belong to the Sciuridae family of rodents, which also includes squirrels, chipmunks, and marmots. There are five species of prairie dogs, all of which are native to North America and all of which have non-overlapping geographic ranges (Hoogland 1995; Hoogland 2003). Taxonomically, prairie dogs are divided into two subgenera (Hoogland 1995): white-tailed and black-tailed. The Utah prairie dog is a member of the white-tailed group, subgenus Leucocrossuromys. Other members of this group, which also occur in Utah, are the white-tailed prairie dog (Cynomys leucurus) and the Gunnison prairie dog (Cynomys gunnisoni). The Utah prairie dog is widely recognized as a distinct species (Zeveloff 1988; Hoogland 1995). The Utah prairie dog is most closely related to the white-tailed prairie dog. These two species may have once belonged to a single interbreeding species (Pizzimenti 1975), but they are now separated by ecological and physiographic barriers. The type locality for the Utah prairie dog is Buckskin Valley in Iron County, Utah (Pizzimenti and Collier 1975, p. 1). Genetic variance within Utah prairie dog populations is very low – less than half that commonly observed for black tailed prairie dogs (Chesser 1984; Ritchie and Brown 2005)). This may be the result of genetic drift in small populations (Chesser 1984). The Utah prairie dog's color is cinnamon to dark buffy cinnamon mixed with small amounts of buff or blackish hairs. This species can be distinguished from the two other white-tailed species by a black spot above the eye (Pizzimenti and Collier 1975), a brown cheek patch, the cinnamon to clay coloration of the dorsum and the proximal half of the tail, and the all-white terminal half of the tail (Hollister 1916). However, color alone is not considered a reliable tool to differentiate between prairie dog species (Hoogland 2003). Adult Utah prairie dogs range in total body length from 250 to 400 mm (9.8 to 15.7 in.) including a tail length of 30 to 65 mm (1.2 to 2.6 in.) (Hollister 1916; Hoogland 1995). Adult males weigh

between 750 and 1,410 grams (g) (1.7 to 3.1 pounds (lbs)) and adult females weigh between 640 to 1,140 g (1.4 to 2.5 lbs) (Wright Smith 1978). Body weight varies by sex and season. For example, in spring, male body mass ranges from 300 to 900 g (0.7 to 2 lbs) but by late summer or early fall, their body mass ranges from 500 to 1500 g (1.1 to 3.3 lbs) (Hoogland 1995).

The species historical range included Utah. See below for information about where the species is known or believed to occur.

Current Listing Status Summary

Status	Date Listed	Lead Region	Where Listed
Threatened	06/04/1973	Mountain-Prairie Region (Region 6)	Wherever found

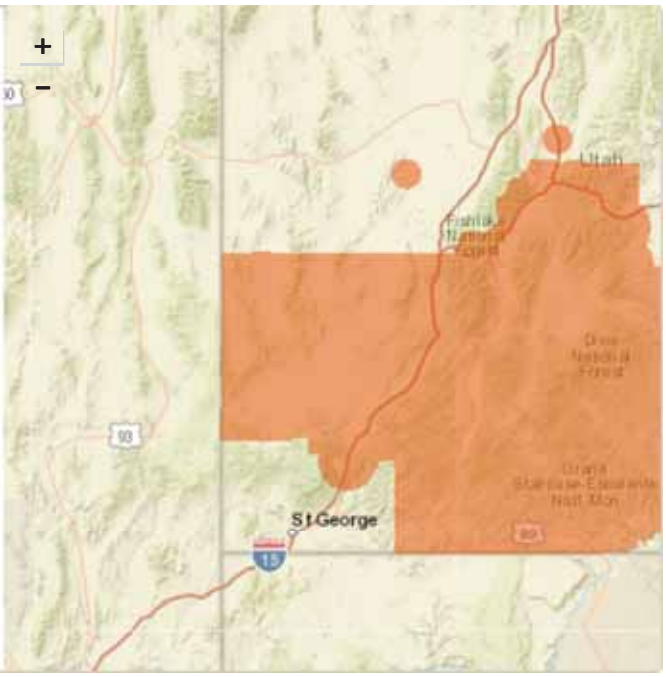
» Range Information'

Current Range

☑ *Wherever found*

Zoom in! Some species' locations may be small and hard to see from a wide perspective. To narrow-in on locations, check the state and county lists (below) and then use the zoom tool.

Want the FWS's current range for all species? Click here to download a zip file containing all individual shapefiles and metadata for all species.



- **Wherever found**

  Listing status: Threatened

  - **States/US Territories** in which this population is known to or is believed to occur: Utah
  - **US Counties** in which this population is known to or is believed to occur: View All

» Federal Register Documents

Federal Register Documents

Show 10 entries

Date	Citation Page	Title

08/02/2012	77 FR 46158 46183	Endangered and Threatened Wildlife and Plants; Revising the Special Rule for the Utah Prairie Dog; Fina Rule
04/26/2012	77 FR 24975	Revised Recovery Plan for the Utah Prairie Dog; Notice of document availability
04/26/2012	77 FR 24915 24924	Revising the Proposed Special Rule for the Utah Prairie Dog: Supplemental notice of proposed rulemaking; reopening of public comment period and notice of document availability
06/21/2011	76 FR 36053 36068	Revised 90-Day Finding on a Petition To Reclassify the Utah Prairie Dog From Threatened to Endangered
06/02/2011	76 FR 31906 31920	Proposed Rule to Revise the Special Rule for the Utah Prairie Dog

Showing 1 to 10 of 14 entries

‹ Previous 1 2 Next ›

Special Rule Publications

Show 10 entries

Date	Citation Page	Title
08/02/2012	77 FR 46158 46183	Endangered and Threatened Wildlife and Plants; Revising the Special Rule for the Utah Prairie Dog; Fina Rule
04/26/2012	77 FR 24915 24924	Revising the Proposed Special Rule for the Utah Prairie Dog: Supplemental notice of proposed rulemaking; reopening of public comment period and notice of document availability
06/02/2011	76 FR 31906 31920	Proposed Rule to Revise the Special Rule for the Utah Prairie Dog
06/14/1991	56 FR 27438 27443	ETWP; Final Rule to Amend Special Rule Allowing Regulated Taking of the Cynomys parvidens (Utah Prairie Dog); 56 FR 27438 27443
02/21/1990	55 FR 6022 6024	ETWP; Proposal to Amend Special Rule Allowing Regulated Taking of the Utah Prairie Dog; 55 FR 6022 6024
05/29/1984	49 FR 22330 22334	Final Rule to Reclassify Utah Prairie Dog as Thr., w/ Special Rule to Allow Regulated Taking; 49 FR 22330-

Showing 1 to 6 of 6 entries

‹ Previous 1 Next ›

» Recovery

- Recovery Plan Information Search
- Information Search FAQs

Current Recovery Plan(s)

Show 10 entries

Date	Title	Plan Action Status	Plan Status
03/01/2012	Utah Prairie Dog (Cynomys parvidens) Revised Recovery Plan	View Implementation Progress	Final Revision 1

Showing 1 to 1 of 1 entries

‹ Previous 1 Next ›

Other Recovery Documents

Show 10 entries

Date	Citation Page	Title	Document Type
04/26/2012	77 FR 24915 24924	Revising the Proposed Special Rule for the Utah Prairie Dog: Supplemental notice of proposed rulemaking; reopening of public comment period and notice of document availability	• Notice Doc. Availability • Notice Reopen Comment
04/26/2012	77 FR 24975	Revised Recovery Plan for the Utah Prairie Dog; Notice of document availability	• Notice Final Recovery Plan Availability
09/17/2010	75 FR 57055 57056	Draft Revised Recovery Plan for Utah Prairie Dog	• Notice Draft Recovery Plan Availability
02/21/2007	72 FR 7843 7852	90-Day Finding on a Petition To Reclassify the Utah Prairie Dog From Threatened to Endangered	• Notice 5-year Review, Initiation • Notice 90-day Petition Finding, Not

Showing 1 to 4 of 4 entries

‹ Previous 1 Next ›

Five Year Review

Show 10 entries

Date	Title
04/20/2012	Utah prairie dog (Cynomys parvidens) 5-Year Review: Summary and E l ti

Showing 1 to 1 of 1 entries

‹ Previous 1 Next ›

» Critical Habitat

No critical habitat rules have been published for the Utah prairie dog.

» Conservation Plans

Habitat Conservation Plans (HCP) (learn more)

Show 10 entries

HCP Plan Summaries
West Hills L.L.C.
Smead Manufacturing Company
SCUTA
Noriega, Jose, Sam Zittering, Phillip Finch
Iron County Low Effect HCP
Iron County
Garfield County Low Effect HCP
Connel Gower
Coleman Company
Church of Jesus Christ of LDS

Showing 1 to 10 of 11 entries

‹ Previous 1 2 Next ›

Safe Harbor Agreements (SHA): (learn more)

Show 10 entries

SHA Plan Summaries
Utah Prairie Dog Programmatic Safe Harbor
Pace Safe Harbor
Henrie Safe Harbor

Showing 1 to 3 of 3 entries

‹ Previous 1 Next ›

» Petitions'

Show 10 entries

Showing 1 to 1 of 1 entries

‹ Previous 1 Next ›

» Biological Opinions

» Life History

» Other Resources

NatureServe Explorer Species Reports -- NatureServe Explorer is a source for authoritative conservation information on more than 50,000 plants, animals and ecological communtities of the U.S and Canada. NatureServe Explorer provides in-depth information on rare and endangered species, but includes common plants and animals too. NatureServe Explorer is a product of NatureServe in collaboration with the Natural Heritage Network.

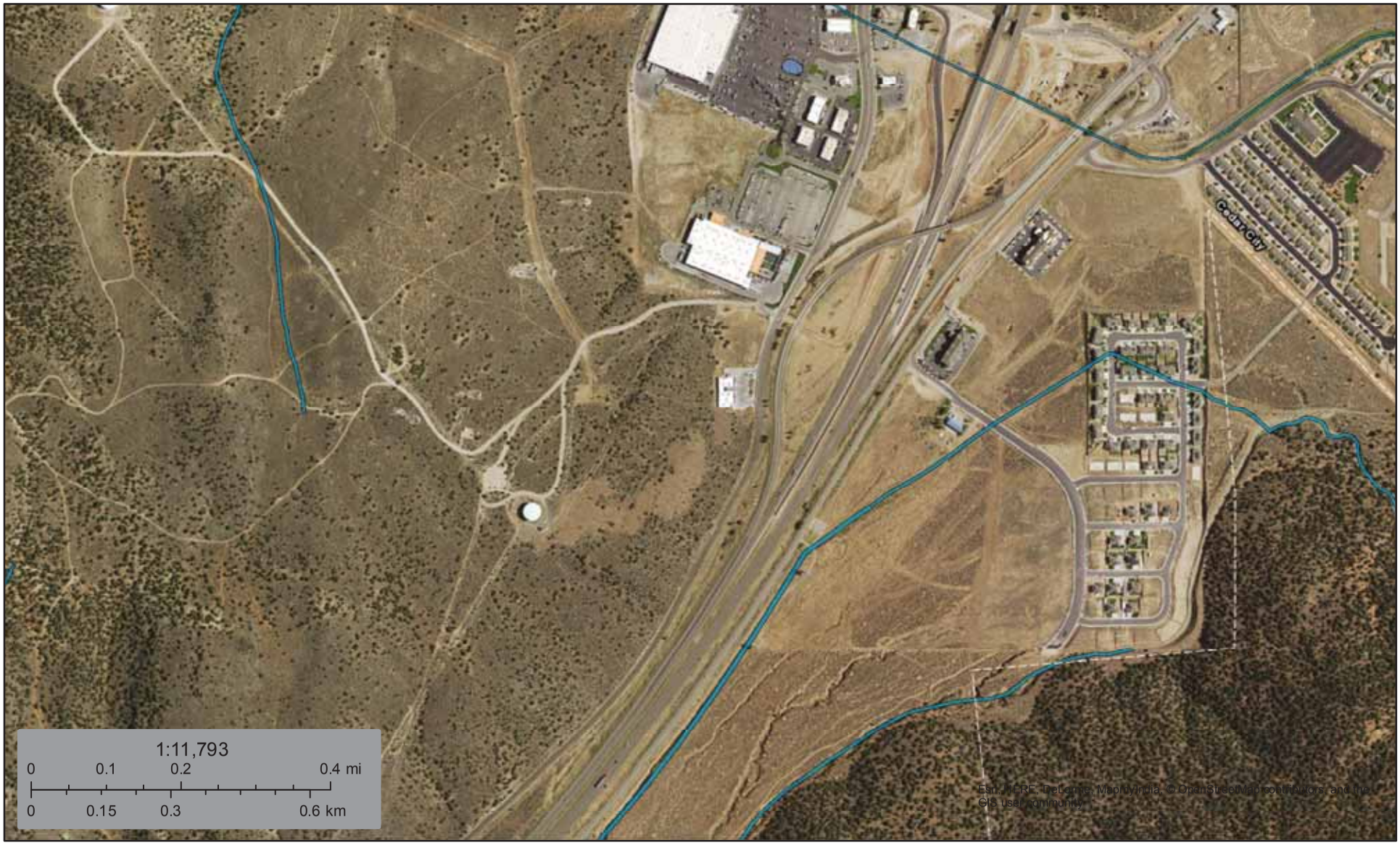
ITIS Reports -- ITIS (the Integrated Taxonomic Information System) is a source for authoritative taxonomic information on plants, animals, fungi, and microbes of North America and the world.

FWS Digital Media Library -- The U.S. Fish and Wildlife Service s National Digital Library is a searchable collection of selected images, historical artifacts, audio clips, publications, and video.

U.S. Fish and Wildlife Service

National Wetlands Inventory

Wetlands

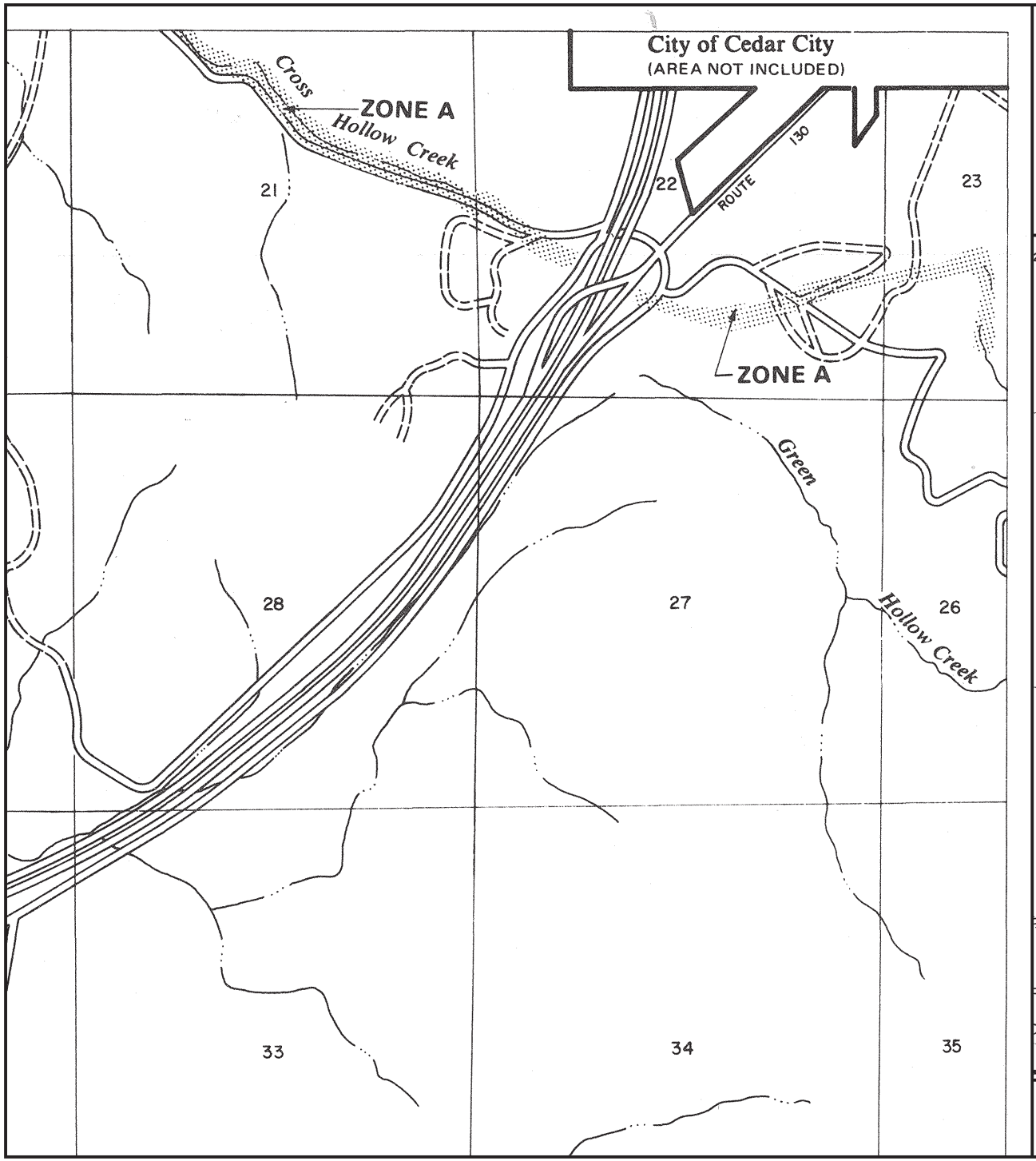


April 18, 2017

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

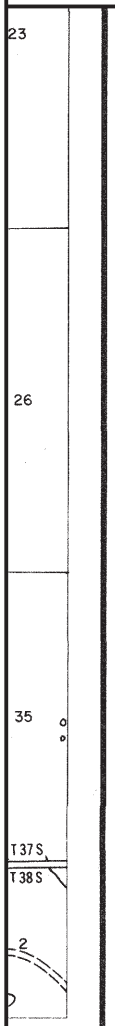
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper



APPROXIMATE SCALE IN FEET

2000 0 2000



NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

IRON COUNTY, UTAH

(UNINCORPORATED AREAS)

PANEL 900 OF 1000

(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
490073 0900 B

EFFECTIVE DATE:
JULY 17, 1986

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

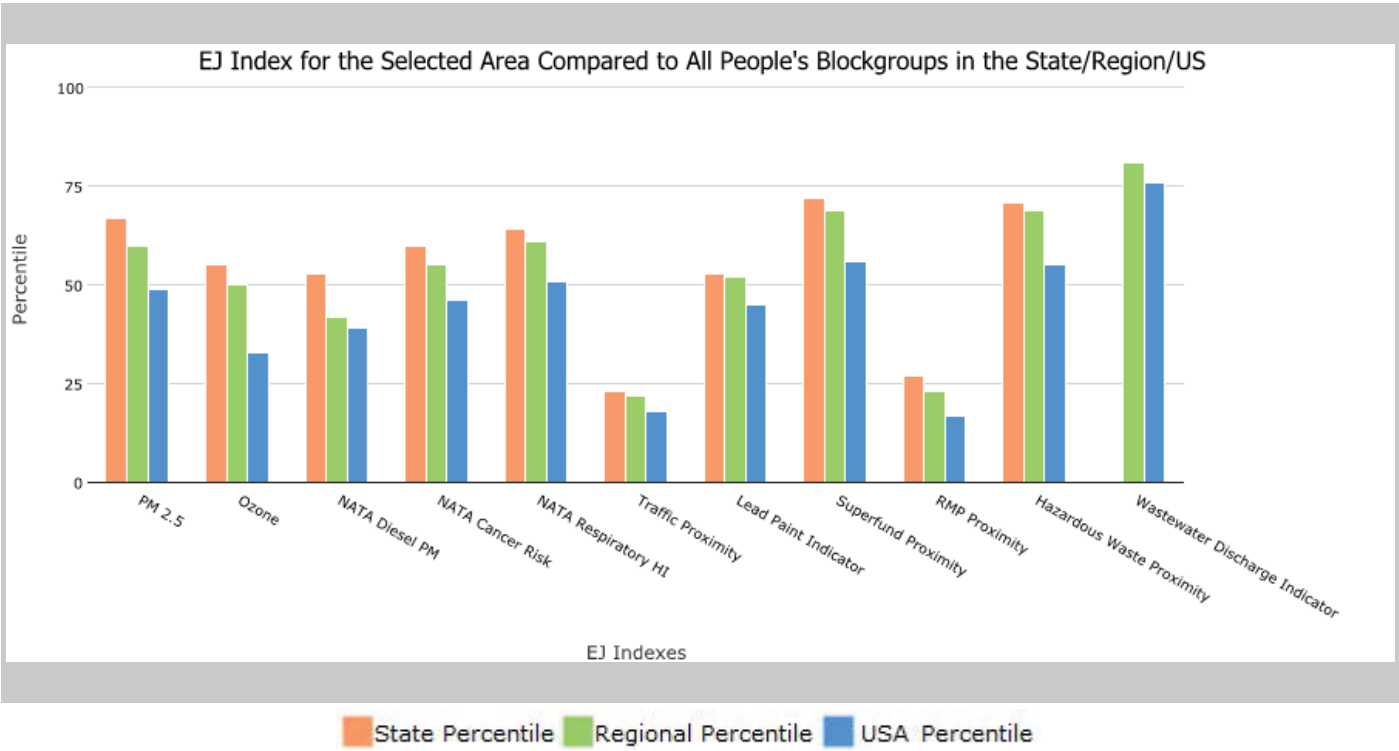
EJSCREEN Report (Version 2017)

.75 mile Ring Centered at 37.649335,-113.089759, UTAH, EPA Region 8

Approximate Population: 406

Input Area (sq. miles): 1.77

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	67	60	49
EJ Index for Ozone	55	50	33
EJ Index for NATA* Diesel PM	53	42	39
EJ Index for NATA* Air Toxics Cancer Risk	60	55	46
EJ Index for NATA* Respiratory Hazard Index	64	61	51
EJ Index for Traffic Proximity and Volume	23	22	18
EJ Index for Lead Paint Indicator	53	52	45
EJ Index for Superfund Proximity	72	69	56
EJ Index for RMP Proximity	27	23	17
EJ Index for Hazardous Waste Proximity	71	69	55
EJ Index for Wastewater Discharge Indicator	N/A	81	76



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

EJSCREEN Report (Version 2017)

.75 mile Ring Centered at 37.649335,-113.089759, UTAH, EPA Region 8

Approximate Population: 406

Input Area (sq. miles): 1.77

Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0

EJSCREEN Report (Version 2017)

.75 mile Ring Centered at 37.649335,-113.089759, UTAH, EPA Region 8

Approximate Population: 406

Input Area (sq. miles): 1.77

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	4.71	10.1	1	7.3	6	9.14	0
Ozone (ppb)	48.3	43.4	96	43.5	93	38.4	97
NATA* Diesel PM (µg/m^3)	0.256	0.608	19	0.607	<50th	0.938	<50th
NATA* Cancer Risk (lifetime risk per million)	19	29	11	30	<50th	40	<50th
NATA* Respiratory Hazard Index	0.4	1.2	6	1.4	<50th	1.8	<50th
Traffic Proximity and Volume (daily traffic count/distance to road)	170	180	70	250	66	590	59
Lead Paint Indicator (% Pre-1960 Housing)	0.063	0.19	45	0.22	43	0.29	29
Superfund Proximity (site count/km distance)	0.0037	0.2	5	0.12	5	0.13	0
RMP Proximity (facility count/km distance)	0.64	0.61	68	0.61	70	0.73	66
Hazardous Waste Proximity (facility count/km distance)	0.0042	0.085	1	0.078	4	0.093	0
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	0	1900	N/A	480	38	30	40
Demographic Indicators							
Demographic Index	27%	26%	60	27%	60	36%	44
Minority Population	9%	21%	29	24%	28	38%	22
Low Income Population	44%	32%	76	31%	76	34%	69
Linguistically Isolated Population	0%	3%	54	2%	55	5%	44
Population With Less Than High School Education	3%	9%	30	9%	29	13%	16
Population Under 5 years of age	8%	9%	49	7%	66	6%	74
Population over 64 years of age	13%	10%	75	12%	61	14%	53

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJSCREEN outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

APPENDIX E

Public Notices and Comments