FINAL
SUPPLEMENTAL
ENVIRONMENTAL ASSESSMENT

PROPOSED BED TOWER REPLACEMENT, CLINICAL BUILDING EXPANSION, AND JC PARKING GARAGE ADDITIONS

ST. LOUIS VA MEDICAL CENTER – JOHN COCHRAN DIVISION

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EXECUTIVE SUMMARY

In February 2014, the Department of Veterans Affairs (VA) completed an Environmental Assessment (EA) that analyzed three possible parcel acquisition alternatives for an expansion and renovation project of the Department of Veterans Affairs St. Louis Health Care System (VASTLHCS) John Cochran Division to help identify optimal layouts for new buildings and other components. The EA resulted in a Finding of No Significant Impact (FONSI). The 2014 project was later postponed. Presently, the VA has reinitiated the project planning process and is developing two action alternatives for the new project. When important new information becomes available after an EA is prepared, an agency may satisfy its duty under National Environmental Policy Act of 1969 (NEPA) with a supplemental analysis. Reasons for performing a Supplemental Environmental Assessment (SEA) include a change in project, a change in the environment where the federal action is located, or the NEPA analysis completed for the project is more than five years old and the proposed action has not yet been implemented.

This (SEA) has been prepared to supplement information that identified, analyzed, and documented the potential physical, environmental, cultural, and socioeconomic impacts identified in the 2014 EA associated with the VA proposed bed tower replacement, clinical building expansion, and jc parking garage additions of the Department of Veterans Affairs St Louis Health Care System – John Cochran Division (VASTLHCS). The SEA was prepared 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] 1500-1508); 38 CFR Part 26 (Environmental Effects of the Department of Veterans Affairs Actions) and VA NEPA Interim Guidance for Projects dated 30 September 2010.

Proposed Action

VA proposes to upgrade and expand the existing VASTLHCS located at 915 North Grand Boulevard, St. Louis, Missouri. The proposed action includes construction of care facilities that would meet modern standards, alleviate existing facility space deficiencies, provide veterans with privacy and a better quality of care, and provide for more streamlined facility operations. As part of this project VA proposes to construct and operate the following core components at the John Cochran Division:

- New Inpatient Medical Tower
- New Substance Abuse Treatment Program Clinic
- New Central Utility Plant
- New Facilities Support and Information Technology Building
- New Parking Facilities
- New Water Storage Structure
- Site improvements including utility infrastructure, roadways, sidewalks and landscaping

Purpose and Need

The **purpose** of the Proposed Action is to protect life and property, while ensuring the facility can continue providing essential medical services to veterans living in the St. Louis area following a major earthquake event and to provide veterans with facilities that support modern standards of health care and have sufficient capacity to meet the current and projected needs for heaths.

The Proposed Action is **needed** to meet VA Directive 7512, a directive that establishes policy regarding the seismic safety of VA buildings, thus providing veterans with safety and reasonable options to VA medical services and to address the demands of projected future patients and existing shortfalls in bed space, medical facilities, and parking capabilities at VASTLHCS.

Three alternatives are analyzed in this SEA:

1. **Alternative A -** acquisition of southern properties

   Alternative A would **include acquisition of two properties south of the existing medical center and vacation of portions of City of St. Louis streets including Bell and Enright Avenue**. As part of this Alternative VA proposes to construct and operate the following core components at the John Cochran Division:

   - New Inpatient Medical Tower
   - New Substance Abuse Treatment Program Clinic
   - New Facilities Support and Information Technology Building
   - New Central Utility Plant
   - New Parking Facilities
   - New Water Storage Structure
   - Site improvements including utility infrastructure, roadways, sidewalks and landscaping

2. **Alternative B –** no property acquisition

   Alternative B would **limit development to property currently owned by VA and vacation of a portion of Bell Avenue,** a City of St. Louis street. As part of this alternative VA proposes to construct and operate the following core components at the John Cochran Division:

   - New Inpatient Medical Tower
   - New Substance Abuse Treatment Program Clinic
   - New Central Utility Plant
   - New Facilities Support and Information Technology Building
   - New Parking Facilities
   - New Water Storage Structure
   - Site improvements including utility infrastructure, roadways, sidewalks and landscaping

3. **No Action Alternative**

Under the No Action Alternative, operations at VASTLHCS would continue under current conditions. This alternative would not address the deficiencies of the existing buildings and parking and would not provide the proper standard of required medical care to veterans living within the St. Louis region.

Table 1 summarizes the resource areas analyzed in this SEA and the potential environmental effects of Alternative A, Alternative B, and the No Action alternative. A detailed analysis of the potential effects to the resource areas is included in Section 3.0.

Table 1. Technical Resource Area Analysis Summary

Technical Resource Area	Alternative A	Alternative B	No Action
Meets Purpose and Need for Action	Meets purpose and need for action	Meets purpose and need for action	Does not meet purpose or need
Aesthetics	**Beneficial -- Less than Significant** The Proposed Action would develop vacant urban lots and demolish a vacant, condemned building. The proposed facility will be designed to enhance the (interior and exterior) aesthetic qualities of the medical facilities. The landscaping, open space, and ground amenities design will contribute to this objective.	**Beneficial -- Less than Significant** The Proposed Action would develop vacant urban lots. The proposed facility will be designed to enhance the (interior and exterior) aesthetic qualities of the medical facilities. The landscaping, open space, and ground amenities design will contribute to this objective.	**None** No change to aesthetics
Air Quality	**Adverse -- Less than Significant** Construction will create dust, smoke, and engine emissions. Appropriate VA and other regulatory guidance will be followed during construction. Construction of the new facilities will cause a minor, temporary negative impact to local air quality.	**Adverse -- Less than Significant** Construction will create dust, smoke, and engine emissions. Appropriate VA and other regulatory guidance will be followed during construction. Construction of the new facilities will cause a minor, temporary negative impact to local air quality.	**None** No change to air quality
Cultural Resources	**Adverse -- Less than Significant** May impact historic properties	**Adverse -- Less than Significant** May impact historic properties view scape	**None** No impact to cultural resources
Geology, Topography, and Soils	**Beneficial -- Less than Significant** Impacted soils containing rubble and contaminants are present and need to be removed. Soft spots, existing fill and contaminated soils will be replaced during construction.	**Beneficial -- Less than Significant** Impacted soils containing rubble and contaminants are present and need to be removed. Soft spots, existing fill and contaminated soils will be replaced during construction.	**None** No impact to geology, topography and soils
Hydrology and Water Quality	**Beneficial -- Less than Significant** The Proposed Action would result in design and construction of stormwater BMP's to meet modern water quality and discharge requirements.	**Beneficial -- Less than Significant** The Proposed Action would result in design and construction of stormwater BMP's to meet modern water quality and discharge requirements. Limited space may pose challenges to fully implementing successful BMP's.	**Adverse -- Less than Significant** Current campus does not meet modern stormwater requirements and would continue to operate under legacy standards
Wildlife and Habitat	**Less than Significant** Two federal species and one state listed species are potentially present within the area. Mitigation measures laid out in Section 3.7	**Less than Significant** Two federal species and one state listed species are potentially present within the area. Mitigation measures laid out in Section 3.7	**None** No change to wildlife or habitat
Noise	**Beneficial & Adverse -- Less than Significant** The Proposed Action will cause a temporary, short-term increase in noise during the demolition and construction phases that may have an adverse impact on medical center residents and workers, and adjacent residential and commercial areas. As this is a medical facility, additional noise control measures may be required during construction. The new facilities will incorporate noise reduction features that will have a long-term benefit to occupants.	**Beneficial & Adverse -- Less than Significant** The Proposed Action will cause a temporary, short-term increase in noise during the demolition and construction phases that may have an adverse impact on medical center residents and workers, and adjacent residential and commercial areas. As this is a medical facility, additional noise control measures may be required during construction. The new facilities will incorporate noise reduction features that will have a long-term benefit to occupants.	**None** No change to noise

Land Use	**Beneficial -- Less than Significant** The Proposed Action would result in development consistent with the current land use and zoning. The new buildings and ground improvements will have a long-term beneficial impact on utilities, traffic circulation, and parking at the facility. The new construction will have a negligible impact on local land use.	**Beneficial -- Less than Significant** The Proposed Action would result in development consistent with the current land use and zoning. The new buildings and ground improvements will have a long-term beneficial impact on utilities, traffic circulation, and parking at the facility. The new construction will have a negligible impact on local land use.	**None** No change to land use
Floodplains and Wetlands	**None** No Floodplains or wetlands present.	**None** No Floodplains or wetlands present.	**None** No Floodplains or wetlands present
Socioeconomics and Environmental Justice	**Beneficial -- Less than Significant** Minimal effects, potential economic benefit from growth and construction of site area	**Beneficial -- Less than Significant** Minimal effects, potential economic benefit from growth and construction of site area	**None** No change to socioeconomics and environmental justice
Community Services	**Beneficial& Adverse -- Less than Significant** Alterations to Delmar Blvd. and acquisition of Enright Ave. should not affect bus route travel. Police, fire, and municipal services will have short term impacts during construction. Medical care to veterans will be improved.	**Beneficial & Adverse -- Less than Significant** Police, fire, and municipal services will have short and long term impacts during construction as proper access may be limited. Medical care to veterans will beimproved.	**None** No change
Solid and Hazardous Materials	**Adverse &Beneficial-- Less than Significant** During demolition and construction phase, various hazardous wastes and other debris will be generated. The potential short-term, temporary adverse impact will be minor and will be avoided and mitigated through close adherence to federal, state, and local regulations, and incorporated into construction contracts. Buildings currently burdened with hazardous materials will be removed and replaced.	**Adverse & Beneficial -- Less than Significant** During demolition and construction phase, various hazardous wastes and other debris will be generated. The potential short-term, temporary adverse impact will be minor and will be avoided and mitigated through close adherence to federal, state, and local regulations, and incorporated into construction contracts. Buildings currently burdened with hazardous materials will be removed and replaced.	**Adverse -- Significant** 2014 Phase 1 and 2 found hazardous materials on various sites outside of VAMC campus
Transportation and Parking	**Adverse -- Less than Significant** Potential for short term minor impacts during construction.	**Adverse -- Less than Significant** Potential for short term minor impacts during construction. Limited space may pose challenges to fully implementing successful BMP's.	**Adverse -- Significant** Parking limitations would continue and grow over time
Utilities	**None** No Impact to utilities.	**None** No Impact to utilities. Limited space may affect utility access	**None** No changes to utilities
Cumulative Impacts	**Beneficial -- Less than Significant** Urban revitalization will have positive impacts on the economy and overall value of the surrounding area. the St. Louis downtown will benefit from additions of green space, aesthetically pleasing buildings and artwork proposed.	**Beneficial -- Less than Significant** Urban revitalization will have positive impacts on the economy and overall value of the surrounding area. the St. Louis downtown will benefit from additions of greenspace, aesthetically pleasing buildings and artwork proposed.	**Adverse -- Significant** Would not meet VA standards and campus needs
Potential for Generating Substantial Controversy	**Less than Significant** Potential for causing controversy related to potential acquisition and development of NHRP-eligible property.	**None Expected**	**None** No change or impact

This SEA includes Best Management Practices (BMPs) that will minimize potential adverse effects to the analyzed technical resource areas. The minimization measures are described in Section 5.

Several public agencies and other interested parties were consulted throughout the SEA process in accordance with NEPA as seen in Section 4.0 Public Involvement. All stakeholder correspondence is included in Appendix A. All comments received during the 15-day comment period are included in Appendix E.

Section 1.0 Introduction

Preparation of this Supplemental Environmental Assessment (SEA) 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 SEA also has been prepared in accordance with VA's NEPA Interim Guidance for Projects (2010). When important new information becomes available after an EA is prepared, an agency may satisfy its duty under National Environmental Policy Act of 1969 (NEPA) with a supplemental analysis. Reasons for performing a supplemental EA include a change in project, a change in the environment where the federal action is located, or the NEPA analysis completed for the project is more than five years old and the proposed action has not yet been implemented.

1.1 Background

The Department of Veterans Affairs Medical Center — St. Louis John Cochran Division (VASTLHCS) is part of the Veteran Affairs Heartland Network - Veteran Integrated Service Networks (VISN 15) that includes the states of Missouri, Kansas, Illinois, and parts of Indiana, Kentucky and Arkansas. This represents approximately 162,000 square miles where about 500,000 Veterans reside. VASTLHCS is also part of a two-division facility, along with Jefferson Barracks VAMC (located approximately 18-miles south of VASTLHCS), that provides inpatient and ambulatory care in medicine, surgery, psychiatry, neurology, and rehabilitation, as well as over 65 subspecialty areas. VASTLHCS has all the St. Louis VAMC's operative surgical capabilities, an ambulatory care unit, intensive care units, outpatient psychiatry clinics, and an expanded laboratory.

VASTLHCS is located at 915 North Grand Boulevard, St. Louis, Missouri (Figure 1). The campus is in a highly concentrated urban setting and is part of the Grand Center District, a cultural art destination, located in an area of St. Louis called "Midtown."

Figure 1. Location Map

The VASTLHCS existing medical tower complex commands much of the campus setting with several surrounding smaller additional support buildings (Figure 2). The existing nine-story main hospital building (Building 1) was constructed in 1953 with an addition and renovation done in 1988. The existing two-story education, chapel, and medical media building (Building 2) was also constructed in 1953 with renovation in the mid-1980s. A Clinical Addition was constructed in the 1970s with subsequent additions built in the late 1980s and early 1990s.

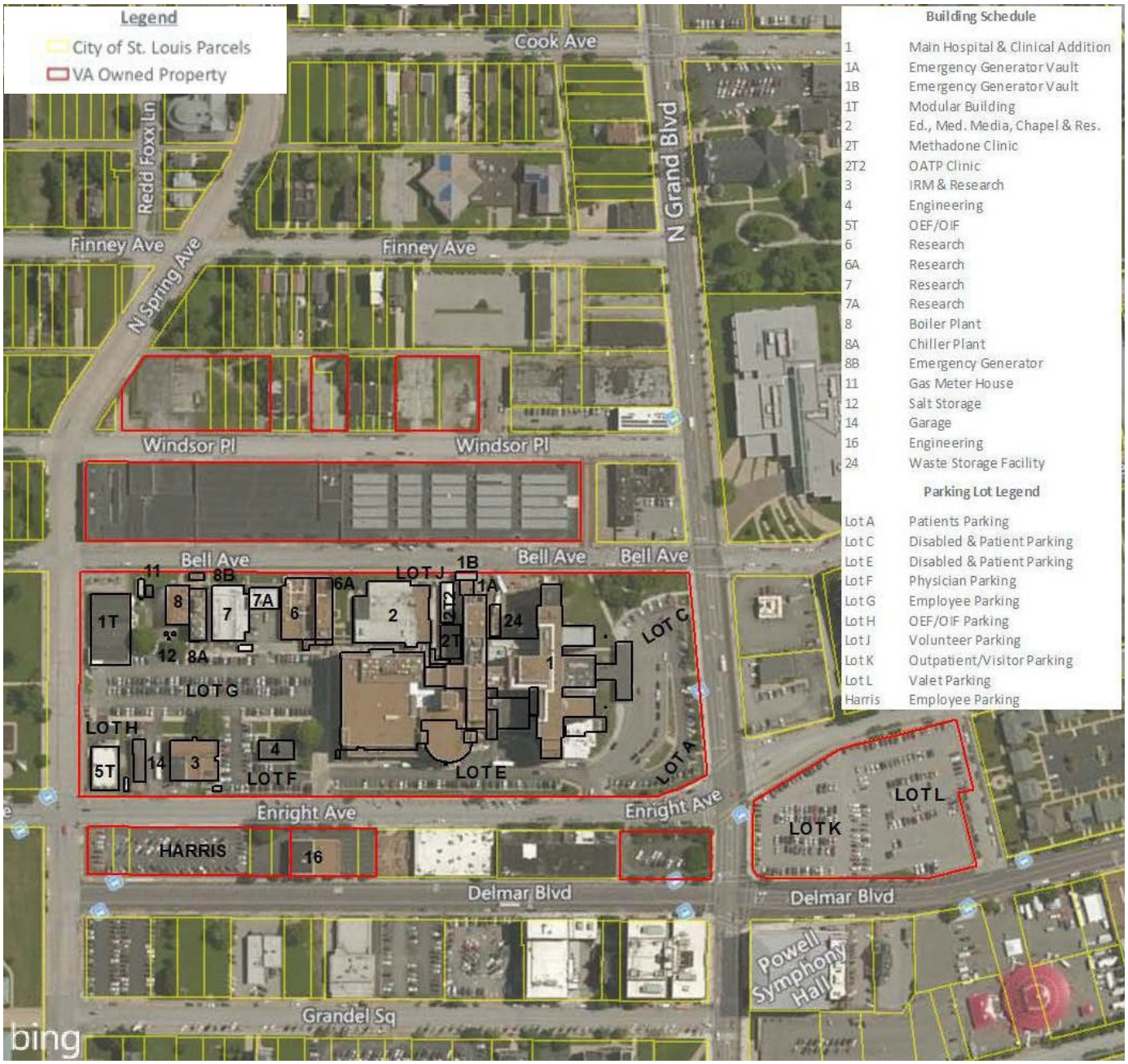

Figure 2. Campus Map

VA Directive 7512 establishes policy regarding the seismic safety of VA buildings, and facilities identified as critical and essential must meet additional requirements to remain operational after a seismic event (VA 2017). VASTLHCS is located within a seismically active area classified as "Moderate High." In recognition of this, the VA commissioned a phase one and two seismic study (Degenkolb Engineers, 1999) (Degenkolb Engineers, 2000) for Building 1 to determine what extent this building meets the current seismic codes. The studies indicated that Building 1 is seismically deficient having both structural and nonstructural deficiencies as well as adjacency hazards due to connections with the eastern portion of the building known as Building A and the western portion known as Building B. A 2006 Degenkolb Seismic Inventory List specifically lists Buildings 1, 6A and 8A as high risk buildings. The VA performed a Tier 1 Structural Seismic Study of the Clinical Addition as well. The Clinical Addition constructed in two-stages in 1977 and 1983 is adjacent to and connected to Building 1. The results identified structural and nonstructural seismic deficiencies of the Clinical Addition (part of Building 1). The most significant issues include:

- Insufficient separation joint between the Clinical Addition and Building 1
- Smaller, structurally weaker upper floors
- Tall, narrow shear walls subject to overturning and
- A large opening in a mechanical area next to a primary shear wall

In February 2014, VA completed an EA that analyzed three possible parcel acquisition alternatives for an expansion and renovation project to help identify optimal layouts for new buildings and other components and to correct campus deficiencies. The EA resulted in a Finding of No Significant Impact (FONSI). The 2014 project was later postponed. Presently, the VA has reinitiated the project planning process and is developing two action alternatives for the new project.

1.2 Purpose and Need

The purpose of the Proposed Action is to protect life and property, while ensuring the facility can continue providing essential medical services to veterans living in the St. Louis area following a major earthquake event and to provide veterans with facilities that support modern standards of health care and have sufficient capacity to meet the current and projected needs for the VASTLHCS.

The proposed action would address campus deficiencies, construct care facilities that would meet modern standards, alleviate existing facility space deficiencies, provide veterans with privacy and a better quality of care, and provide for more streamlined facility operations. Additionally, improved facilities would provide for separate patient, staff, ambulance, and service traffic; a clear route for patient vehicular access onto the campus; improved and simplified way-finding from parking areas to patient entries; improved security and required physical security setbacks from critical facilities and the campus boundary; improved departmental and service adjacencies for improved, more streamlined services and care; and reduced operating costs by providing modern facilities that meet current energy minimization and design standards.

The Proposed Action is needed to meet VA Directive 7512, a directive that establishes policy regarding the seismic safety of VA buildings, thus providing veterans with safety and reasonable options to VA medical services and to address the demands of projected future patients and existing shortfalls in bed space, medical facilities, and parking capabilities at VASTLHCS.

The existing facilities at VASTLHCS were constructed in 1953 and are seismically deficient, outdated, inefficient, poorly organized, do not meet current medical care provision needs, do not provide sufficient space, and have the potential to compromise patient care. Patient rooms are crowded, require sharing of bathrooms, and are generally

antiquated. Such facilities result in significantly increased energy, maintenance, and other ancillary operational costs and do not provide for or promote a healthy healing environment for veterans. The insufficient facilities challenge VA's ability to safely, economically, and consistently provide high-quality, integrated healthcare services to the region's Veterans. Facility deficiencies include:

- 14,614-square foot ER space deficiency.
- Deficiency in the number of private rooms.
- 1,000 to 1,500 parking space deficiency.
- 80,000-square foot clinical space deficiency.

Under current conditions, VA has identified space deficiencies in the existing Emergency Room (ER); primary care, specialty care, and mental health clinics; and parking areas. Critical spinal cord injury (SCI) patients must be shuttled between the two divisions of the St. Louis VAMC (the Jefferson Barracks and John Cochran Divisions, located 18 miles apart) to receive the full spectrum of required medical attention. The process places a strain on the patient, requires extra personnel, and consumes time, funds, and gasoline. In addition, the current lack of space requires Veterans to wait for an available exam room and limits the number of patients that can park and enter VASTLHCS. Such current limitations compromise VA's local ability to provide the most modern, convenient, and efficient medical care possible to its patients.

1.3 Decision-Making

This SEA has been prepared to identify, analyze, and document the potential physical, environmental, cultural, and socioeconomic impacts associated with VA's proposed bed tower replacement, clinical building expansion and JC parking garage additions of the existing John Cochran Division, located within St. Louis, Missouri. 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 1.0.

Ultimately, VA would decide, in part based on the analysis presented in this SEA and after having taken potential physical, environmental, cultural, and socioeconomic effects into account, whether VA should implement one of the Action Alternatives and, as appropriate, carry out mitigation and management measures to reduce effects to the environment. VA would also consider other factors, such as cost, time, engineering feasibility, and the like, in their decision-making process.

VA reviewed several possible alternatives. Through a comprehensive and detailed screening process, VA narrowed the number of reasonable alternatives based on more refined analyses of the site- and project-specific aspects, issues, and concerns. VA developed a list of screening criteria to guide the initial alternatives' review, evaluation, and selection process. These criteria were developed based on the physical, operational, and location requirements of the Proposed Action, as well as land availability, overall project cost, environmental issues, and other factors, as described below. Satisfaction of VA's screening criteria would provide locations and facilities best suited to meet the purpose of and need for the Proposed Action, while minimizing overall project costs.
These criteria included:

1. **Location:** The alternative should be located within or immediately adjacent to the existing John Cochran Division campus in a suitable configuration to accommodate the Proposed Action. Relocating the expanded medical facilities to another site would compromise VA's ability to provide a continuum of care for Veterans at a single facility and would result in disjoint service provision at separate locations.

2. **Size:** the alternative should provide enough space to accommodate all proposed structures, circulation roads, green space, utilities and stormwater management features; as well as meeting, physical security requirements.

3. **Access:** The site needs to have ready access from at least one primary road, such as North Grand Boulevard. Public roads should not bisect the site to maximize internal cohesion and security of the John Cochran Division.

4. **Cost:** The alternative needs to be able to be developed to suit VA's needs and mission at reasonable costs.

5. **Continuous Operations:** The alternative should allow for continuous VA operations and services and should not impact VA's ability to provide these services to regional Veterans. The proposed facilities must not conflict with ongoing use of the John Cochran Division during construction or operation. Implementation of the Proposed Action should maintain continuous, seamless operation of all extant John Cochran Division functions.

6. **Availability:** The alternative should be available for acquisition by VA from willing landowners to facilitate design and construction of the Proposed Action.

7. **Land Use Compatibility:** The alternative should be in an area with compatible offsite land use and appropriate local zoning, as designated by the local government.

8. **Environmental:** The alternative should have few environmental concerns, such as hazardous waste contamination, asbestos, lead-based paint, wetlands, floodplain or flooding issues, geotechnical, cultural or biological concerns, or other regulated environmental resource concerns.

Through this analysis, VA concluded that two alternatives best met the initial screening criteria and are reasonable. These alternatives (Alternative A and B) are described in Section 2.0. The areas encompassed by each of these alternatives are depicted on Figures 3 and 5.

Section 2.0 Alternatives

2.1 Alternative A

Under Alternative A (Figure 3), VA would seek to acquire all properties immediately south of the existing campus and north of Delmar Boulevard between North Grand Boulevard and North Spring Avenue. The properties in this area, which are not under VA ownership, include Sweetie Pies Upper Crust restaurant and the vacant condemned Former St. Louis Palladium building. Additionally, portions of Bell Avenue and Enright Avenue would be vacated. The acquisition of additional land will allow for:

- Increased building footprint due to additional program requirements.
- The campus to accommodate the VA's physical security requirements.
- The coverage of the parking gaps and allow better options for surface and structured parking.
- Controlling access construction and construction phasing costs.
- Future expansion to accommodate growth beyond the limitations of the immediate site and may allow for out leased services to return to campus.
- Without the acquisition of additional land, allowing for setback requirements and necessary space for buildings would be difficult. Vacating Enright and Bell would allow for better flow of traffic in and around the medical center. The new VASTLHCS campus would also have the unique opportunity to be located on the northern boundary of the Grand Center Arts District as the capstone for the Grand Center Great Streets initiative (St. Louis Art walk). Without the acquisition of additional land, the project cannot fully achieve these broader city adjacencies.

Alternative A would include a new and seismically compliant bed tower 10 stories high with 11 total floors including the below grade floor. Two parking garages totaling around 107,250 square feet would be added to provide adequate parking spaces for staff and visitors. Additionally, on the north side of the campus, a new utility plant (28,000 square feet), water storage, and electrical substation would be added to provide utilities to the campus and bring the substation within the VA required setback for security. A new clinic (5,020 square feet) would be added near the north entrance as well as surface parking and various access points around the campus. Green spaces and stormwater retention areas would be located strategically around the site to meet city and state requirements for stormwater retention and offer an aesthetically pleasing space for visitors. Figure 3 shows the site layout and figure 4 shows a stacking concept for the new bed tower.

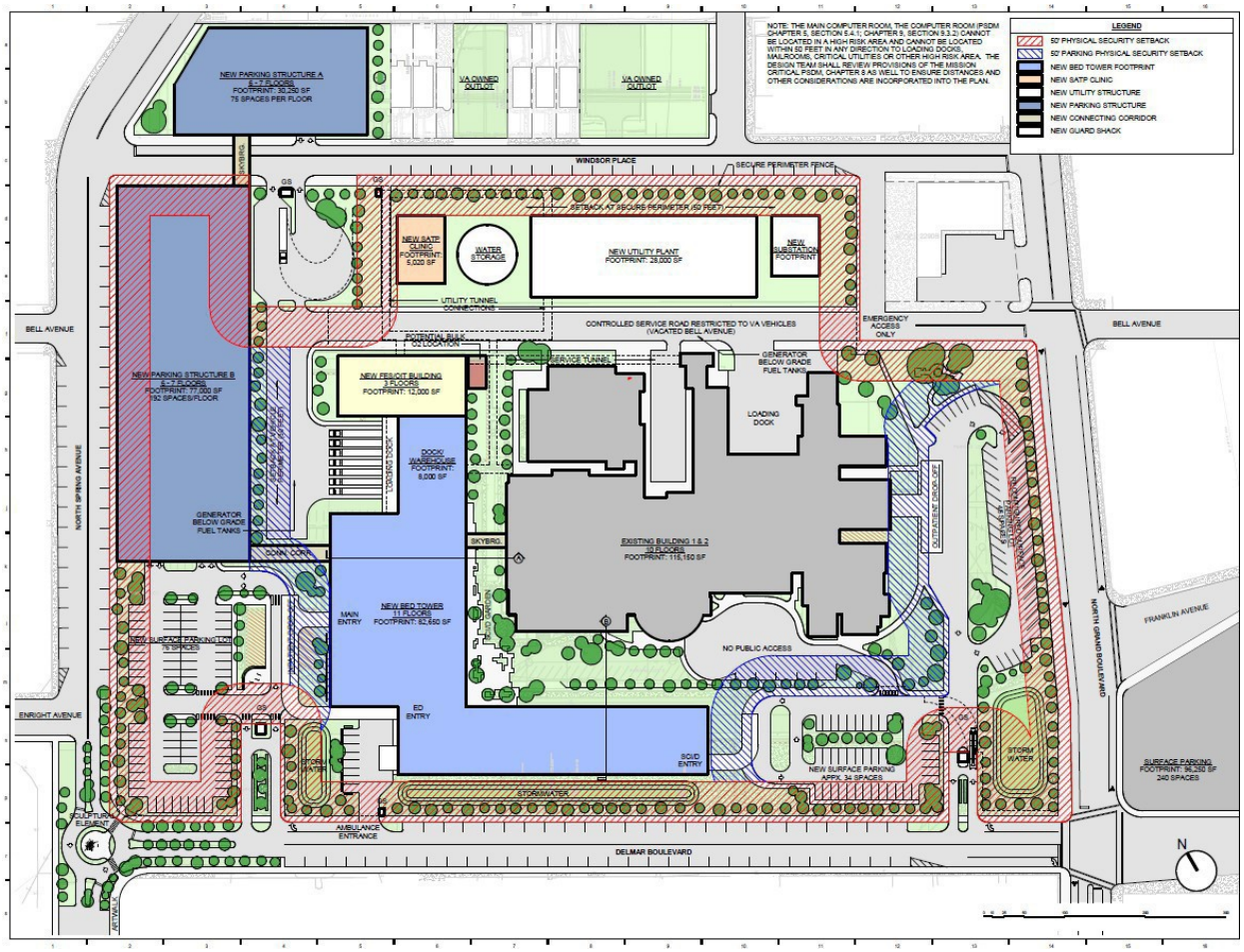

Figure 3. Alternative A – Site Layout.

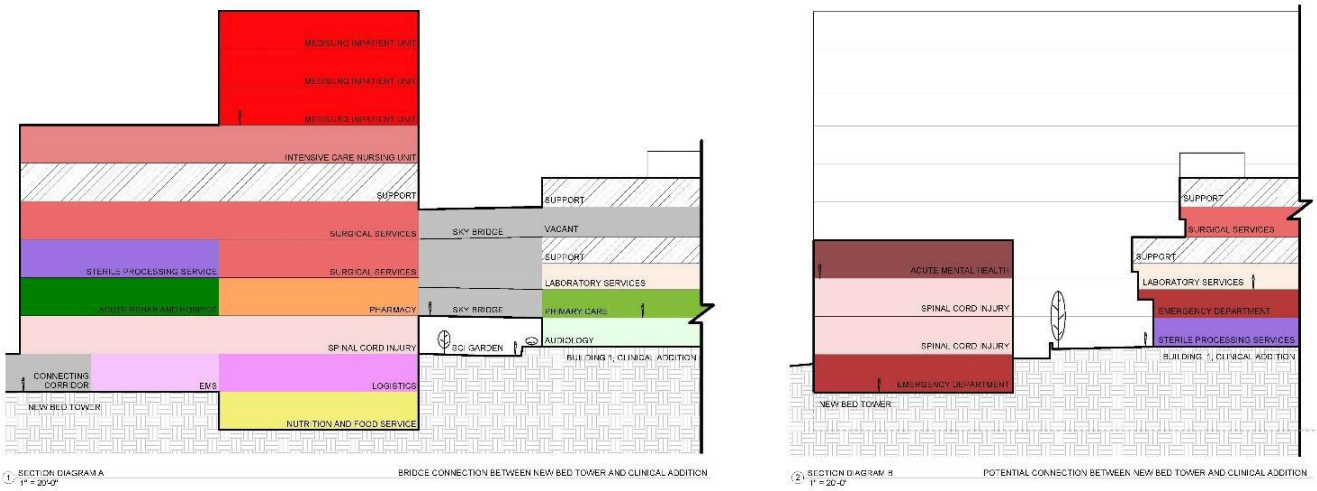

Figure 4. Alternative A – Vertical Stacking

2.2 Alternative B

Alternative B (Figure 5) addresses a scenario in which the VA would not acquire property south of the existing campus. Under Alternative B, development would be limited to property currently owned by the VA and a portion of Bell Avenue would be vacated. This alternative is limited in space, which would pose several challenges:

- Greatly reduced land availability resulting in a concentrated campus area where Mission Critical buildings can be to satisfy Physical Security requirements. This would also increase the site impact of the required screening zones, further reducing buildable area.
- A portion of Building 1 would be located within the 50-foot standoff distance from vehicles due to the need to keep a portion of Bell Avenue open for public access for patrons doing business at Liberty Plaza.
- Area on the site needed for stormwater retention is very limited with all the required program squeezed onto the site. More complex planning would be required to fulfill stormwater retention needs.
- The desired connection to the Great Center Grand Streets/Arts District may be difficult with a smaller campus.
- The construction and phasing of the work being performed on the site would be complex with extremely limited staging and laydown area during the construction process. Keeping the site functions fully operational during construction may not be possible as most the site would be undergoing work making site access and parking difficult to manage.
- Future expansion would only be possible by either acquisition of surrounding properties or by demolition of existing buildings on campus.
- With the Great Streets initiative as well as expanding growth along Grand, future acquisition of properties may come at a much higher premium.

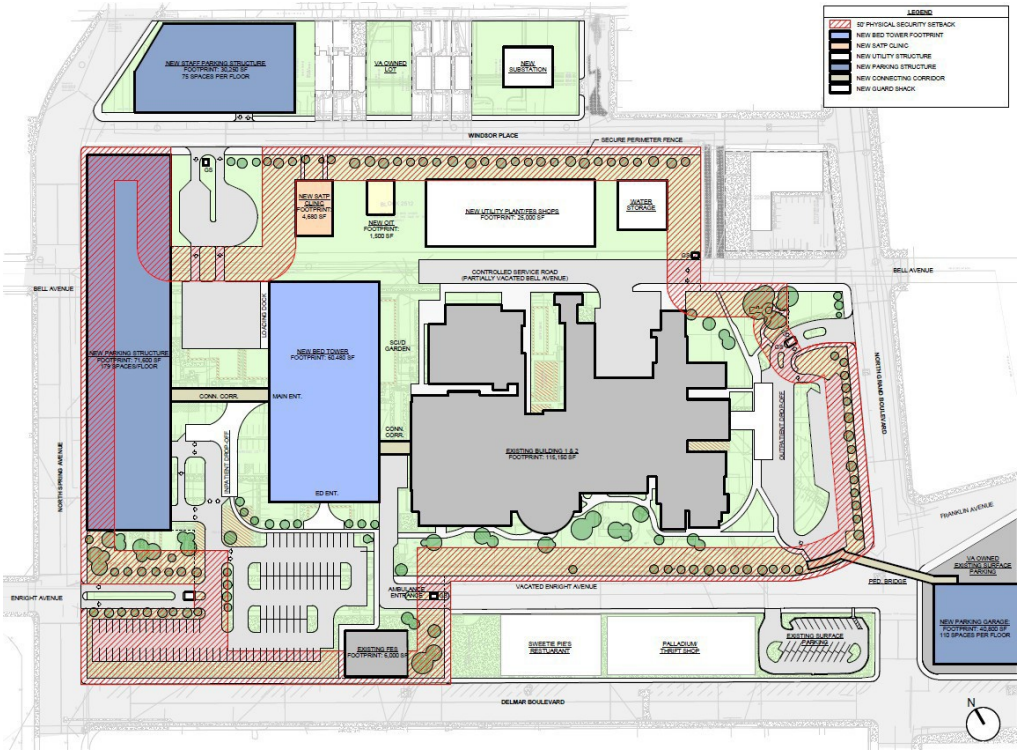

Figure 5. Alternative B - Site Layout

2.3 No Action Alternative

Under the No Action Alterative, the Proposed Action would not be implemented. Operations at the John Cochran Division would continue under current conditions. This alternative would not enable VA to provide the proper standard of required medical care to Veterans living within the St. Louis region. Patients would continue to lack privacy within antiquated facilities; operations would continue under inefficient, inadequate, seismically deficient, and outdated conditions; and existing outpatient space deficiencies would remain and increase in the future. In addition, patients and staff would face parking challenges as space shortages would continue currently and would increase in the future.

While the No Action Alternative would not satisfy the purpose of or need for the Proposed Action, this alternative is retained to provide a comparative baseline against which to analyze the effects of the Action Alternatives, as required under CEQ Regulations (40 CFR Part 1502.14). The No Action Alternative reflects the status quo, serving as a standard against which VA can evaluate the effects of the Proposed Action.

Section 3.0 Affected Environment and Environmental Consequences

3.1 Introduction

This Section describes the baseline (existing) physical, environmental, cultural, and socioeconomic conditions at the John Cochran Division in St. Louis, Missouri and its general vicinity (i.e., the Proposed Action's ROI), with emphasis on those resources potentially affected by the Proposed Action. Under each resource area, the potential direct and indirect effects of implementing the Action Alternative and the No Action Alternative are identified. Cumulative Impacts are discussed in Section 3.17.

In this SEA, 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 impact. As used in this SEA, 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 Part 1508.27):

- **Context** refers to the significance of an effect to society (human and natural), 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 SEA, 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.

Significance criteria for resource areas considered in this SEA are as follows:

- Aesthetics. An alternative could significantly affect visual resources if it resulted in abrupt changes to the complexity of the landscape and skyline (i.e., in terms of vegetation, topography, or structures) when viewed from points readily accessible by the public.

- Air Quality. An alternative could have a significant air quality effect if it would result in substantially higher air pollutant emissions or cause established air quality standards to be exceeded.

- Cultural Resources. An alternative could have a significant effect on cultural resources if it would: result in damage, destruction, or demolition to an archaeological site or building that is eligible or listed on the NRHP; promote neglect of such a resource, resulting in resource deterioration or destruction; introduce audio or visual intrusion to such a resource; or decrease access to resources of value to federally recognized Native American tribes. Impact assessment for cultural resources focuses on properties that are listed in or considered eligible for the NRHP or are National Historic Landmarks.

- Geology and Soils. If an alternative would result in an increased geologic hazard or a change in the availability of a geologic resource, it could have a significant effect. Such geologic and soil hazards would include, but not be limited to, seismic vibration, land subsidence, and slope instability.

- Hydrology and Water Quality. If an alternative would result in a reduction in the quantity or quality of water resources for existing or potential future use, it could have a significant effect.

- Wildlife and Habitat. The effect of an alternative on biological resources and ecosystems could be significant if it would disrupt or remove any endangered or threatened species or its designated critical habitat. The loss of a substantial number of individuals of any plant or animal species (sensitive or non-sensitive species) that could affect the abundance or diversity of that species beyond normal variability could also be considered significant. The measurable degradation of sensitive habitats, particularly wetlands, could also be significant.

- Noise. An alternative could have a significant noise effect if it would generate new sources of substantial noise, increase the intensity or duration of noise levels to sensitive receptors, or result in exposure of more people to unacceptable levels of noise.

- Land Use. If an alternative would conflict with adopted plans and goals of the affected community or if it would result in a substantial alteration to the present or planned land use of an area, it could have a significant direct effect. If an alternative would result in substantial new development or prevent such development elsewhere, it could have a significant indirect effect.

- Floodplains, Wetlands, and Coastal Zone Management. An alternative could have a significant effect on water resources if it would cause substantial flooding or erosion, if it would subject people or property to flooding or erosion, or if it would adversely affect a significant water body, such as a stream or lake.

- Socioeconomics. If an alternative would substantially alter the location and distribution of the population within the geographic ROI, cause the population to exceed historical growth rates, or substantially affect the local housing market and vacancy rates, the effect would be significant. Significant effects could occur if an alternative caused disproportionate risks to children that resulted from environmental health risks or safety risks. It is important to note that, per CEQ Regulations (40 CFR 1508.14), social or economic effects are not intended by themselves to require preparation of an EIS. Only when social or economic effects are interrelated with natural or physical environmental effects would all of these effects be analyzed as part of the NEPA process.

- Community Services. An alternative could have a significant effect if it would create a need for new or increased fire or police protection, medical services, or other community service beyond the current capability of the local community, or would decrease public service capacities so as to jeopardize public safety.

- Solid and Hazardous Materials. An alternative could have a significant effect if it would result in a substantial increase in the generation of hazardous substances, 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. Data provided in the site-specific environmental site assessments (ESAs) and other prior studies helps to identify these potential impacts, as well as their significance.

- Transportation and Parking. An alternative could have a significant effect on infrastructure if it would increase demand over capacity, requiring a substantial system expansion or upgrade, or if it would result in substantial system deterioration over the current condition. For instance, an alternative could have a significant effect on traffic if it would increase the volume of traffic beyond the existing road capacity, cause parking availability to fall below minimum local standards, or require new or substantially improved roadways or traffic control systems.

- Utilities. An alternative could have a significant effect on infrastructure if it would increase demand over capacity, requiring a substantial system expansion or upgrade, or if it would result in substantial system deterioration over the current conditions.

- Environmental Justice. Significant effects could occur if an alternative would disproportionately affect minority or low-income populations.

3.2 Aesthetics

The VASTLHCS campus is in the Grand Center District 3.7-miles from downtown. Grand Center is well known for its art displays and shows at popular St. Louis sites like the Fabulous Fox Theater and Powell Hall home to the St. louis Symphony. The areas surrounding the VASTLHCS campus generally include commercial and residential properties with unique architectural designs and facades. The surrounding land uses and architectural designs were detailed for review in the Cultural Resource Assessment (Row 10, 2019) and the Grand Center Master Plan (Grand Center, 2013). Many features are unique and may be utilized by the VA to have a visually appealing and consistent view shed with the local community while promoting the Grand Center District push to redevelop a vibrant and visually appealing district if Alternative A or B are chosen.

The following list shows the buildings and districts surrounding the VASTLHCS campus and their respective architectural design and facades:

Midtown Historic District: The Midtown Historic District is an irregularly shaped district with North Grand Avenue and Lindell Boulevard serving as the main spines of the district. Midtown was listed for its significant collection of architecture by St. Louis architects and representation of the growth and wealth of St. Louis in the late nineteenth and early twentieth centuries. Most the district stretches to the south of the SLJC VAMC.

Powell Hall: Listed in the NRHP in 2001, Powell Hall is a significant example of a St. Louis movie palace. Designed by the Chicago architecture firm of Rapp & Rapp and opened in 1925, the building retains its grand French Renaissance Revival architecture façade.

Welfare Finance Company Building: Listed in the NRHP in 2016, the Welfare Finance Company Building was listed as a significant example of Art Deco architecture on a small commercial scale. The building features a storefront configuration, delineated in tan brick and terra cotta tiles. While the façade doors

and windows are currently boarded over, the fenestration pattern and distinct architectural features are readily apparent. The side elevation as a red brick exterior that lacks the features of the high style façade. The building was designed by the St. Louis architectural firm LeBeaume &Klein.

Palladium: The building features a stucco façade with terra cotta ornament, including lions head figures. The main façade features large rounded arches over the entrances for smaller shops that lined the Enright Avenue elevation. The central bay features a grander arch and larger entrance. The building has been modified over the years to accommodate a shift in use from entertainment to commercial, including the addition of individual shopfronts and the alteration of the main entrance. The building is now condemned by the City of St. Louis and large portions have been destroyed by age and collapse. The southwest elevation (rear of the building) has a plain façade and arched openings that may have once been windows (Detailed in Section 3.4 Cultural Resources with current images).

3514 Delmar Boulevard: Designed by locally significant architect Jerome B. Legg for the L. L. Culver family.

1023 North Grand Avenue: The brick building has a symmetrical façade with a door on the center axis flanked by shopfront windows; the arched stone doorway features an exaggerated keystone.

701-11 North Grand Boulevard (Contributes to Midtown Historic District): The former Carter Carburetor Corporation building was constructed in 1925. The building has two parts: the two-story portion bordering North Grand Avenue and the dark brick clad parking structure behind it. The front section features a tall arch at the center of the building to emphasize the main entrance. The center of the building is further accentuated through the use of ornament, notably the Corinthian capitals on the columns at the second floor. Ashlar stones form the exterior. The rear section is clad in dark brick with light stone detailing, creating a marked visual difference from the adjacent section. This portion of the building is seven stories in height, terminating in a stylized cupola at the center of the building mass.

714 North Grand Boulevard (contributes to Midtown Historic District): Constructed in 1925, the former St. Louis Theater was designed by architectural firm Rapp & Rapp. The façade features tan brick laid in multiple patterns and elaborate ornamentation carved in limestone. A tall, arched window at the south end of the west elevation receives the greatest amount of detail and emphasizes the main entrance to the theater building.

3617 Grendel Square (contributes to Midtown Historic District): Constructed circa 1880 the building has a red brick exterior, slate-shingled clad side gable roof, and copper ornamental features. A partial width porch shields the main entrance. Elaborate dormers puncture the roof. The windows appear to be historic.

3619-29 Grendel Square (contributes to Midtown Historic District): The building's exterior features red brick, stone, and terra cotta. The elaborate ornamentation on the southwest elevation includes three large arches at the center of the building, Classical detailing with pilasters featuring Ionic capitals, and theatrical masks carved in the keystones of the arches. The remaining elevations are clad in brick and notable plain when compared to the façade.

3643-53 Delmar Boulevard (Sweetie Pie's Upper Crust): The Sweetie Pie's Upper Crust restaurant is a one-story building sheathed in stucco panels. The main entrance features paired glazed metal doors, decorative niches flanking the main doors, and stone cladding on the lower portions of the wall. The exterior building has been heavily remodeled; the building does not retain historic materials, design, or characteristics.

1015 North Grand Boulevard: Constructed circa 1960, the Liberty Plaza shopping center consists of a building with an L-shaped footprint. The building appears to have been constructed of concrete block with a tan brick veneer; the extant stucco exterior on the northeast elevation is likely a later addition. The building houses multiple storefronts; several have large plate glass windows and a single-entry door.

900 North Grand Boulevard: This one-story commercial building is clad in brick veneer. Constructed ca. 1990, large plate glass windows contribute to the commercial appearance of the building. The building has a plain exterior, asymmetrical appearance, and square footprint.

920 North Grand Boulevard: The one-story building features large glass windows, portions of the exterior clad in brick, and flat roof. The building has no architectural ornamentation or details.

1000 North Grand Boulevard: Clad in a mix of glass, metal, and concrete panels, the building has large bands of windows, a jagged roofline, and an irregular footprint.

3620 Finney Avenue: Constructed ca. 1905 The two-story building has a symmetrical façade, rectangular footprint, and brick exterior. The first floor of the main façade features quoins, arched windows, and a door surround flanked by pilasters with Corinthian capitals. The second story lacks these ornamental features. The pediment at the roofline features a small, plain cross.

1039 North Grand Boulevard: Constructed ca. 1935, this one-story building appears to have façade with a storefront configuration; portions of the building are boarded over and original details were difficult to determine at the time of the site visit. The façade features tan brick framed by decorative panels featuring an inverted fan pattern; the panels appear to be terra cotta. The side elevations are red brick. The building has a rectangular footprint and stands at a single store.

3644 Finney Avenue: This two-and-a-half story single family home was constructed in 2001. The exterior is clad in a mix of brick veneer, stucco panels, and vinyl siding. The gable has a faux half timbering finish. The house has a stoop, rectangular footprint, and asphalt-clad roof.

3646 Finney Avenue: Constructed in 1903, this three-story building is a single-family townhouse. The building has Italianate features, including paired brackets at the cornice and decorative window surrounds. The façade is covered in stucco; the side elevations are brick. The rear portions of the building drop to two stories in height. The building appears to have a stone foundation and a rectangular footprint.

3652 Finney Avenue: The brick two-story duplex was built in 1903. The building features paired entrances at the west end of the northeast elevation. Awnings have been added to the exterior and the cornice obscured by vinyl siding. The façade features arched openings and windows on the first floor, but this decorative feature does not appear to continue to the second floor. The building's footprint is irregular in shape.

3656 Finney Avenue: Constructed in 2000, this single-family house has an irregular footprint, front gable roof, and a brick façade; the remainder of the building appears to be sheathed in vinyl siding. The building has a partial width porch at the main entrance. The façade has an asymmetrical appearance and some reference to historical building features, such as stone lintels and sills at the windows.

3660 Finney Avenue: This single-family house was built in 2000. The building has a brick façade, but the side elevations are clad in vinyl siding. The front gables have fish-scale shingles. The paired wooden front doors have semicircular, leaded glass windows, but the remaining façade is plain. The building has a rectangular footprint and asphalt shingle clad roof.

3644 Finney Avenue: As with its neighbors, this house features a brick façade but the side elevations are clad in vinyl. Constructed in 2000, this single-family house has a plain exterior, rectangular footprint, and a flat roof. A round awning marks the main entrance.

3666 Finney Avenue: Constructed in 2000, this single-family house has a front gable roof sheathed in asphalt shingles and a rectangular footprint. The façade has a brick veneer façade while the side elevations are clad in vinyl siding. The building has a plain exterior with little architectural ornamentation.

3696 Finney Avenue: This single-family house was built in 2006. The two-story building features an exterior of faux half timbering, red brick veneer, and vinyl siding. A modest porch shields the main entrance. The building has an asymmetrical façade, rectangular footprint, and front gable roof sheathed in asphalt shingles.

3641-3705 Grendel Square: Constructed ca. 1960, this building features a center section that stands two-stories in height flanked by one-story sections on the north and south. The southernmost section is clad in stucco panels while the remainder of the building is brick. The building has a rectangular footprint, flat roofs, and a minimalist appearance.

3715 Grendel Square: Construction ca. 1970, this automotive garage building is constructed of concrete block. The building has an L-shaped footprint, flat roof, and plain exterior. Glass block windows mark the western half of the building while the eastern have has large vehicular entrances.

701 North Spring Avenue: The Cardinal Ritter College Prep school was constructed in ca. 2000. The school complex includes one large building near North Spring Avenue with smaller support facilities and athletic fields at the rear of the property. The main building is two stories in height, has an irregular footprint, and is clad in red brick. The center portion features multiple hip roofs sheathed in standing seam metal, while the wings to the south and west are more modest in scale and detail.

911-15 North Spring Avenue: The buildings have red brick exterior, paired single pane windows, flat roofs and plain exteriors.

3653 Windsor Place: This two-story brick building is one of three similar buildings on Windsor Place; the building addressed at 3653 Windsor Place has a darker red brick façade than its neighbors, but is stylistically identical. Constructed in 1903, the brick duplex has a crenellated roof line, arched windows on the first floor, and a metal cornice. Decorative brickwork creates a drip mold over the second story windows. The building has one-over-one double hung sash windows, paired entrances with replacement doors, and a metal awning over the entrance.

3655 Windsor Place: Constructed in 1918, the brick duplex addressed at 3655 Windsor Place features the same crenellated roofline, brick façade, and arched windows as its neighbors. The paired entrances at the southwest corner appear to retain their historic partially glazed doors. The building has a stone foundation, rectangular footprint, and metal cornice. The building appears to retain its original one-over- one double hung sash windows.

3659 Windsor Place: As with its neighbor to the east, this building was also constructed in 1918 and possesses the same architectural features.

3669 Windsor Place: This brick duplex was constructed in 1909. The building is oriented towards the southwest; the main façade features a projecting bay window, decorative brick details, and a partial width porch. The primary entrance appears to have been modified, given the alterations in brickwork around the main door. The building has an irregular footprint, brick foundation, and one-over-one double hung sash windows. The building is not a notable architectural style or building type.

3705 Windsor Place: This two-story duplex has a rectangular footprint, one-over-one double hung sash windows, and brick exterior. Constructed in 1908, the building has a partial width porch covering the paired main entrances to the two units. The main façade features brick quoins, a bay window, and decorative cornice as the primary ornamental features.

3709 Windsor Place: The building's façade appears to have been modified; a second-story doorway has been infilled with brick, the porch has been rebuilt, and the main entrance doors are modern replacements. The brick has been painted over, but the decorative quoins remain.

3808 Windsor Place: This modest one-and-a-half story house was built in 1892. The building features a full-width front porch with plain, square columns. A large dormer pierces the side gable roof. The double pitch roof is covered in asphalt shingles. The main entrance door and many of the windows appear to be original.

Renaissance Place at Grand: These eight apartment buildings sit on the eastern edge of North Theresa Avenue between Delmar Boulevard and Bell Avenue. Constructed in 2004 and 2005, these buildings resemble single family homes, featuring partial width porches, gable-on-hip roofs, brick exteriors, and small-scale development.

For images and cultural significance of the above listed properties, refer to Section 3.4 Cultural Resources and Appendix D for the full Cultural Resource Assessment.

The Grand Center District which forms much of the downtown main drag of St. Louis has a master plan which details architecture and design elements to create an attractive and consistent view scape while promoting pedestrian traffic and safety. The Grand Center also promotes modern design and local art to beautify the existing and future land uses to achieve the above-mentioned goal of a vibrant view scape. The Grand Center design has an art walk leading up to the southern border of the VASTLHCS campus as well to enhance and bring local art to the greater St. Louis downtown.

3.2.1 Effects of the Alternative A

Acquisition

Acquisition and development of the southern two properties would create a more consistent view scape around the campus and utilize outdated and run-down buildings and empty urban lots. The space afforded by acquisition would lead to the ability to connect the Grand Center design and art walk to the campus, encouraging local art and a consistent vibrant view scape to connect to the campus and surrounding community.

Construction

Using best management practices to minimize damage to trees and green spaces during construction will greatly help in reducing damage to aesthetic value of site. New site design would involve removing obsolete hospital buildings and creating up to date modern buildings throughout campus improving overall aesthetic value as well as developing currently vacant lots. Consultation with the city of St. Louis and Missouri State Historical Preservation Office (SHPO) will set standards to match the surrounding current buildings to create a uniform and visually appealing landscape. As well this construction would create new green space and open garden areas.

Operation

During operation of the VASTLHCS campus, care of green space shall be maintained and updates to paint or displays outside of building will follow overall aesthetics of the campus for uniformity and aesthetic value. An addition of an 11-story bed tower and the overall project would not have an overall impact on the skyline nor create an abrupt change in complexity of the landscape as there are several taller buildings within proximity.

3.2.2 Effects of the Alternative B

Construction

Using best management practices to minimize damage to trees and green spaces during construction will greatly help in reducing damage to aesthetic value of site. New site design would involve removing obsolete hospital buildings and creating up to date modern buildings throughout campus improving overall aesthetic value as well as developing currently vacant lots. Consultation with the city of St. Louis and Missouri State Historical Preservation Office (SHPO) will set standards to match the surrounding current buildings to create a uniform and visually appealing landscape. As well this construction would create new green space and open garden areas.

Operation

During operation of the VASTLHCS campus, care of green space shall be maintained and updates to paint or displays outside of building will follow overall aesthetics of the campus for uniformity and aesthetic value. The addition of the bed tower and the overall project would not have an overall impact on the skyline nor create an abrupt change in complexity of the landscape as there are several taller buildings within proximity. Alternative B would limit the campus ability to connect to the Grand Center art walk and design plans based on the limited space and expansion created by no acquisition.

3.2.3 Effects of the No Action Alternative

No action would maintain current campus which would not benefit from the addition of new modern buildings and utilization of empty urban lots around the current VASTLHCS campus.

3.2.4 Minimization/Management Measures

The VASTLHCS campus will acquire all zoning changes and city permits required to maintain aesthetics and follow city ordinance. As well campus will maintain upkeep on landscaping and buildings.

3.3 Air Quality

A cursory desktop review using NEPAssist shows that the project area is located within an 8-hour non-attainment area for ozone which details an area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for a National Ambient Air Quality Standards (NAAQS). Further review indicated the VASTLHCS campus and project area are within the carbon monoxide maintenance area. The Clean Air Act and its amendments (CAA and CAAA) require the EPA to set NAAQS standards for pollutants considered harmful to public health and the environment. NAAQS principal pollutants are:

- Carbon monoxide (CO)
- Lead (Pb)
- Nitrogen Oxides (NO_X)
- Ozone (O_3)
- Particulate matter (PM)
    - Aerodynamic size less than or equal to 10 micrometers(PM_{10})
    - Aerodynamic size less than or equal to 2.5 micrometers($PM_{2.5}$)
- Sulfur dioxide (SO_2)

The EPA indicated on August 22nd, 2019 that the VASTLHCS campus is in proximity to one or more Toxic Release Inventory (TRI) sites and air emission facilities. As well, the campus itself is an air emission facility. Therefore, the Missouri Department of Natural Resources (MDNR) requires when modification or construction of air pollution services (10 CSR 10-6.061) occur, a New Source Review permit must be acquired prior to construction or modification. As of November 2018, the VASTLHCS is not required to have a Basic Operating Permit through the Missouri Department of Natural Resources. Appendix D has the Emissions Inventory Questionnaire showing the VASTLHCS emissions as of 2018.

3.3.1 Sensitive Receptors

Sensitive receptors near the project area are highlighted in section 3.8.1 Current Surrounding Land Uses and section 3.12 Community Services that include numerous schools, betterment organizations and residential areas to the north, east and west. These receptors are in a highly-urbanized section of the City of St. Louis. There are no other hospitals within 0.5 miles of the project area. Described in Section 3.14 Transportation and Parking, while queueing and traffic around the VASTLHCS campus are expected to increase in number of vehicles and time at each intersection, the anticipated 2038 traffic model did not show any substantial impacts to commute time and queuing at intersections, and since the campus is already in a high traffic urban environment, vehicle emissions should not have a substantial impact on air quality around the campus.

3.3.2 Effects of the Alternative A

Acquisition

As the properties being acquired for alternative A are within all the same zones as the VASTLHCS campus there are no additional impacts.

Construction

Before construction may begin, VA and contractors must acquire all permits required through the state and conform to all federal emission policy and recording procedures. BMPs will be followed by VA

contractors to limit additional air quality impacts during construction as detailed in Section 3.3.5 below.

Operation

As the VASTLHCS campus is already an air emission facility, all current permits and recording shall continue with the new facility. New modern equipment is expected to decrease overall emissions and create a healthier air quality surrounding the campus.

3.3.3 Effects of the Alternative B

Construction

Before construction may begin, VA and contractors must acquire all permits required through the state and conform to all federal emission policy and recording procedures. BMPs will be followed by VA contractors to limit additional air quality impacts during construction as detailed in Section 3.3.5 below.

Operation

As the VASTLHCS campus is already an air emission facility, all current permits and recording shall continue with the new facility. New modern equipment is expected to decrease overall emissions and create a healthier air quality surrounding the campus.

3.3.4 Effects of the No Action Alternative

No action would not need to follow mitigation techniques outlined and continue with current permits and recording of air emission via state and federal regulation.

3.3.5 Minimization/Management Measures

BMPs to be used to mitigate air quality impacts during construction:

- When applicable, limit the use of heavy construction equipment on orange or red Air Quality Indices (AQI) to limit ozone exceedances.
- State ordinance 10 CSR 10-5.385 states that any heavy-duty diesel vehicle with a gross weight greater than 10,000 pounds that operates in the City of St. Louis may not idle more than 5 minutes within any 60-minuteperiod.
- Submit and have approved a notice of asbestos abatement and/or demolition to the MDNR at least 10 days prior to the commencement of asbestos abatement and/or demolition activities.
- Use appropriate dust suppression methods during onsite demolition/construction activities. Available methods include application of water, dust palliative, or soil stabilizers; use of enclosures, covers, silt fences, or wheel washers; and suspension of demolition and earth-moving activities during high wind conditions.
- Comply with all local, state, and federal regulations.

3.4 Cultural Resources

Section 106 of the National Historic Preservation Act (NHPA) of 1966 requires federal agencies to consider effects on historical properties both individually and cumulatively. Active consultation is underway with the Missouri State Historic Preservation Office (SHPO), the Advisory Council on Historic Preservation (ACHP), Native American Tribes, and consulting parties to avoid and minimize adverse effects to historical resources or ensure that historic resources that may be adversely impacted have appropriate mitigation/management measures.

VA Directive 7545 defines cultural resources as "all aspects of the human environment that have historical, architectural, archaeological, or cultural significance, including, but not limited to, historic properties, archaeological resources and data, Native American ancestral remains and cultural items, religious places and practices, historical objects and artifacts, historical documents, and community identity."

Cultural resources are the physical evidence of our heritage. Cultural resources are: historic properties as defined by the 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 79, Curation of Federally Owned and Administered Collections. Requirements set forth in NEPA, NHPA, ARPA, NAGPRA, AIRFA, 36 CFR 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 ACHP and the National Park Service (NPS).

The VA completed a Preliminary Cultural Resource Impact Report to categorize and summarize historic resources within a set area of potential effect (APE). Six properties that are eligible for listing in the NRHP have been identified within the APE. The VAMC was determined ineligible for listing in the NRHP in 2013.

SLJC VAMC	915 North Grand Boulevard		
Area of Potential Effect			
Historic Property	*Address*	*Status*	*Depiction*
Midtown Historic District	Lindell and Grand Boulevards	District Listed in the National Register	
Welfare Finance Company Building	1027-1029 N. Grand Boulevard	Listed Individually in the National Register	
Powell Theater	527 N. Grand Boulevard		
Palladium	3618 Enright Avenue	Determined Eligible for Listing in the National Register	
3514 Delmar Blvd.	3514 Delmar Boulevard		
1023 N. Grand Blvd.	1023 N. Grand Boulevard		

Figure 6. Historic Resources

Appendix C includes the full cultural resource report and programmatic agreement and Appendix B and C contain SHPO consultation, Tribal Consultation, and comments.

NHRP Listed Properties

The Midtown Historic District: listed in the NRHP in 1978 and is an irregularly shaped district with North Grand Avenue and Lindell Boulevard serving as the main spines of the district. Midtown was listed for its significant collection of architecture by St. Louis architects and representation of the growth and wealth of St. Louis in the late nineteenth and early twentieth centuries.

The majority of the district stretches to the south of the SLJC VAMC, but the northeastern boundary crosses into the APE; five contributing features of the Midtown Historic District are within the APE:

- Powell Hall (also individually listed in the NRHP)
- 701-11 North Grand Boulevard
- 3617 Grendel Square
- 3619-29 Grendel Square
- 3514 Delmar Boulevard

Powell Hall: Listed in the NRHP in 2001, Powell Hall is a significant example of a St. Louis movie palace. Designed by the Chicago architecture firm of Rapp & Rapp and opened in 1925, the building retains its grand French Renaissance Revival architecture façade.

Welfare Finance Company Building: Listed in the NRHP in 2016, the Welfare Finance Company Building was listed as a significant example of Art Deco architecture on a small commercial scale. The building was designed by the St. Louis architectural firm LeBeaume & Klein. In 2013, the MO SHPO recommended this building as eligible for inclusion in the NRHP under Criterion C: Architecture; it has since been listed.

NHRP-Eligible Properties

3514 Delmar Boulevard: Designed by locally significant architect Jerome B. Legg for the L. L. Culver family, this house is individually eligible for inclusion in the NRHP under Criterion C: Architecture at the local level.

1023 North Grand Avenue: The brick building has a symmetrical façade with a door on the center axis flanked by shopfront windows; the arched stone doorway features an exaggerated keystone. In 2013, the MO SHPO recommended this building as eligible for inclusion in the NRHP under Criterion C: Architecture.

Palladium: The former St. Louis Palladium building located at 3617 Delmar Boulevard St. Louis, Missouri, is within the APE. The Former St. Louis Palladium was once a jazz club where African-American musicians played for primarily white audiences. The building was identified as individually eligible as part of the 2013 consultation effort under Criterion A: Ethnic Heritage. Most recently, the former St. Louis Palladium was HHV Thrift Plus and has since been vacated. On March 14th, 2018, the former St. Louis Palladium was inspected by the City of St. Louis Department of Public Safety and placed under condemnation.

Image 1. Former St. Louis Palladium - 3617 Delmar Blvd – North Facade, July 2019

For details of all the buildings inventoried and Missouri SHPO in-eligible determinations, refer to the Cultural Resource Assessment in Appendix D.

3.4.1 Native American Consultation

Following requirements formed in accordance with NEPA, the NHPA, the Native American Graves Protection and Repatriation Act (NAGPRA) and Executive Order 13175, the VA has contacted five tribes that have potential ancestral ties to the site area. The five tribes were located using the United States Department of Housing and Urban Development's Tribal Directory Assessment Tool (TDAT). Letters inviting the five tribes identified using TDAT were sent September 13th, 2019 via USPS Certified Mail. Certified mail receipts confirmed all tribes received the letter September 19th, 2019.

3.4.2 Effects of the Alternative A

Acquisition

Alternative A would require the acquisition of the former St. Louis Palladium building.

Construction

If the former St. Louis Palladium properties is acquired, Alternative A would require the demolition of the buildings for construction of the new bed tower. Construction of the bed tower and other buildings and structures has the potential to affect the view sheds of historic resources within the APE. This construction has the potential to disrupt archaeological resources.

Operation

Operation of the VASTLHCS is not anticipated to impact cultural resources.

3.4.3 Effects of the Alternative B

Construction

Construction of the bed tower and other buildings and structures has the potential to affect the view sheds of historic resources within the APE. This construction has the potential to disrupt archaeological resources.

Operation

Operation of the VASTLHCS is not anticipated to impact cultural resources.

3.4.4 Effects of the No Action Alternative

Under the No Action Alternative, the VASTLHCS would continue current operations. VA would not acquire or demolish the former Palladium and existing view sheds would not be altered.

3.4.5 Minimization/Management Measures

The VA has initiated consultation with SHPO and consulting parties. Through consultation, the VA and the consulting parties have identified measures to avoid and minimize potential adverse effects to historic properties and recorded them in a programmatic agreement (PA) signed January 2020. If the Palladium is still considered eligible following consultation and if Alternative A is chosen to move forward, the VA will need to complete Historic American Buildings Surveys and Historic American Engineering Records documentation prior to demolition. Other mitigation strategies include:

- Design Review by SHPO and other parties to identify alternatives that are more sympathetic to historic resources
- Minimize indirect (view shed) effects to nearby historic buildings/districts through environmental sensitive/sympathetic design.
- Follow guidelines and mitigation measures detailed in the PA

Should human remains or other cultural items as defined by NAGPRA be discovered during project construction, the construction contractor would immediately cease work until VA, a qualified archaeologist, and the SHPO are contacted to properly identify and appropriately treat discovered items in accordance with applicable State and Federal law(s).

3.5 Geology, Topography, and Soils

The VASTLHCS project area located at 915 North Grand Boulevard in St. Louis, Missouri Latitude 38.6426°N and Longitude 90.2318 W. the project area consists of numerous single and multi-story buildings and parking lots. Current ground conditions are asphalt pavement where buildings are present. Existing topography slopes from east to west with approximately 35 feet of relief across the site (545 elevation to 510 elevation). Based on the geological map provided by the United States Geological Survey (USGS), the subject site is located over the Meramecian Series; which consists of the St. Louis Limestone, Salem Formation, and Warsaw Formation. These units characterized by massive, argillaceous, and fossiliferous limestone. A sinkhole is mapped approximately 1,500 feet to the west of the site, but no sinkholes are mapped on the site itself. A seismic fault is mapped approximately 3,500 feet to the east of the site.

Soil borings conducted during the summer of 2019 encountered asphalt pavement over base rock underlain by existing fill to depths of 3 to 8 feet. The fill generally consists of lean and fat clay with variable amounts of sand, gravel and brick. Beneath the fill, lean, lean to fat, and fat clay soils were encountered to the top of rock. The overburden soils were typically medium stiff, although soft zones were noted. The existing fill is variable and there is a risk of excessive settlements if foundations, floor slabs, or pavements are founded in or above the existing fill. Limestone bedrock was encountered at depths of 25 to 37 feet. Mud rotary drilling was used below a depth of 20 feet in all the borings taken. Groundwater was only encountered in one boring (B-6 at a depth of 16 feet) prior to introducing water for the mud rotary drilling.

3.5.1 Seismic Considerations

The seismic design requirements for buildings and other structure are based on Seismic Design Category. The site classification is based on the upper 100 feet of the site profile in accordance with section 20.4 of ASCE 7 and the International Building Code (IBC). Site classification C of IBC was determined after seismic testing on the site. VA Directive 7512 establishes policy regarding the seismic safety of VA buildings, and facilities identified as critical and essential must meet additional requirements to remain operational after a seismic event (VA 2017). VASTLHCS is located within a seismically active area classified as "Moderate High." In recognition of this, the VA commissioned a phase one and two seismic study (Degenkolb Engineers, 1999) (Degenkolb Engineers, 2000) for Building 1 to determine what extent this building meets the current seismic codes. The studies indicated that Building 1 is seismically deficient having both structural and nonstructural deficiencies as well as adjacency hazards due to connections with the eastern portion of the building known as Building A and the western portion known as Building B. A 2006 Degenkolb Seismic Inventory List specifically lists Buildings 1, 6A and 8A as high risk buildings. The VA performed a Tier 1 Structural Seismic Study of the Clinical Addition as well. The Clinical Addition constructed in two-stages in 1977 and 1983 is adjacent to and connected to Building 1. The results identified structural and nonstructural seismic deficiencies of the Clinical Addition (part of Building 1). The most significant issues include:

- Insufficient separation joint between the Clinical Addition and Building 1
- Smaller, structurally weaker upper floors
- Tall, narrow shear walls subject to overturning and
- A large opening in a mechanical area next to a primary shear wall

3.5.2 Prime and Unique Farmland

Prime and unique farmlands are regulated under the Farmland Protection Policy Act (FPPA) under subtitle I of Title XV, section 1539-1549. These protections are intended to limit unnecessary and irreversible conversion of prime farmlands to nonagricultural lands. Prime farmlands are assigned by the U.S.

Department of Agriculture and are defined as: "land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is also available for these uses. It has the soil quality, growing season, and moisture supply needed to produce economically sustained high yields of crops when treated and managed according to acceptable farming methods, including water management." Summary of the VASTLHCS project area via the Web Soil Survey produced by the US Department of Agriculture Natural Resource Conservation Services (NRCS) shows the two main soil map units as Urban lands- Harvester complex (0 to 2 percent slopes) and Upland (0 to 5 percent slopes). Neither of these map units are rated as prime farmland.

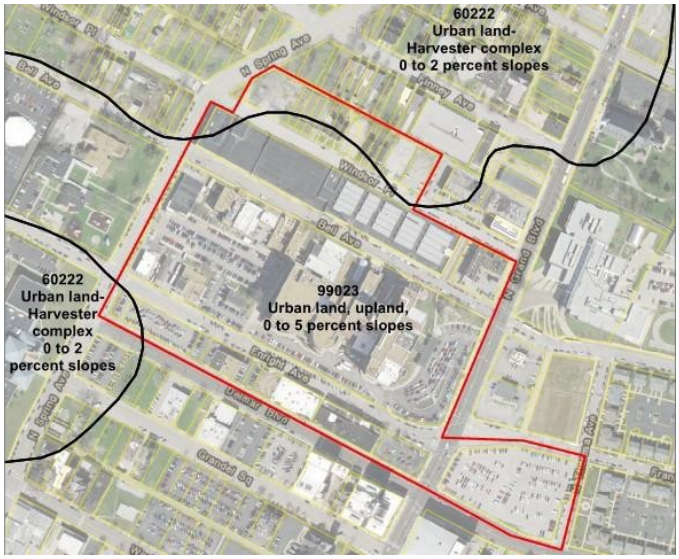

Figure 7. Soil Map

3.5.3 Effects of the Alternative A

Acquisition

Acquisition of the sites detailed in alternative A would not have impact on geology and soils on VASTLHCS project area.

Construction

During construction of the new VASTLHCS project area, consideration of soft spots and laying new fill will need to be accounted for to avoid settling and shifting of buildings. IBC seismic class will be planned around when the new campus is designed to be seismically compliant per IBC and Department of Veterans Affairs requirements.

Operation

Operation of the new facility should have no impact on geology or soils of the VASTLHCS project area.

3.5.4 Effects of the Alternative B

Construction

During construction of the new VASTLHCS project area, consideration of soft spots and laying new fill will need to be accounted for to avoid settling and shifting of buildings. IBC seismic class will be planned around when the new campus is designed to be seismically compliant per IBC and Department of Veterans Affairs requirements.

Operation

Operation of the new facility should have no impact on geology or soils of the VASTLHCS project area.

3.5.5 Effects of the No Action Alternative

The no action alternative would not alter the current VASTLHCS campus and does not meet the project objective.

3.5.6 Minimization/Management Measures

The campus design in Alternative A and B will be created with IBC and Department of Veterans Affairs requirements. As well, removal of existing fill and avoiding soft spots within the project area detailed above and in the geotechnical report will help to provide a stable and long-lasting campus that will serve the area and meet project objectives.

Implementing BMPs to reduce erosion and sedimentation impacts during construction of Alternative A and B would further minimize the potential impacts on local soils and water quality. These erosion and sedimentation control BMPs include developing and submitting a NPDES General Permit for Construction Activity to the Metropolitan St. Louis Sewer District and the MDNR Water Protection Program. The NPDES permit would require stormwater runoff and erosion management using BMPs, earth berms, detention basins, vegetative buffers and filter strips, and spill prevention and management techniques. The construction contractor would implement the following as appropriate and necessary to protect surface water quality, as part of NPDES permit:

- Install and monitor erosion-prevention measures (BMPs), such as silt fences and water breaks, detention basins, filter fences, sediment berms, interceptor ditches, straw bales, rip-rap, and/or other sediment control structures; re-spread stockpiled topsoil; and seed/re-vegetate areas temporarily cleared of vegetation.
- Retain on-site vegetation to the maximum extent possible.
- Plant and maintain soil-stabilizing vegetation on disturbed areas.
- Use native vegetation to re-vegetate disturbed soils.

3.6 Hydrology and Water Quality

The VASTLHCS project is located within the Western Mill Watershed and drains into the Lower Mississippi River. The Metropolitan St. Louis Sewer District operates stormwater and water quality for the site area. Adequate sewer systems are in place and water quality is not required as the site is in the combined sewer area. The current VASTLHCS campus has limited space and almost no stormwater BMP's.

3.6.1 Effects of the Alternative A

Alternative A would design stormwater best management practices in place to decrease stormwater volume discharging into the system and improve water quality by allowing infiltration into the ground water. The increased footprint of Alternative A allows for stormwater retention measures to be used as well as increases pervious surfaces along the site. Consultation with the Metropolitan Sewer District will continue during planning and design.

3.6.2 Effects of the Alternative B

Alternative B has designed stormwater best management practices in place to decrease stormwater volume discharging into the system and improve water quality by allowing infiltration into the ground water. The decreased footprint without the acquisition of the south properties would impede size requirements to get the proper stormwater BMPs in place on the site. Consultation with the Metropolitan Sewer District will continue during planning and design.

3.6.3 Effects of the No Action Alternative

Stormwater would continue to discharge into the sewer system as it has been with the no action alternative.

3.6.4 Minimization/Management Measures

Volume reducing best management practices (BMPs) for stormwater quality are required and these are identical to the water quality BMPs. The project will need to provide flood detention (100 year – 24 hour, type 2 Storm event) since the difference in stormwater is over 2 cubic feet per second. As well the flood protection should be supplemented by volume reducing BMPs as well. VA will need to obtain all federal, state and local permits before project may begin. Missouri Department of Conservation (MDC) also recommends mitigation measures should be used to prevent erosion and sedimentation/runoff to nearby waterways as well as proper cleaning of construction equipment via removing mud, soil, trash, plants and animals as well as when possible wash and rinse equipment with hard spray or hot water (>140 F) to prevent the spread of invasive species.

3.7 Wildlife and Habitat

Federally recognized threatened and endangered species and their habitats are protected under Section 7 of the Endangered Species Act. Federal agencies are required to consult with the United States Fish and Wildlife Service (USFWS) to evaluate if qualifying Federal actions would adversely affect listed species or their habitat.

The proposed project would occur in an already developed urban environment where none of the original vegetated landscape is present. The original vegetation cover prior to European settlement, according to *The Missouri Ecological Site Project: Correlating Soil Map Units to Pre-Settlement Vegetative Communities for Conservation Planning and Soil Health Monitoring* (Struckhoff and Wallace 2017) was a diverse mix of prairie, wetlands, and forest communities.

During the SEA preparation process, the USFWS and the Missouri Department of Conservation were contacted on August 8, 2019 to identify any potential for the presence of federal- or state-listed threatened or endangered species on or in the vicinity of the site. The following species review, consultation code 03E14000-2019-e-05933; was conducted August 6, 2019 using the USFWS tool, Information for Planning and Consultation (IPaC), shows the following species as potentially occurring in the in the proposed project area:

- **Endangered Mammal**: Indiana bat (*Myotis sodalis*) (Federal and state listed endangered)
- **Threatened Mammal**: northern long-eared bat (*Myotis septentrionalis*) (Federal-listed threatened)
- **Critical Habitat**: none listed

According to the Missouri DOC, Indiana bats and northern long-eared bats hibernate during winter months in caves and mines and during the summer months' roost and raise young under the bark of trees in riparian forests and upland forests near perennial streams. Since the project area is an urban site and does not consist of mature trees it is determined unlikely that any of the proposed action alternatives would have adverse effects on these two species. Consultation with the MDOC also concurred that if recommendations are followed the potential for adverse effects towards wildlife will be reduced (Appendix A). USFWS sent correspondence dated August 19, 2019 indicating they had no comment

pertaining to threatened or endangered species impacts after reviewing the project (consultation code: 03E14000-2019-SLI- 2546) (Appendix A).

Migratory Bird Treaty Act and Bald and Golden Eagle Act

Under these two acts, migratory birds, bald and golden eagles have protections that prohibit the taking, killing, possession, transportation, and importation of migratory birds and eagles, their eggs, parts and nests unless specifically authorized by the USFWS. As migratory birds and eagles may nest on manmade structures, there may be adverse effects from demolition of old campus buildings and the construction efforts around the campus if Alternative A or B are selected. Proper steps will be taken as laid out in Section 3.7.3 Minimization/Management Measures to minimize any impacts to federally protected species if one of these alternatives are chosen.

Consultation with the Missouri Department of Conservation (MDC) provided the MDC Natural Heritage Review Report (Appendix D) conducted by the MDC on September 23, 2019. The review did not identify any wildlife preserves, designated wilderness areas or critical habitats within the project area. Peregrine falcons are state listed endangered species in Missouri and records identify Peregrine Falcons 1.9, 2, 2.2, 2.6, 2.8, 3.3 and 5.7 miles from the project area. Peregrine falcons nest from April 15th-July 15th on natural bluffs, building ledges and bridges. The MDC provided Mitigation recommendations listed in Section 3.7.3 Minimization/Management Measures to minimize impacts to falcons, their nests or eggs if they are present on the VASTLCHCS project area if alternative A or B are chosen.

3.7.1 Effects of Alternative A

Alternative A activities such as demolition of buildings and construction efforts may have impacts on Peregrine Falcons, migratory birds, and bald and golden eagles as nests and eggs may be present on manmade structures. As nests, eggs, and/or protected species may be present on the VASTLHCS campus, mitigation measures will need to be followed to make sure if there are any present they are not adversely affected.

3.7.2 Effects of Alternative B

Alternative B activities such as demolition of buildings and construction efforts may have impacts on Peregrine Falcons, migratory birds, and bald and golden eagles as nests and eggs may be present on manmade structures. As nests, eggs, and/or protected species may be present on the VASTLHCS campus, mitigation measures will need to be followed to make sure if there are any present they are not adversely affected.

3.7.3 Effects of the No Action Alternative

No action alternative would have no effect on wildlife or habitat as no construction or demolition would occur on the VASTLHCS campus.

3.7.4 Minimization/Management Measures

Proper site inspection to verify that the nests of migratory birds, peregrine falcons, and eagles will be conducted prior to demolition and construction if Alternative A or B are chosen. The contractor hired will be responsible for hiring a qualified biologist to conduct site inspections for federally protected and state listed species. Per MDC recommendation, work should be avoided within 1500 feet of nests when nest building or active nests (eggs or hatchlings) are present to limit adverse effects to the state listed peregrine

falcon. If nest building or active nests of peregrine falcons or any of the protected species mentioned above are found on the campus by the biologist or workers, work shall be avoided within 1500 feet to avoid impacts to protected species.

3.8 Noise

Primary noise around the VAMC-SLJC project area are dominated by ground based vehicular traffic with primary traffic volumes occurring on North Grand Boulevard, Spring Avenue and Enright Avenue and to lesser extent Bell Avenue, Windsor Place and Delmar Boulevard (See 3.13 Transportation and Parking).

City of St. Louis city code 15.50.010 prohibits the creation of any unreasonably loud, disturbing, or unnecessary noise in the city. 15.50.080 details the definition of construction and demolition. Construction consists of any land grading, road and utility construction, and the use of any power equipment outside of a building or structure for purposes of site preparation, assembly, erection, repair, alteration or similar actions which generates noise audible at a residential property. Construction also includes manual demolition of building sand structures which generate noise with or without aid of power equipment. Demolition means any dismantling, destruction or removal of buildings, structure, or roadways. 15.50.081 states "construction, demolition and excavation within one thousand (1,000) feet of a residential property, including excavation, demolition, alteration or repair of any building, land clearing, land grading or road and utility construction within one thousand (1,000) feet of a residential property is prohibited before 6:00 a.m. and after dusk, Monday through Saturday, except in case of an urgent necessity in the interest of public safety for a period of three (3) days. After three (3) days the urgent necessity will be deemed to have elapsed unless a permit has been obtained from the Building Commissioner which allows specific action during any of the hours between 6:00 a.m. and dusk, Monday through Saturday."

3.8.1 Sensitive Receptors

Sensitive noise receptors near the project area are highlighted in section 3.9 Current Surrounding Land Uses and section 3.12 Community Services that include numerous schools, betterment organizations and residential areas to the north, east and west. These receptors, however, are in a highly-urbanized section of the City of St. Louis. There are no other hospitals within .5 miles of the project area.

3.8.2 Effects of the Alternative A

Acquisition

Acquisition for the project should have no impact on noise around the VASTLHCS campus.

Construction

Short-term construction noise outputs are the largest concern for noise issues during the project. Demolition and construction noises are variable, depending on the type, number, and schedule of construction personnel and equipment. Phased construction is expected to occur over 9-12 years, with start and stop phases occurring to build the various components. A table with the decibel ranges of common construction equipment is shown below:

Table 2. 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 Levels	**Distance from Source (feet)**							
	50	100	200	¼ Mile		½ Mile		
	103	97	91	74		68		

Source: Tipler 1976, 2014 Supplemental Environmental Assessment

Peak noise levels will vary at any given location based on line of sight, topography, and atmospheric conditions. As shown in table 2, noise levels are variable based on type of equipment and the distance from the source. Based on this, as laid out further in the mitigation section below, setting appropriate times and limiting equipment use to only when needed will be necessary to minimize effects to the community.

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 2, 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 start stop 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. Indirect impacts such as noise from workers commuting to and from the site as well as delivery and services truck traffic is also expected, but not considered significant as these would be temporary traffic increases during day time hours and similar to existing traffic noise in the area.

Operation

Long term operation of the new VASTLHCS would be similar to current operation and no increase in noise output are expected from facility use.

3.8.3 Effects of Alternative B

Same as Alternative A for construction and operation of the VASTLHCS campus.

3.8.4 Effects of the No Action Alternative

No change the VASTLHCS campus would continue normal operation and current noise output levels.

3.8.5 Minimization/Management Measures

While no specific measures are required, using best management practices during construction if Alternative A or B are chosen will limit noise output increases and limit impacts to sensitive receptors and the community. To minimize the short-term impacts of construction, the contractor shall implement these BMP's when applicable. Any noise issues that arise will be addressed by the onsite construction manager. BMPs include:

- Comply to all noise ordinances in the St. Louis City Code
- Limit construction activities on the weekend and from sunset to sunrise Monday-Friday when possible to avoid excessive noise output during sensitive times
- Include signage at sight and coordinate with local sensitive receptors where entry and exit points are, construction times and activity to avoid conflict with local stakeholders.
- Encourage construction personnel to operate equipment in the quietest manner possible and follow BMP's to avoid excessive noise output (limit speeds, shut off non-operating equipment, select entry and exit points far from noise receptors)

These BMP's would help to limit the short-term construction noise outputs until normal operation can continue and avoid conflict as much as possible with local sensitive receptors.

3.9 Land Use

The City of St. Louis Planning and Urban Design Agency are responsible for planning and zoning for the John Cochran division and surrounding communities and businesses. The current VASTLHCS Campus is zoned (C) Multi Family Dwelling District. The surrounding area in each direction are zoned Multi Family Dwelling, Area Commercial Districts and Industrial districts. Hospitals, Government Buildings and Parking Facilities are condition uses allowed within these districts.

The land use proposed within the project area is compatible with the urban design and long term planning of the City of St. Louis and does not differ from the overall downtown landscape. As discussed in section 3.1, the City of St. Louis zoning ordinance, aesthetic value and flow of downtown, and forestry ordinance regarding permitted uses, landscaping, building setback and sizes, tree preservation and replanting, and population density are all considered in project design and implementation of Alternatives described in Section 2.

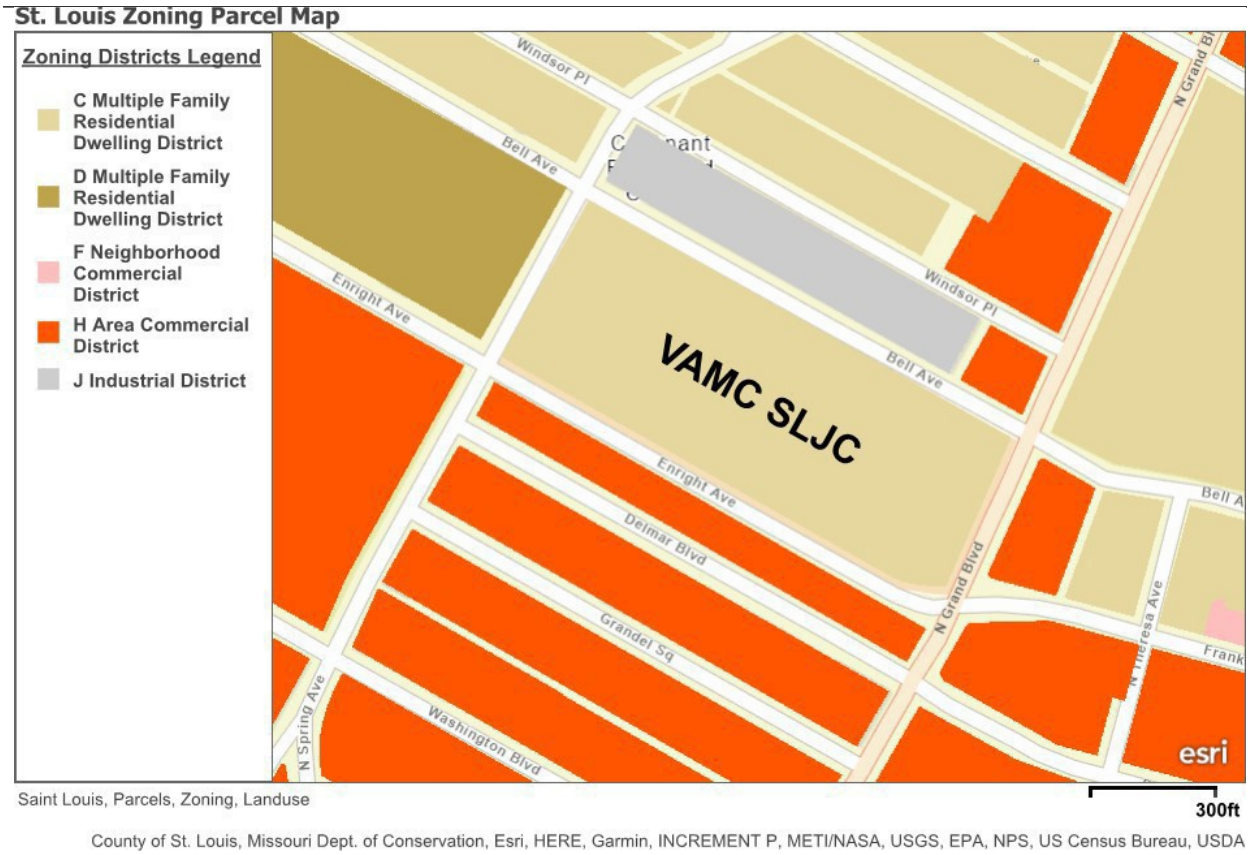

Figure 8. Zoning Map

3.9.1 Current Surrounding Land Uses

This list contains additional land uses observed outside the project area of the VASTLHCS.

North of VASTLHCS – Mixed Residential, Commercial, and Religious

- Fresh Start Bible Church
- Saint Luke's Memorial Baptist Church
- St. Alphonus Liuori Rock Catholic Church

East of VASTLHCS – Commercial, Educational, and Residential beyond

- Clyde Miller's Career Academy
- Church's Chicken
- Veterans Currency Exchange
- Surface Parking Lots

South of VASTLHCS – Grand Center Arts District

- Creative Arts Building
- Grand Center Arts Academy
- The Sun Theater
- Urban League of Metropolitan St. Louis
- Powell Symphony Hall

West of VASTLHCS – Mixed Residential, Educational, and Government

- Griscom School
- Head Start-North Spring Center
- Saint Louis City Family Court
- Cardinal Ritter College Prep School

3.9.2 Effects of the Alternative A

Acquisition

Alternative A would require the acquisition of the Sweetie Pie Upper Crust and Former St. Louis Palladium which are currently zoned Area Commercial District. The desired creation of New Parking Garage A (as seen on Figure 3 in section 2.1) would require a conditional use that would need to be permitted by the St. Louis Board of Public Service after review by the St. Louis Zoning Administrator and Community Development Commission.

Construction

Alternative A would obtain all required permits before proceeding with construction.

Operation

Alternative A would follow the aesthetic value and flow of the surrounding VASTLHCS and downtown as well as follow all St. Louis Department of forestry and Planning and Urban Design Agency requirements for landscaping, tree preservation and replanting and permitted uses.

3.9.3 Effects of the Alternative B

Construction

Alternative B would obtain all required permits before proceeding with construction.

Operation

Alternative B would follow the aesthetic value and flow of the surrounding VASTLHCS and downtown as well as follow all St. Louis Department of forestry and Planning and Urban Design Agency requirements for landscaping, tree preservation and replanting and permitted uses.

3.9.4 Effects of the No Action Alternative

Under the no action alternative, no changes to land use would occur.

3.9.5 Minimization/Management Measures

For any acquired properties that require conditional use permits, VA would pursue appropriate permits prior to beginning project construction for Alternative A and B. VA shall consult with the City of St. Louis Planning and Urban Design Agency (PUDA) to integrate design features, to the extent practicable, so that the expanded John Cochran Division would be designed and constructed in similarity with other developments within the area if continuing with Alternative A and B.

3.10 Floodplains and Wetlands

3.10.1 Wetlands

Review of the USFWS Online Wetland Mapper, USFWS IPaC, and Missouri DOC Natural Heritage Program showed no mapped wetlands or waterways within the project extent or surrounding area. Consultation with the United States Army Corp of Engineers (USACE) and their review of the project area determined the project would have no impact on streams or wetlands on September 4, 2019. Regulatory permit review file number MVS-2012-496 was given at the same time as the determination and **no permit is required from the Department of the Army.**

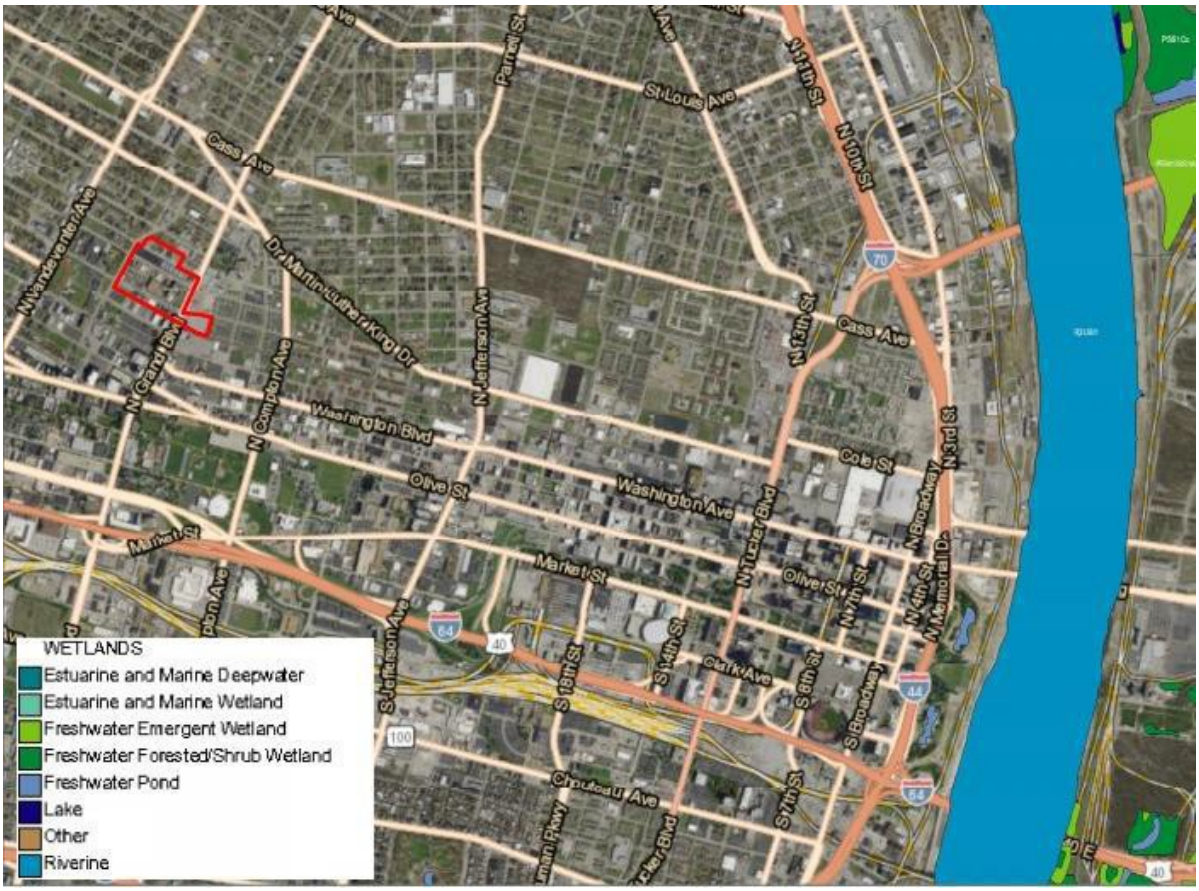

Figure 9. National Wetland Inventory

3.10.2 Floodplains

Review of the Federal Emergency Management Agency's flood zone online mapping tool and Missouri State Emergency Management Agency Outreach show the project and surrounding area fall outside the 100 and 500-year flood zone.

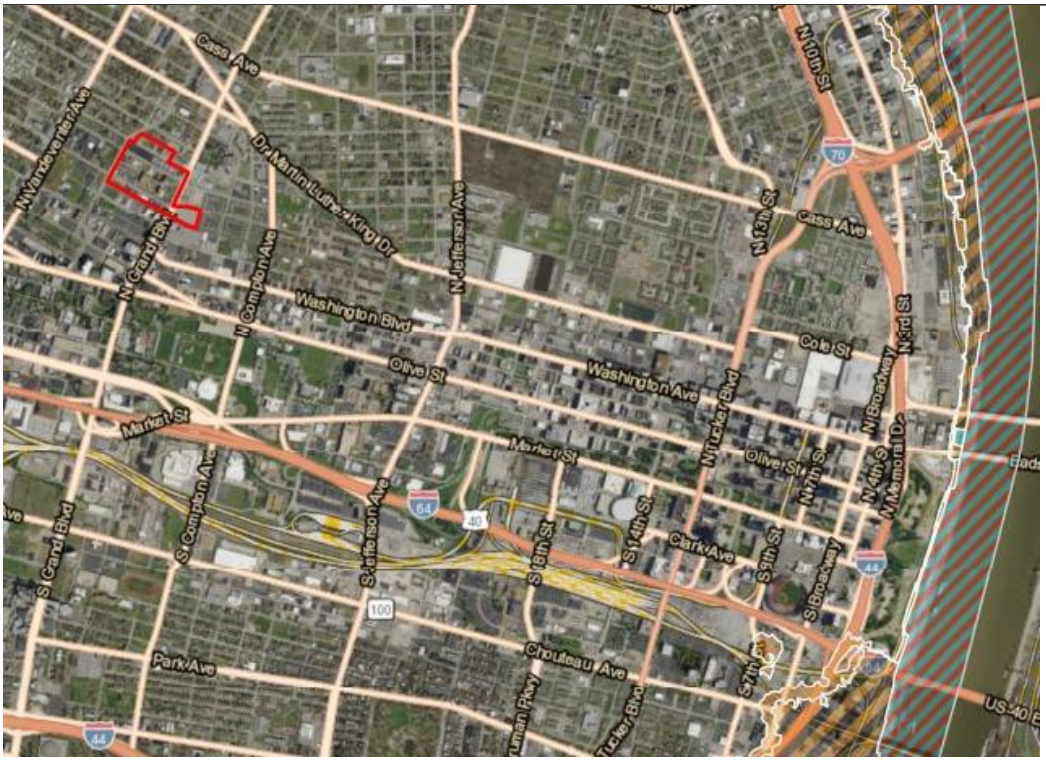

Figure 10. Floodplains

3.10.3 Effects of the Alternative A

Alternative A acquisition, construction, and operation would not have impacts on wetlands, floodplains, or waterways.

3.10.4 Effects of the Alternative B

Alternative B acquisition, construction, and operation would not have impacts on wetlands, floodplains, or waterways.

3.10.5 Effects of the No Action Alternative

No effect would occur under no action alternative.

3.10.6 Minimization/Management Measures

No mitigation or management measures are required for any of the alternatives described for the project. Consultation with the USACE determined since none of the project occurred within waters of the US, no USACE permit is required.

3.11 Socioeconomics

The socioeconomic subsections listed below show the City of St. Louis and State of Missouri environment including demographics, employment and income levels and housing. Data was obtained from the 2010 census and most recent estimates by the census bureau as well as the 2017 American Consumer Study.

3.11.1 Demographics

Population totals for the City of St. Louis are decreasing over the last 8 years by 6.2% compared to a decrease for St. Louis County of -0.2% and increase of the overall state of Missouri by 3.3%. However, a large proportion (5.37%) of the population of both St. Louis and the state of Missouri are veterans. The City of St. Louis has a much more diverse population of minorities than St. Louis County and the overall state as seen in Table 4. This is covered more thoroughly in section 3.16 Environmental Justice.

Table 3. Population Totals for the City of St. Louis and State of Missouri

Area	2010	2018 (estimate)
City of St. Louis	319,294	302,838
St Louis County	998,954	996,945
Missouri	5,988,927	6,126,452

Source: US Census Bureau, 2010 data

Table 4. Population by Race and Ethnicity

Area	White (%)	African American (%)	American Indian and Alaska Native (%)	Asian (%)	Native Hawaiian or Pacific Islander (%)	Two or More Races (%)	Hispanic or Latino (%)	White Alone, no Hispanic or Latino (%)
City of St. Louis	45.9	47.6	0.3	3.1	0.1	2.1	3.9	42.9
St. Louis County	68.2	24.9	0.2	4.5	0	2.2	3.0	65.6
Missouri	83	11.8	0.6	2.1	0.2	2.3	4.3	79.3

Source: US Census Bureau, American Consumer Study 2017 data
Percentages may total more than 100% as individuals may record more than one race

Table 5. Veteran Populations

Area	2013-2017	Percentage of Total Population
City of St. Louis	17,137	5.37
St. Louis County	59,954	6.01
Missouri	424,605	7.09

Source: US Census Bureau

Table 6. Age Characteristics of Populations

Area	2018 (estimate)	Persons Under 18 (%)	Persons Over 65 (%)
City of St. Louis	302,838	19	13.7
St. Louis County	996,945	22	18.1
Missouri	6,126,452	22.5	16.9

Source: US Census Bureau, 2010 data and 2018 Estimates

3.11.2 Employment and Income

The City of St. Louis has a significantly higher percentage of persons in poverty than the state of Missouri and the overall country as seen in Table 7. Median household incomes within the city are less than the state overall as well seen in Table 8.

Table 7. Persons in Poverty for the City of St. Louis and State of Missouri

Area	2018 (estimate)	Poverty (%)
City of St. Louis	302,838	25
St. Louis County	996,945	10
Missouri	6,126,452	13.4
United States	327,167,434	12.3

Source: US Census Bureau, American Consumer Study 2017, US Census 2010 Data

Table 8. Median Household Income

Area	Income
City of St. Louis	$38,664
St. Louis County	$62,931
Missouri	$51,542

Source: US Census Bureau, American Consumer Study 2017

With a higher percentage of low income individuals within the city than St. Louis County and the state of Missouri, impacts may need to be mitigated as laid out in Section 3.16 Environmental Justice.

3.11.3 Housing

Housing data between the state of Missouri and the City of St. Louis are nearly identical, with very little difference in value of owner owned housing units and median gross rent.

Table 9. Housing Characteristics

Area	Owner Occupied Housing Units (%)	Median Value of Owner Occupied Housing Units	Median Gross Rent
City of St. Louis	43.5	$123,800	$780
St. Louis County	69.5	$181,100	$937
Missouri	66.9	$145,400	$784

Source: US Census Bureau, American Consumer Study 2017

3.11.4 Effects of the Alternative A

Construction of Alternative A is anticipated to result in short-term and long-term, direct, positive socioeconomic impacts to local employment and personal income. Construction of the expanded VASTLHCS would potentially provide additional temporary construction jobs in the private sector, thus providing short-term socioeconomic benefit to the area. In addition, the operations of the expanded John Cochran Division would provide long- term employment for the area. Increased development in the region would indirectly benefit the local economy through the spending of business and personal income generated from the construction and operation of the proposed facility. As such, a long-term, indirect, positive impact to the local economy is anticipated from operation of the facility. The Proposed Action would result in long-term positive socioeconomic impacts by providing a larger, expanded John Cochran

Division to US Veterans. As part of alternative A, the VA would obtain 2 businesses south of the current campus, Sweetie Pies Upper Crust Restaurant and the condemned Palladium building (Section 3.4). As Sweetie Pies Upper Crust Restaurant is currently in operation, the VA will need to purchase the property and follow all Uniform Relocation Act regulations to ensure uniform and equal treatment to the business owner.

No health or safety risks to children are anticipated to result from construction or operation of the expanded John Cochran Division. In addition, children would only be present at the site as visitors; all Veterans are above the age of 18. Construction areas would be secured to prevent unauthorized access by children from the nearby residential areas.

3.11.5 Effects of the Alternative B

Benefits of Alternative B are similar to Alternative A and would not result in the acquisition of the properties to the south.

No health or safety risks to children are anticipated to result from construction or operation of the expanded John Cochran Division. In addition, children would only be present at the site as visitors; all Veterans are above the age of 18. Construction areas would be secured to prevent unauthorized access by children from the nearby residential areas.

3.11.6 Effects of No Action Alternative

The No action alternative would not bring increased volumes of veterans to the VASTLHCS campus and not produce short term construction jobs and long term operational jobs to the area. The no action alternative would mean there would be no change to local businesses and homeowners, as no acquisition of the local businesses mentioned in Section 2 would occur.

3.11.7 Minimization/Management Measures

VA shall comply with the requirements of the Uniform Relocation Act (URA) to ensure the uniform and equitable treatment of displaced businesses and people from their residences. VA would develop a Relocation Plan specific to the selected Action Alternative to identify potential problems and associated solutions for displaced residents, businesses, tenants, and/or landlords as a result of the implementation of the Proposed Action.

3.12 Community Services

Metrobus and Metro Link offer public transportation to the St. Louis and surrounding areas. The City of St. Louis Metropolitan Police Department, District 5 and St. Louis Metropolitan Fire Department deliver medical emergency services, police and fire protection to the VASTLHCS and surrounding area. Primary roads and bridges surrounding the John Cochran Division are maintained by the Missouri Department of Transportation and St. Louis Department of Streets. The City of St. Louis various departments listed within this description have been contacted and awaiting consultation to verify construction does not impact community services and the new campus can be adequately reached by community services.
The St Louis area has 46 Elementary Schools, 9 Middle Schools and 15 High Schools according to the St. Louis Public School website. The following schools are located within 0.5 miles of the St. Louis VAMC proposed project area.

- St. Louis Public Schools (3416 E Cook Ave.)
- Clyde Miller Career Academy (1000 N Grand Blvd.)
- Carver Elementary School (3325 Bell Ave.)
- Hadley Technical High School (27 School St.)
- Preclarus Mastery Academy (620 N Grand Blvd.)
- Cardinal Ritter College Prep (701 N Spring Ave.)
- Loyola Academy of St. Louis (3851 Washington Blvd.)
- Montessori Lab School at Grand Center (3854 Washington Blvd.)
- MAP St. Louis (3840 Washington Ave.)
- Griscom High School (3847 Enright Ave.)

The nearest hospitals to the St. Louis VAMC John Cochran Division are:

- 2 miles Southwest – Barnes-Jewish Hospital (4353 Clayton Ave.)
- 1.6 miles South - SLUCare Physician Group (1438 S Grand Blvd.)
- 2 miles West – Kindred Hospital St. Louis (4930 Lindell Blvd.)
- 1.3 miles Southeast – Hope Recovery Center VAMC
- 2 miles West – The Rehabilitation Institute of St. Louis – Central West End (4455 Duncan Ave.)
- 2.5 miles West – St. Louis Children's Hospital (660 Euclid Ave.)
- 1.5 miles South - Children's Miracle Network (1465 S Grand Blvd.)
- 1.5 miles South - SSM Health Saint Louis University Hospital (3635 Vista Ave.)
- 2.4 miles Southwest - Washington University Med Center (660 S Euclid Blvd.)

3.12.1 Effects of the Alternative A

Since construction of the new bed tower would shift services from the seismically deficient old hospital building, and not create a large surge of new visitors to the site but rather replace old seismically deficient building operations to the new bed tower, there is no reason to expect a change in city service needs within the St. Louis VAMC John Cochran Division area. Old buildings would be demolished and replaced with new facilities, which would not greatly increase the load of work for community services. Consultation with the St. Louis Fire Department deemed the height of the new bed tower not an issue and verified that current alternatives include all necessary fire protection equipment and that streets allow access for fire trucks. As Alternative A would close Enright Avenue and parts of Bell Avenue, consultation with city services was conducted as part of the SEA process. Road closures were determined to not have impacts to community services and the VA has agreed to consult with the City if plans to move forward with alternative A are chosen.

Medical services for veterans would be improved and expanded within the St. Louis and surrounding area benefiting staff and the veterans who rely on the VASTLHCS.

3.12.2 Effects of the Alternative B

Alternative B would closely replicate the effects of Alternative A. Without the acquisition of the properties south of the VASTLHCS campus, the project would have limited space to provide the necessary access and parking space needed for emergency vehicles. As Alternative B would still close half of Enright Avenue and the same parts of Bell Avenue as Alternative A, the impacts are similar between the alternatives. Consultation with city services was conducted as part of the SEA process. Road closures were determined to not have impacts to community services and the VA has agreed to consult with the City if plans to move forward with alternative A are chosen.

3.12.3 Effects of the No Action Alternative

No action would have negative effects on city services and roadways in the surrounding area. the ability for the VA to provide proper medical services for veterans of the community would diminish as outdated buildings and equipment would continue to age and deteriorate. As buildings continue to deteriorate, there will be an increased need for city clean-up crews and creating dangerous opportunities campus visitors and surrounding buildings and roadways. As well the promise to provide a seismically safe campus would not be accomplished.

3.12.4 Minimization/Management Measures

VA shall consult with all community services before construction and changes to any streets or services occur.

3.13 Solid Waste and Hazardous Materials

Resource Conservation and Recovery Act (RCRA) gives the EPA the authority to control hazardous waste and defines key terms. Solid waste is any garbage or refuse, sludge from a wastewater treatment plant, water supply plant, or air pollution control facility and other discarded material, resulting from industrial, commercial, mining, agricultural operations and community activities. The EPA defines hazardous waste as any waste with properties that make it dangerous or capable of having a harmful effect on human health or the environment.

Consultation with the EPA the VASTLHCS campus is in proximity to a Toxic Release Inventory (TRI) site and an RCRA facility and is an RCRA facility itself. The VASTLHCS campus currently has a Spill, Prevention, Control and Countermeasure (SPCC) Plan to address storage and management of petroleum products and hazardous substances found on site. Practices, procedures, structures and equipment used to prevent spills and eliminate or reduce the harmful effects of a spill to human health and the environment are described in the SPCC plan.

In March of 2012 a Phase 1 ESA of surrounding parcels was conducted for the VA 2014 Supplemental Environmental Assessment. The Phase 1 ESA conducted a site reconnaissance, interviewed numerous personnel that had knowledge of the sites, reviewed historical data and environmental regulatory information for the site and surrounding properties. Based on the findings a Phase 2 ESA was conducted as well, which consisted of geophysical survey, soil borings with soil and groundwater samples, asbestos and lead-based paint surveys, and a PCB residue (dust and concrete) survey. Laboratory analysis of the soil samples identified RCRA and/or total priority pollutant metals in each of the thirty-six soil probes advanced at the site. Many of the detected metal concentrations exceed their respective MDNR lowest default target levels (LDTL) or the Tier 1 Soil Concentrations Protective of Domestic Use of Groundwater Pathway Risk Based Target Levels (RBTL). However, the detected arsenic and lead concentrations do not exceed the soil background concentrations for St. Louis County provided by the USGS, except for two sampling locations located on the parcel north of the campus and between Bell Avenue and Windsor Place and the south west parking lot at the corner of Bell Avenue and North Spring Avenue (Figure 2. Campus Map).

Analytical results of water samples collected from the six groundwater monitoring wells installed during the Phase II ESA were generally below MDNR LDTLs, except for pentachlorophenol and naphthalene concentrations detected in monitoring well MW-5 located between the residential properties north of Windsor Place and a total lead concentration detected at MW-1 the south west parking lot at the corner of Bell Avenue and North Spring Avenue. Weaver Bros Consulting concluded that the groundwater analytical data suggests that the impacts identified in soil do not appear to have migrated to the depth of shallow groundwater at the site, except for total lead identified in MW-1, which was also identified in soil

under the south west parking lot at the corner of Bell Avenue and North Spring Avenue at concentrations that did not exceed the USGS soil background concentrations.

Laboratory analyses did not identify any detectable concentrations of PCBs in the concrete and dust wipe samples collected from the old warehouse that has since been demolished by the VA and was located north of the campus between Bell avenue and Windsor Place. Asbestos was found in the engineering building south of the campus, the Palladium, and the old warehouse which has since been demolished.

WBC stated that as long as the asbestos containing materials (ACM) remain intact and the integrity of the materials is not compromised, they may be managed in place pursuant to an Operations and Maintenance Plan (O&M Plan) without representing a hazard to the building or its occupants. Should the need arise to address, remove, or disturb these materials as a result of potential renovation or demolition activities, the identified materials should be abated by a licensed asbestos abatement contractor following all applicable State, Federal, and local regulations.

A lead based paint (LBP) survey identified LBP on several of the painted surfaces/components at the same four properties with asbestos mentioned above, at or above the US Department of Housing and Urban Development (HUD) action level, with the exception of the engineering building. WBC stated that any LBP painted surfaces that were observed to be peeling, flaking, and/or in damaged condition would require abatement prior to demolition and/or renovation activities.

Based on the findings of the Phase II ESA, WBC stated that ACM and LBP removals; the potential for undocumented USTs needing removal; and impacted soil removal may be required as part of the future expansion of the John Cochran Division.

3.13.1 Effects of the Alternative A

Acquisition

Proper inspection and removal of VA buildings and surrounding properties will be done by the VA prior to construction of the new VASTLHCS campus. The phase 1 ESA identified historical operations that could pose environmental concerns including gasoline servicing stations, automotive repair businesses, and industrial operations. The phase 2 ESA did not identify soil or groundwater impacts in excess of applicable criteria however further investigation of the VASTLHCS campus will be required to evaluate further potential soil and groundwater impacts.

Construction

Buildings on the campus and surrounding that will be demolished also contain Asbestos contaminated materials and lead based paint and proper mitigation and disposal techniques will be used during demolition. Construction BMPs to limit short term leakage of gasoline and diesel fuel, as well as proper removal of construction materials will be followed as well to mitigate impacts.

Operation

As the campus is an RCRA facility, current permits must be renewed and up kept following state and federal regulation regarding the disposal of waste both hazardous and not. The new facility would require underground storage tanks to store fuel for the substation and emergency generators.

3.13.2 Effects of the Alternative B

Construction

See Alternative A for details of construction effects on Alternative B. Demolition would be limited without acquisition and less alteration to the properties surrounding the VASTLHCS campus would mean testing and mitigation for these properties and areas would not need to occur. The buildings on the campus that were tested would still be demolished and would require mitigation for hazardous materials.

Operation

As the campus is an RCRA facility, current permits must be renewed and up kept following state and federal regulation regarding the disposal of waste both hazardous and not. The new facility would require underground storage tanks to store fuel for the emergency generators. Alternative B would have limited space for the inclusion of the necessary diesel tanks on the site while maintaining security setbacks.

3.13.3 Effects of the No Action Alternative

No action would lead to the continuation of current operation and permitting for RCRA facility requirements. Under the No Action Alternative, no construction by VA would occur, and none of the known or potentially contaminated soils, groundwater, or building materials would be removed. In addition, the ACM and LBP abatement and soil/groundwater remediation activities that would be conducted would not occur.

3.13.4 Minimization/Management Measures

Reducing potential future impacts by following the recommended BMP's listed below will help to limit future potential adverse effects and help with compliance to regulatory requirements in the future.

The VA will need to complete asbestos and lead surveys of all buildings planned for demolition or renovation by certified Missouri inspectors before work is to begin if alternative A or B are selected. Proper BMP's during construction will need to be followed to limit short term minimal waste impacts; removing waste from site, limiting construction dust and airborne particles and limiting and monitoring for leaks from equipment to avoid ground contamination from diesel and gasoline. As well care should be taken in demolition of facilities to limit asbestos and lead contact and proper disposal of building materials containing them. The proper removal of lead based paint and asbestos will be required to mitigate impacts and contamination to the project site. Further evaluation for impacted soils and removal of underground storage tanks detected in the Phase 2 ESA will need to be completed to limit further contamination and mitigate impacted soils.

The VA would need to acquire all necessary permits for the underground storage tanks needed for the generators being constructed on the new facility, if Alternative A is selected. The SPCC Plan will need to be updated to include all new facility tanks and waste.

3.14 Transportation and Parking

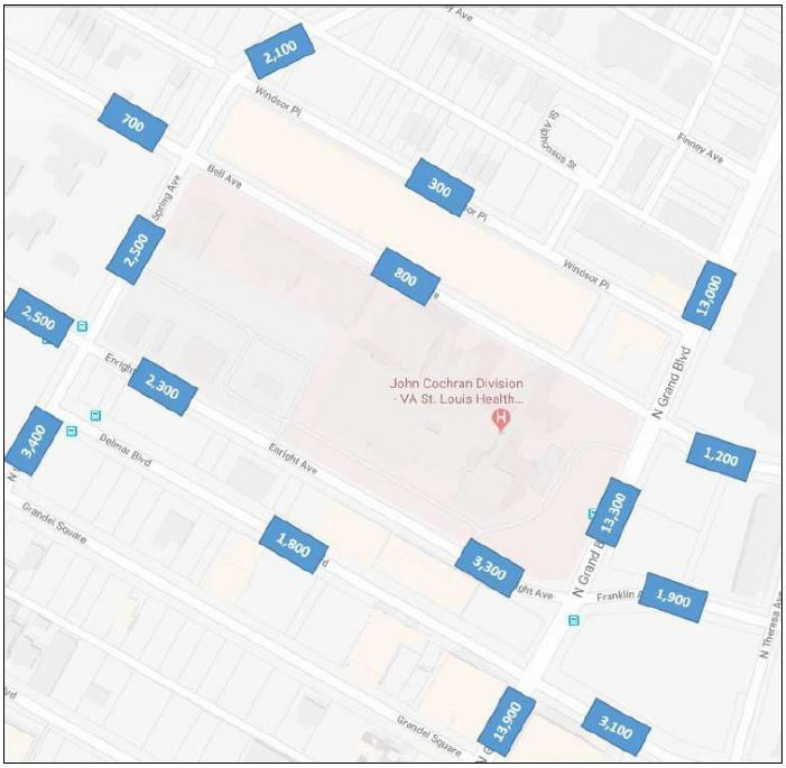

Figure 11. 2019 Existing Daily Traffic Volumes

Traffic volumes were measured in February of 2019 under normal weekday conditions. The average a.m. and p.m. peak hours were found to be from 7:30 to 8:30 a.m. and 3:15 to 4:15 p.m. The "typical day" counts from these two peak hours were used at the study intersections for analysis. Figure 11 shows the surrounding roadways and their traffic volumes. Spack Consulting was able to forecast expected 2038 volumes and anticipate vehicular queues at the intersections surrounding the VASTLHCS campus. Per the analysis done, all intersections are forecast to operate with acceptable levels of service and queueing through the 2038 build scenarios. No additional lane configurations or traffic control are needed. For more details or to see how this analysis was calculated, see Appendix D for Spack Consulting Transportation Impact Study.

Table 10 – Daily Traffic Volume Impacts

Roadway	Location	Existing Daily Volume	Preferred Alternative	
			Added Volume	% Increase
Grand Boulevard	North of Windsor	13,000	800	6%
Grand Boulevard	South of Delmar	13,900	1,500	11%
Delmar Boulevard	East of Grand	3,100	400	13%
Spring Avenue	South of Delmar	3,400	600	18%
Enright Avenue	West of Spring	2,500	600	24%

Parking for the site is currently spread out across several different areas. Figure 12 below shows off-street parking facilities that are currently used by staff and visitors. Lots A, B, E, F, G and J are exclusively used by VAMC staff. Lot C is used by visitors and for drop-offs as well as emergency vehicles. Lot D has some visitor parking and operates as the valet loading/unloading area. Lot H is a valet parking area. Lot I contains a split between valet parking and visitor parking. Parking area K is a ramp that is leased during the day for VAMC use but is also utilized by other area businesses. The existing parking is not adequate to serve the veterans and staff of the VASTLHCS.

Figure 12. Existing Parking Map

VA conducted traffic and parking studies in 2013 and 2019 to determine overall traffic volume before and after the project and parking needs of campus. The current VASTLHCS parking demand accounting for overflow and practical capacity is 1,431 parking stalls. Without leased lots off site (lots J and K) to supplement parking, the current parking deficiency 679 stalls.

Table 11. Parking Spaces

VA Owned Lots	Capacity
Lot A	177
Lot A 2	6
Lot B	48
Lot C	41
Lot D – Valet	56
Lot D – Non-Valet	40
Lot E	63
Lot F	27
Lot G	64
Lot H	33
Lot I	260
Totals (VA Owned Lots)	815
VA Leased Lots	Capacity
Lot J	146
Lot K	606
Totals (Leased Lots)	752

3.14.1 Effects of the Alternative A

Acquisition

Portions of Bell Avenue and Enright Avenue would be vacated for Alternative A. The city has been consulted with and have set up guidelines for the vacation of the roadways.

Construction

Construction could lead to short term impacts on traffic as materials and equipment are moved into and out of the site. As well, the reconstruction of the intersections of Bell and Enright Avenue with North Spring Avenue and North Grand Boulevard could lead to short term traffic impacts. As shown in Figure 3, Alternative A has various parking lots and garages planned to allow for parking of the full 2,063 needed spots and additional to allow for growth and increased traffic to the campus. Alternative A would eliminate the need for leased lots J and K and provide the needed parking spaces plus the additional practical capacity spaces totaling 2,292 available parking spaces.

Operation

Operation of the new campus will result in an increase of traffic and parking demand to the site and parking needs, however Alternative A accommodates forecasted traffic volume increases and forecasted increased parking demand. All intersections are forecasted to operate acceptably through the build scenarios with the intersection modifications per the Great Streets program as well as with or without the vacation of Bell Avenue and Enright Avenue between Spring Avenue and Grand Boulevard. Four of the five roadways analyzed for average daily traffic volumes will be less than a 20% increase with the exception of Enright Avenue west of the site at a 24% increase. According to the Highway Capacity Manual, 6th Edition, a road like Enright Avenue has a daily capacity of around 10,000 vehicles. With the existing volumes on that segment of Enright Avenue being 2,500 vehicles, the future volume of 3,100 on that roadway will be well within the capacity of the road.

3.14.2 Effects of Alternative B

Alternative B, as shown in Figure 5, has 3 parking garages planned to offer the necessary parking of 2,336 stalls for the site. Without acquisition, alternative B would limit space for construction efforts and create a shortage of parking space during construction and demolition as these efforts would further limit already deficient parking. As well, the construction of the 3 parking garages as opposed to two in alternative A would increase overall cost and time of construction. Since a portion of Enright Avenue would be preserved under alternative B, there would be some street parking saved for additional parking spaces during and after construction.

3.14.3 Effects of the No Action Alternative

No change would lead to a continued deficiency of parking spaces for the VASTLHCS and would not serve the veterans and staff that use and operate the facility. However, portions of Bell Avenue and Enright Avenue would remain open to traffic.

3.14.4 Minimization/Management Measures

Coordination with the City of St. Louis is underway and will continue as construction is planned to properly mitigate all changes to city streets and traffic. Parking lots and garages are designed In Alternative A to offer parking for visitors and staff for the proposed campus and into the future with planned growth. Short term impacts during construction will be limited to all extents possible.

The signals along Grand Boulevard would be closely coordinated to minimize queues on Grand Boulevard, especially when reduced to one through lane during construction. Emergency vehicle preemption would be in place at the signals along Grand Boulevard throughout all phases of reconstruction along Grand Boulevard. Depending on city consultation, if a roundabout is constructed at Spring Avenue/Delmar Boulevard, the Spring Avenue/Enright Avenue intersection would be converted from a signalized intersection to side-street stop control.

3.15 Utilities

Natural Gas

Spire Inc. is the current natural gas provider to the site area. Coordination with Spire Inc. is underway and will consult prior to beginning construction of proposed projects if alternative A or B are chosen for continuation.

Sanitary Sewer

Coordination with the Metropolitan St. Louis Sewer District is underway. Section 3.6 Hydrology and Water Quality outlines best management practices laid out for stormwater retention and improved water quality. Current combined sewer systems are adequate if Alternative A or B are continued.

Electricity

Ameren Missouri provides electrical power to the campus. Site plans and proposed actions will be coordinated with Ameren before connecting to the electrical infrastructure if Alternative A or B are continued forward. The new campus under Alternative A or B would require an updated substation that is within campus security fences and larger to accommodate electrical needs on the campus.

Telecommunications

AT&T is the main provider of telecommunication services to the VAMC campus. These services should be adequate for all alternatives. VA shall coordinate with AT&T prior to connecting to telecommunication services.

3.15.1 Effects of the Alternative A

Acquisition

Acquisition of the properties outlined in section 2.1 Alternative A would not require additional utilities and could be connected to current utilities on site and on the campus.

Construction

VA shall acquire all required permits and consult with all utility services prior to beginning construction of the new campus. All permits required for the substation and necessary changes to current electrical hook ups should be discussed with Ameren and the City of St. Louis prior to construction.

Operation

Operation of the new facility is not expected to require any additional utility services that aren't already in place on the current VASTLHCS campus. A shift from the old seismically deficient and outdated bed tower to the new bed tower would not over utilize any utilities as old buildings would be demolished and

operations would be transferred to the new facility. Updated and modern technology would also work to limit and cut utility use from the old current technology on the campus.

3.15.2 Effects of the Alternative B

Construction and operation of alternative B would mirror alternative A. Limited space in the footprint is anticipated to cause difficulties in providing utility hook ups to the campus as well as long term maintenance. Decreased footprint space would limit the access of maintenance crews and the ability to access underground utility lines as ground and pavement may need to be removed to access utility lines. These interruptions would limit space needed for operation of the VASTLHCS campus.

3.15.3 Effects of the No Action Alternative

Current operation of the campus would continue with outdated and old technology and equipment which is expected to cause increases in utilities used over time.

3.15.4 Minimization/Management Measures

During planning of facilities and construction if proceeding forward with Alternative A or B, the VA shall be in communication with utility services to make sure services are not interrupted or altered. Communication with Ameren regarding the substation and any local or state permits required should be completed and obtained before construction of the Campus if Alternative A or B are selected to proceed forward.

3.16 Environmental Justice

In addition to considering socioeconomic information for the area surrounding the VASTLHCS, federal agencies are required through Executive Order 12898 set forth in 1994 to focus attention on minority and low-income communities that may be adversely affected by environmental conditions and impacts to human health at a disproportionately higher rate than other communities.

Minority Populations: Persons of Hispanic origin of any race, American Indian and Alaskan Native, Asian, African American and Native Hawaiian or Pacific Islander.

Low Income Populations: families living at or below the poverty line, based on an annual income of $24,600 or less for a family of 4. (US Department of Health and Human Services, 2017)

As shown in section 3.11 Socioeconomics Tables 3 and 4, the City of St. Louis has a significantly higher population of minority groups and percentage of families in poverty than the overall state of Missouri. Therefore, minority populations and low income populations impact analysis are detailed in the alternative descriptions below.

3.16.1 Effects of the Alternative A

Acquisition

The acquisition of the Former St. Louis Palladium and Sweetie Pies Upper Crust are not anticipated to impact low income or minority populations. The VA would pay fair market value for any properties purchased and are in current negotiation to meet SHPO requirements for community identity and NHRP-eligible properties described in section 3.4.

Construction

Construction of Alternative A could potentially lead to short term private sector construction jobs positively impacting the local economy. As well, spending of business and personal income is anticipated to indirectly benefit the local economy and communities. Environmental conditions that may have adverse effects on low income and minority populations related to construction noise and air quality are considered and mitigated within sections 3.3 and 3.8.

Operation

Operation of the VASTLHCS is anticipated to lead to increased long term employment as well as positive indirect spending of local incomes to businesses and services within the community. Increased development is anticipated to bring new jobs and consumers to the project area, which would benefit local businesses and increase local revenue. Increased traffic to the campus would have potential to bring new customers to area businesses and potentially increase the economic growth of the surrounding area.

3.16.2 Effects of the Alternative B

Construction

Construction of Alternative B could potentially lead to short term private sector construction jobs positively impacting the local economy similar to Alternative A. As well, spending of business and personal income is anticipated to indirectly benefit the local economy and communities. Environmental conditions that may have adverse effects on low income and minority populations related to construction noise and air quality are considered and mitigated within sections 3.3 and 3.8.

Operation

Operation of the VASTLHCS is anticipated to lead to increased long term employment as well as positive indirect spending of local incomes to businesses and services within the community. Increased development is anticipated to bring new jobs and consumers to the project area, which would benefit local businesses and increase local revenue. Increased traffic to the campus would have potential to bring new customers to area businesses and potentially increase the economic growth of the surrounding area.

3.16.3 Effects of the No Action Alternative

No action would leave an outdated and seismically deficient VASTLHCS campus limiting resources and appropriate health care available for veterans and not bringing the anticipated economic benefits laid out above.

3.16.4 Minimization/Management Measures

During construction if Alternative A or B are chosen, effects on adjacent land uses, such as through noise and dust, would be limited and controlled as discussed in Sections 3.3 and 3.8, thereby minimizing adverse effects to minority and low-income populations.

In addition, construction of Alternative A or B is anticipated to result in short-term and long- term, direct, positive socioeconomic impacts to local employment and personal income. Given the ROI is a minority and low-income community, such positive effects would be anticipated to extend to local minority and low-income citizens, a positive environmental justice effect.

3.17 Cumulative Impacts

The Council of Environmental Quality defines cumulative impacts as "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (40 CFR 1508.7).

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 John Cochran Division and the Alternative parcels are located in an urban area in mid-town St. Louis, Missouri. Alternative A involves the acquisition and redevelopment of 2 parcels located south of the current campus as shown in Section 2.1.

The ROI for the Alternatives is mostly developed. Little space remains for in-fill development other than scattered vacant lots where previous residential and commercial structures have been removed. Please refer to Sections 3.2 and 3.9 for an additional description of Aesthetics and Land Use within the ROI.

The Alternatives would result in the impacts identified throughout Section 3. These include potentially adverse impacts to air quality; cultural resources; noise; wildlife and habitat; solid and hazardous materials; transportation and parking; community services; and environmental justice. No adverse effects to floodplains and wetlands or utilities are expected. Implementation of Alternative A or B could also result in positive impacts to aesthetics; geology, topography, and soils; hydrology and water quality; noise; land use; socioeconomics and environmental justice; community services; and long-term positive impacts to soil and hazardous materials.

All the impacts associated with the Alternative A and B are less-than-significant and would be further reduced through careful coordination and implementation of the general BMPs and management measures, and compliance with regulatory requirements as identified throughout Section 3 and in Table 12. Mitigation Measures.

Within the ROI, a primarily minority and low-income area, re-development is occurring at a relatively slow rate and many vacant parcels and unoccupied structures are present. Projects, such as the proposed "Great Streets" project, VASTLHCS campus improvements and expansion through Alternative A or B would enhance the current environment.

While properties would be acquired with Alternative A, no significant effects to local socioeconomics or environmental justice would occur. All properties would be acquired from willing property owners for a fair market value and VA would provide relocation benefits for those residents and businesses displaced by the land acquisition. Over the long-term, Alternative A would contribute to cumulative positive socioeconomic effects to the ROI through increased jobs and incidental spending.
As a Federal agency, VA would be required to analyze the potential direct, indirect, and cumulative effects of any future proposed development under the NEPA and other applicable regulations when additional details are available, and prior to implementing any future development beyond those

identified in this SEA.

To the best extent possible, this SEA considered all key factors that could be impacted by the proposed bed tower replacement, clinical building expansion and JC parking garage additions of the St. Louis VA Medical Center – John Cochran Division. This project, after careful review of the environmental concerns listed above, was determined to have no significant impacts, and if requesting or required, mitigation/management techniques detailed in Section 5 were given through consultation or in best professional judgement to further mitigate any concerns in moving forward with the proposed project. Close and ongoing coordination between VA and the stakeholders would serve to manage and control cumulative effects within the project area, including managing regional transportation increases with adequate infrastructure.

Implementation of local and state land use, resource management, and other plans, coupled with ongoing compliance with Federal, State, and local regulations and requirements, as applicable, 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 these plans and regulations should minimize or eliminate any potential cumulative degradation of the natural, cultural, or human environment within the project area.

Under the No Action Alternative, cumulative impacts due to the Proposed Action would not occur. The No Action Alternative would also contribute to a significant adverse cumulative socioeconomic impact in the region. Specifically, VA's ability to provide modern, quality medical care to our nation's Veterans over the long-term would be compromised.

3.18 Potential for Generating Substantial Controversy

VA has solicited input from various Federal, State, and local government agencies regarding the Proposed Action. VA contacted potential consulting parties and some have responded affirming participation as consulting parties regarding historic resources. See Section 4.3 for detail. It is not anticipated that there will be substantial public controversy regarding the Proposed Action.

Section 4.0 Public Involvement

The 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 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 area residents, interested organizations, and disadvantaged persons are urged to participate. A record of stakeholder coordination associated with the SEA is provided in Appendix A.

4.1 Public Involvement

The VA, as the Federal proponent of this Proposed Action, published and distributed a draft SEA for a 15-day public comment period, which began with the publication of a notice of availability in the local newspaper. A public meeting was held in St. Louis during the 15-day public comment period. An electronic copy of the draft SEA will be available through the VA's website at [https://www.stlouis.va.gov/]. The VA submitted the draft SEA to interested agencies for comment concurrent with the public comment period. Comments received during the 15 day public comment period are contained in Appendix E.

4.2 Stakeholder Coordination

Interagency coordination of environmental planning regarding major federal proposed actions is a federally mandated requirement for informing and coordinating with other governmental agencies and stakeholders. As part of the NEPA process, public agencies shall be consulted to provide preliminary input on potential environmental effects on resources under their jurisdiction within the Proposed Action area. Below is a list of agencies contacted as part of this SEA. In addition, a sample of the scoping letter and the scoping comments from the stakeholders are contained in Appendix A.

Federal Agencies

- Bureau of Indian Affairs
- Federal Aviation Administration
- Natural Resources Conservation Service – St. Peters Service Center
- U.S. Environmental Protection Agency
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service

State Agencies

- Missouri Department of Conservation
- Missouri Department of Environmental Quality
    - Air Pollution Control Program
    - Environmental Services Program
    - Hazardous Waste Program
    - Land Reclamation Program
    - Water Quality Program

- Missouri Department of Natural Resources
    - Division of State Parks and Historic Sites
    - State Historic Preservation Office
    - Water Resources Center
- Missouri Department of Transportation

Local Agencies

- East-West Gateway Council of Governments
- St. Louis Air Pollution Control Department
- St. Louis Building Division
- St. Louis Community Development Association
- St. Louis County Soil and Water Conservation District
- St. Louis Cultural Resources Office
- St. Louis Department of Forestry
- St. Louis Department of Health
- St. Louis Department of Public Utilities
- St. Louis Department of Streets
- St. Louis Development Corporation
- St. Louis Parks Recreation, and Forestry
- St. Louis Planning and Urban Design Agency
- St. Louis Water Division
- St. Louis Zoning

4.3 Native American and Section 106 NHPA Consultation

In accordance to Section 106 of NHPA, EO 13175 and the Native American Graves Protection and Repatriation Act (NAGPRA), VA sent letters during the SEA process asking for input to Federally recognized tribes that may attach religious or cultural significance to the project area affected by the Proposed Action. Five Native American Tribes with possible ancestral ties to the Proposed Action's project area were contacted based on review of the Tribal Directory Assessment Tool (TDAT) from the United States Department of Housing and Urban Development. A Section 106 Consultation letter was sent to each tribe. Tribal organizations consulted include:

- Apache Tribe of Oklahoma
- Miami Tribe of Oklahoma
- Osage Nation
- Quapaw Tribe of Indians
- Seneca-Cayuga Nation

Section 5.0 Mitigation Measures

Mitigation measures that were laid out in the above sections are compiled here. Mitigation measures are to be used to avoid, minimize, rectify, reduce, or compensate for the adverse effects of an impact to the environment. Table 1 shows Technical Resource Area Analysis Summary. Table 12 shows the mitigation measures collected during stakeholder consultation and review while completing this SEA.

Table 12. Mitigation Measures

Resource	Proposed Action Mitigation
Aesthetics	The VASTLHCS campus will acquire all zoning changes and city permits required to maintain aesthetics and follow city ordinance. VASTLHCS will maintain upkeep on landscaping and buildings.
Air Quality	BMPs to be used to mitigate air quality impacts during construction: • When applicable, limit the use of heavy construction equipment on orange or red Air Quality Indices (AQI) to limit ozone exceedances. • State ordinance 10 CSR 10-5.385 states that any heavy-duty diesel vehicle with a gross weight greater than 10,000 pounds that operates in the City of St. Louis may not idle more than 5 minutes within any 60-minute period. • Submit and have approved a notice of asbestos abatement and/or demolition to the MDNR at least 10 days prior to the commencement of asbestos abatement and/or demolition activities. • Use appropriate dust suppression methods during onsite demolition/construction activities. Available methods include application of water, dust palliative, or soil stabilizers; use of enclosures, covers, silt fences, or wheel washers; and suspension of demolition and earth-moving activities during high wind conditions. • Comply with all local, state, and federal regulations.
Cultural Resources	The VA has initiated consultation with SHPO and consulting parties regarding Alternative A. Through consultation, the VA and the consulting parties will identify measures to avoid and minimize potential adverse effects to historic properties. If the Palladium is still considered eligible following consultation and if Alternative A is chosen to move forward, the VA will need to complete Historic American Buildings Surveys and Historic American Engineering Records documentation prior to demolition. The creation of a programmatic agreement (PA) is under way to resolve adverse effects to historic properties through development and implementation. Other mitigation strategies include design review by SHPO and other parties to identify alternatives that are more sympathetic to historic resources. Minimize indirect (view shed) effects to nearby historic buildings/districts through environmental sensitive/sympathetic design. The VA shall follow guidelines and mitigation measures detailed in the PA. Should human remains or other cultural items as defined by NAGPRA be discovered during project construction, the construction contractor would immediately cease work until the VA, a qualified archaeologist, and the SHPO are contacted to properly identify and appropriately treat discovered items in accordance with applicable State and Federal law(s).

Geology, Topography, and Soils	The campus design will be created with IBC and Department of Veterans Affairs requirements. As well, removal of existing fill and avoiding soft spots within the project area detailed above and in the Geotechnical report will help to provide a stable and long lasting campus that will serve the area and meet project objectives. Implementing BMPs to reduce erosion and sedimentation impacts during construction would further minimize the potential impacts on local soils and water quality. These erosion and sedimentation control BMPs include developing and submitting a NPDES General Permit for Construction Activity to the Metropolitan St. Louis Sewer District and the MDNR Water Protection Program. The NPDES permit would require stormwater runoff and erosion management using BMPs, earth berms, detention basins, vegetative buffers and filter strips, and spill prevention and management techniques. The construction contractor would implement the following as appropriate and necessary to protect surface water quality, as part of NPDES permit: • Install and monitor erosion-prevention measures (BMPs), such as silt fences and water breaks, detention basins, filter fences, sediment berms, interceptor ditches, straw bales, rip-rap, and/or other sediment control structures; re-spread stockpiled topsoil; and seed/re-vegetate areas temporarily cleared of vegetation. • Retain on-site vegetation to the maximum extent possible. • Plant and maintain soil-stabilizing vegetation on disturbed areas. • Use native vegetation to re-vegetate disturbed soils.
Hydrology and Water Quality	Volume reducing best management practices (BMPs) for stormwater quality are required however and these are identical to the water quality BMPs. The project will need to provide flood detention (2 & 100 year – 24 hour, type 2 Storm event) since the difference in stormwater is over 2 cubic feet per second. Flood protection should be supplemented by volume reducing BMPs as well. MDC also recommends mitigation measures should be used to prevent erosion and sedimentation/runoff to nearby waterways (Section 3.6 Hydrology and Water Quality provides further detail) as well as proper cleaning of construction equipment via removing mud, soil, trash, plants and animals. When possible wash and rinse equipment with hard spray or hot water (>140̊ F) to prevent transferring invasive exotic species. VA will need to obtain all federal, state and local permits before project may begin.
Wildlife and Habitat	Proper site inspection to verify that the nests of migratory birds, peregrine falcons, and eagles will be conducted prior to demolition and construction if Alternative A or B are chosen. The contractor hired will be responsible for hiring a qualified biologist to conduct site inspections for federally protected and state listed species. Per MDC recommendation, work should be avoided within 1500 feet of nests when nest building or active nests (eggs or hatchlings) are present to limit adverse effects to the state listed peregrine falcon. If nest building or active nests of peregrine falcons or any of the protected species mentioned above are found on the campus by the biologist or workers, work shall be avoided within 1500 feet to avoid impacts to protected species.

Noise	While no specific measures are required, using best management practices during construction if Alternative A or B are chosen will limit noise output increases and limit impacts to sensitive receptors and the community. To minimize the short-term impacts of construction, the contractor shall implement these BMP's when applicable. Any noise issues that arise will be addressed by the onsite construction manager. BMPs include: • Comply to all noise ordinances in the St. Louis City Code. • Limit construction activities on the weekend and from sunset to sunrise Monday-Friday when possible to avoid excessive noise output during sensitive times. • Include signage at sight and coordinate with local sensitive receptors where entry and exit points are, construction times and activity to avoid conflict with local stakeholders. Encourage construction personnel to operate equipment in the quietest manner possible and follow BMP's to avoid excessive noise output (limit speeds, shut off non-operating equipment, select entry and exit points far from noise receptors). These BMP's would help to limit the short-term construction noise outputs until normal operation can continue and avoid conflict as much as possible with local sensitive receptors.
Land Use	For any acquired properties that require conditional use permits, VA would obtain and submit and the proper permits prior to beginning project construction. VA shall consult with the City of St. Louis Planning and Urban Design Agency (PUDA) to integrate design features, to the extent practicable, so that the expanded John Cochran Division would be designed and constructed in similarity with other developments within the area.
Floodplains and Wetlands	No mitigation or management measures are required for any of the alternatives described for the project. Consultation with the USACE determined since none of the project occurred within waters of the US, no USACE permit is required.
Socioeconomics	VA shall comply with the requirements of the Uniform Relocation Act (URA) to ensure the uniform and equitable treatment of displaced businesses and people from their residences. VA would develop a Relocation Plan specific to the selected Action Alternative to identify potential problems and associated solutions for displaced residents, businesses, tenants, and/or landlords as a result of the implementation of the Proposed Action.
Community Services	VA shall consult with all community services before construction and changes to any streets or services occur.
Solid Waste and Hazardous Materials	Reducing potential future impacts by following the recommended BMP's listed below will help to limit future potential adverse effects and help with compliance to regulatory requirements in the future. The VA will need to complete asbestos and lead surveys of all buildings planned for demolition or renovation by certified Missouri inspectors before work is to begin if alternative A or B are selected. Proper BMP's during construction will need to be followed to limit short term minimal waste impacts; removing waste from

	site, limiting construction dust and airborne particles and limiting and monitoring for leaks from equipment to avoid ground contamination from diesel and gasoline. As well, care should be taken in demolition of facilities to limit asbestos and lead contact and proper disposal of building materials containing them. The proper removal of lead based paint and asbestos will be required to mitigate impacts and contamination to the project site. Further evaluation for impacted soils and removal of underground storage tanks detected in the Phase 2 ESA will need to be completed to limit further contamination and mitigate impacted soils. The VA would need to acquire all necessary permits for the underground storage tanks needed for the generators being constructed on the new facility, if Alternative A is selected. The SPCC Plan will need to be updated to include all new facility tanks and waste.
Transportation and Parking	Coordination with the City of St. Louis is underway and will continue as construction is planned to properly mitigate all changes to city streets and traffic. Parking lots and garages are designed In Alternative A to offer parking for visitors and staff for the proposed campus and into the future with planned growth. Short term impacts during construction will be limited to all extents possible. The signals along Grand Boulevard would be closely coordinated to minimize queues on Grand Boulevard, especially when reduced to one through lane during construction. Emergency vehicle preemption would be in place at the signals along Grand Boulevard throughout all phases of reconstruction along Grand Boulevard. Depending on city consultation, if a roundabout is constructed at Spring Avenue/Delmar Boulevard, the Spring Avenue/Enright Avenue intersection would be converted from a signalized intersection to side-street stop control.
Utilities	During planning of facilities and construction if proceeding forward with Alternative A or B, the VA shall be in communication with utility services to make sure services are not interrupted or altered. Communication with Ameren regarding the substation and any local or state permits required should be completed and obtained before construction of the Campus if Alternative A or B are selected to proceed forward.
Environmental Justice	During construction, if Alternative A or B are chosen, effects on adjacent land uses, such as through noise and dust, would be limited and controlled as discussed in Sections 3.3 and 3.8 of the SEA, thereby minimizing adverse effects to minority and low-income populations. In addition, construction of Alternative A or B is anticipated to result in short-term and long- term, direct, positive socioeconomic impacts to local employment and personal income. Given the ROI is a minority and low-income community, such positive effects would be anticipated to extend to local minority and low-income citizens, a positive environmental justice effect.

Section 6.0 Summary and Conclusion

This SEA evaluates VA's proposed action to bed tower replacement, clinical building expansion and JC parking garage additions the St. Louis VAMC – John Cochran Division in the City of St. Louis, Missouri. This SEA discusses three alternatives: Alternative A, acquisition of southern properties; Alternative B, no acquisition; and the No Action Alternative. The SEA evaluates possible effects to aesthetics; air quality; cultural resources; geology, topography and soils; hydrology and water quality; wildlife and habitat, including threatened and endangered species; noise; land use; floodplains and wetlands; socioeconomics and environmental justice; community services; solid and hazardous materials; transportation and parking; and utilities.

The acquisition of properties and construction of new facilities proposed in Alternative A are not expected to result in significant adverse impacts to the human environment. The construction of new facilities and enhancements of indoor environmental quality, plus the creation of a more favorable healing environment for veterans receiving medical services will have a long-term beneficial effect on the patients, visitors, and staff in the new and renovated campus.

The impacts would occur if Alternative A or B were chosen, and would be anticipated to occur from the short-term and temporary adverse effects caused by the construction and demolition activities. Construction for Alternative A and B would be phased over a 9 to 12-year period with start and stop construction occurring on the various elements. The potential adverse impacts to air quality, water quality, noise, solid and hazardous waste, and transportation and parking will be largely avoided or minimized by strict adherence to VA construction standards for temporary controls, demolition, and waste management, and by application of standard construction best management practices.

This SEA concludes there would be no significant direct, indirect, or cumulative adverse impact to the local environment or quality of life associated with implementing Alternative A, provided VA implements the routine management measures and regulatory compliance measures specified in this SEA.

Section 7.0 List of Preparers

Table 13. List of Preparers

Name	Company	Title	Responsibilities
Chandrashekhar Joshi	VA Office of Construction and Facilities Management	COR/NCA Project Manager	Document Preparation Technical Review
Glenn Wittman	VA Office of Construction and Facilities Management	Regional Environmental Engineer	Document Preparation Technical Review
Héctor M. Abreu Cintrón	VA Office of Construction and Facilities Management	Sr. Historic Preservation Specialist	Document Preparation Technical Review
Benjamin Hodapp	Anderson Engineering of Minnesota, LLC	Environmental Lead	Project Manager Document Preparation
Wyatt Benton	Anderson Engineering of Minnesota, LLC	Environmental Associate	Document Preparation
Katie Ring	Anderson Engineering of Minnesota, LLC	Environmental Associate	Document Preparation
Lindsey Hannah	Row 10, Historical Preservation Solutions, LLC.	Historical Preservationist	Cultural Assessment and Consultation

Section 8.0 References

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Section 9.0 List of Acronyms and Abbreviations

ACHP	Advisory Council on Historical Preservation
ACM	Asbestos Contaminated Materials
AIRFA	American Indian Religious Freedom Act
APE	Area of Potential Effect
AQI	Air Quality Index
ARPA	Archeological Resource Protection Act
BMP	Best Management Practices
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CLA	Clean Air Act
CLAA	Clean Air Act Amendments
CO	Carbon Monoxide
CSR	Code of State Regulation
dBA	a-Weighted Decibel
DOT	Department of Transportation
EA	Environmental Assessment
EPA	Environmental Protection Agency
ER	Emergency Room
ESA	Environmental Site Assessment
FAA	Federal Aviation Administration
FONSI	Finding of No Significant Impacts
FPPA	Farmland Protection Policy Act
HUD	United States Department of Housing and Urban Development
IBC	International Business Code
IPaC	Information for Planning and Consultation
LBP	Lead Based Paint
LDTL	Lowest Default Target Levels
MDC	Missouri Department of Conservation
MDNR	Missouri Department of Natural Resources
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Grave Protection and Reparation Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOx	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCA	Natural Resource Conservation Act
NRHP	National Registry of Historic Places
O & M	Natural Resource Conservation Service
O3	Ozone
OSHA	Occupational Safety and Health Administration
PA	Programmatic Agreement
Pb	Lead

PM	Particulate matter
PUDA	Planning and Urban Design Agency
RBTL	Risk Based Target Levels
RCRA	Resource Conservation and Recovery Act
ROI	Region of Influence
SCI	Spinal Cord Injury
SEA	Supplemental Environmental assessment
SHPO	State Historic Preservation Office
SO2	Sulfur Dioxide
SPCC	Spill Prevention Control and Countermeasures
SWPPP	Stormwater Pollution and Prevention Plan
TDAT	Tribal Directory Assessment Tool
TRI	Toxic Release Inventory
URA	Uniform Relocation Act
USACE	United States Army Corp of Engineers
USC	United States Code
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VA	Veterans Affairs
VAMC	Veterans Affairs Medical Center
VASTLHCS	Veterans Affairs Sr. Louis Health Care System
VISN	Veterans Integrated Service Network

Section 10.0 List of Environmental Permits Required

The following is a list of applicable forms and permits required at the writing of this document. These requirements should be verified with current regulations and guidelines prior to the future project design:

- Air Quality
  - New Source Review Permit
- Stormwater and Erosion Control
  - National Pollutant Discharge Elimination System (NPDES) General Permit
  - NPDES Duly Authorized Representative Form
  - Storm Water Pollution Prevention Plan(SWPPP)
- Utilities
  - Commercial Construction Permit
  - Telecommunications Permit
  - Excavation Permit
  - Blocking Right of Way Permit