

DRAFT

**Environmental Assessment
New Surgical and Clinical Tower and Building Demolition
West Haven Veterans Affairs Medical Center
VA Connecticut Healthcare System, West Haven, CT
VA Project: 689-040**

September 2022

**U.S. Department of Veterans Affairs
Office of Construction and Facilities Management**



EXECUTIVE SUMMARY AND CONCLUSIONS

The U.S. Department of Veterans Affairs (VA) has VA prepared this Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 U.S. Code §§ 4321-4370h), as implemented by the Council on Environmental Quality regulations (40 Code of Federal Regulations [CFR] §§ 1500-1508); *Environmental Effects of the Department of Veterans Affairs Actions* (38 CFR Part 26); and VA's *NEPA Interim Guidance for Projects* (VA 2010).

NEPA requires federal agencies to consider the environmental effects of their proposed actions. This EA evaluates the potential impacts on the human environment resulting from proposed construction of a new surgical and clinical tower and demolition of several existing buildings at the West Haven Veterans Affairs Medical Center (WHVAMC), 950 Campbell Avenue, West Haven, New Haven County, Connecticut.

The WHVAMC encompasses approximately 44 acres in the northern section of the City of West Haven, CT. Under the auspices of the General Hospital Society of Connecticut, construction of a hospital for tubercular patients at this the property began in 1916. Today, the WHVAMC serves over 60,000 Veterans annually.

Under the Proposed Action, an approximately 161,000-building-gross-square-foot new surgical and clinical tower would be constructed and operated within the WHVAMC property; no new property would be acquired. The new tower is proposed to be between two and four levels with aboveground passageways to Building 1. A mechanical/electrical/plumbing penthouse would be housed on top of the new facility and a subterranean tunnel would be included for easy access to utilities with connections to existing buildings.

The ***purpose*** of the Proposed Action is to construct a new surgical and clinical tower at the WHVAMC. The medical support services of the new facility would include inpatient surgical/endovascular, ambulatory, intensive care nursing, information & technology, pathology, laboratory medicine, sterile processing, engineering, pharmacy, environmental management, and logistics.

The Proposed Action ***is needed*** to meet VA Standards for space and patient population, improve workflow inefficiencies, reduce the potential for increased infection control issues, and improve life safety egress issues located within Building 1 which houses the existing Surgery Department Operating Suite.

The EA analyzes the Proposed Action, which is to construct and operate one of three conceptual alternatives (defined as Alternatives 1, 2, and 3) for the new surgical and clinical tower, which would be located within a central area at the WHVAMC. All alternatives would require the demolition of several buildings that contribute to the West Haven Veterans Administration Hospital/William Wirt Winchester Memorial Hospital Historic District, which was listed in the National Register of Historic Places (NRHP) on May 26, 2022.

This EA also examines a No Action Alternative, under which the Proposed Action would not be implemented and existing conditions at the WHVAMC would remain unchanged for the foreseeable future. This is required under NEPA and serves as the baseline for impact analysis. Although none of the historic buildings would be demolished under the No Action Alternative, the deficiencies in medical and utility infrastructure, patient care, and safety issues would remain

unresolved. For this reason, the No Action Alternative does not meet the purpose and need for action and would diminish the level of care that VA is able to provide at the WHVAMC to Veterans throughout Connecticut and southern New England.

The EA provides VA decision makers with information needed to select the conceptual alternative that best fits the WHVAMC long-term operational requirements while minimizing potential adverse impacts to the human environment. Once the EA is completed, the conceptual alternative would be refined during a formal design process performed by VA in collaboration with the U.S. Army Corps of Engineers and a designated Architect/Engineer of Record.

The following table summarizes the impact findings of the environmental analysis of the Proposed Action (Alternatives 1, 2, and 3) and the No Action Alternative.

Environmental Resource Topic	Proposed Action	No Action
Aesthetics		
<i>Construction</i>	All alternatives under the Proposed Action would have direct, short-term (though lasting up to four years), less-than-significant adverse impact on aesthetics.	No impact
<i>Operation</i>	Alternative 1 would have a direct, long-term, moderate adverse impact on aesthetics	No impact
	Alternative 2 would have a direct, long-term, negligible adverse impact.	
	Alternative 3 would have a direct, long-term, minor adverse impact.	
Air Quality		
<i>Construction</i>	All alternatives under the Proposed Action would have a direct, short-term, less-than-significant adverse impact on air quality.	No impact
<i>Operation</i>	All alternatives under the Proposed Action would have a direct, long-term, less-than-significant adverse impact on air quality.	No impact
Cultural and Historic Resources		
<i>Construction and Operation</i>	All alternatives under the Proposed Action would have an adverse impact on historic properties due to the demolition of buildings identified as historic resources. There would be no impact to below-ground historic properties.	No impact
Geology, Topography, and Soils		

Environmental Resource Topic	Proposed Action	No Action
<i>Construction</i>	All alternatives under the Proposed Action would have a direct, long-term, negligible adverse impact on geologic resources including on seismic hazards, mineral resources, and prime agricultural land.	No impact
	All alternatives would have a direct, short-term, negligible adverse impact on soil quality.	
	Alternative 1 would have a negligible impact on topographic conditions.	
	Alternatives 2 and 3 would have direct, long-term, negligible adverse impacts on topographic conditions.	
<i>Operation</i>	All alternatives under the Proposed Action would have direct, long-term, negligible impacts on geology, topography, and soil quality.	No impact
Hydrology and Water Quality		
<i>Construction</i>	All alternatives under the Proposed Action would have a direct, short-term, negligible adverse impact on groundwater quality and a direct, short-term, minor adverse impact on hydrology/stormwater.	No impact
<i>Operation</i>	All alternatives under the Proposed Action would have a negligible impact on groundwater quality and a direct, long-term, less-than-significant beneficial impact on hydrology/stormwater.	No impact
Noise and Vibration		
<i>Construction</i>	All alternatives under the Proposed Action would have a negligible impact on noise-sensitive receptors and the surrounding community. All alternatives would have a direct, short-term, negligible adverse impact on vibration-sensitive receptors.	No impact
<i>Operation</i>	All alternatives under the Proposed Action would have a negligible impact on noise-sensitive and vibration-sensitive receptors and the surrounding community.	No impact
Solid Waste and Hazardous Materials		

Environmental Resource Topic	Proposed Action	No Action
<i>Construction</i>	All alternatives under the Proposed Action would have a direct, long-term, less-than-significant beneficial impact on regulated building materials and radiological waste, but a direct, short-term, less-than-significant adverse impact by increasing the volume of waste disposed of at an off-site landfill.	Long-term, negligible adverse impact on hazardous materials, and no impact on solid waste.
<i>Operation</i>	All alternatives under the Proposed Action would have a direct, long-term, negligible adverse impact on solid wastes and hazardous materials.	Long-term, negligible adverse impact on hazardous materials, and no impact on solid waste.
Transportation and Parking		
<i>Construction</i>	All alternatives under the Proposed Action would have a direct, short-term, minor adverse impact on transportation and parking.	No impact
<i>Operation</i>	All alternatives under the Proposed Action would have a direct, long-term, negligible adverse impact on transportation and parking.	No impact
Utilities		
<i>Construction</i>	All alternatives under the Proposed Action would have a direct, short-term, negligible impact on utilities.	No impact
<i>Operation</i>	All alternatives under the Proposed Action would have a direct, long-term, negligible adverse impact on utilities due to a negligible increase in utility consumption. Improvements to WHVAMC utility distribution infrastructure would have a long-term, direct, moderate beneficial impact on utility operations at the WHVAMC.	Utility distribution infrastructure improvements would have a long-term, direct, moderate beneficial impact on utility operations at the WHVAMC.

Environmental Resource Topic	Proposed Action	No Action
Community Services		
<i>Construction</i>	All alternatives under the Proposed Action would have a direct, short-term, minor adverse impact on administrative and medical services.	No impact
<i>Operation</i>	All alternatives under the Proposed Action would have a direct, long-term, significant beneficial impact on administrative and medical services.	Long-term, significant adverse impact
Socioeconomics/ Demographics		
<i>Construction</i>	All alternatives under the Proposed Action would have a direct, short-term, minor beneficial impact on local socioeconomic conditions.	No impact
<i>Operation</i>	All alternatives under the Proposed Action would have direct and indirect, long-term, negligible beneficial impacts on socioeconomic conditions.	No impact
Environmental Justice		
<i>Construction and operation</i>	All alternatives under the Proposed Action would have a negligible impact on Environmental Justice conditions.	No impact
Cumulative Impacts		
<i>Construction and Operation</i>	Depending on the Proposed Action alternative selected, there would be potential short-term and/or long-term adverse cumulative impacts on aesthetics, air quality, historic aboveground properties, soil, stormwater, noise, solid waste, transportation, and utilities. None of the adverse impacts would increase to a significant level. All Proposed Action alternatives would have a potential long-term, beneficial cumulative impact on community services and socioeconomics.	Long-term, significant, adverse cumulative impact on community services.
Potential for Generating Substantial Controversy		
<i>Construction and Operation</i>	All alternatives under the Proposed Action are not anticipated to generate substantial controversy. The loss of historic buildings may be controversial to community members focused on preserving cultural resources. However, mitigation of this controversy and mitigation of the potential loss of historic buildings would be incorporated into the Programmatic Agreement with the CT SHPO.	Significant public controversy due to not meeting VA Standards.

Environmental Resource Topic	Proposed Action	No Action
	Alternative 1 – Loss of the courtyard may be negatively perceived by VA staff.	

VA published a NEPA scoping notice in *New Haven Register* describing the Proposed Action and VA’s intent to prepare a Draft EA, to solicit early input and engagement from the public, in the NEPA process. No public scoping comments were received. VA also mailed letters to federally recognized tribes and federal, state, and local regulatory agencies and elected officials with potential interest in the Proposed Action to solicit their comments about issues that should be considered for analysis in the Draft EA. VA received comments from the US Environmental Protection Agency, Connecticut Department of Energy and Environmental Protection, and the Connecticut State Historic Preservation Office; these comments are addressed in the Draft EA.

VA has published a Notice of Availability (NOA) of the Draft EA in the *New Haven Register* and mailed copies of the NOA to federally recognized tribes and to federal, state, and local regulatory agencies and elected officials with interest in the Proposed Action. The Draft EA was made available at the West Haven Public Library at 300 Elm St, West Haven, CT 06516; and available for electronic download from the VA website: <https://www.cfm.va.gov/environmental/index.asp>.

Comments received on the Draft EA will be documented and addressed in the Final EA.

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ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
ACM	asbestos-containing material
ADT	average daily traffic
A/E	Architect/Engineer
APE	Area of Potential Effect
bgs	Below ground surface
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFM	Office of Construction and Facilities Management
CFR	Code of Federal Regulations
CGP	Construction General Permit
CO	Carbon monoxide
CT	Connecticut
CTDEEP	Connecticut Department of Energy and Environmental Protection
CTDOT	Connecticut Department of Transportation
CTDPH	Connecticut Department of Public Health
DGSF	Departmental Gross Square Feet
DNL	day-night level
EA	Environmental Assessment
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act
EO	Executive Order
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
HUD	U.S. Department of Housing and Urban Development
LCP	lead-containing paint
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual
mRem/yr	millirem per year
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NHHP	National Health Physics Program
NHPA	National Historic Preservation Act
NOA	Notice of Availability
NRC	US Nuclear Regulatory Commission
NRCS	National Resource Conservation Service
NRHP	National Register of Historic Places
OSHA	US Occupational Safety and Health Administration
PA	Programmatic Agreement
PACU	post-anesthesia care unit
PCB	polychlorinated biphenyls
PEL	Permissible exposure limit

Acronym/Abbreviation	Definition
PM	Particulate matter
PSRDM	Physical Security and Resiliency Design Manual
RSO	Radiological Safety Officer
SESC	soil erosion and sediment control
SF	Square foot
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SSSHA	Site-Specific Seismic Hazard Analysis
TPY	tons per year
TTG	The Traffic Group
UFC	Unified Facilities Criteria
US	United States
USAF	United States Air Force
USC	United States Code
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Agency
USGS	United States Geological Survey
VA	United States Department of Veterans Affairs
VACHS	VA Connecticut Healthcare System
VAMC	VA Medical Center
VdB	Vibration velocity
VISN	Veterans Integrated Service Network
VOC	Volatile organic compound
WHVAMC	West Haven VA Medical Center

1. INTRODUCTION

The U.S. Department of Veterans Affairs (VA) has prepared this Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 U.S. Code §§ 4321-4370h), as implemented by the Council on Environmental Quality regulations (40 Code of Federal Regulations [CFR] §§ 1500-1508); *Environmental Effects of the Department of Veterans Affairs Actions* (38 CFR Part 26); and VA's *NEPA Interim Guidance for Projects* (VA 2010).

NEPA requires federal agencies to consider the environmental effects of their proposed actions. This EA evaluates the potential impacts on the human environment resulting from proposed construction a new surgical and clinical tower and demolition of several existing buildings at the West Haven Veterans Affairs Medical Center (WHVAMC), 950 Campbell Avenue, West Haven, New Haven County, Connecticut.

The WHVAMC encompasses approximately 44 acres in the northern section of the City of West Haven, CT. Under the auspices of the General Hospital Society of Connecticut, construction of a hospital for tubercular patients at the property began in 1916. Today, the WHVAMC serves over 60,000 patients annually throughout New England.

1.1 Purpose and Need

One of the critical missions of VA is to provide healthcare to the nation's millions of Veterans. Construction projects are often required by VA to meet the changing demand for services, improve aging infrastructure, and to keep pace with ever changing technology and models of care.

The current WHVAMC total surgery space is 35,544 Departmental Gross Square Feet (DGSF) which is 40% below the VA Standards for the VA Connecticut Healthcare System (VACHS) space and patient population. As a result, deficits in space occur in patient registration, patient and family waiting areas, restrooms, and outpatient preparation and recovery.

The purpose of the Proposed Action is to address space deficiencies and continuity of healthcare services via the proposed construction of a new surgical and clinical tower at the WHVAMC. Medical support services of the proposed new facility would include inpatient surgical/endovascular, ambulatory, intensive care nursing, information & technology, pathology, laboratory medicine, sterile processing, engineering, pharmacy, environmental management, and logistics.

The Proposed Action **is needed** to meet VA Standards for space and patient population DSGF, ensure continuity of healthcare services, improve workflow inefficiencies, reduce the potential for increased infection control issues, and improve life safety egress issues located within Building 1 which houses the existing Surgery Department Operating Suite

Construction and operation of a new surgical and clinical building at WHVAMC would also address the existing critical deficiencies related to utility failures, infection prevention issues, patient and staff safety concerns.

1.2 Background

The WHVAMC is part of the larger VA Connecticut Healthcare System (VACHS) which provides medical services to over 60,000 Veterans throughout southern New England (VACHS, 2021). The VACHS was officially formed in 1995, when the VA medical centers in West Haven and Newington became affiliated. Current primary affiliations are with the Yale University School of Medicine, the University of Connecticut Schools of Medicine and Dentistry, and the Fairfield University School of Nursing.

The WHVAMC is a tertiary care facility classified as a Clinical Referral Level One Facility with a total of 216 operational beds. It is a teaching hospital that provides a full range of health services for Veterans, with state-of-the-art technology as well as education and research.

The WHVAMC property dates back to 1919 when it was dedicated as a new tuberculosis hospital by the General Hospital Society of Connecticut. The government purchased the property in 1948 enabling construction of a new hospital for veterans. The WHVAMC was dedicated on September 13, 1953. Of the current 39 buildings, 17 buildings and two structures (the entrance gate and the stack) were built prior to 1953.

The WHVAMC (Figure 1) encompasses approximately 44 acres in the northern portion of the City of West Haven, New Haven County, Connecticut. The WHVAMC is bounded on the south by West Spring Street, on the east by Campbell Avenue, to the north by Terrace Avenue, and on the west by Overlook Street and residential neighborhoods (Figure 2). The campus includes 39 buildings and associated parking facilities (Figure 3).

Figure 1. West Haven VAMC Regional Location Map

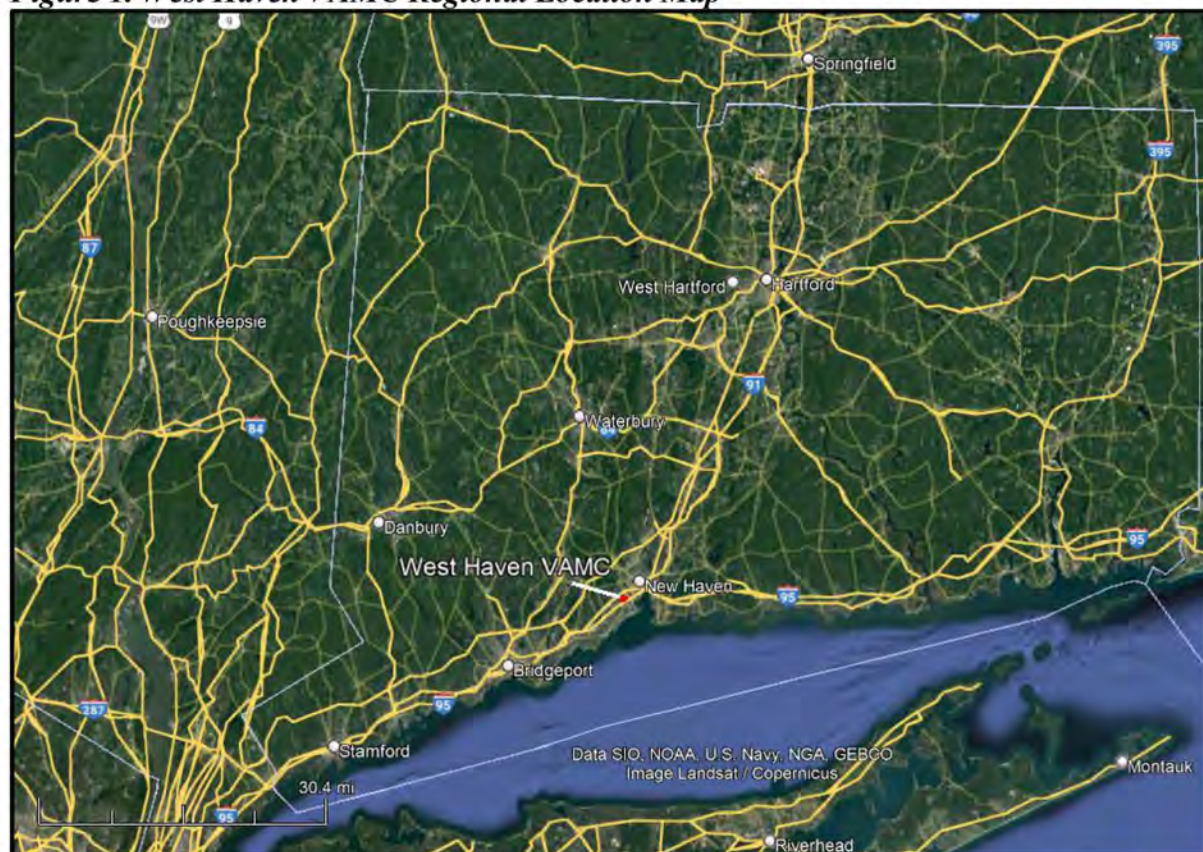


Figure 2. West Haven VAMC Site Locus Map

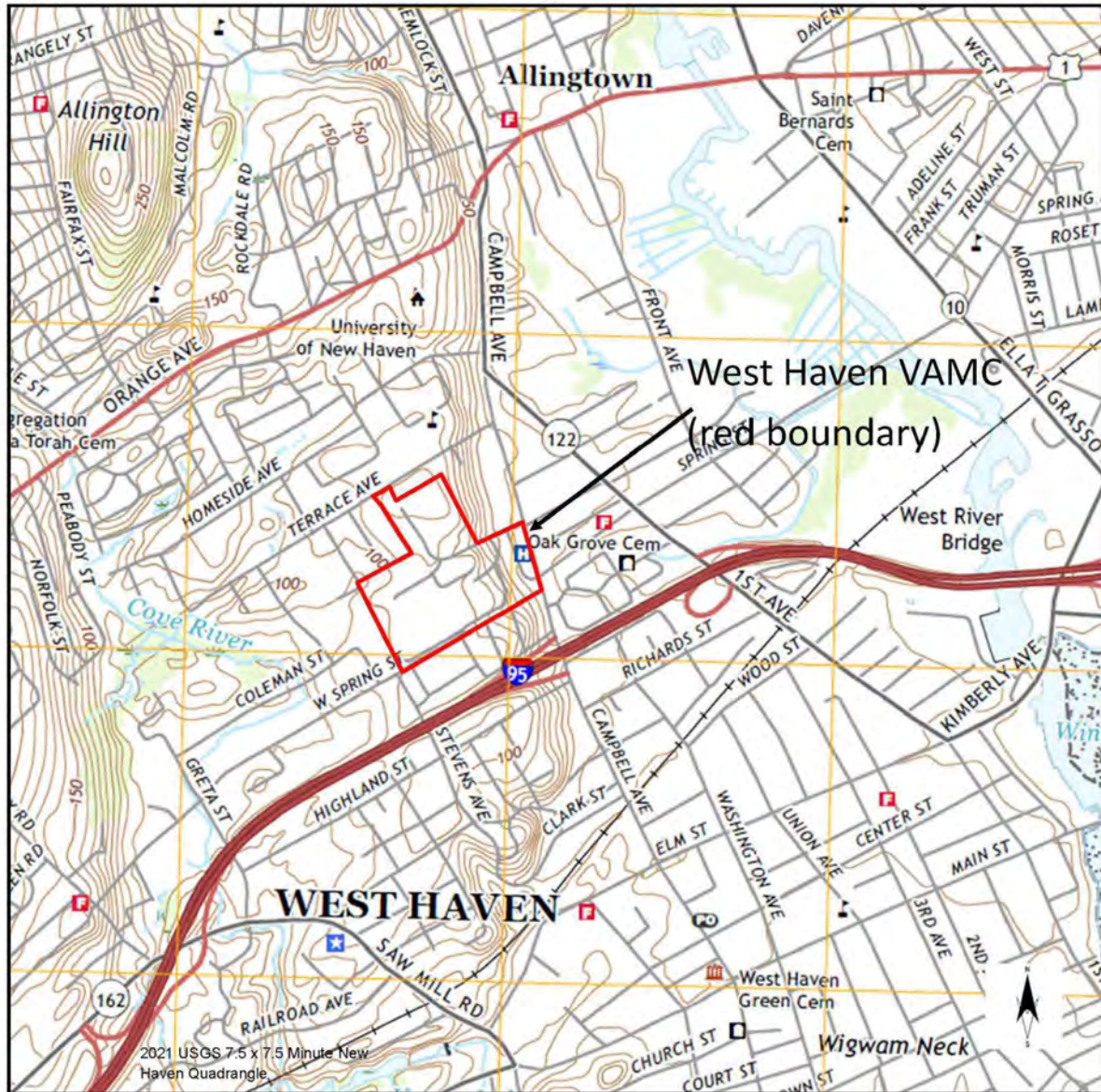
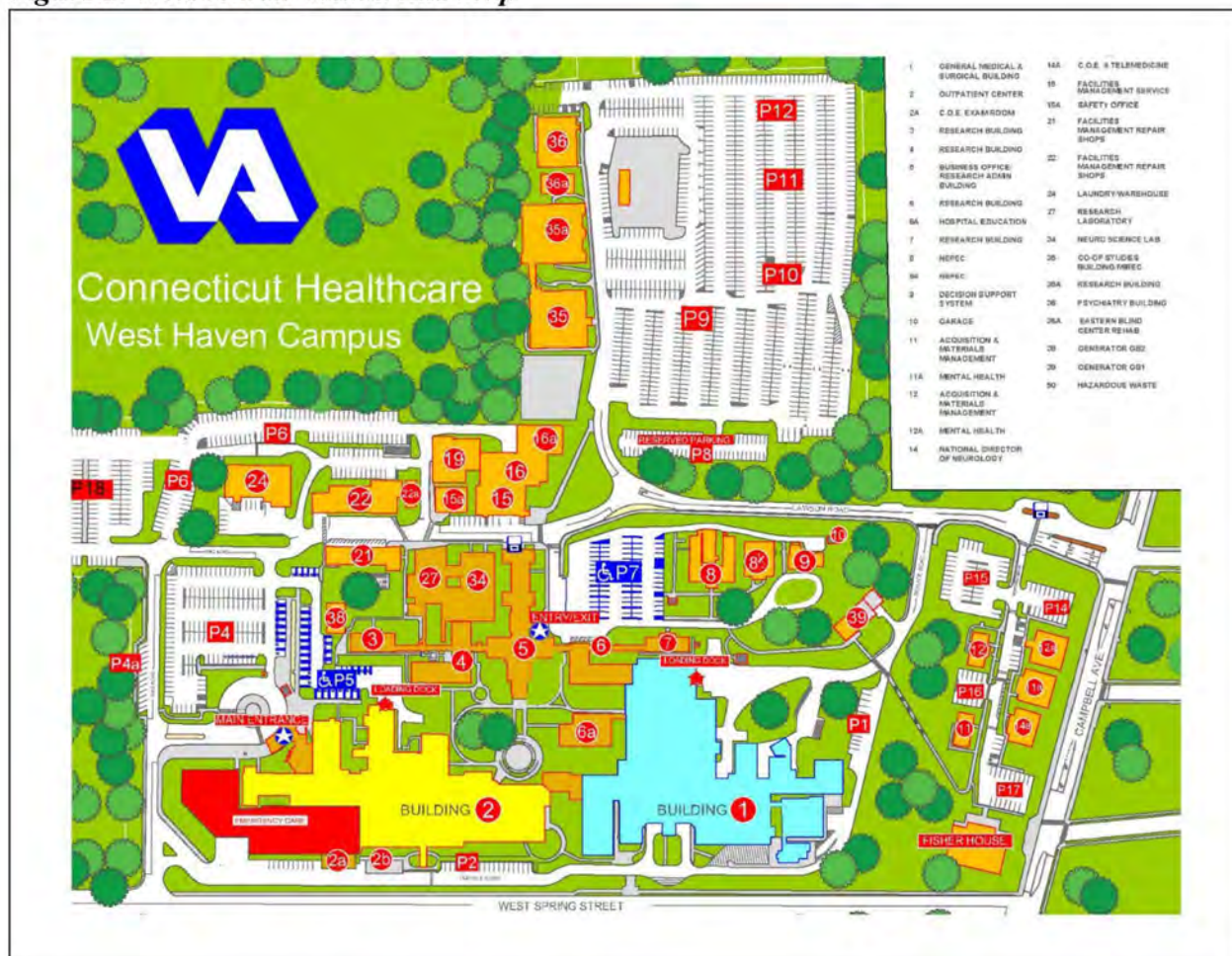


Figure 3. West Haven VAMC Site Map



1.3 Proposed Action

Under the Proposed Action, the US Army Corps of Engineers, on behalf of VA, would design and construct a new surgical and clinical tower at the WHVAMC. The new tower would be classified as Mission Critical because inpatient beds and hospital functions would be located inside. The new tower is proposed to be three to four stories or more. A mechanical/electrical/plumbing penthouse would be housed on top of the new facility and a subterranean tunnel for utilities would be included for easy access to utilities with a tunnel connecting it to existing buildings. The Proposed Action would also involve the renovation of interior spaces in the current General Medical and Surgical Building (Building 1) and would include the construction of aboveground passageways from the new tower to Building 1 to facilitate movement of visitors, patients, staff, and materials/equipment. The Proposed Action would also involve the demolition of several buildings that contribute to the WHVAMC historic district.

Three conceptual alternatives (e.g. physical layout and alignment of the new tower) within a portion of the WHVAMC property boundary have been considered for the Proposed Action. A detailed description of the Proposed Action is presented in Section 2.1.1.

1.4 Regulatory Basis for the Environmental Assessment

In accordance with the National Environmental Policy Act of 1969 (NEPA) (42 United States Code 4321 *et seq.*), the White House Council on Environmental Quality (CEQ) “Regulations Implementing the Procedural Provisions of NEPA” (40 Code of Federal Regulations [CFR] 1500–1508), VA’s NEPA regulations titled “Environmental Effects of the Department of Veterans Affairs Actions” (38 CFR Part 26), and VA’s NEPA Interim Guidance for Projects (VA, 2010). VA is required to conduct an Environmental Assessment (EA) to evaluate the potential environmental impacts of VA facilities, operations, and related funding decisions.

1.5 Decision-Making

VA has prepared this EA to identify, analyze, and document the potential physical, environmental, cultural, and socioeconomic impacts associated with implementing the proposed construction, demolition, and operational elements of the Proposed Action. Additionally, this EA evaluates the potential impacts associated with taking No Action.

VA utilizes the NEPA review process as part of their informed decision making prior to implementing a Proposed Action. An EA provides sufficient evidence and analysis for determining whether an action would cause significant environmental impacts [requiring an Environmental Impact Statement (EIS)] (40 CFR 1508.9). VA decision makers review the EA and, if an EIS is not required, can issue a Finding of No Significant Impact (FONSI) (40 CFR 1508.13). As required by NEPA and the implementing regulations from CEQ and VA, this EA also evaluates a No Action Alternative, which provides a baseline for comparison of potential impacts for the Proposed Action.

VA, as a federal agency, is required to incorporate environmental considerations into its decision-making process for the actions it proposes to undertake. This is done according to the regulations and guidance identified above. As such, this EA:

- Informs the public of the possible environmental impacts of the Proposed Action and its alternatives, as well as methods to reduce these impacts;
- Provides for public, state, inter-agency, and tribal input into VA’s planning and evaluation;
- Documents the NEPA process; and,
- Supports informed decision-making by the federal government.

The decision to be made is whether—having considered the potential physical, environmental, cultural, and socioeconomic effects—VA should implement the Proposed Action including measures to reduce any potential adverse impacts.

2. DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

NEPA regulations require that federal agencies evaluate reasonable alternatives for meeting the purpose of and need for action. Under the Proposed Action three conceptual alternatives have been identified and assessed, as well as a No Action alternative.

2.1 Alternatives

2.1.1 Proposed Action

The Proposed Action involves constructing and operating an approximately 161,000 building gross square foot new surgical and clinical tower at the WHVAMC to comply with VA Standards for VA Connecticut's space and patient population. The primary functions that would occupy the new facility would include surgery, surgical intensive care beds, and pathology.

VA is considering three conceptual alternatives (defined as Alternatives 1,2,3) (regarding the potential location and design of the new surgical and clinical tower. All three alternatives vary in the footprint and orientation of the new tower as well as in the number of existing buildings that would need to be demolished and physical infrastructure to be modified. The three conceptual alternatives analyzed in this EA under the Proposed Action are identified as follows:

- Alternative 1 – Courtyard
- Alternative 2 – Parking Lot 7
- Alternative 3 – Loading Dock

Common elements to all three alternatives are described in Section 2.1.1.1, while unique elements are described in Section 2.1.1.2. Conceptual alignments for each alternative are presented in Figure 5 (Alternative 1), Figure 6 (Alternative 2), and Figure 7 (Alternative 3).

2.1.1.1 Elements Common to All Action Alternatives under the Proposed Action

The following elements would be incorporated into the new surgical and clinical tower regardless of which alternative is selected:

2.1.1.1.1 Medical Support Features

- Inpatient Surgical/Endovascular Services and Ambulatory Surgical Service: Programmed space for 8 operating rooms, 23 patient pre-operative holding/phase II recovery bays, and 14 patient post-anesthesia care unit (PACU)/phase I recovery bays. Operating rooms include rooms for General, Urology/Cystoscopy, Hybrid, Biplane, Orthopedic, and Robotics. Additional needed space for waiting/reception, pre-operative assessment, pre-operative holding, recovery, anesthesia procedure and support, surgical service, PACU and recovery, as well as general support, administration, and education areas.
- Intensive Care Nursing Units: Programmed space for one 15-bed intensive care unit and a step-down unit for patients needing an intermediate level of care between that of the general ward and the intensive care unit. Additional programmed space for waiting, patient area needs, support areas, as well as staff and administration requirements.
- Office of Information & Technology: Programmed space for distributed Telecom rooms.
- Pathology and Laboratory Medicine Service: Programmed space for patient specimen collection, core and clinical pathology work areas, molecular testing pathology suite, anatomical pathology workspace, required support areas, and staff and administration work areas.
- Lobby: Programmed space for an entrance lobby with a police presence and screening area.

- Sterile Processing Service: Programmed space for a biohazard soiled/dirty storage room.
- Engineering Service: Programmed basic and limited receiving area, storage, and engineering workstations/repair shops.
- Pharmacy Service: Programmed space for inpatient pharmacy work, storage, and support areas for Operating Rooms' compounding.
- Environmental Management Service: Programmed space for required lockers, lounges, restrooms with showers, administration, linen and laundry, storage, collection, and staging.
- Logistics Service: Programmed receiving and issuing areas, storage, equipment staging, as well as staff and administration requirements.
- Demolition: Demolition of at least two and no more than five historic buildings that have been identified as contributing elements to the WHVAMC historic district.
- Utility Upgrades: Utility infrastructure, such as piping, tunnels, corridors, and capacities, may be constructed and/or upgraded to supply the new tower and other facilities at the WHVAMC. Additionally, a new above-ground potable water tank or tower with an approximate 1-million-gallon capacity may be constructed at the WHVAMC and operated to ensure there is sufficient potable water supply available to the new tower and other facilities at the WHVAMC.

2.1.1.1.2 Section 106 Compliance

Depending on the alternative selected, the Proposed Action involves demolishing at least two and no more than five historic buildings that contribute to the WHVAMC historic district. VA initiated Section 106 consultation with the Connecticut State Historic Preservation Office (SHPO), federally recognized tribes with interests in New Haven County, Connecticut, and other identified consulting parties (a detailed description of Section 106 consultation is provided in Section 3.5). Because VA has not yet determined the site or design for the undertaking, there is not yet sufficient information to determine the specific effects of the undertaking on aboveground historic resources. Pursuant to 36 CFR § 800.16(b)(1), a Programmatic Agreement (PA) may be used when effects on historic properties cannot be fully determined prior to approval of an undertaking. Therefore, VA will develop and execute a PA since effects on historic properties cannot be fully developed at this time in the planning process. Once VA has determined the undertaking and the potential adverse effects to historic properties, VA will continue consultation under Section 106 with the CT SHPO and identified consulting parties to determine ways to avoid or minimize those effects or develop a Memorandum of Agreement if the effects cannot be avoided per the stipulation in the PA. The Architect/Engineer of Record (A/E) selected by the government to design the new tower would adhere to the stipulations specified in the PA and any additional consultation requirements prior to demolishing any contributing buildings at the WHVAMC.

2.1.1.1.3 Sustainable Design

VA requires major renovations be designed to reduce energy used by a minimum of 30% compared to the baseline building performance rate per ASHRAE 90.1-2019 *Energy Efficiency Standard for Buildings*. The new facility would meet this requirement.

Additionally, per VA Sustainable Design Manual Section 2.4.1, dated August 18, 2017, all VA construction and renovation projects occurring on buildings of 5,000-square-feet (SF) or more

shall comply with the 2016 Guiding Principles for Sustainable Federal Buildings. Further, the VA Office of Construction and Facilities Management (CFM) Policy Memorandum 003C-2021-21, *Green Building Certification Requirements*, dated August 3, 2021, and the Standards Alert 018, dated August 24, 2021, established green building certification requirements to support VA facility compliance with applicable laws (VA, 2021). The policy requires that VA must certify all VA major construction projects, including major renovations, using USGBC's LEED certification system and achieve a minimum certification level of silver.

Accordingly, the Proposed Action would incorporate sustainable design elements to include installing LED lighting; maximizing energy performance; installing advanced utility meters for electricity, natural gas, and/or steam; and employing total building commissioning practices (VA 2020). Compliance with the Guiding Principles would be achieved either through the selected A/E's completion of the US General Services Administration's *2016 Guiding Principles Checklist* during each design phase; certifying the project using Green Building Initiative's *Green Globes* program by achieving a minimum of two Green Globes; or certifying the project using the "Leadership in Energy and Environmental Design" (LEED) program via a third-party certification to achieve a minimum of LEED Silver (VA, 2021).

2.1.1.1.4 Staff/Functional Relocation/Demolition

The Proposed Action would require up to approximately 56,455 SF of existing building area to be demolished; the new tower would be located within a portion of this area. The building area to be demolished currently supports predominantly administrative functions and associated staff, though some of this building area is currently vacant or underused (VA, 2021). As a result, approximately 14,280 DGSF of space would be needed to accommodate the displaced staff. Displaced functions would be accommodated with temporary modular swing space for the length of the Proposed Action construction and in combination with added and extended telework plans, and some staff relocations.

2.1.1.1.5 Staffing

The current medical and support staffing levels are anticipated to be maintained at existing levels to support the new surgical and clinical tower. Should additional staff be required, VA would follow standard hiring practices and procedures. (It is noted that for the traffic analysis completed for this EA, it was assumed that up to 225 new staff could be needed to support the Proposed Action based solely on the square footage of the new tower. This increase in staffing numbers is a conservative estimate (high end of projected staffing) and is necessary to project near-term and forward-looking impacts on traffic and parking conditions but is not a reflection of staffing needs at the VAMC related to implementation of the Proposed Action

2.1.1.1.6 Construction Phasing

All three alternatives under the Proposed Action would have similar construction-phasing.

All three alternatives would take approximately the same amount of time to construct and involve the following three major construction phases shown in Table 1 and described below.

Table 1. Summary Table of Estimated Construction Sequencing and Duration

Phase		Estimated Duration
Phase 1	Sitework, Utilities, and Demolition (staff temporarily moved to modular swing space)	15 months
Phase 2	New Surgical and Clinical Tower Construction	48 months
Phase 3	Renovation of Building 1 Vacated Space	24 months
Total		7 years

Phase 1 - Sitework, Utility Upgrades, and Building Demolition: This phase includes preliminary activities, including but not limited to establishing safe work zones that prevent unauthorized pedestrian and vehicle access; establishing a construction lay-down area for construction-related equipment and supplies; relocating utilities; site grading; preparing Building 1 for upgraded utility infrastructure and physical connections to the new surgical and clinical tower; and demolition of selected buildings. To maintain functional adjacency to clinical services predominantly located in Building 1, all alternatives would require significant upfront site and utility work to maintain uninterrupted utility services to all other buildings. This would involve constructing new and redundant connections to Central Utility Plant and creating an anticipated utility tunnel to provide utility services to the new building while maintaining utilities to the existing buildings.

During this portion of work, the existing utilities would be monitored and kept operational until new piping is constructed and completed. Much of the utility piping is original to the campus, has reached its expected life, and must be replaced. Additional boiler capacity may need to be added to the Central Utility Plant to supply the new tower. The A/E would calculate the demand for the design of the new tower and assess whether the Central Utility Plant capacity is sufficient or requires additional capacity. The A/E would coordinate with VA to complete required upgrades. Should new emergency water storage structures (tanks or towers) be constructed, they may be located near the Central Utility Plant or on either side of Lamson Road (see Figure 4), though the final location would be selected during the design phase.

The A/E would also monitor the condition of existing utility lines to ensure these lines are not damaged during the installation of any new utility lines and connections. Disruptions to operations on campus would be avoided and mitigated, if necessary. Temporary facilities may be needed to ensure continuity of operations. Redundant loops and utilities would be constructed because the new surgical and clinical tower would be classified as Mission Critical due to inpatient beds and hospital functions in the new facility. This phase is anticipated to last approximately two (2) years.

Phase 2 - New Surgical Tower and Clinical Tower Construction: Once the site is graded, construction would begin on the new surgical and clinical tower and the connections to Building 1. This construction is anticipated to last approximately four (4) years. As needed, additional boiler capacity and potable water storage infrastructure would also be constructed during this phase.

Phase 3 - Renovation of Building 1 Vacated Space: Once construction of the new tower is complete, services targeted for the new tower would vacate from their existing locations in Building 1 and relocate to the new tower. The vacated locations within Building 1 would create an approximately 48,000 SF area for renovation considerations, including use for a new endoscopy service and two VISN Reference Laboratories for tuberculosis and Virology. Renovation is anticipated to last approximately two (2) years.

Figure 4. Potential Locations for Proposed Emergency Water Storage Structures



2.1.1.2 Elements Unique to Each Alternative Under the Proposed Action

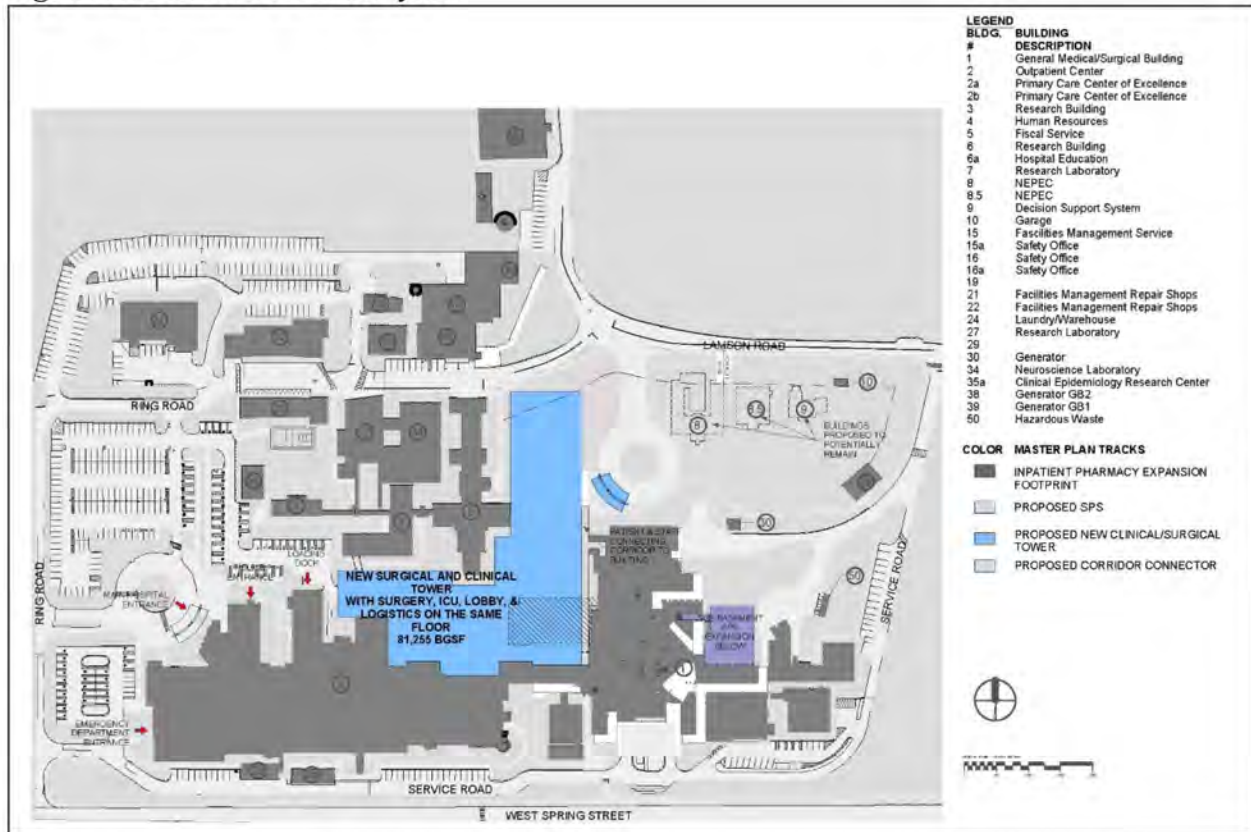
Elements unique to each option concern their alignment and impact on existing buildings, tunnels, and utility lines, as well as their various advantages and disadvantages.

2.1.1.2.1 Alternative 1: Courtyard

Alternative 1 would locate the new surgical and clinical tower in the courtyard between Buildings #1 and #2, and adjacent to Buildings #4 and #5 (Figure 5). Alternative 1 provides the opportunity to make direct connections into the existing horizontal and vertical circulation systems of Building #1. Alternative 1 also provides convenient parking areas for both staff and visitors. This option retains Buildings #8, #9, and #10, but results in the demolition of Buildings #6, #6A and #7. Each of these buildings has been identified as a contributing resource to the National Register of Historic Places (NRHP)-eligible historic district except for Building #6A, which is non-contributing.

Alternative 1 would require an elongated building footprint that would negatively affect optimal layout and flow for staff and patient care. Due to the presence of many existing utilities and tunnels, construction in this location would require significant replacement and rerouting of these utilities (Figure 8). This location would also require eliminating loading docks in Building #2, potentially impacting how materials are delivered to and distributed throughout the WHVAMC.

Figure 5. Alternative 1: Courtyard

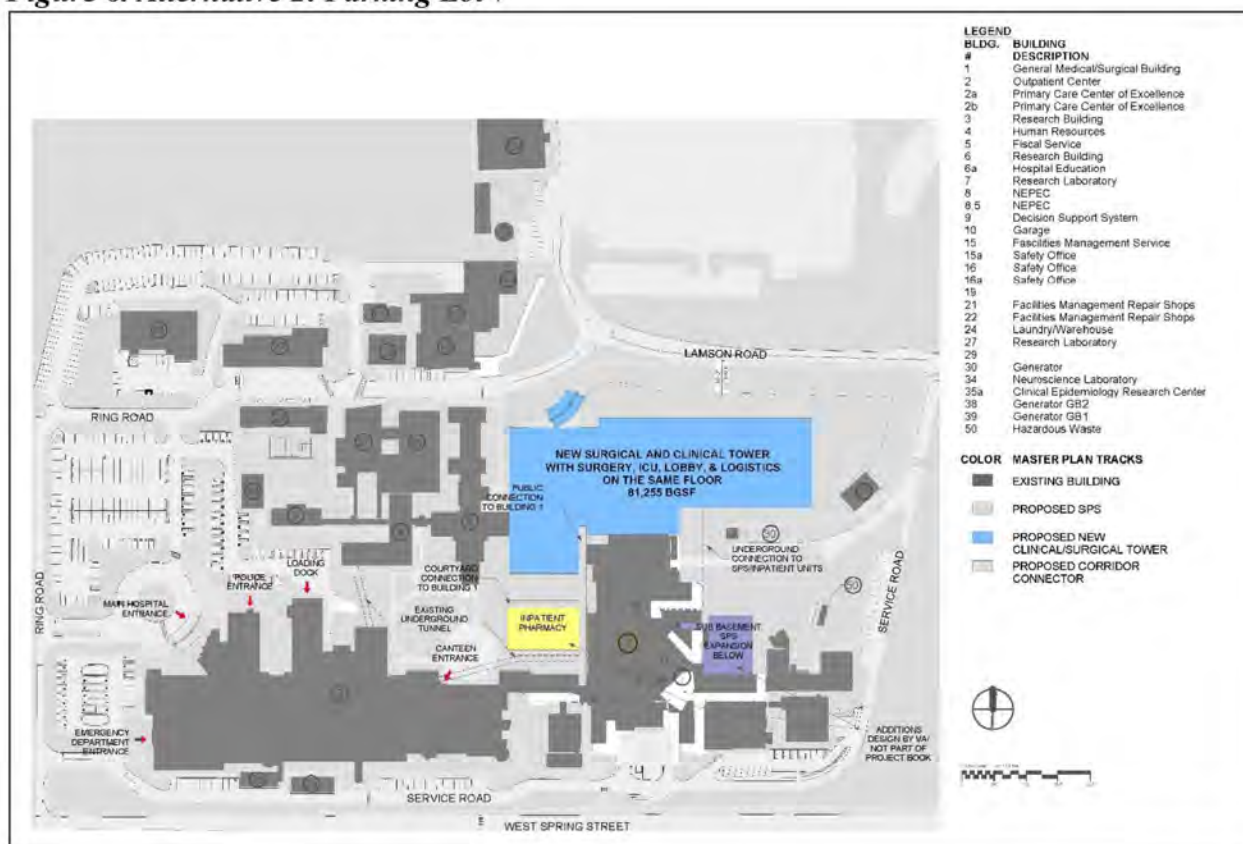


2.1.1.2.2 Alternative 2: Parking Lot 7

Alternative 2 considers locating the new surgical and clinical tower in the existing Parking Lot 7. Alternative 2 provides for ease of connection to the northern portion of Building #1 (Figure 6). The site layout affords more design flexibility to provide efficient configuration of the proposed services and natural and diffused light into the new tower. Alternative 2 would require the demolition of Buildings #6, #7, #8, #9 and #10, all of which have been identified as contributing resources, and the demolition of Buildings #8½ and #6A, both of which are non-contributing. Alternative 2 does not substantively impact the existing service road, nor the loading docks in Building 1. Alternative 2 is located above an existing major electrical power duct bank and would require upgrades to these existing utilities and tunnels, but to a lesser extent than Alternative 1 because fewer such tunnels are beneath Alternative 2 (Figure 8).

Alternative 2 has a drop in grade on its eastern border and would require stabilization with grading and retaining walls. Demolishing Parking Lot 7 would eliminate approximately 90 parking spaces of which 72 are handicapped accessible. However, under a separate project for which an EA/FONSI was completed 2015, VA is currently designing a parking garage, to be constructed in 2023, that would be located at the existing “P4” surface lot on the western portion of the WHVAMC property. Construction of the garage would add a total of 403 parking spaces and would off-set the anticipated loss of the Lot 7 parking capacity (VA, 2015).

Figure 6. Alternative 2: Parking Lot 7



2.1.1.2.3 Alternative 3: Loading Dock

Alternative 3 considers locating the new surgical and clinical tower to the east of Parking Lot 7 (Figure 7). In this Alternative, the connection to Building #1 would be longer and more circuitous than Alternatives 1 or 2 but would not require complete removal of Parking Lot 7. Alternative 3 would require demolishing Buildings #7, #8, #9, and #10, which are contributing resources to the NRHP-listed historic district, and the demolition of Building #6A and 8½, both of which are non-contributing resources.

Alternative 3 would require rerouting or reconstruction of an existing major electrical power duct bank beneath the proposed building footprint (Figure 8) and would have to be designed so that the southeast corner of the new tower avoids the adjacent Building 39, which houses a generator. Alternative 3 provides daylight and does not limit the viewshed from within the new tower. Alternative 3 would require significant grading and retaining walls. The upper floor of the new surgical and clinical tower under this scheme aligns at grade level of Parking Lot 7. Due to its relatively greater distance away from Building 1, Alternative 3 would require significant hardening for blast resistance to comply with VA's Physical Security requirements.

Figure 7. Alternative 3: Loading Dock

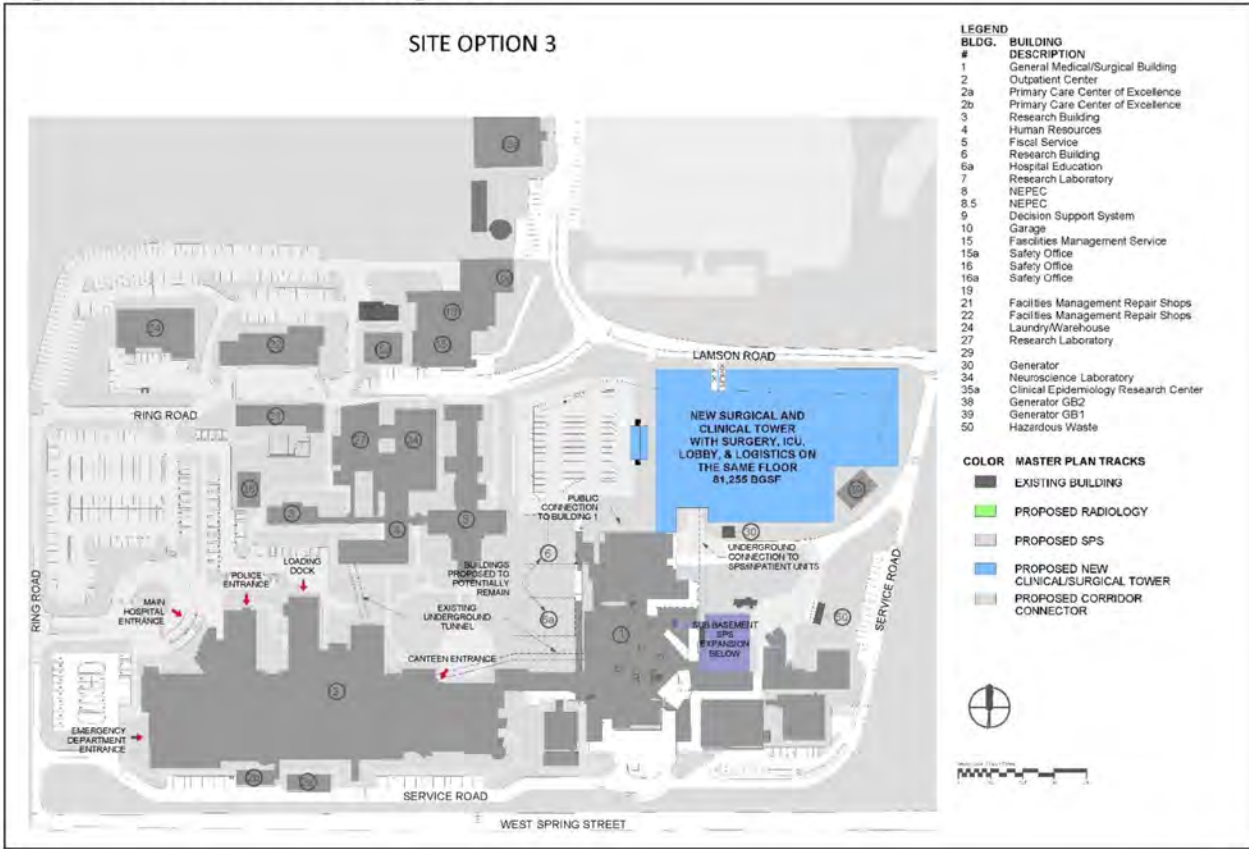
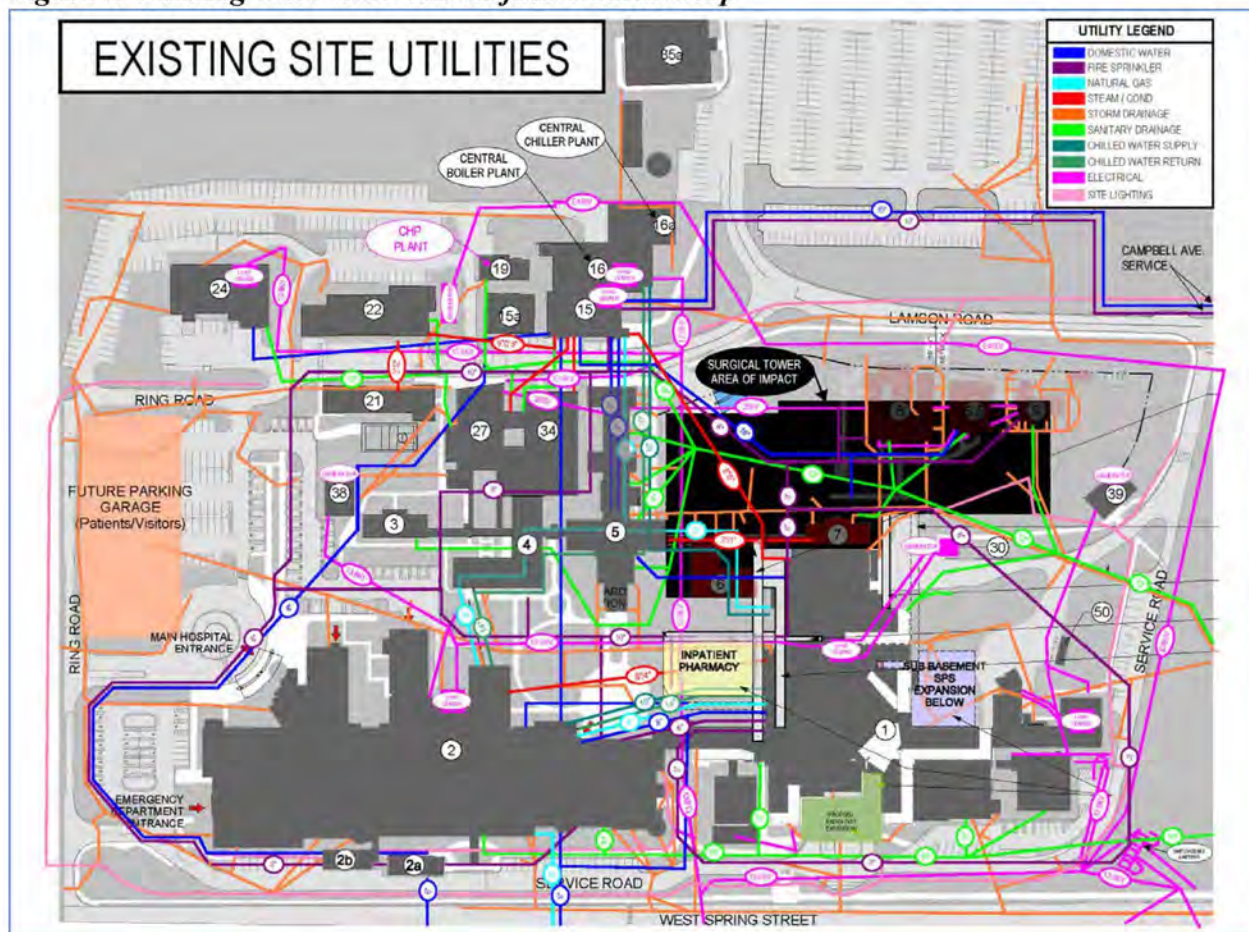


Figure 8. Existing WHVAMC Subsurface Utilities Map



2.1.2 No Action Alternative

The No Action Alternative serves as the baseline for which the effects of the Proposed Action can be evaluated, as required by the VA NEPA regulations (38 CFR Part 26). Under the No Action Alternative, the Proposed Action would not be implemented. None of the historic buildings would be demolished. However, the No Action Alternative does not meet the purpose and need for action and would diminish the level of care that VA is able to provide at the WHVAMC to Veterans throughout Connecticut and southern New England. Deficiencies in medical and utility infrastructure, patient care, and safety issues would remain unresolved.

2.2 Alternatives Considered but Dismissed from Further Analysis

Alternatives considered but dismissed from further analysis included renovation of existing buildings, locating the tower farther from Building 1, and an off-site suit to lease option.

Renovation of Existing Buildings

Renovating one or more of the individual Buildings 6, 7, 8, 8½, 9, and 10, to provide a modern medical workspace would not provide a consolidated work area, nor would the total renovated workspace square footage meet the VA Standards for VACHS space and patient populations.

Additionally, the renovated buildings would not provide a direct connection to Building 1, which is necessary to meet the purpose and need for action

WHVAMC Parking Lot 9/10

The WHVAMC property is nearing full build out and has limited potential space. One potential site within WHVAMC that was explored for implementation of the Proposed Action is located at the newly constructed Parking Lot 9/10 (see “P9” and “P10” on Figure 3) located north of Lamson Road. While Parking Lot 9/10 has the area for the Proposed Action, this area is too far removed to allow for a direct connection to Building 1. Additionally, locating the Proposed Action in this space would require the demolition of the newly constructed Parking Lot 9/10 and would eliminate a significant number of on-site parking spaces, with no plan for the construction of an additional parking lot to offset this loss.

Off-Site Suit to Lease

VA’s *Surgical and Endovascular Services Design Guide* (revision 5/22) states, “Recently there has been a shift toward one integrated interventional platform consolidating surgical and invasive cardiovascular services directly adjacent to each other. By utilizing the same aseptic environment this concept maximizes efficiency by sharing resources and promotes quality outcomes and patient safety.” The *VA Surgical and Endovascular Services Design Guide* does not describe locating these services away from the main campus in an off-site facility.

An off-site suit to lease facility would not allow VA to consolidate critical medical services at the WHVAMC, would not provide a direct connection to Building 1, and therefore would not improve Veterans access to VA-provided medical services.

3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section describes the affected environment and evaluates the potential environmental effects of the Proposed Action and No Action Alternative. The affected environment includes the project area, and depending on the resource, a region surrounding the project area. CEQ regulations (40 CFR 1501.3) specify that in considering whether the effects of a proposed action are significant, agencies shall analyze the potentially affected environment and degree of the effects of the action. In considering the potentially affected environment, agencies should consider, as appropriate to the specific action, the affected area (national, regional, or local) and its resources, such as listed species and designated critical habitat under the Endangered Species Act.

In this EA, the Proposed Action site is an approximately 5-acre area within which the new surgical and clinical tower would be variously aligned under Alternatives 1, 2, and 3, and where grading, utility upgrades, construction lay down areas, and other construction-related activities would generally occur. As previously described, should new emergency water storage structures be constructed, then may be located outside of this 5-acre site but within the WHVAMC property (Figure 4). The Proposed Action site is located in the highly developed central portion of the WHVAMC. As a result, all three alternative locations have similar site conditions. However, Alternative 1 is unique because it is situated within the existing courtyard area and is directly adjacent to Building 1, while Alternatives 2 and 3 are near Parking Lot 7 and approximately 80 feet north from Building 1 (see Figure 5, Figure 6, and Figure 7).

This section provides a single analysis for topics where existing conditions and environment impacts are similar for all three alternatives. Separate analyses are presented for alternatives having substantially different environmental conditions and impacts. Additionally, for topics where potential environmental impacts could reasonably extend beyond the Proposed Action site or the WHVAMC, a broader “Geographic Region of Influence” is analyzed.

3.1 Criteria for Analysis of Impacts

The specific criteria for evaluating the potential environmental impacts of the Proposed Action and the No Action Alternative are described in the following sections. The significance of an action is also measured in terms of its context and intensity. The context and intensity of potential environmental impacts are described in terms of duration, the magnitude of the impact, and whether they are adverse or beneficial, as summarized in the following paragraphs:

- **Short-term or long-term.** In general, short-term impacts are those that would occur only with respect to a particular activity, for a finite period, or only during the time required for construction or installation activities. Long-term impacts are those that are more likely to be persistent and chronic. Impacts must also be reasonably foreseeable and have a reasonably close causal relationship to the proposed action or alternatives.
- **Less-than-significant (negligible, minor, moderate), or significant.** These relative terms are used to characterize the magnitude or intensity of an impact. Negligible impacts are generally those that might be perceptible but are at the lower level of detection. A minor impact is slight, but detectable. A moderate impact is readily apparent. Significant impacts are those that, in their context and due to their magnitude (severity), have the potential to meet the thresholds for significance set forth in CEQ regulations (40 CFR Part 1508.27)

and, thus, warrant heightened attention and examination for potential means for mitigation to fulfill NEPA. Significance criteria by resource area are presented in the following sections.

- **Adverse or beneficial.** An adverse impact is one having unfavorable or undesirable outcomes on the human-made or natural environment. A beneficial impact is one having positive outcomes on the human-made or natural environment.

3.2 Environmental Resources Dismissed from Further Analysis

The potential impacts of the Proposed Action and the No Action Alternative on the following environmental resources were dismissed from further analysis because these resources are not present at the WHVAMC and, therefore, the Proposed Action would not impact nor necessitate compliance with any requisite regulatory requirements associated with protecting these resources. A brief summary of the environmental resources dismissed from further detailed analysis is provided in Table 2.

Table 2. Environmental Resources Dismissed from Further Analysis

Environmental Resource Dismissed	Rationale
Land Use and Zoning	The Proposed Action is consistent with activities at the WHVAMC and with the City of West Haven Land Use and Zoning regulations. The Proposed Action would not require changes in land use or zoning to properties adjacent to or in the vicinity of the WHVAMC. Additionally, the WHVAMC has been operating in this location for over 100 years in concert with increasing residential and commercial development in abutting properties and throughout West Haven. Thus, the Proposed Action would not reasonably be anticipated to induce any future changes in land use or zoning at properties outside of the WHVAMC. Therefore, the Proposed Action would have no impact on these resources.
Wildlife and Habitat	There are no federal- or state-listed flora or fauna at the Proposed Action site. The Proposed Action site is highly developed with buildings, pavement, and has grounds that are subject to routine mowing and maintenance; thus, the site does not provide suitable habitat to support listed wildlife species or birds protected under the Migratory Bird Treaty Act. Therefore, the Proposed Action would have no impact on wildlife or habitat. The findings from the US Fish and Wildlife (USFWS) Information for Planning and Consultation (IPaC) database search results are provided in Appendix A.

Environmental Resource Dismissed	Rationale
Floodplains, Wetlands, and Coastal Zone Management	The Proposed Action site is not within a 100- or 500-year floodplain; does not contain wetlands; and is not within the coastal zone per the Coastal Zone Management Act. Therefore, the Proposed Action would have no impact on these resources. The database results from the USFWS National Wetland Inventory, Federal Emergency Management Agency, and CT Coastal Zone Program are provided in Appendix A.

3.3 Aesthetics

Aesthetics refers to the visual resources, including natural and human-made features that give a particular piece of land its aesthetic properties. A combination of natural and built features influence and contribute to the aesthetic environment of an area. Natural features may include topography and vegetation, which may have been altered over time by human action, while built features can include buildings and other constructed elements. Beneficial or adverse impacts may occur depending on how changes to the existing aesthetic environment are perceived by human receptors, which can include visitors and staff at the WHVAMC, and residents living adjacent to and in the vicinity of the WHVAMC.

3.3.1 Existing Conditions

The Proposed Action site is located in the central-southern portion of the WHVAMC. This area of the WHVAMC is dominated by the built environment, which includes buildings, roadways, walkways, curbing, landscaped grounds and plantings, light fixtures, and supporting infrastructure.

The WHVAMC also includes a designated historic district that encompasses the buildings located in all three of the alternatives. The buildings that would be demolished are contributing elements (except for Building 8½) to the historic district and influence the aesthetics of the WHVAMC. The impacts of the Proposed Action's changes to the historic district are discussed separately in Section 3.5. Aesthetic conditions unique to each alternative are described in the following subsection.

3.3.1.1 Alternative 1

Alternative 1 is located in the WHVAMC courtyard. The existing aesthetic conditions for the Alternative 1 location are dominated by the courtyard, Buildings 1, 2, 4, 5, 6, and 7, and Parking Lot 7. The courtyard is an approximately one-acre area and is the largest designated greenspace at the WHVAMC. The courtyard includes a constructed concrete amphitheater, picnic tables, concrete walkways, and landscaped grounds with sparsely planted trees and shrubs. The courtyard is just outside of the cafeteria in Building 1 and is often used by visitors and staff as an outdoor eating area. The eastern portion of the courtyard is currently improved with nine office trailers that are temporarily being used to support the pharmacy operations. Under a separate project, VA will remove the trailers and construct a permanent pharmacy building in their place.

3.3.1.2 Alternatives 2 and 3

The existing aesthetic conditions are similar for the Alternative 2 and 3 locations. The existing aesthetic conditions for Alternatives 2 and 3 are dominated by the presence of Buildings 6, 7, 8, 8½, 9, and 10, Parking Lot 7, and the service road that surrounds this site area. The eastern portion of this site area has a steeply sloping grass-covered hill with approximately a dozen mature deciduous trees. The northern boundary of the area is sparsely vegetated with trees and shrubs and is bounded by a near vertical retaining wall along Lamson Road. This site area is visible to staff, patients, and visitors from north-facing windows above the third floor in Buildings 1 and 2 and from east-facing windows in Building 5. The trees located on the eastern slope of the Alternative 2 and 3 site are visible from outside the campus, but only from an approximately 700-foot linear portion of Campbell Avenue that directly borders the eastern entrance to the WHVAMC.

3.3.2 Environmental Consequences

3.3.2.1 Proposed Action

3.3.2.1.1 Construction

Aesthetic impacts unique to Alternative 1 are primarily associated with the permanent loss of the courtyard. Once construction begins, the courtyard would become permanently unavailable to patients, visitors, and staff. Views into the courtyard from the north-facing windows in Buildings 1 and 2, and south-facing windows in Buildings 4 and 5, would be impacted by the presence of construction equipment and machinery, followed by the incremental presence of building massing associated with the new tower construction.

Aesthetic impacts unique to Alternatives 2 and 3 include the removal of some or all of the existing landscape oak, birch, and pine trees (approximately 30 trees) on the eastern slope of the site area. The loss of selected trees would have a minor adverse impact on the viewshed; however, WHVAMC staff have not indicated that these trees are historic or have heritage for the campus (VA, 2021). Once these trees are removed, construction activities on this eastern-facing slope would be visible to passersby on Service Road and from the Campbell Road entrance. However, during the final stages of construction, undeveloped portions of the slope would be replanted with native, non-invasive ornamental trees and shrubs to restore this viewshed element.

For all three alternatives, the aesthetic impacts during construction are associated with creating a construction work zone, installing temporary privacy fencing around the construction site to obstruct the view of on-going construction activities, demolition of selected buildings and infrastructure, construction of new utility infrastructure, grading the site for the new tower, and the vertical construction of the new tower. These activities would occur within an area limited to the selected alternative footprint.

The Proposed Action may also include construction of a potable water tank or tower. Although a water tank or tower configuration has not yet been designed, the design would seek to minimize any potential adverse impact on the WHVAMC historic district viewshed. Further, Buildings 1 and 2 dominate the existing viewscape from within and outside the WHVAMC and would continue to do so even if a water tower was present. A tank would likely be located near the Central Utility Plant and would not be readily visible to visitors or staff within the WHVAMC and would not be visible from outside the WHVAMC. A water tower may be more visible to visitors and staff, and, depending on its location and design, may be visible from outside the WHVAMC. (A typical 1M

gallon water tower is approximately 165 feet tall, or approximately the same height at Buildings 1 and 2.)

Due to the limited visibility of the Proposed Action site from within and external to the WHVAMC, the existing intensely developed conditions of the area, and the presence of construction privacy fencing around active work areas, construction of the Proposed Action is anticipated to have a direct, short-term (though lasting up to four years), less-than-significant adverse impact on aesthetics at the WHVAMC.

3.3.2.1.2 Operation

Following construction, aesthetic impacts unique to the operation of Alternative 1 are associated with daylight and viewscape concerns. The physical presence of new tower would effectively diminish the amount of daylight reaching the south facing windows in Buildings 4 and 5. The new tower would also have a direct connection to the north sides of Buildings 1 and 2, thereby eliminating the outward view of north-facing windows from the ground floor up to approximately the 4th floor of Buildings 1 and 2. Additionally, daylight into the new tower would be relatively less than Alternatives 1 and 2, because the southern side of the new tower would be connected to Buildings 1 and 2 and absent of outward facing windows on that side.

Alternative 1 would permanently eliminate the courtyard, which is the largest greenspace on campus. Therefore, Alternative 1 would have a direct, long-term, moderate adverse impact on aesthetics as it relates to the aesthetic viewshed associated with the courtyard. To mitigate this impact a new courtyard/greenspace offering similar benefits as the former courtyard could need to be established and maintained elsewhere on campus.

Operation of the new tower under Alternatives 2 and 3 would have no impact on the courtyard and therefore would avoid the moderate adverse impact to aesthetics associated with Alternative 1. Additionally, under Alternatives 2 and 3, the new tower would have generally unobstructed daylight and a wider viewshed compared with Alternative 1, because there would be outward facing windows on all four sides of the building.

Alternative 3 would require clearing of the majority of sparse but mature trees present along the eastern slope of the site area. The permanent loss of trees would have a minor adverse impact on aesthetics by removing an element that provided a natural viewshed on this portion of the campus. Without this vegetation, passersby on Campbell Avenue and Lamson Road would have a direct view of the eastern side of the new tower. To help minimize this impact, new landscaping with native, non-invasive vegetation would be planted around the new tower and professionally maintained.

Therefore, Alternative 2 is likely to have a direct, long-term, negligible adverse impact, while Alternative 3 is likely to have a direct, long-term, minor adverse impact on aesthetics.

3.3.2.2 No Action

Under the No Action Alternative, no changes to the current aesthetics of the grounds would occur at the Proposed Action site. The existing WHVAMC viewshed would remain unchanged as the Proposed Action would not be implemented. Therefore, the No Action Alternative would have no impact on aesthetics.

3.4 Air Quality

Air quality refers to the concentration of air contaminants in a specific location. Air quality is determined by the type and number of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions.

3.4.1 Existing Conditions

3.4.1.1 Regional Climate

Weather and climate are important influences on air resources. On average, New Haven receives approximately 48 inches of rainfall and 29 inches of snowfall per year. The average temperature is warmest in July, at approximately 83 degrees Fahrenheit (°F), and coldest in January at approximately 20.5°F in January (NOAA, 2022).

3.4.1.2 National Ambient Air Quality

The ambient air quality in an area can be characterized in terms of its compliance with the primary and secondary National Ambient Air Quality Standards (NAAQS). The Clean Air Act (CAA), as amended, requires the US Environmental Protection Agency (USEPA) to set NAAQS for pollutants considered harmful to public health and the environment. NAAQS are provided for the following principal pollutants, called “criteria pollutants” (as listed under Section 108 of the CAA):

- Carbon monoxide (CO)
- Lead (Pb)
- Nitrogen oxides (NO_x)
- Ozone (O₃)
- Particulate matter (PM), divided into two size classes:
 - Aerodynamic size less than or equal to 10 micrometers (PM₁₀)
 - Aerodynamic size less than or equal to 2.5 micrometers (PM_{2.5})
- Sulfur dioxide (SO₂)

Geographic areas are designated by the USEPA as “attainment”, “non-attainment”, “maintenance”, or “unclassified” with respect to the NAAQS. Regions in compliance with the standards are designated as “attainment” areas. In areas where the applicable NAAQS are not being met, a “non-attainment” status is designated. Areas that have been classified as “non-attainment” but are now in compliance can be re-designated “maintenance” if the state completes an air quality planning process for the area. Areas for which no monitoring data are available are designated as “unclassified” and are by default considered to be in attainment of the NAAQS. According to the USEPA Green Book, New Haven County, Connecticut is currently designated as in moderate non-attainment for the 2015 standard for 8-hour ozone (2015), serious non-attainment for the 2008 standard for 8-hour ozone, and moderate non-attainment for the 1987 standard for PM₁₀, (USEPA, 2022). New Haven County is in attainment for PM_{2.5}, SO₂ and NO_x.

3.4.1.3 Local Emissions Sources

Emissions sources at the WHVAMC that can impact air quality include the Central Heating Plant boilers, which primarily burn natural gas, to generate steam for hot water and heat that is then distributed to the majority of buildings throughout the campus. Large chillers also burn natural gas

to produce cooled water that is used to cool indoor air. Additionally, WHVAMC operates several diesel-fueled emergency generators, which are used to provide back-up power to critical medical functions in the event of a main power outage.

Other sources of emissions that can impact air quality at WHVAMC include regulated building materials, including asbestos-containing materials (ACM) and lead-containing paint (LCP). These materials, if disturbed and made small enough, can be released into the air and cause health impacts. VA completed a survey for ACM and lead-containing paint LCP in Buildings 6, 7, 8, 8½, 8T, 9, and 10 on September 27 and 28, 2021, and October 27, 2021 (VA, 2021(b)). The findings from the survey are presented in Table 3.

Table 3. ACM and LCP Survey Findings

Building	ACM	LCP
6	Present	Present
7	Present	Present
8	Present	Present
8½	Present	Not present
8T	None present	Not present
9	Present	Present
10	Present	Present

3.4.1.4 Sensitive Receptors

CEQ NEPA regulations require evaluation of the degree to which the Proposed Action affects public health (40 CFR 1508.27). Children, the elderly, and people with illnesses are especially sensitive to the effects of air pollutants; therefore, hospitals, schools, convalescent facilities, and residential areas are considered to be sensitive receptors for air quality impacts, particularly when located within one mile from the emissions source.

Sensitive air quality receptors in the immediate vicinity of the Proposed Action include patients in Buildings 1 and 2. The residential receptors about the WHVAMC on all sides. The nearest school is Notre Dame High School, located approximately 0.5-miles north of the WHVAMC. No other sensitive receptors were identified in the vicinity of the WHVAMC.

3.4.2 Environmental Consequences

The impacts of the Proposed Action on air quality are analyzed on a local region of influence. This is the area within approximately 1,500 feet of the Proposed Action site where sensitive receptors may experience localized air quality impacts (e.g. from fugitive construction dust) from construction and operational activities occurring at the Proposed Action site.

Direct emissions are emissions that are caused or initiated by a federal action and occur at the same time and place as the action. Indirect emissions are reasonably foreseeable emissions that are caused by the action but might occur later in time and/or be farther removed in distance from the action itself, and that the federal agency can practicably control. There are no indirect emissions anticipated with this Proposed Action.

3.4.2.1 Construction

Construction Emissions. Emissions of criteria pollutants would be generated during the construction phase of the Proposed Action, regardless of the alternative selected. Under the Proposed Action,

potential air quality impacts from construction activities would occur from: 1) combustion emissions due to the use of fossil fuel-powered equipment and vehicles; 2) particulate emissions during earth-moving activities; and 3) demolition of buildings and infrastructure.

Construction vehicles would consist of a mixture of land preparation equipment, vertical construction, paving, and interior finishing, including graders, tractors, cranes, excavators, generator sets, welders, aerial lifts, cement and mortar mixers, pavers, paving equipment, rollers. Other equipment includes generator sets and on-road vehicles that would be active during the construction phase, such as material delivery trucks, tractor trailers used for transporting off-road heavy equipment, and workers commuting daily to and from the job site in their personal vehicles.

To minimize adverse impacts on air quality, the construction contractor would implement BMPs including implementing dust suppression methods identified in VA Specification 01 57 19: *Temporary Environmental Controls*. Available methods include application of water mist or other dust palliatives to the structure being demolished and to exposed soils; use of enclosures and covers over highly friable materials being demolished; covering haul trucks with tarps; and postponing dust-generating activities during sustained high wind conditions (10-40 mph with gusts at or above 50 mph). All haul trucks would be covered with a tarp prior to transporting any material to or from the site. Construction vehicles would limit to no more than three minutes in compliance with Section 22a-174-18(b)(3)(C) of the Regulations of Connecticut State Agencies. Construction vehicles would also utilize Tier 4-compliant engines, to the extent practicable, to reduce emissions of particulate matter and nitrogen oxides to meet emission standards established by USEPA.

Fugitive dust and particulate air emissions containing AMC and LCP can also be generated during demolition of the buildings where ACM and LCP were identified. To minimize the potential for the release of ACM or LCP, these materials would be abated (removed) from the buildings prior to demolition and transported off-site for proper disposal as described in Section 3.9.

3.4.2.1.1 Fugitive Dust Air Emissions

Construction activities often generate fugitive dust. The amount of fugitive dust, also referred to as total suspended particles, can be estimated from the amount of ground surface exposed, the type and intensity of activity, soil type and conditions, wind speed, and dust control measures used.

Total suspended particulates that may be generated during the grading phase of the Proposed Action, regardless of the alternative selected, were calculated using the emission factor for heavy construction activity operations from “AP-42, Compilation for Air Pollutant Emission Factors” (USEPA, 1995). Although the Proposed Action site is approximately 5 acres, none of the alternatives would occupy this entire area. The actual size of the area to be disturbed by any one of the alternatives would depend on the final design and alignment of the new tower. However, a 5-acre area of disturbance was used to represent a conservative (high) estimate of potential total suspended particulate emissions (Table 4). Detailed emissions inputs and calculations are presented in Appendix A.

Table 4. Estimate of Total Suspended Particulates during Construction of the Proposed Action

Total Area (acre)	Exposed Area (acre)	Construction Duration (months)	Emission Factor (tons/acre/month)¹	Control Efficiency (%)	Total Suspended Particulate Emissions (tons/year)
5	0.69	12	1.2	50%	0.052

¹ – Emission factor for Heavy Construction Operations (USEPA, 1995).

3.4.2.1.2 Off-Road Construction Equipment Emissions

Off-road, diesel-fueled heavy construction equipment, such as excavators, loaders, and backhoes, would emit criteria pollutants during the new tower construction phase. The off-road construction equipment and the emissions generated from operating this equipment would be similar for all of the alternatives, because the size of the new tower would also be similar under each alternative.

Emissions were estimated using the USEPA MOVES3.0 software (USEPA, 2020). Emission factors for year 2025 were used in these calculations, though it is understood that construction activities would occur farther into the future; emission factors typically decrease over time as new and more efficient equipment is brought to market. Therefore, using year 2025 factors represents a conservative (higher) estimate of potential emissions. Additionally, a single emission factor representing a composite of different construction equipment (e.g. excavators, graders, loaders, lifts) was used in this calculation. The emissions estimate assumes that two sets of composite construction equipment would be in use during the 15-month site preparation, demolition, grading, and utility modification phase; five sets during the 48-month new tower construction phase, in addition to specific paving equipment for 1 month; and one set during the 24-month renovation of Building 1. Table 5 presents the annual emission generated by off-road equipment for each phase of construction in a given year. Detailed emissions inputs and calculations are presented in Appendix A.

Table 5. Off-Road Construction Equipment Emissions

Activity	CO	VOC	NO ₂	SO ₂	PM ₁₀	PM _{2.5}
Phase 1: Site preparation, Utilities, Demolition (15 months)	4.1306	0.5628	10.0357	0.0116	0.5885	0.5526
Phase 2: New Surgical and Clinical Tower Construction (48 months)	10.6064	1.4546	26.0859	0.0305	1.5165	1.4255
Phase 3: Renovation of Building 1 Vacated Space (24 months)	6.1959	0.8441	15.0536	0.0174	0.8827	0.8289
ANNUALIZED EMISSIONS (TPY)	2.8873	0.3947	7.0586	0.0082	0.4121	0.3872

Notes:

CO, carbon monoxide; VOC, Volatile Organic Compound; NO₂, nitrogen dioxide; SO₂, sulfur dioxide; PM, particulate matter

3.4.2.1.3 On-Road Heavy-Duty Construction/Haul Trucks

Construction of the Proposed Action, regardless of alternative selected, would utilize on-road heavy-duty vehicles, such as multi-axle dump trailers and flatbed trucks, to transport materials off-site, such as demolition debris, and to bring materials on-site, such as building supplies and equipment. Table 6 present an annualized average of emissions for each phase of the Proposed Action generated by on-road diesel-fueled heavy-duty vehicles (greater than 8,501 lbs) using emissions factors specific to Connecticut for the year 2025 (USAF, 2021). Detailed emissions inputs and calculations are presented in Appendix A.

Table 6. Total Haul Truck Emissions

TOTAL HAUL TRUCK EMISSIONS	CO	VOC	NO₂	SO₂	PM10	PM2.5
Site Preparation/ Demo/Grading/Utilities (15 months)	0.00046	0.00007	0.00198	0.00001	0.00004	0.00004
New Surgical and Clinical Tower Construction (48 months)	0.00050	0.00008	0.00214	0.00001	0.00004	0.00004
Renovation of Building 1 Vacated Space (24 months)	0.00006	0.00001	0.00027	0.00000	0.00001	0.00000
TOTAL HAUL TRUCK EMISSIONS (Annualized average)	0.00014	0.00002	0.00061	0.000003	0.000012	0.000011

3.4.2.1.4 Construction Workers' Vehicle Emissions

Emissions were estimated from construction workers' vehicles (e.g., gasoline-fueled light-duty trucks) in use during the Proposed Action construction phase, regardless of the alternative. Emission factors specific to Connecticut for emission year 2025 were used in the calculation (USAF, 2021). Table 7 presents the estimated emissions from construction workers' vehicles. Detailed emissions inputs and calculations are presented in Appendix A.

Table 7. Construction Workers' Vehicles Annual Emissions

Construction Workers Annual Emissions (tpy)						
NAAQS:	CO	VOC	NO₂	SO₂	PM10	PM2.5
Phase 1: Site Preparation, Demolition, Grading, Utilities	0.023731	0.000344	0.001376	0.000021	0.000017	0.000015
Phase 2: New Surgical and Clinical Tower Construction (48 months)	0.047461	0.000688	0.002751	0.000042	0.000034	0.000030
Phase 3: Renovation of Building 1 Vacated Space (24 months)	0.009492	0.000138	0.000550	0.000008	0.000007	0.000006
TOTAL WORKER EMISSIONS (Annualized average)	0.011129	0.000161	0.000645	0.000010	0.000008	0.000007

The total estimated construction emissions on an annualized average basis, and regardless of the alternative, are presented in Table 8. Based on these estimates, none of the criteria pollutant concentrations exceed the General Conformity *de minimis* threshold limits. Thus, a formal General Conformity Determination would not be required for the Proposed Action. Therefore, construction of the Proposed Action, regardless of alternative, would be considered to have a direct, short-term, less-than-significant adverse impact on air quality.

Table 8. Total Construction Emissions

Element	Construction Emissions (tons per year [tpy])					
	CO	VOC	NO ₂	SO ₂	PM ₁₀	PM _{2.5}
Heavy Duty Haul Truck Emissions	0.00014	0.00002	0.00061	0.000003	0.00001	0.00001
Construction Worker Vehicle Emissions	0.011	0.0002	0.0006	0.00001	0.00001	0.00001
Off-Road heavy Duty Construction Equipment	0.612	0.078	0.360	0.002	0.013	214.128
Fugitive Dust Emissions	--	--	--	--	0.045	0.007
Asphalt Curing Emissions	--	0.001	--	--	--	--
Total Construction Emissions, annualized average (tpy)	0.62	0.08	0.36	0.00	0.06	214.13
de minimis threshold (40 CFR 93.153(b)(1,2))	100	25	25	100	100	100

3.4.2.2 Operation

The new surgical and clinical tower would require the use of utilities, including electricity, steam, and hot and cold water. The new tower would incorporate energy efficient designs and equipment to minimize the operational demand for utilities. (Additional analysis of utilities is provided in Section 3.11.) The additional emissions generated to provide these utilities would be less than the General Conformity *de minimis* threshold limits for any individual criteria pollutant. Therefore, operation of any of the Proposed Action alternatives, would be considered to have a direct, long-term, less-than-significant adverse impact on air quality.

3.4.2.3 No Action

Under the No Action Alternative, current baseline air emissions would continue unchanged for the foreseeable future. Known regulated building materials (e.g. ACM, LCP) would remain at Buildings 6, 7, 8, 8½, 9, and 10, where routine building maintenance would continue to ensure these regulated building materials are not released into the environment.

3.5 Cultural and Historic Resources

3.5.1 Existing Conditions

3.5.1.1 Historic District

Under the auspices of the General Hospital Society of Connecticut, construction of a hospital for tubercular patients at this property began in 1916. The New York-based architectural firm of Scopes & Feustmann designed the original buildings, applying many of the guidelines and plans published by the National Association for the Study and Prevention of Tuberculosis. The buildings were of brick construction, and most were executed in the Colonial Revival style. Beatrix Farrand, a noted landscape architect and one of the founding members of the American Society of Landscape Architects, provided landscape designs for the campus including the design for the elaborate gate and entrance elements on Campbell Avenue.

Upon its official opening (1918), the Society leased the hospital to the U.S. Army for the care of tubercular soldiers returning from World War I. The hospital was administered by the United States Public Health Services and then the Veteran's Bureau (ca. 1919-1927) and then reverted back to the General Hospital Society of Connecticut for a tuberculosis treatment division (1927-1940). In 1948, VA took ownership of the facility, and the campus was dedicated in 1953. Of the current 39 buildings, 17 buildings and two structures (the entrance gate and the stack) were built prior to 1953. Unlike many other campuses, where older buildings were demolished, the original buildings were incorporated into the new facility and remain today.

In 2014, VA determined that the West Haven Veterans Administration Hospital/William Wirt Winchester Memorial Hospital Historic District was eligible for listing in the NRHP, in the areas of Health/Medicine and Government on a national level as a facility utilized by VA as part of the Third Generation of Veterans' hospitals, and under Criterion C in the areas of Architecture and Landscape Architecture at the national level for its association with Scopes & Feustmann and Beatrix Farrand. The West Haven VAMC historic district was listed in the National Register of Historic Places (NRHP) on May 26, 2022.

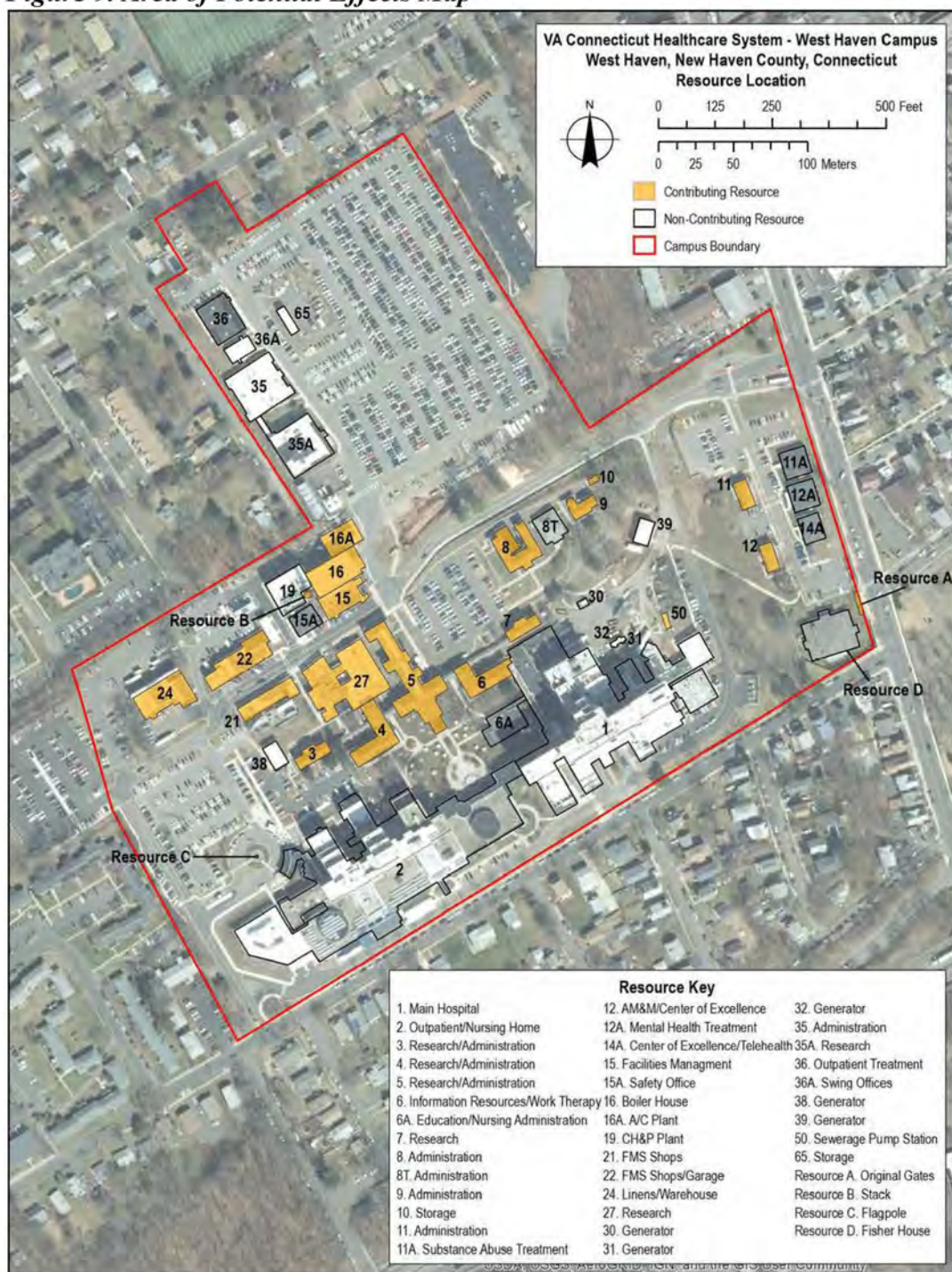
3.5.1.2 Area of Potential Effect

The Area of Potential Effects (APE), as defined in 36 CFR 800.16(d), is *“the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.”*

Because the Proposed Action would result in the demolition of buildings that contribute to the NRHP-listed historic district, VA determined that the APE consists of the boundaries of the historic district, which effectively is the WHVAMC property, as depicted on Figure 9.

The APE considered in this assessment was defined as the footprint of the proposed building demolition and new surgical and clinical tower construction, including all associated new or revised utility corridors, construction laydown areas, and any graded or landscaped areas.

Figure 9. Area of Potential Effects Map



3.5.1.3 Architectural Resources

Several buildings located within the Proposed Action site are contributing resources to the historic district. The individual buildings located within each alternative site area are shown in Table 9. A description of each contributing building is provided in the following paragraphs.

Table 9. Historic Buildings within the Proposed Action Site

Contributing Building	Alternative 1 – Courtyard	Alternative 2 – Parking Lot 7	Alternative 3 – Loading Dock
Building 6	Within this site area	Within this site area	Not in site area
Building 7	Within this site area	Within this site area	Within this site area
Building 8	Not in site area	Within this site area	Within this site area
Building 9	Not in site area	Within this site area	Within this site area
Building 10	Not in site area	Within this site area	Within this site area

Building 6 was historically used as Administration/Quarters. It currently houses functions related to Information Resources/Voluntary/Compensated Work Therapy. It mirrors Building 4 featuring a truncated L-shaped footprint, red brick exterior laid in a Flemish bond, and hipped roof with rounded dormers. The south and east corner porches have been enclosed while the two-story columns remain extant and now appear to function as pilasters. The window openings are detailed with brick jack-arched lintels and cast stone sills. Openings on the first floor feature a cast stone keystone in the arch. Windows are replacement one-over-one sash. It is linked to several of the surrounding buildings via connected corridors that obscure several of the original access points to the building. The last renovations to the building occurred in 1987.

Building 7 was historically used as a Radioisotope Laboratory but is now vacant and no longer operational, though it still houses defunct research and office equipment. Located near the northwest elevation of Building 1, Building 7 is a two-story brick building covered by an asphalt shingle-clad hipped roof with a cross gable located on the front (northwest) elevation. A pedimented gable-roofed wing projects from the center of the front elevation. The wing holds the main entrance door, which is accessed from a portico with Doric columns, puncheon dentil cornice, corner scrolls, and a balustraded flat roof. Stone lintels, keystones, and water table relieve the strict red brick of the exterior. A metal exterior staircase has been added to the northeast elevation. The building has a rectangular footprint. Most windows are one-over-one replacement sash. The last renovations to the building occurred in 1992.

Building 8 historically housed Nurses Quarters and now houses a variety of administrative functions including infection prevention, epidemiology, infection diseases, emergency medical services, and selected programs associated with the Northeast Program Evaluation Center. The two-story brick building is covered by a hipped roof with rounded dormers on the front and side slopes with two interior brick chimneys. The building is U-shaped in plan with a pedimented entry porch projecting from the southeast (front) elevation. The lower level of the three-bay porch is open while the former screened-in porch on the upper level has been enclosed with vinyl siding and sash windows. Screened-in porches on the northeast and southeast corners of the building have been enclosed. The columns that once provided architectural detailing have been sheathed in vinyl; retaining the historic form if not the appearance. The remaining sections of the building are sheathed in red brick laid in Flemish bond. Stone lintels underscore each window though stone keystones at the center of each jack arch crown only the windows of the first floor. A stone belt course encircles the building. The last renovations to the building occurred in 1993.

Building 9 historically served as a Manager's Quarters and now houses administration offices. Oriented towards the southeast, the building sits northeast of Building 8½ on a small cul-de-sac adjacent to other former quarters. The building is residential in scale and appearance and is executed in the Colonial Revival style. The two-and-a-half-story, three-bay, brick-clad building is covered by a side-facing gable roof of asphalt shingles with three gable-roofed dormers on the

front and interior brick chimneys on the rear slope. The gable ends are clad with brick and large modillion blocks are present on the raking eave. A one-story, screened-in porch formerly stood on the northeast end of the house; the porch was replaced by a two-story, one-bay-wide brick wing that is setback from main elevation. A two-story, one-bay ell also projects from the rear of the house. The paneled front entrance door is recessed within an architrave surround and is framed by sidelights and a transom. The windows on the lower floor feature stone keystones at the center of each jack arch lintel and cast stone sills. Wooden louvered shutters with crescent moon cutouts cover several of the windows, but the majority have been removed. Windows include eight-over-eight wooden sash, round-arched windows in the dormers, and a Palladian window in the gable end. The latest renovations to the building occurred in 1991.

Building 10, built in 1916, is a contributing building to the historic district and originally served as the garage for the Managers Quarters. It is now used for storage. The one-story building, located just to the north of Building 9, features a brick clad exterior, flat roof, and a single garage door opening on the southwest elevation. A window opening on the northeast elevation has been infilled within concrete blocks and clad on the exterior with bricks (date uncertain).

3.5.1.4 Archaeological Resources

In 2015 and 2016, a baseline archaeological study that included background research and pedestrian survey was conducted at the WHVAMC (VA, 2016). As a result of that study and others, no archaeological sites have been identified at the WHVAMC. The report included a recommendation for no additional archaeological investigations at the WHVAMC, as follows (from page 36 in VA, 2016):

Although research indicates that the area initially may have had a moderate potential for archeological resources from both the pre-Contact and twentieth century historic periods, the extensive and intensive development of the VAMC campus argues strongly against the presence of archeological resources that retain stratigraphic integrity or that possess the ability to provide data important to our understanding of significant research questions. The results of this archeological assessment support a recommendation for no further archeological work within the West Haven VAMC campus.

A site visit in 2021 visually confirmed the presence of extensive surface and subsurface disturbances are present in all areas of the WHVAMC, and the potential for intact, significant archaeological resources is negligible. Additionally, the extent of subsurface disturbance from existing utility installations is extensive (Figure 8).

3.5.2 Section 106 Consultation

VA on March 8, 2022, initiated Section 106 consultation with the CT SHPO, as well as the four federally recognized tribes with interests in New Haven County, CT, as listed in the U.S. Department of Housing and Urban Development (HUD) Tribal Directory Assessment Tool (HUD, 2021) and as required under NHPA, Native American Graves Protection and Repatriation Act (NAGPRA), EO 13007, *Indian Sacred Sites*, and EO 13175, *Consultation and Coordination with Indian Tribal Governments*:

- Delaware Tribe of Indians
- Mashantucket Pequot Indian Tribe
- Mohegan Tribe of Indians of Connecticut

- Narragansett Indian Tribe

Additionally, VA initiated Section 106 consultation with the following organizations and offered them an opportunity to participate as a consulting party:

- City of West Haven Planning
- Connecticut Historic Society and Museum
- West Haven Historical Society
- Preservation Connecticut
- West Haven Veterans Museum

VA's Section 106 consultation letter described the WHVAMC historic district, provided detailed information about the Proposed Action, and identified the Area of Potential Effect (APE) for architectural and archaeological resources. Based on this information, VA included a determination of finding that the grounds of the WHVAMC had been high disturbed and was unlikely to contain intact, significant archaeological deposits; therefore, no additional archaeological work was necessary. However, VA determined that the Proposed Action has the potential to adversely effect historic architectural properties due to the proposed demolition of several historic buildings.

The SHPO on 06 April 2022 issued a letter to VA that concurred with VA's finding for archaeological resources and that no additional archaeological work is necessary. The SHPO also concurred that the Proposed Action has the potential to adversely effect architectural resources, but requested more information about the project planning, siting considerations, and project alternatives. In response, VA on 23 June 2022 issued a letter to the SHPO with the requested information and potential strategies to mitigate any adverse impacts to historic resources. VA is currently preparing a draft Programmatic Agreement to mitigate adverse impacts to historic properties.

None of the federally recognized tribes or identified consulting parties provided a response that required action.

Copies of consultation letters and correspondence are provided in Appendix B.

3.5.3 Environmental Consequences

3.5.3.1 Proposed Action

3.5.3.1.1 Construction and Operation

As previously described, the SHPO concurred with VA's determination that no below-ground historic properties would be affected by the undertaking within the APE pursuant to 36 CFR 800.4(d)(1).

However, the Proposed Action would have an adverse effect on architectural resources by demolishing the selected contributing historic buildings, as shown in Table 10.

As previously described, the Proposed Action may also include construction of a potable water tank or tower. Although a water tank or tower configuration has not yet been designed, the design would seek to minimize any potential adverse impact on the WHVAMC historic district viewshed.

Table 10. Contributing Historic Buildings Impacted for each Alternative

Contributing Building	Alternative 1 – Courtyard	Alternative 2 – Parking Lot 7	Alternative 3 – Loading Dock
Building 6	To be demolished	To be demolished	Not in site area, retained
Building 7	To be demolished	To be demolished	To be demolished
Building 8	Not in site area, retained	To be demolished	To be demolished
Building 9	Not in site area, retained	To be demolished	To be demolished
Building 10	Not in site area, retained	To be demolished	To be demolished

VA recognizes that the Proposed Action would result in the demolition of buildings identified as contributing to the NRHP-listed historic district and this would result in an adverse effect on historic resources. However, no other location at the WHVAMC is adequate for siting the new tower, which is needed to meet VA’s goals for patient care. Because the new tower is still in the pre-design phase, VA anticipates the development of a Programmatic Agreement (PA) for the undertaking that will provide stipulations to address the undertaking’s effects. Pursuant to 36 CFR §800.16(b)(1), a PA with the SHPO and identified consulting parties may be used when effects on historic properties cannot be fully determined prior to approval of an undertaking. A PA documents an agreed upon process among the VA, SHPO, and other identified consulting parties for evaluating and resolving potential adverse effects to historic properties resulting from the Proposed Action. Therefore, VA proposes to develop and execute a PA which will allow VA to later determine which of the alternatives will be selected. Once VA has selected an alternative and has determined the potential adverse effects to historic properties, VA can determine ways to avoid or minimize those effects or develop a Memorandum of Agreement if the effects cannot be avoided per the stipulation in the PA. *VA will update this section in the Final t EA to summarize the outcome of Section 106 consultation.*

Additionally, in the event that ground-breaking activities and development of infrastructure during the Proposed Action disturb and/or remove previously undiscovered cultural resources, and in accordance with NHPA’s *Act of 1979* and NAGPRA’s EO 13007, VA would implement an “Inadvertent Discovery” plan. Under this plan, if prehistoric or historic artifacts that could be associated with Native American, early European, or American settlement are encountered at any time during construction or operation of the expansion areas, VA would cease all activities involving subsurface disturbance in the vicinity of the discovery. 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, any affected tribes, and the CT SHPO, are contacted to properly identify and appropriately treat discovered items in accordance with applicable state and federal law(s). The work would not resume in the area of the discovery until the resource has been documented and evaluated for eligibility for the NRHP, in compliance with Section 106 of the NHPA.

3.5.3.2 No Action

Under the No Action Alternative, VA would not implement the Proposed Action at the WHVAMC. There would be no change in existing conditions and no impacts to the historic district or to the contributing historic buildings. Therefore, the No Action Alternative would have no impact on cultural and historic resources.

3.6 Geology, Topography, and Soils

3.6.1 Existing Conditions

3.6.1.1 Geology

Connecticut lies within the Coastal Lowland portion of the New England Upland Physiographic Section of the New England Physiographic Province. Glacial meltwater deposits in the area consist of non-sorted, generally non-stratified mixtures of grain-sizes ranging from clay to large boulders. The matrix of most tills is composed predominantly of sand and silt. Boulders within and on the surface of tills range from sparse to abundant. The glacial and post-glacial deposits are underlain by Precambrian igneous rocks (primarily granite) and bedrock outcropping is common (USGS, 2005). The WHVAMC is not located in an area where karst conditions and associated sinkholes are present. No active significant faults are known to extend through the subsurface geology at the WHVAMC.

Within the Proposed Action site, the general bedrock geology underlying is split between the Allingtown Metavolcanics, which is a fine-grained massive greenstone from the middle Ordovician epoch and the Oronoque Schist, which is a gray to silver medium to fine-grained schist and granofels of the lower Ordovician. The bedrock is overlain by glacial till deposits which can be thick to thin. The thin and thick till deposits in the area are generally described as discontinuous on slopes or in areas of moderate local relief and which bedrock controls the topography. The upper till is loose to moderately compact, generally sandy, and commonly stony. Both lodgment and ablation facies are present in places. Bedrock outcrops were not observed within the Proposed Action site during visits to the site in September 2021.

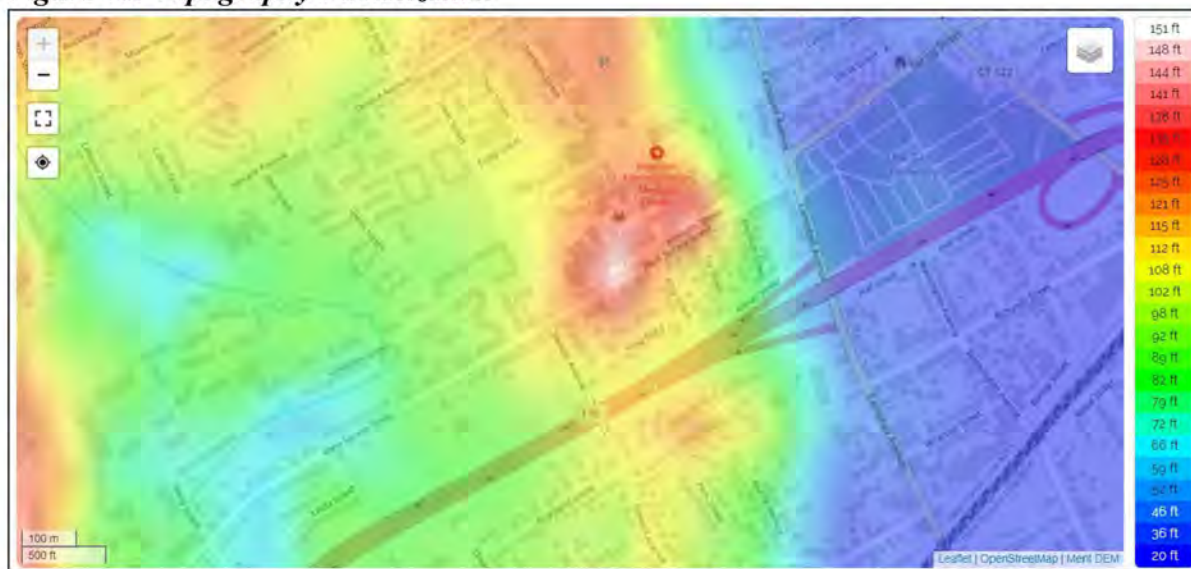
VA conducted a geotechnical investigation of the Proposed Action site in January 2021 (VA, 2021). Intact bedrock was encountered at depths ranging from 12.5 to 23.7 feet below the ground surface, which corresponds to approximate elevations of 73.3 to 95 feet above mean sea level. The general trend of the bedrock surface is similar to the ground surface and tends to slope downwards to the eastern portion of the site. Bedrock consisted of fine-grained greenstone, which showed moderate weathering. Recovery of the rock cores ranged from 88 to 100 percent, while rock quality designation values ranged from 0 to 50 percent, which is indicative of poor rock.

3.6.1.2 Topography

The WHVAMC is located in the southern portion of New Haven County, CT. The gross topography (Figure 10) of the area slopes from the northwest to the southeast (Yamazaki, 2017). The WHVAMC sits on a topographic ridge, with slopes to the west, south, and east. Thus, slopes vary depending on the position within the campus.

Within Alternative 1, the topography is relatively flat. However, within Alternatives 2 and 3, the topography is generally flat at Parking Lot 7, but gradually slopes eastward toward Buildings 9 and 10, where the slope becomes steeper, with grades from approximately 15% to 26% eastward until reaching Service Road. The slope continues eastward, but more gradually, until reaching Campbell Road, where the topography is generally flat and gently sloping south and east.

Figure 10. Topography Visualization



Note: Scale at right represents feet above mean sea level.

3.6.1.3 Soils

According to the United States Department of Agriculture - Natural Resources Conservation Service (USDA-NRCS), Udorthents-Urban land complex and Cheshire-Urban land complex soils have been classified within the Proposed Action site and throughout much of the WHVAMC and vicinity (Table 11 and Figure 11) (USDA-NRCS, 2021). The typical profile for Udorthents is loam, gravelly loam, and very gravelly sandy loam with the depth to the water table ranging from 54 to 72 inches below the ground surface (bgs). The typical profile of Cheshire soil is fine sandy loam and gravelly sandy loam with the depth to the water table greater than 80 inches bgs. Both soils have been assigned a hydrologic soil group of B. Group B soils are defined by USDA-NRCS as soils having a moderate infiltration rate when thoroughly wet and consisting chiefly of moderately deep or deep, moderately well-drained or well-drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

VA evaluated subsurface soil conditions during the 2021 geotechnical survey of the Proposed Action site (VA, 2021). The survey determined that soils within the Proposed Action site have been compacted and disturbed. Relatively shallow uncontrolled existing fill was identified across the Proposed Action site and at various depths including to the top of bedrock. Sandy soils were encountered at the subgrade elevation in each boring. These soils are susceptible to excessive pumping or rutting caused by construction operations, particularly during times of elevated groundwater. Previously placed fill was encountered at the ground surface in each boring that extended from 3- to 5.5-feet bgs. The existing fill consisted of fine to coarse, silty to clayey sand with varying amounts of gravel and crushed rock. Documentation regarding the placement and compaction of the existing fill was not available; however, VA anticipates the fill was generated from general site grading when the original improvements were made. Based on the results of the field and laboratory testing, the existing fill appears to have been placed with compactive effort (VA, 2021).

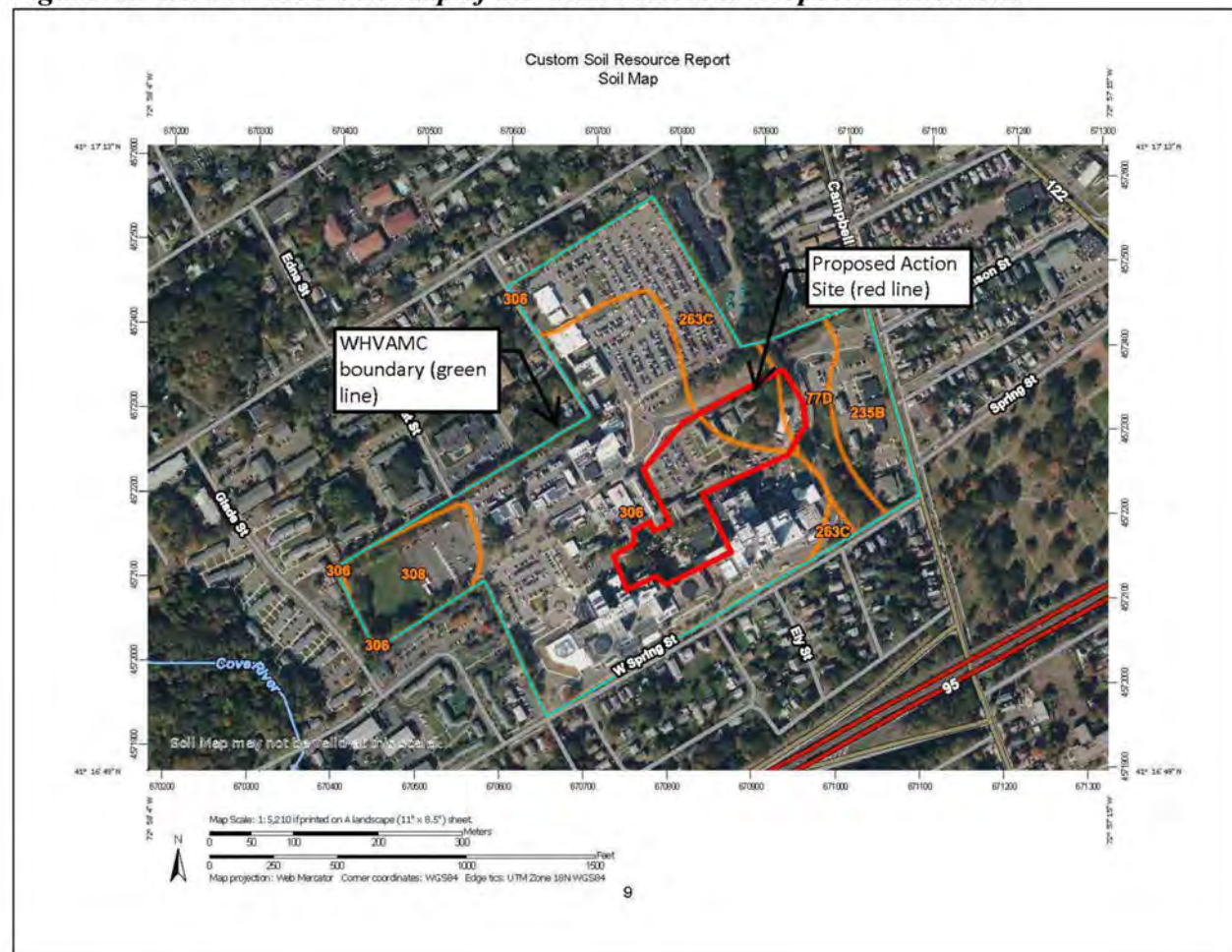
The USDA Farmland Protection Policy Act (7 USC 4201, et seq.) applies to prime or unique farmlands to ensure preservation of agricultural lands that are of Statewide or local importance.

Soils designated as prime farmland are capable of producing high yields of various crops when managed using modern farming methods. None of the WHVAMC soils are characterized as prime farmland. Therefore, preparation of a Farmland Conversion Impact Rating form AD-1006 is not required for the Proposed Action.

Table 11. USDA-NRCS Soil Types within the Proposed Action Site

Map Unit Symbol (on Figure 11)	Map Unit Name	Acres	Percent
77D	Cheshire-Holyoke complex, 15 to 35 percent slopes, very rocky	0.2	3.6%
263C	Cheshire-Urban land complex, 8 to 15 percent slopes	1.4	26.3%
306	Udorthents-Urban land complex	3.7	70.0%
Totals for Area of Interest		5.3	100.0%

Figure 11. USDA NRCS Soil Map of the WHVAMC and Proposed Action Site



3.6.2 Environmental Consequences

3.6.2.1 Proposed Action

3.6.2.1.1 Geology

Construction and Operation

The WHVAMC is not located in an area where karst conditions and associated sinkholes are present. No active significant faults are known to extend through the subsurface geology at the Action Alternative sites. As such, no impacts associated with seismic hazards are identified. No mineral resource impacts are anticipated, as the Proposed Action would not involve the commercial extraction of mineral resources, nor affect mineral resources considered important on a local, state, national, or global basis. In addition, the Proposed Action would not impact prime agricultural land.

All of the alternatives would incorporate seismic design elements and requirements specified in VA H-18-8 *Seismic Design Requirements*; VA Master Construction Specification 13 05 41-*Seismic Restraint Requirements for Non-Structural Components*; and the Unified Facilities Criteria (UFC 3-310-04), which required structures, such as the proposed new tower, to be designed to resist an earthquake with a 2 percent Probability of Exceedance (PE) over a 50-year exposure period (i.e. a 2,475-year design earthquake). Additionally, the A/E design team would include a Site-Specific Seismic Hazard Analysis as part of the design process, as required under VA H-18-8. The A/E would also complete a Tier 2 seismic study to determine requirements for the design of an elevated skybridge connecting the new tower and Building 1, such that the skybridge is able to withstand a seismic event specific to the required design thresholds.

Should the selected design require footings or other structural elements to be advanced into bedrock, bedrock removal may include ripping or chipping with a hydraulic hammer. It is anticipated that blasting of rock would not be allowed to avoid causing vibrations that could impact medical services in nearby buildings at the WHVAMC.

The advancement of borings, footings, or removal of bedrock in an area localized to the Proposed Action site would not substantively change geologic conditions at WHVAMC or in the surrounding area. Thus, the Proposed Action, regardless of the alternative selected, would have a direct, long-term, negligible adverse impact on geologic resources.

3.6.2.1.2 Topography

Construction and Operation

Alternative 1: The courtyard area is generally flat; therefore, Alternative 1 would require only minor grading to ensure the proper elevations are achieved for the building footprint. Following construction, the grounds would no longer be accessible; thus, Alternative 1 would have a negligible impact on topographic conditions at the Proposed Action site.

Alternative 2: Alternative 2 has an existing large difference in grade between the west and east sides of the area where the proposed building footprint would be located; the east side of the proposed building footprint would be approximately 20-25 feet lower than the west side. The eastern portion of the building footprint would be constructed into the eastern hillside, effectively covering and removing the existing eastern slope. Concrete retaining walls, segmental block

retaining walls, or mechanically stabilized earth walls may be needed to help alleviate some of the differential with the buildable grades (VA, 2021). The A/E would complete a global stability analysis, performed by a qualified geotechnical engineer, for the specific wall system chosen.

However, the overall topographic conditions on the grounds surrounding the building and elsewhere at the WHVAMC would remain unchanged. Therefore, Alternative 2 would have a direct, long-term, negligible adverse impact on topographic conditions.

Alternative 3: Similar to Alternative 2, under Alternative 3 the eastern end of the new tower would be approximately 25-35 feet lower than the western end. However, under Alternative 3 the eastern side of the building would extend approximately 100 feet further east than Alternative 2, effectively removing the majority of the existing hillside. Concrete retaining walls, segmental block retaining walls, or mechanically stabilized earth walls may be needed to help alleviate some of the differential with the buildable grades, and the appropriate design engineering analysis (as described for Alternative 2) would also be required (VA, 2021).

However, the overall topographic conditions on the grounds surrounding the building and elsewhere at the WHVAMC would remain unchanged. Therefore, Alternative 3 would have a direct, long-term, negligible adverse impact on topographic conditions.

3.6.2.1.3 Soils - Construction

For any alternative, construction activities associated with site preparation, grading, and excavating for foundations and utilities would remove vegetation and pervious cover (e.g. asphalt), exposing the underlying soil. Exposed soils can be subject to erosion from wind, precipitation, or mechanical means. Erosion can lead to nuisance dust generation and sedimentation of stormwater run-off from the construction site.

To minimize soil erosion, the A/E would develop, apply for, obtain, and implement the terms of the CTDEEP General Permit for Stormwater Dewatering Wastewaters from Construction Activities (CGP). The CGP applies to discharges of stormwater and dewatering wastewater from construction activities where the activity disturbs more than an acre. The requirements of the current general permit include registration to obtain permit coverage and development and implementation of a Stormwater Pollution Control Plan (SWPCP). The SWPCP contains requirements for the permittee to describe and manage their construction activity, including implementing erosion and sediment control measures as well as other control measures to reduce or eliminate the potential for the discharge of stormwater runoff pollutants (e.g. suspended solids and floatables, such as oil and grease, trash) both during and after construction. A registration form and the SWPCP would be prepared and submitted by the construction contractor to CTDEEP at least 60-90 days prior to the start of construction.

The construction contractor would adhere to best management practices (BMPs) specified in the CGP and VA's *Specification 01 57 19: Temporary Environmental Controls*, and would include the following measures at a minimum:

- Install and maintain sedimentation and erosion control measures, including silt fences and water breaks, detention basins, filter fences, sediment berms, interceptor ditches, synthetic hay bales, rip-rap, and/or similar physical control structures.
- Retain on-site vegetation to the maximum extent possible.

- Revegetate disturbed areas with native, non-invasive vegetation as soon as construction is completed.

Spill Prevention: The construction contractor would implement spill and leak prevention and response procedures, including maintaining a complete spill kit at the site, to reduce the impacts of incidental releases of construction vehicle fluids (such as diesel or hydraulic fluids) to soil quality. The construction contractors would be required to report releases of regulated quantities of petroleum-based fluids to VA and CTDEEP and be responsible for performing cleanup according to applicable state regulatory requirements.

Thus, with these permit-required BMPs in place, construction of the Proposed Action, regardless of the alternative selected, would have a direct, short-term, negligible adverse impact on soil quality.

3.6.2.1.4 Soils - Operation

Following commissioning of the new tower, operational activities would have no mechanism to further impact geology or topography. Soils exposed during construction and revegetated would be professionally maintained during operation to prevent exposure and subsequent erosion. Stormwater from the Proposed Action site would also be minimized through engineering controls and improvements to the WHVAMC stormwater management system (described in further detail in Section 3.7). Therefore, operation of the Proposed Action, regardless of the alternative selected, would have a negligible impact on soil quality.

3.6.2.2 No Action

Under the No Action Alternative, VA would not implement the Proposed Action at the WHVAMC. There would be no changes in existing conditions and therefore there would be a negligible impact on geology, topography, or soils.

3.7 Hydrology and Water Quality

This section focuses on groundwater resources and on hydrology related to stormwater management.

As previously described in Section 2.2, the Proposed Action site is not within a 100- or 500-year floodplain; does not contain wetlands; and is not within a Coastal Zone Management area (see Appendix A for maps). There are no surface water bodies present at the WHVAMC. Therefore, the Proposed Action would have no impact on these resources; these topics are not further analyzed in this EA.

3.7.1 Existing Conditions

3.7.1.1 Groundwater

Aquifers that supply fresh groundwater to the WHVAMC include New England crystalline rock aquifers. Areas where thin or barely permeable glacial deposits of till blanket the bedrock, surficial aquifers are not readily available and the bedrock itself is an important source of water (Groundwater Atlas of the U.S.; USGS, 1995). According to the CTDEEP Aquifer Protection Program, the City of West Haven is not included as an area with a protected aquifer (CTDEEP, 2016). The CTDEEP ECO map classifies groundwater beneath the WHVAMC as “GB.” The

CTDEEP defines “GB” groundwater resources as “groundwater designated for industrial process water and cooling waters; base flow for hydraulically connected surface water bodies; presumed not suitable for human consumption without treatment.”

There are no state wells or public water supply systems located within a one-mile radius of the WHVAMC (Mabbett, 2016). Six water wells located within a one-mile radius of the WHVAMC have been installed as part of the National Water Inventory System to enable the USGS to collect data on groundwater in the area.

During the January 2021 geotechnical investigation within the Proposed Action site, groundwater was observed in all of the boreholes, generally within several inches of the top of bedrock (VA, 2021). This corresponds to depths ranging from 12.5 to 23.7 feet bgs. The groundwater appears to be on top of the bedrock and follows a general trend of sloping downward to the east, following the same slope of the ground surface and surface of bedrock. However, groundwater flow within the Proposed Action site may vary due to the presence of underground utilities such as sewers, storm drains, and heterogeneous subsurface soil conditions.

3.7.1.2 Hydrology/Stormwater Management

The Proposed Action site has a combination of pervious and impervious surfaces. Table 13 summarizes the approximate acreages of pervious and impervious surface areas unique to each alternative site. These impervious surfaces include building footprints, paved walkways, parking lots, and the concrete amphitheater in the courtyard. Stormwater run-off from these impervious surfaces enters the WHVAMC stormwater management system infrastructure.

Table 12. Pervious and Impervious Surfaces at the Proposed Action site

Alternative	Area (approx. acres)	Current impervious area within the site footprint (approx. acres)	Current pervious area within the site footprint (approx. acres)
Alternative 1	1.5	0.2	1.3
Alternative 2	2	1.5	0.5
Alternative 3	1.9	0.6	1.3

The WHVAMC stormwater management system infrastructure consists of several components designed to capture stormwater originating from different portions of the campus (VA, 2021-b). The system includes three underground detention facilities (e.g. large underground tanks) to capture and detain stormwater generated during large storm events. The detained stormwater is then allowed to slowly discharge to the City of West Haven’s stormwater catch basins (operated by the City of West Haven) located along Campbell Avenue.

Once stormwater run-off leaves the WHVAMC, it may eventually reach the West River and the Cover River. The West River is located approximately one mile east from the WHVAMC. The West River is classified by CTDEEP as a Class SD/SB waterbody, indicating that the water quality is impaired. It has a Class SB water quality goal, which would allow the following designated uses: fishing, swimming & recreation, healthy marine habitat, commercial shellfish harvesting (requires purification), and industrial supply.

The Cove River is located approximately two miles south from the WHVAMC. The Cove River is classified by CTDEEP as a Class A waterbody, with the following designated uses: potential

drinking water supply; fish and wildlife habitat; recreational use; agricultural and industrial supply and other legitimate uses including navigation.

Both rivers are separated from the WHVAMC by physical infrastructure, including roads, residences, and commercial and industrial development. However, stormwater from the WHVAMC eventually discharges to these rivers; the rivers also receive stormwater discharges from point sources located outside of the WHVAMC.

3.7.2 Environmental Consequences

3.7.2.1 Proposed Action

3.7.2.1.1 Groundwater - Construction

Construction of the Proposed Action is not anticipated to require subsurface excavations at depths that would encounter groundwater. However, should groundwater be encountered in the excavation (e.g. during a period where the depth to groundwater is at a seasonal high), the excavation would be dewatered and the captured water would be transported off-site for disposal, or disposed on-site into the WHVAMC stormwater management system if the groundwater meets existing CTDEEP stormwater permit conditions for total suspended solids.

Construction vehicles and equipment utilize petroleum-based fluids that, if accidentally released, could migrate through soil and into the underlying groundwater. To minimize the probability of a release, all equipment would be maintained in good working order according to the manufacturer's requirements. Additionally, construction vehicles would be equipped with spill kits to remediate surficial releases of petroleum-based fluids, and contractors would be properly trained to use these kits. Should a release occur, the construction contractor would deploy the spill kit and notify WHVAMC and CTDEEP immediately. This would help to ensure that an accidental release of petroleum-based fluids would not cause more than a direct, short-term, negligible adverse effect on groundwater quality.

Therefore, the Proposed Action, regardless of the alternative selected, would have a direct, short-term, negligible adverse impact on groundwater quality.

3.7.2.1.2 Groundwater - Operation

Operation of the Proposed Action has no mechanism to impact groundwater. The groundwater underlying the WHVAMC would not be extracted for potable or other uses. Potable water would continue to be obtained from the City of West Haven. The Proposed Action would not change regional groundwater recharge rates, flow patterns, or elevations. Thus, operation of the Proposed Action would have a negligible impact on groundwater quality.

3.7.2.1.3 Hydrology/Stormwater Management - Construction

Under Section 438 of the Energy Independence and Security Act (EISA), federal facilities with a construction footprint exceeding 5,000 SF shall use site planning, design, construction, and maintenance strategies to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property in the post-development condition. Therefore, the A/E would design the new tower to comply with EISA Section 438 to the maximum extent technically feasible.

VA anticipated that under any alternative, some pervious areas would be permanently converted to impervious surfaces during construction of building massing, sidewalks, and roadways. The loss of pervious area would increase the volume of stormwater run-off generated at the site and requiring management under the WHVAMC Municipal Separate Storm Sewer System (MS4) permit program. Table 13 summarizes the area of pervious soil loss that would occur based on a conceptual pre-design footprint for each alternative.

Table 13. New Impervious Surface Area Created for each Alternative

Location	Site footprint (approx. acres)	New impervious surface area with footprint (approx. acres)
Alternative 1	1.5	1.3
Alternative 2	2	0.5
Alternative 3	1.9	1.3

A hydrology/stormwater system report completed in 2021 identified the existing WHVAMC stormwater management system catch basins, manholes, and stormwater piping that are located within the conceptual footprint of each alternative, as summarized below (VA, 2021-b):

- Alternative 1 would overlap 11 catch basins, 3 manholes, and associated drainpipes.
- Alternative 2 would overlap 10 catch basins, 3 manholes, and associated drainpipes.
- Alternative 3 would overlap 9 catch basins, 4 manholes, and associated drainpipes.

Depending on the final design for the new tower, these WHVAMC stormwater system elements may need to be relocated, removed, and/or re-routed. Additionally, depending on the final design selected, new subsurface detention and/or infiltration systems may need to be constructed. The final design should also consider avoiding direct connections between the roof drains on the new tower and the WHVAMC stormwater system (i.e. avoid a direct pipe-to-pipe connection). Instead, stormwater runoff from the roof should first be discharged at grade and either flow over pervious grounds, discharged to rain gardens, or captured in cisterns and used for irrigation or other gray-water functions. The use of pervious pavement, which is a type of pavement with gaps which allow passage of water, is not recommended in the northeast US because the gaps often become obstructed by sand or salt used during winter de-icing and long-term routine maintenance is required to ensure it functions as designed.

To ensure the Proposed Action stormwater system is properly designed, the A/E would be required to complete the following stormwater system analyses prior to any construction or modifications to the WHVAMC stormwater system infrastructure:

- Hydrologic analysis of existing and proposed conditions for the selected alternative;
- Calculation of stormwater runoff rates for existing and proposed conditions to determine increases in rates of stormwater runoff and volume, if any, in each of the affected watersheds within the WHVAMC;
- Analysis of existing stormwater system to determine inlet grate capacities, pipe capacities, and subsurface system performance;
- Determination of modifications needed to existing system to accommodate the selected alternative;

- Preparation of a design that works with existing system and provides for continued compliance with any federal, state, and local requirements.
- Ensure there is not a net increase of pollutant loading (of the specific pollutant that the waterbody is impaired by) to any impaired waterbodies. The design must also consider any planned updates to the City of West Haven's MS4 permit required BMPs as well as operational and maintenance requirements.

Thus, pre-construction planning would be completed to ensure that the WHVAMC stormwater infrastructure remains functional and compliant with the existing WHVAMC MS4 permit. Therefore, regardless of the alternative selected, construction is anticipated to have a direct, short-term, minor adverse impact on hydrology due to the loss of pervious ground cover and while any necessary modifications are made to the existing WHVAMC stormwater system infrastructure.

3.7.2.1.4 Hydrology/Stormwater Management - Operation

During operation, WHVAMC personnel would integrate the new stormwater management infrastructure installed for the new tower into the overall operational and maintenance program for other WHVAMC stormwater system infrastructure. This would ensure that the combined infrastructure would comply with WHVAMC MS4 permit requirements. Therefore, operation of the Proposed Action, regardless of the alternative selected, is anticipated to have direct, long-term, less-than-significant beneficial impact on hydrology/stormwater.

3.7.2.2 No Action

Under the No Action Alternative, current groundwater and hydrology/stormwater conditions would remain unchanged. No new impervious areas would be created, and stormwater runoff would continue to infiltrate into vegetated ground and/or enter the existing WHVAMC MS4 infrastructure. Routine maintenance and any future upgrades to stormwater infrastructure would occur. Therefore, the No Action Alternative would have a negligible impact on groundwater and hydrology/stormwater.

3.8 Noise and Vibration

3.8.1 Noise

Noise is traditionally defined as unwanted sound that interferes with normal activities in a way that reduces the quality of the environment. Magnitudes of sound, whether wanted or unwanted, are usually described by sound pressure. There are two primary types of sound sources that generate noise: stationary and transient. Sounds produced by these sources can be intermittent or continuous. A stationary source is usually associated with a specific land use or site, such as construction activities or the operation of generators. Transient sound sources, such as vehicles and aircraft, move through the area. The human auditory system is sensitive to fluctuations in air pressure above and below the barometric static pressure. The loudness of sound as heard by the human ear is measured on the A-weighted decibel (dBA) scale.

Sound pressure levels are quantified in decibels (dB), which is dependent on both frequency and intensity, and is given a level on a logarithmic scale. The way the human ear hears sound intensity is quantified in A-weighted decibel (dBA), which are level "A" weights according to weighting curves. Sound levels for common activities and construction work are presented in Table 14. Noise levels and durations from these activities would vary depending on the specific equipment being

used, and the impact from this noise on a receptor would depend on the distance between the receptor and the source of the noise. Generally, noise levels decrease by approximately 6 dBA for every doubling of distance for point sources (such as a single piece of construction equipment), and approximately 3 dBA for every doubling of distance for line sources (such as a stream of motor vehicles on a busy road at a distance).

Table 14. Common Sound Levels and Exposure Conditions

Source	Decibel Level	Exposure Concern
Soft Whisper	30	Normal safe level
Quiet Office	40	
Average Home	50	
Conversational Speech	65	
Highway Traffic	75	May affect hearing in some individuals depending on sensitivity, exposure length, etc.
Noisy Restaurant	80	
Average Factory and Construction Equipment Vehicles	80-90	
Pneumatic Drill	100	
Automobile Horn	120	
Jet Plane	140	Above 140 decibels may cause pain.
Gunshot Blast	140	

3.8.1.1 Vibration

Vibration is the motion of the ground transmitted into a building that can be described in terms of displacement, velocity, or acceleration (Metro Council, 2015). Vibration velocity (VdB) is used to describe vibration because it corresponds well to human response to environmental vibration. Vibration is defined by the maximum vibration level during a given event. Human sensitivity to vibration increases with increasing numbers of events during the day. Vibration velocity is defined by the following terms:

- **Level:** Vibration is expressed in vibration decibels (VdB). and represents how much the ground is moving. The threshold of human perception to vibration is approximately 65 VdB and annoyance begins to occur for frequent events at vibration levels over 70 VdB.
- **Frequency:** Vibration frequency is expressed in Hertz (Hz). Human response to vibration is typically from approximately 6 Hz to 200 Hz.
- **Time Pattern:** Environmental vibration changes all the time and human response is correlated to the number of vibration events during the day.

3.8.2 Existing Conditions

3.8.2.1 Noise

Sensitive noise receptors are defined as properties where frequent human use occurs and where a lowered noise level would be of benefit. Hospitals, schools, convalescent facilities, religious institutions, libraries, recreation areas, and residential areas are considered to be sensitive receptors, particularly when located within 0.25 miles of the noise source. Sensitive noise receptors in the immediate vicinity of the Proposed Action site include Buildings 1 and 2, while the nearest residential receptors abut the WHVAMC on all sides. No other sensitive receptors were identified

within 0.25 miles of the WHVAMC. The nearest school is Notre Dame High School, located approximately 0.5-miles north of the WHVAMC.

The soundscape at the Proposed Action site typical of a modern VA Medical Center or other active hospital campus. During a site visit on September 28, 2021, sound levels measured over a 10-minute period ranged from approximately 40-65 dBA within the Proposed Action site. The soundscape was dominated by motor vehicles, including passenger cars, buses, and various types of commercial trucks. Noise from building operations, such as generators and heating/ventilation and air conditioning (H/VAC) systems equipped with noise-dampeners/mufflers or a noise-shielding structure contribute to the soundscape to a lesser extent. No other notable noise-generating sources are present in the vicinity of the Proposed Action site.

External noise sources that can be heard within the WHVAMC include vehicle traffic on Campbell Avenue and Spring Street.

3.8.2.2 Vibration

Normal facility operations and vehicle traffic within the WHVAMC do not cause vibrations that impact sensitive receptors within the WHVAMC (West Haven VAMC, 2022).

3.8.3 Environmental Consequences

3.8.3.1 Proposed Action

3.8.3.1.1 Noise - Construction

Proposed Action activities would generate noise during building demolition, site grading, and construction of the new tower. These construction-related noises would have a direct, short-term, minor adverse impact on sensitive receptors, including Buildings 1, 2, 4, and 5, which are all located adjacent to the Proposed Action site.

Construction equipment would include excavators, cranes, backhoe-loaders, welders, aerial lifts, graders, pavers/paving equipment, rollers, haul trucks, and concrete mixing trucks. Once mobilized to the site, construction equipment would be operated within the work site for the selected alternative. Construction noise levels would vary depending on the type of equipment being used at the time. Table 15 summarizes the predicted noise levels (at a distance of 50 feet from the source) for common construction equipment (FTA, 2018).

Table 15. Predicted Noise Levels for Construction Equipment

Construction Category and Equipment	Predicted Noise Level at 50 feet (dBA)
Clearing and Grading	
Grader/Dozer	80–93
Truck	83–94
Roller	73–75
Excavation	
Backhoe	72–93
Jackhammer	81–98
Construction	
Concrete mixer	74–88
Welding generator	71–82
Crane	75–87
Paver	86–88

The noise from demolition and construction equipment would be localized and intermittent during the Proposed Action phases. Intermittent loud construction sound levels at the construction site are anticipated to range from approximately 90 to 100 dBA.

The sound levels experienced by human receptors would vary depending on distance from the noise source. The distance between the construction site and other buildings and parking areas ranges from approximately 10 to 300 feet. Thus, noises from active demolition and exterior building construction would be audible to visitors, patients, and staff who are traveling past the construction site. Noise levels decrease approximately 6 dBA with every doubling of distance. Therefore, the predicted noise levels that a receptor might experience will vary depending on their distance from the construction site, as shown in Table 16 (assuming construction activity generates noise at 90-100 dBA). Additionally, indoor noise levels would be expected to be 15-25 decibels lower than outdoor levels at the same distance.

Table 16. Predicted Noise Levels Based on Distance from Source

Distance from Noise Source (feet)	Predicted Noise Level (dBA)
50	90 to 94
100	84 to 88
150	81 to 85
200	78 to 82
400	72 to 76
800	66 to 70
1,500	Less than 64

Construction workers who are in close proximity to construction equipment may be exposed to noise levels above 90 dBA, which is the permissible exposure level defined by U.S. Occupational Safety and Health Administration (OSHA).

VA identifies management measures to minimize noise impacts during development projects on VA property in Section 01-57-19, Temporary Environmental Controls in the VA Technical Information Library (VA, 2014). To comply with VA's noise control requirements, as well as the City of West Haven noise control ordinance (Chapter 154) (West Haven City Council, 2003), the construction contractor would implement required administrative and engineering noise controls to include but not limited to the following BMPs:

- Construction activities would take place during daylight hours and during weekdays, unless there is a specific activity that needed to be completed outside of this schedule to avoid impacting the staff, visitors, and patients at the WHVAMC. Should such activity be necessary, the WHVAMC Public Information Office would notify sensitive receptors in advance of the work taking place.
- Use shields or other physical barriers to restrict noise transmission.
- Provide soundproof housings or enclosures for noise producing machinery.
- Use efficient intake and exhaust mufflers on internal combustion engines that are maintained so equipment performs below noise levels specified.
- Conduct truck loading, unloading, and hauling operations so that noise is kept to a minimum.
- Select material transportation routes as far away from sensitive receptors as possible.

- Shut down noise-generating heavy equipment when it is not needed (do not allow equipment to idle for more than three minutes).

Therefore, construction of the Proposed Action, regardless of the alternative selected, would have a direct, short-term, less-than-significant adverse impact on noise-sensitive receptors at the WHVAMC and a negligible impact on the surrounding community.

3.8.3.1.2 Noise - Operation

Operation noises generated by the new tower would be limited to air handlers for cooling and ventilation. These systems may be roof-mounted or placed in another location. The A/E would design and locate the air handling system to minimize noise impacts to occupants of the new tower and other buildings at the WHVAMC. Therefore, operation of the Proposed Action, regardless of the alternative selected, would have a negligible impact on noise-sensitive receptors at the WHVAMC and in the surrounding community.

3.8.3.1.3 Vibration - Construction

Demolition of buildings and other infrastructure would cause various degrees of ground vibration, depending on the equipment, methods employed, and soil compactness, but the vibrations diminish in strength with distance (Hanson, 2006). The vibration velocity level experienced at a receptor located more than 230 feet from the vibration source (except impact pile driving) would diminish below the 65-VdB threshold of perception by humans and interference with vibration-sensitive activities.

From a vibration standpoint, a jackhammer would be the most likely to create vibrational impacts. At a distance of 75 feet from the jackhammer, the vibration level, measured in peak particle velocity, would be 0.01 inches per second. The threshold of perceptibility is 0.08-0.019 inches per second. Thus, vibration levels would be nearly imperceptible by a receptor located 50 feet or more away from the jackhammering. This is supported by information provided by the WHVAMC Project Engineer who stated that jackhammering of concrete on the grounds immediately outside of Building 1 has not caused any vibration or noise impacts to medical operations inside of Building 1 (West Haven VAMC, 2022).

Should pile driving be required to help shore the ground and support the new facility, the construction contractor would implement all necessary precautions to reduce the potential for vibration impacts to any medical operations at Building 1. Additionally, the construction contractor would coordinate in advance with the WHVAMC Director to ensure the timing of such activity does not impact any ongoing vibration-sensitive medical activities.

Therefore, construction of the Proposed Action, regardless of the alternative selected, would have a direct, short-term, negligible adverse impact on vibration-sensitive receptors at the WHVAMC and in the surrounding community.

3.8.3.1.4 Vibration - Operation

The Proposed Action would have no mechanisms to create vibrations that would disrupt medical operations elsewhere at the WHVAMC. Therefore, operation of the Proposed Action, regardless of the alternative selected, would have no impact on vibration-sensitive receptors at the WHVAMC or in the surrounding community.

3.8.3.2 No Action

Under the No Action Alternative, the existing soundscape and vibration conditions at the WHVAMC would remain unchanged.

3.9 Solid Waste and Hazardous Materials

3.9.1 Existing Conditions

A Phase I Environmental Site Assessment (ESA) of the Proposed Action site and its buildings was performed on behalf of VA by Mabbett in September 2021 (Mabbett, 2021). The Phase I ESA included a site visit, interviews with WHVAMC staff knowledgeable about the site, a review of historic information, and a review of local, State and Federal environmental regulatory information for the WHVAMC and surrounding area. The Phase I ESA identified the following Recognized Environmental Conditions (RECs) at the Proposed Action site:

- Radiological waste in Building 7
- Underground sludge trap associated with the former Building 7 radioisotope laboratory/

Additionally, the Phase I ESA confirmed that regulated building materials, while noted defined as a REC, were identified during Regulated Building Materials Surveys at Buildings 6, 7, 8, 8½, 9, and 10 in September and October 2021 (Mabbett, 2020). The surveys identified the presence of asbestos, lead, and likely presence of PCBs in caulk.

3.9.1.1 Regulated Building Materials

Regulated building material surveys were conducted at Buildings 6, 7, 8, 8½, 9, and 10 in September and October 2021 (Mabbett, 2020). The surveys identified the presence of asbestos, lead, and likely presence of PCBs in caulk, in Buildings 6, 7, 8, 9, and 10.

3.9.1.2 Radioactive Waste

Radioactive materials were last used in Building 7 in 2004 (VACHS, 2021b). The building was decommissioned prior to 2010, but due to lack of documentation of decommissioning, VACHS in August and September 2012 completed comprehensive surveys of the second floor of Building 7, where radioactive materials had been used between 1998 and 2004. The surveys confirmed that radiological measurements were below U.S. Nuclear Regulatory Commission (NRC) “NUREG” screening levels, and the NRC National Health Physics Program inspector recommended releasing all of Building 7 for unrestricted use. However, radioactive material remains in selected benchtop and hood fixtures at concentrations above background levels (these fixtures are currently affixed with labels reading “Caution, Radioactive Material”). As a result, the fixtures cannot be disposed of as regular solid waste; the radionuclide(s) present will first need to be identified and then disposed of in compliance with all pertinent radiation related regulations (VACHS, 2021b).

VA provided design plans dated 1949 that depict an underground sludge trap associated with the former radioisotope laboratory at Building 7. The plan depicts a subsurface sludge trap with two maintenance covers located immediately northeast of the Building 7 entrance. During a site visit on September 28, 2021, the two maintenance covers were visually observed in the physical location depicted on the 1949 drawing. The WHVAMC site representative confirmed these maintenance covers are access points to the sludge trap. To date, VA has not performed an investigation to assess the contents and condition of the sludge trap. Therefore, prior to any

subsurface work in this area, the AE of Record would be required to assess the condition and contents of the sludge trap according to guidance from the CTDEEP Radiation Division. Should radiological waste be present, the construction contractor would be required to manage the material according to regulations set forth by the U.S. Nuclear Regulatory Commission, USEPA, Federal Department of Transportation, Connecticut Department of Transportation, and CTDEEP.

3.9.2 Environmental Consequences

3.9.2.1 Proposed Action

3.9.2.1.1 Regulated Building Materials - Construction

Although VA has completed an ACM and LCP survey of the buildings to potentially be demolished, the construction contractor would be required to complete a pre-demolition survey for polychlorinated biphenyls (PCBs), which may be present in caulk used around windows, door frames, masonry columns and other masonry building materials in buildings constructed or renovated prior to 1978. PCBs may also be present in transformers, capacitors, fluorescent light ballast and other oil-containing equipment, and in other building materials (e.g., paint, roofing, flooring, insulation). This survey would allow the construction contractor to determine appropriate disposal methods and comply with CTDEEP and USEPA guidance regarding disposal of PCB bulk product waste.

Prior to demolition of the buildings containing regulated building materials, the construction contractor would prepare a CTDEEP-required Construction and Demolition Waste Management Plan identifying the waste to be generated during demolition and how it would be handled. Additionally, prior to demolition, the construction contractor would submit to CTDEEP an *Application Form for Special Waste or Asbestos Disposal Authorization* (DEP-WEED-APP-200) to obtain a *Special Waste Disposal Authorization* to dispose of a "special waste" (not hazardous) or asbestos.

Additionally, prior to demolition, the construction contractor would apply for and obtain a demolition permit from the City of West Haven, in accordance with the 2012 Connecticut General Statutes: *Title 29 - Public Safety and State Police, Chapter 541 - Building, Fire and Demolition Codes, Fire Marshals and Fire Hazards, Safety of Public and Other Structures*.

At least 10 days prior to demolition, the construction contractor would also submit a Demolition Notification Form to Connecticut Department of Public Health (CTDPH). However, if an Asbestos Abatement Notification was previously submitted to the CTDPH, the submission of the Demolition Notification Form is not required provided that an Asbestos Abatement Notification Form was previously submitted to the CTDPH. In all cases of demolition, one and only one form (Notification of Demolition Form or Asbestos Abatement Notification Form) shall be sufficient to satisfy the CTDPH notification requirements detailed in Section 19a-332a-3 of the Regulations of Connecticut State Agencies.

The construction contractor would then use CT-licensed workers to abate the regulated building materials and transport them off-site for proper disposal.

The number of buildings requiring abatement prior to demolition varies among the proposed action alternatives as follows:

- Alternative 1 abatement: Buildings 6 and 7
- Alternative 2 abatement: Buildings 6, 7, 8, 9, 10
- Alternative 3 abatement: Buildings 7, 8, 9, 10

3.9.2.1.2 Radiological Waste - Construction

The VACHS has been issued a Broad Scope permit by the National Health Physics Program (NHHP) for management of radioactive material; this permit covers activities involving radioactive material at the WHVAMC. The NHHP specifies policies for decommissioning laboratories containing radioactive materials. The WHVAMC follows these policies and performs close-out surveys prior to decommissioning. A close out survey refers to performance and documentation of a historical assessment and radiological measurements/calculations of sufficient quality to support release of a room, area or building for unrestricted use per 10 CFR 20.1401.

CTDEEP does not regulate radioactive material at WHVAMC, because WHVAMC is a federal facility. However, CTDEEP would expect to be consulted for building demolition. Their release criterion is 19 millirem per year (mRem/yr) plus As Low As Reasonably Achievable levels (CTDEEP, 2020), rather than the 25 mRem/year used by the US Nuclear Regulatory Commission (NRC) and Multi-Agency Radiation Survey And Site Investigation Manual (MARSSIM) (MARSSIM, 2020). Additionally, CTDEEP identifies remediation standards for radionuclide contamination in Connecticut (CTDEEP, 2020).

Prior to demolition of Building 7 or removal of the subsurface sludge trap outside of Building 7, additional radiological investigations would be performed by the A/E and the data reviewed by the VACHS Radiological Safety Officer (RSO) to determine the appropriate requirements for the removal of the tank and its transport off-site for disposal to an appropriate licensed disposal facility.

3.9.2.1.3 Demolition Requirements - Construction

Prior to any building demolition, the A/E would prepare and submit an application and subsequently obtain a demolition permit from the City of West Haven, in accordance with the 2012 Connecticut General Statutes: *Title 29 - Public Safety and State Police, Chapter 541 - Building, Fire and Demolition Codes. Fire Marshals and Fire Hazards. Safety of Public and Other Structures.*

Demolition of the buildings would generate construction debris. The A/E would be required to recycle or reuse this construction debris to the maximum extent practicable. Only materials that could not be reused or recycled would be transported off-site for disposal at a landfill approved for construction debris.

Therefore, the construction phase of the Proposed Action, regardless of the alternative selected, would have a direct, long term, less-than-significant beneficial impact on regulated building materials and radiological waste by removing these materials from at the WHVAMC, but a direct, short-term, less-than-significant adverse impact by increasing the volume of waste disposed of at an off-site landfill.

3.9.2.1.4 Solid Waste and Hazardous Materials - Operation

During operation of the Proposed Action, WHVAMC would continue to manage any operational-related solid waste and hazardous materials in accordance with VA's Standard Operating Procedures (SOPs) and applicable federal and state laws governing the use, generation, storage, or transportation and disposal of these materials.

Therefore, operation of the Proposed Action would have a direct, long-term, negligible adverse impact on solid wastes and hazardous materials associated with normal medical operations.

3.9.2.2 No Action

Under the No Action Alternative, existing conditions at the WHVAMC would remain unchanged for the foreseeable future. WHVAMC would continue to perform operational and maintenance activities at the Proposed Action site buildings to minimize the risk of exposing staff to regulated building material hazards and to prevent the release of these materials to the environment. The Building 7 fixtures containing radiological contamination would continue to be managed by the RSO according to applicable regulations. The former sludge tank would remain in its present condition unless the WHVAMC identifies a specific need for its assessment and removal.

Therefore, the No Action Alternative would have a long-term, negligible adverse impact on hazardous materials, and no impact on solid waste.

3.10 Transportation and Parking

3.10.1 Existing Conditions

3.10.1.1 Regional Transportation

Public transportation is provided to the WHVAMC by CT Transit via bus stops located along Ring Road (Bus Routes 265 and 268), as well as additional stops located at the intersection of Campbell Avenue and Lamson Street (Bus Route 265) and at the intersection of West Spring Street and Stevens Avenue (Bus Route 268) on and/or adjacent to the WHVAMC.

Primary vehicle access to the WHVAMC is provided by the Connecticut Turnpike (Interstate 95), a six-lane divided highway. I-95 is located approximately 600 feet south of the WHVAMC. The WHVAMC is accessible from exit 43 when traveling south or north on I-95. Once off I-95, traffic approaches the WHVAMC from Campbell Avenue and 1st Avenue (Route 122). The I-95 exit ramps to Campbell Avenue and 1st Avenue are fully signalized.

WHVAMC is bordered to the east by Campbell Avenue and to the south by Spring Street. Vehicles enter the campus via Lamson Road at its intersection with Campbell Avenue, and via Ring Road, from its intersection with Spring Street. The intersection of Spring Street and Campbell Avenue and the intersection of Campbell Avenue and Lamson Road are fully signalized. The intersection of Spring Street and Ring Road is not signalized and has a stop sign on Ring Road.

3.10.1.2 WHVAMC Roadways and Parking

Within the WHVAMC, Lamson Road connects to the Ring Road, which provides vehicle and pedestrian access throughout the campus. Parking lots for staff and visitors are available throughout the WHVAMC. Parking Lot 7 is a designated handicapped parking area and provides approximately 90 spaces. WHVAMC also offers valet parking at Lot 7. Emergency vehicles are

allowed to transport patients directly to and from Buildings 1 and 2. VA is currently constructing a multi-level parking garage in the western portion of the campus.

Traffic and parking conditions at the WHVAMC were analyzed and presented in a report prepared by IMEG, Inc. dated May 9, 2021 (VA, 2021). An updated traffic study was performed in September 2021 by The Traffic Group, Inc. (TTG). The TTG study presented future projections of traffic and parking conditions that could potentially occur under the Proposed Action, evaluated circulation patterns, and made additional recommendations to increase pedestrian and vehicle safety within the WHVAMC (TTG, 2021). The Proposed Action does not require new staff to be hired to operate the new tower. However, the standard traffic prediction model used a hypothetical increase of 225 staff based on the square footage of the proposed new tower. The model then projected a 1% increase in traffic volume annually through year 2046, with and without the hypothetical staffing increase. Because no new staff are required for the Proposed Action, the traffic prediction model overestimates potential traffic increases and associated impacts. The traffic model projected the increases in average daily traffic at the two WHVAMC entrances, with and without a hypothetical staff increase (Table 17).

The traffic model also projected how the increase in average daily traffic volume, both with and without the hypothetical staff increase, would impact levels of service (LOS) at the WHVAMC intersections. The existing LOS at the WHVAMC entrances ranges from A to C (Table 18). The traffic model also indicated that the LOS at the WHVAMC parking lot 9/10 intersection would decrease from B to E (for AM peak hour) by year 2046. This decrease in LOS would occur regardless of implantation of the Proposed Action.

Table 17. Average Daily Traffic (ADT) – Existing and Projected

Location	Existing ADT	Future ADT (No Action)	% Increase in Future (No Action)	Future ADT with Proposed Action	% Increase in Future ADT with Proposed Action
Campbell Avenue	13,100	16,768	28%	18,001	7.3%
West Spring Street	4,100	5,248	28%	5,752	9.6%

Table 18. Intersection Level of Service – Existing and Projected

Intersection	AM Peak Period			PM Peak Period		
	2021	2046 (with Proposed Action)	2046 (with No Action)	2021	2046 (with Proposed Action)	2046 (with No Action)
West Spring Street & WHVAMC southwest entrance	B	D	D	C	C	C
Within WHVAMC at the entrance to Lot 9/10	C	E	E	B	C	C
Campbell Avenue & WHVAMC eastern entrance (main entrance)	B	C	C	C	C	C
Campbell Avenue & West Spring Street intersection	A	B	B	B	D	D

3.10.2 Environmental Consequences

3.10.2.1 Proposed Action

3.10.2.1.1 Construction

The existing network of federal highways, state roads, and local roads is sufficient for construction equipment and materials to be transported to the WHVAMC during the construction phase of the Proposed Action. Therefore, no modifications to transportation infrastructure or traffic patterns to these roads would be required.

The number of construction workers traveling to and from the WHVAMC during the Proposed Action construction phase is anticipated to be fewer than 100 at any given time. Assuming each worker drives one vehicle, the additional volume would add an insignificant increase (<20%) in overall traffic volume on roadways outside of the WHVAMC. VA's NEPA regulations at 38 CFR 26(26.62)(ii) define a significant traffic impact as "an increase in average daily traffic volume of at least 20 percent on access roads to the site or the major roadway network"; such impacts would typically require an Environmental Impact Statement.

When traveling on these roadways, construction workers would be required to follow all existing posted traffic requirements, as all non-emergency vehicles must.

The existing roadways within the WHVAMC also provide sufficient access to the Proposed Action site; no modifications to existing WHVAMC roadways would be required.

To ensure that construction vehicles do not degrade the quality of the roadways within the WHVAMC, gravel construction pads would be installed at the construction site exit to ensure debris is physically removed from construction equipment before that equipment travels on WHVAMC roadways; brushes and/or water may also be used to remove debris. Additionally, flaggers may be utilized within WHVAMC to alert other drivers when oversized vehicles are traveling through the WHVAMC.

Construction within any of the alternative areas would temporarily disrupt pedestrian and vehicle circulation patterns during demolition of selected buildings; when heavy equipment and building materials are delivered to the construction site; and during the construction phase for the new tower. Impacts unique to each alternative are discussed in the following paragraphs.

For Alternative 1, the sidewalk within the courtyard would be permanently eliminated. Pedestrians would no longer be able to walk directly from Lot 9/10, or from Buildings 4 and 5, to the northern entrances of Buildings 1 and 2. Instead, to reach Buildings 1 and 2 from Lot 9/10, pedestrians would likely have to walk around the western sides of Buildings 21 and 38. The underground tunnel systems leading to Building 1 would also close once construction begins on the surface above the tunnel. Additionally, Parking Lot 7 and the roadway leading to Building 9 may be intermittently closed to avoid safety concerns when building materials and equipment are being transported to the courtyard work area.

Therefore, Alternative 1 would have a direct, short-term, minor adverse impact on transportation and parking.

For Alternatives 2 and 3, Parking Lot 7 would be permanently closed, eliminating 90 parking spaces (of which 72 are handicapped accessible). The new parking garage would accommodate this loss in parking, but a shuttle may be required to assist with transporting handicapped visitors

to and from the new garage (or other designated handicapped parking area) to their destination within the WHVAMC. Alternatives 2 and 3 would also permanently eliminate the northern and southern access roadway that extends from Parking Lot 7 to Building 10.

Therefore, Alternatives 2 and 3 would have a direct, short-term, minor adverse impact on transportation and parking.

3.10.2.1.2 Operation

Operation of the Proposed Action would have no direct impact on traffic volumes because VA does not anticipate increasing staffing levels to operate the new tower. The traffic model projected increases in average daily traffic volumes at the entrances and within the WHVAMC. These increases would occur with or without Proposed Action. The impact of these projected future traffic increases would result in a general decrease in the LOS at WHVAMC intersections (Table 18). These impacts would have no direct impact on the operation of the new tower because staff and visitors would remain able to access the WHVAMC.

Other operational impacts to traffic and parking unique to each alternative are discussed in the following sections.

For Alternative 1, a new round-about with a designated patient drop-off area would be created in the place of the existing Parking Lot 7. This would provide patients with direct, convenient access to the eastern entrance of new tower. Sidewalk access would be restored to pedestrians traveling to and from Lot 9/10 and the new tower or to Building 1. Additionally, there would be direct pedestrian access to the new tower from within Buildings 1, 2, and 5.

Vehicular access to Buildings 8, 8½, 9 and 10 would be from the existing access road to the south of these buildings. Similar to existing conditions, none of these buildings would have dedicated staff parking lots.

Therefore, Alternative 1 would have a direct, long-term, negligible adverse impact on transportation and parking.

For Alternative 2, a semi-circular new patient drop-off area would be created in the place of the existing Parking Lot 7. This would provide patients with direct, convenient access to the eastern entrance of the new tower. However, this new patient drop-off area would be substantially smaller than the round-about for Alternative 1. This smaller size could cause traffic back-ups when many patients are dropped-off in a short time period.

Sidewalk access would be restored to pedestrians traveling to and from Lot 9/10 and the new tower. Additionally, there would be direct pedestrian access to the new tower from within Buildings 1 and 5.

Vehicular access to Building 10 (the only building not demolished under Alternative 2) would be from the existing narrow access road located to the north of the new tower.

Therefore, Alternative 2 would have a direct, long-term, negligible adverse impact on transportation and parking.

For Alternative 3, Parking Lot 7 would be reutilized as a patient drop-off area. While a new round-about is not proposed, the new drop-off area would provide patients with direct, convenient access to the western entrance of the new tower.

Sidewalk access would be restored to pedestrians traveling to and from Lot 9/10 and the new tower or to Building 1. Additionally, there would be direct pedestrian access to the new tower from within Building 1.

None of the existing buildings (6, 7, 8, 8½, 9, 10) or the access roadways to these building would remain or be needed (the new tower footprint covers these elements).

Therefore, Alternative 3 would have a direct, long-term, negligible adverse impact on transportation and parking.

3.10.2.2 No Action

Under the No Action Alternative, the increases in average daily traffic levels and the resulting impacts to LOS would occur as shown in Table 17 and Table 18, respectively. Under the No Action Alternative, the current parking conditions at Lot 7 and the service roads would remain unchanged. (Construction and operation of the new parking garage would continue as a separate project that is independent of the Proposed Action.) Recommended traffic and circulation improvements described in the 2021 IMEG Traffic Study and the 2021 TTG Traffic Study could occur.

Therefore, the No Action Alternative would have no impact on traffic and parking conditions at the WHVAMC.

3.11 Utilities

3.11.1 Existing Conditions

The WHVAMC obtains utilities from several companies and then distributes these utilities to buildings and facilities throughout the WHVAMC via VA-owned infrastructure. Additionally, the WHVAMC Central Utility Plant generates and distributes steam, hot water, and chilled water to buildings throughout the campus. Medical-grade oxygen and fuel for emergency generators are stored in designated tanks on the WHVAMC property. A map of the WHVAMC utility distribution infrastructure is provided in Figure 8.

Table 19 summarizes currently available information about the utilities, including suppliers, and existing supply and demand. The table also identifies upgrades to the utility distribution infrastructure identified by WHVAMC as necessary to support current WHVAMC operations and to meet VA PSRDM redundancy requirements, even if the Proposed Action is not implemented (from VA, 2021). Additionally, the WHVAMC does not have emergency water storage capacity for potable, fire, and industrial use, as required by the VA PSDRM.

Table 19. Current WHVAMC Utility Information

Utility:	Electricity	Sanitary Sewer	Potable Water	Natural Gas	Steam	Chilled Water/AC	Hot Water System	Medical Gas System	Fuel Storage	Telecom
Provider:	United Illuminated	City of West Haven Public Works Department	South Connecticut Regional Water Authority	Southern Connecticut Gas Company	WHVAMC	WHVAMC	WHVAMC	External vendor (not specified)	External vendor (not specified)	External vendor (not specified)
Existing Capacity:	Two 13.2kV feeds from West Spring Street. Third 13kV feed dedicated to PET CT in Building 1.	N/A	N/A	N/A	Three boilers, each with output capacity of 26,000-27,000 pounds per hour (lbs/hour) at 110 psi	Two 800-ton steam absorption chillers in the new CHP. One 1,000-ton in fair condition but past useful life. One 800-ton chiller new in 2012. 6,000 tons of thermal storage (10 hours)	WHVAMC generates and distributes hot water from the CUP (steam to hot water exchangers) at 35 psi	6,500 gallons	65,000 gallons, which is stored in four 21,2250 gallon above-ground storage tanks	N/A
Existing Demand	6.3M Kilowatt hours (KWh)	N/A	67M gallons (in FY2020)	61.5M cubic feet	58,000 lbs/hour	4,000 tons	N/A	686,000 cubic feet per month	N/A	N/A
Upgrades recommended to support current WHVAMC operations	Upgrade switchgear to meet VA PSRDM redundancy requirements	Replace or line original pipes	Most pipes are original and likely will not hold pressure (50 pounds per square inch [psi])	No upgrades identified	There is a current project to replace the boilers and main steam condensate return lines, but design has not started.	Cooling towers are in poor condition and will need to be upgraded.	N/A	Existing bulk storage tanks and vaporizer are undersized.	N/A	Single path for data and voice does not meet VA PSRDM redundancy requirements

N/A – Not available

3.11.2 Environmental Consequences

3.11.2.1 Proposed Action

Table 19 identifies upgrades needed to much of the current utility infrastructure to support current WHVAMC operations and meet VA PSRDM requirements. As stated upgrades to the current utility infrastructure are necessary with or without implementation of the Proposed Action and would also meet the anticipated demand for utilities for the Proposed Action (Table 21).

Neither the design for utility upgrades nor the Proposed Action have been finalized. Based on the final design for the new tower, the A/E would confirm the anticipated utility demands, then coordinate with each external utility provider to assess whether there is sufficient supply to meet this demand without impacting service quality to other external customers.

The A/E of Record would also coordinate with the WHVAMC Chief of Facilities to ensure that any utility upgrades that are planned to correct existing deficiencies in the current infrastructure would consequently support the new tower. The A/E and the WHVAMC Chief of Facilities would determine the specific utility corridors and lines that would require re-configuration without disrupting utility service to other users within the WHVAMC. Re-configuration would involve upfront site work to maintain uninterrupted utility services to all other buildings, creation of redundant utility connections, and creation of new utility corridors. However, should new utility corridors be required, they would still generally occur within existing areas of disturbance on the WHVAMC property.

The A/E and the WHVAMC Chief of Facilities would also determine the size, design, and location for emergency water storage structures (tanks and/or towers) within the WHVAMC property (preliminary proposed locations are depicted on Figure 4). It is anticipated the total emergency water storage capacity would be approximately one million gallons.

The following subsections describe the potential impacts associated with constructing the utility upgrades associated with the Proposed Action.

Table 20. Proposed Action Anticipated Utility Demand

Utility	Electricity	Steam	Chilled Water/AC	Fuel Storage
Anticipated Demand from the Proposed Action ⁽¹⁾	250-500kVA	15,000 lbs/hour	575 tons	35,000 gallons

1 - Anticipated demand was not available for sanitary sewer, potable water, natural gas, hot water, medical gas, and telecommunications. However, the Proposed Action would utilize all of these utilities.

3.11.2.1.1 Construction

Once the design of the new tower is finalized, utility upgrades and re-configurations would be constructed. Construction would involve creating new and redundant connections to the WHVAMC Central Utility Plant and a new utility tunnel to service the new tower. Redundant loops would be required because the new tower would be classified as Mission Critical due to the inclusion of inpatient beds and hospital functions. Temporary utility lines may be needed to ensure continuity of utility services throughout the WHVAMC while permanent new utility lines are constructed. The new utility lines installed during construction would present an improvement compared with the prior existing conditions. Additionally, the new tower would utilize energy efficient design principles to reduce the demand for heating, cooling, and water use.

The pre-design and design coordination among the A/E, WHVAMC Chief of Facilities, and external utility providers, as well as the construction management measures implemented by the A/E, would ensure that Proposed Action does not adversely impact the existing utility distribution during the Proposed Action construction phase.

The extensive utility pre-construction coordination and intensive monitoring activities during construction may be considered to have direct, short-term, negligible adverse impact on overall utility operations at the WHVAMC.

As a result, all of the Proposed Action alternatives would be anticipated to have a direct, short-term, negligible adverse impact on utility services at the WHVAMC, and no impact on customers outside of the WHVAMC.

3.11.2.1.2 Operation

Operation of the Proposed Action would utilize all of the utilities identified in Table 19, with anticipated demand for selected utilities identified in Table 20. Once the selected medical functions previously located in Building 1 are relocated to the new tower, those functions would become operational and begin using utilities. The utility demand would be minimized by utilizing energy efficient equipment. As a result, only a negligible, direct, long-term increase in utility demand is anticipated.

As previously described, as part of the design process the A/E would ensure utility service providers and the WHVAMC have sufficient capacity to meet operational utility demand for the new tower and without reducing service quality elsewhere at WHVAMC or to other utility customers. Should mitigation be required to avoid a significant adverse impact on utility service quality, the A/E would design the mitigation strategy and provide a monitoring and maintenance plan to ensure the mitigation remains effective over time.

Therefore, operation of the Proposed Action, regardless of the alternative selected, is anticipated to have a direct, long-term, negligible adverse impact on utilities due to the increased consumption of utilities, but no impact on utility service quality within or external to the WHVAMC.

Utility improvements required regardless of the Proposed Action would occur and have a long-term, direct, moderate beneficial impact on utility operations at the WHVAMC.

3.11.2.2 No Action

Under the No Action Alternative, existing utility conditions at the Proposed Action site would remain unchanged. However, under the No Action Alternative, upgrades to the majority of utility infrastructure, including a new emergency water storage facilities, would be required regardless of construction and operation of the new tower. Upgrades would increase the safety and efficiency of utility distribution, such as reducing leakage from original piping and valves, and improving digital monitoring and distribution capabilities. Therefore, the No Action Alternative would have a long-term, direct, moderate beneficial impact to the WHVAMC through an improvement in utility distribution and monitoring infrastructure.

3.12 Community Services

Community services include security (police, fire), medical (hospital and ambulatory), educational (public and private schools), and recreational areas (parks, playgrounds) to the community.

With the exception of hospital medical services, the Proposed Action would not increase, reduce, or otherwise impact the level of community services (police, fire, ambulance, schools, public institutions). Therefore, this section analyzes how the Proposed Action would impact medical services provided to Veterans in Connecticut and southern New England.

3.12.1 Existing Conditions

As previously described in Section 1, the WHVAMC is the primary care facility for Veterans in Connecticut and is a tertiary care facility classified as a Clinical Referral Level One Facility with a total of 216 operational beds. It is a teaching hospital that provides a full range of health services for Veterans, with state-of-the-art technology and educational and research functions.

As previously described in Section 1.1 (Purpose and Need), VA Standards for the VACHS space and patient population establish a total surgery space of approximately 60,000 DGSF for the WHVAMC. Currently, the WHVAMC has 35,544 DGSF, which is approximately 40% below the standard. Therefore, the current facilities do not provide the amount of space specified in the VA Standards.

3.12.2 Environmental Consequences

3.12.2.1 Proposed Action

3.12.2.1.1 Construction

For all three alternatives, construction of the new tower would require demolition of several buildings where administrative functions are performed. Table 21 summarizes the buildings that would be demolished for each alternative. For all alternatives, displaced functions would be accommodated with temporary modular swing space for the length of the construction phase, and in combination with added and extended telework plans and some staff relocations. These accommodations would ensure there are minimal disruptions to these administrative and medical support services.

Table 21. Building Impacts by Alternative

Building	Function	Alternative 1 – Courtyard	Alternative 2 – Parking Lot 7	Alternative 3 – Loading Dock
Building 6	Administrative	To be demolished	To be demolished	Retained
Building 7	Vacant	To be demolished	To be demolished	To be demolished
Building 8	Administrative and Supportive Medical	Retained	To be demolished	To be demolished
Building 8½	Administrative	Retained	To be demolished	To be demolished
Building 9	Administrative	Retained	To be demolished	To be demolished
Building 10	Facilities Garage	Retained	To be demolished	To be demolished

Alternative 1 would demolish the fewest number of buildings (Buildings 6 and 7) and therefore would be least disruptive to administrative functions. Building 6 is used for administrative work functions while Building 7 is vacant.

Construction of the new tower within the courtyard area would involve direct connections into the north and west sides of Building 1 and the north side of Building 2 (Figure 5). Construction would involve removal of portions of exterior walls where the new tower connects to these buildings.

This construction activity would require extensive coordination with medical staff in Buildings 1 and 2 to minimize adverse impacts to medical services, patients, and staff in those affected areas.

Therefore, construction of Alternative 1 would have a direct, short-term, minor adverse impact on administrative and medical services.

Alternative 2 would demolish six buildings and require relocation of more administrative functions compared with Alternatives 1 and 3. Construction of the new tower would involve direct connections into the north side of Building 1 (Figure 6). Construction would involve removal of portions of Building 1 exterior walls where the new tower and Building 1 connect. This construction activity would require extensive coordination with the medical staff to minimize adverse impacts to medical services, patients, and staff in Building 1.

Therefore, construction of Alternative 2 would have a direct, short-term, minor adverse impact on administrative and medical services.

Alternative 3 would demolish four buildings and would also disrupt administrative functions in those buildings. Construction of the new tower would involve a small connection on the northeast portion of Building 1 (Figure 7). Construction would involve removal of portions of exterior walls where the new tower and Building 1 connect. This construction activity would require less extensive coordination with the medical staff to minimize adverse impacts to medical services, patients, and staff in Building 1. Alternative 3 would eliminate the loading dock area between it and Building 1. The A/E would be required to design a permanent alternative loading dock area.

Therefore, construction of Alternative 3 would have a direct, short-term, minor adverse impact on administrative and medical services.

3.12.2.1.2 Operation

Operation of the Proposed Action would meet the VA Standards for the VACHS space and patient population for DGSF at the WHVAMC, provide additional medical support features including inpatient surgical/endovascular, ambulatory, intensive care nursing, information & technology, pathology, laboratory medicine, sterile processing, engineering, pharmacy, environmental management, and logistics, increase the efficient use of building utilities, and improve VACHS's ability to provide modern medical services to Veterans in Connecticut and southern New England.

Therefore, operation of the Proposed Action, regardless of the alternative selected, would have a direct, long-term, significant beneficial impact on administrative and medical services.

3.12.2.2 No Action

Under the No Action Alternative, the Proposed Action would not be implemented. The current WHVAMC would not meet the VA Standards for the space and patient populations. Existing medical functions would continue, but the purpose and need for action would not be met.

Therefore, the No Action Alternative would have a direct, long-term, significant adverse impact on Veterans' medical services.

3.13 Socioeconomics/Demographics

3.13.1 Existing Conditions

The West Haven VAMC is located within a suburban, medium-density area in New Haven County, Connecticut. The socioeconomic conditions are influenced by the employment opportunities in the region, which are predominantly associated with health care and social assistance, retail trade, and educational services (Data USA, 2021). The median annual income in New Haven County is \$69,905, which is slightly less than the median annual income of \$78,444 for Connecticut and slightly more than the United States median annual income of \$62,843 (USCB, 2019). New Haven County is the third most populated county of the eight counties in Connecticut. The population in New Haven County has decreased by 0.9% to approximately 854,757 individuals from 2010 to 2019 (the year the most recent data was reported) (USCB, 2019).

Relevant demographic data for New Haven County and for Connecticut are presented in Table 22 and economic data are presented in Table 23. The data presented are from the U.S. Census Bureau 2010-2019 Quick Facts dataset (USCB, 2019).

Table 22. Demographic Data for New Haven County and Connecticut

Location	Total Population	Median Age	% Population under age 18	% Minority Population ⁽¹⁾	% High School Graduates	Veterans
New Haven County	854,757	40.6	20.0%	22.7%	90.1%	38,410
Connecticut	3,565,287	41.0	20.4%	20.3%	90.6%	167,521

Notes:

1 – Data include all race/ethnicity categories except non-Hispanic White persons.

Table 23. Economic Data for New Haven County and Connecticut

Location	Number of Households	% Population in Poverty	Total Employment
New Haven County	330,572	12.0%	343,018
Connecticut	1,370,746	10.0%	1,538,341

3.13.2 Environmental Consequences

3.13.2.1 Proposed Action

3.13.2.1.1 Construction

The Proposed Action would require the construction contractor to employ skilled laborers and make expenditures on construction equipment, vehicles, supplies, and support facilities (e.g., office trailers, safety equipment, erosion-control materials). Additionally, workers from outside of New Haven County who are involved with construction of the new tower may utilize area lodging and other amenities. The expenditures would be generally similar regardless of the alternative selected. The temporary increase in the number of workers supporting construction of the Proposed Action would not induce changes in the demographic profile of New Haven County as it relates to population, housing, or income levels.

There are no children or child-care centers at the WHVAMC. The construction contractor would also establish a safe work zone with signage and fencing to ensure only authorized personnel can enter the work zone. These measures would help to keep children, as well as other visitors and

staff, outside of the construction area. As a result, the Proposed Action would not pose disproportionate environmental health and safety risks to children and would comply with EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*.

Therefore, under any of the alternatives, the temporary increase in employment and spending on equipment, supplies, and local services would have a direct, short-term, minor beneficial impact on local socioeconomic conditions in New Haven County.

3.13.2.1.2 Operation

Operation of the Proposed Action would enable Veterans in Connecticut and southern New England to continue receiving medical care at the WHVAMC, avoiding the related expenses of traveling to outside of this region to obtain medical care at another VA medical center or at a non-VA medical provider.

Once construction is completed, the Proposed Action would require capital expenditures to operate and maintain the new tower, including the purchase of maintenance and medical equipment. During the design phase, VA would also determine whether new staff would need to be hired to support the new tower. Although the specific operating budget and staffing levels would be defined during the design phase, routine operating expenditures would generally benefit New Haven County through additional tax revenue. However, the New Haven-Milford CT Metropolitan Statistical Area has a total domestic gross product of approximately \$53 billion in 2022 (FRED, 2022). Therefore, operation of the Proposed Action would have direct and indirect, long-term, negligible beneficial impact on socioeconomic conditions in New Haven County.

3.13.2.2 No Action

Under the No Action Alternative, the Proposed Action would not be implemented. There would be no increase in expenditures on local or regional services and materials. Baseline expenditures on local services and materials would continue for the foreseeable future. Therefore, the No Action Alternative would have no impact on socioeconomics and demographics.

3.14 Environmental Justice

3.14.1 Existing Conditions

For this analysis, data for minority and low-income population were obtained for the area within a 2.5-mile radius of the West Haven VAMC, New Haven County, and Connecticut (USCB, 2019) (Table 24). According to this data, the area within a 2.5-mile radius of the West Haven VAMC has a larger minority population than New Haven County and Connecticut, but a slightly lower percentage of low-income populations (household income less than \$25,000/year) than New Haven County, and a slightly larger percentage of low-income populations than Connecticut.

Table 24. Minority and Low-Income Populations

Location	Total Population	% Minority Population ⁽¹⁾	Percentage of Population Below Poverty Level
2.5-mile radius of the West Haven VAMC	54,620	36.7%	11.8%
New Haven County	854,757	22.7%	12.0%
Connecticut	3,565,287	20.3%	10.0%

Notes:

1 – Includes all race/ethnicity categories except non-Hispanic White persons

3.14.2 Environmental Consequences

3.14.2.1 Proposed Action

Construction and operation of the Proposed Action would not have a disproportionate impact on low-income or minority groups, as these populations are not present within the local community at dissimilar rates compared with levels within New Haven County or state-wide.

Therefore, the Proposed Action, regardless of the alternative selected, would have a negligible impact on environmental justice conditions.

3.14.2.2 No Action

No changes at WHVAMC would occur under the No Action Alternative. No impacts to environmental justice conditions would occur.

3.15 Cumulative Impacts

As defined by the CEQ regulations in 40 CFR Part 1508.7, cumulative impacts are those which “result from the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions, without regard to the agency (federal or non-federal) or individual who undertakes such other actions.”

Cumulative impact analysis captures the effects that result from the Proposed Action in combination with the effects of other actions taken before, during, or after the Proposed Action in the same geographic area.

The Proposed Action site is located within an approximately 5-acre area within the central portion of the 44-acre WHVAMC. The Proposed Action site is highly developed, having been improved with many of the existing buildings in 1916. The Proposed Action site is devoid of wildlife habitat or significant natural features (e.g. wetlands, water bodies). The Proposed Action site has been extensively graded, and the subsurface environment consists of densely compacted urban fill interspersed with numerous utility corridors and duct banks.

The surrounding WHVAMC grounds are also highly developed with medical and infrastructure support buildings, roadways, parking areas, designated entrances, utility infrastructure, and landscaped grounds. The continued use of the WHVAMC property as a medical hospital is also consistent with the West Haven CT Plan of Conservation and Development (City of West Haven, 2017).

The WHVAMC is located in the north-central portion of the City of West Haven, which is highly urbanized and includes a mixture of institutional, residential, commercial, and recreational uses.

There has been no large-scale development in the vicinity of the WHVAMC, primarily because there is little to no undeveloped land remaining in this area.

More recent development has occurred on the West Haven VAMC campus, which has undergone periodic additions and modifications. Surface parking was expanded in the northeastern portion of the campus in the late 1990s. VA developed the parking lot northwest of the Site (P18) in 2018.

No new development plans were identified for off-campus properties in the Site area. Given the fully developed nature of the surrounding area, there is little remaining space for in-fill development.

Other projects planned for the West Haven VAMC campus in the near future include the construction of an approximately 10,000 square-foot inpatient pharmacy addition (scheduled for construction in 2023/2024), a new multi-deck parking garage to replace parking lot P4 9 (2023/2024), and the relocation and addition of an approximately 8,000 square-foot sterile processing service (2023/2024).

3.15.1 Proposed Action

The Proposed Action would result in adverse impacts to different portions of the site, depending on the alternative selected, as described throughout Section 3. These include potential short-term and/or long-term adverse impacts to aesthetics, air quality, above-ground historic properties, soil, noise, solid waste, transportation, and utilities.

Cumulative impacts on these resources are mostly likely to occur through additional development within the WHVAMC. Additional development could increase impervious surface area and/or impact the existing stormwater management infrastructure, such that new and/or replacement infrastructure is required to achieve MS4-permit requirements. Cumulative impacts would include a potential negligible impact on groundwater quality and a potential direct, long-term, less-than-significant beneficial impact on hydrology/stormwater.

Major projects within the WHVAMC that involve new or expanded medical or administrative functions, such as the new pharmacy and sterile processing facility, would increase the demand for utilities. This demand, when considered on a cumulative basis with other developments, can be considered to have a less-than-significant adverse impact because the resources from which the utilities are obtained may not be renewable. Based on VA's experience constructing and operating similar projects, potential adverse impacts from these future projects are anticipated to remain less-than-significant because of increases in the efficiencies in building systems.

As VA continues to identify improvements and advancements in standards of delivering care, future renovations to existing facilities may be required. Where renovations are not feasible economically or physically, then demolition may be required to additional buildings that are considered contributing elements to the WHVAMC historic district. Mitigation of adverse effects to historic properties would be required.

The Proposed Action and other planned major projects within the WHVAMC would have a beneficial long-term cumulative impact on community services by continuing to provide world-class medical services to Veterans, and socioeconomics through employment of medical and operational staff and expenditures on operational supplies from local and regional vendors.

3.15.2 No Action

The No Action Alternative would have a significant adverse impact on community services (medical). When considered on a cumulative basis with other projects at the WHVAMC, the No Action Alternative would have a significant adverse impact on this resource because it would not allow the WHVAMC to achieve the VA Standards for supportive medical care.

3.16 Potential for Generating Substantial Public Controversy

3.16.1 Proposed Action

The Proposed Action is not anticipated to generate substantial controversy or lead to negative public reaction, because it would improve VA's ability to increase the level of care offered at WHVAMC to Veterans in Connecticut and throughout southern New England. The Proposed Action is anticipated to be widely accepted and positively perceived within both the Veteran and non-Veteran communities. However, the loss of historic buildings may be perceived negatively and be controversial to community members focused on preserving resources that contribute to the historic district. Additionally, Alternative 1 would eliminate the courtyard, which serves many visitors and staff on a daily basis and may be perceived less positively than Alternatives 2 or 3.

3.16.2 No Action

Significant public controversy would be anticipated under the No Action Alternative because of awareness that VA Standards for the VACHS space and patient population are not being met at the WHVAMC.

4. Management and Mitigation Measures

This section summarizes the best management practices (BMPs) and mitigation measures that would minimize potential effects of the Proposed Action

Per established protocols, procedures, and requirements, the A/E and construction contractors would incorporate and implement BMPs and permit-required regulatory compliance mitigation measures in the design, construction, and operation of the new surgical and clinical tower at the WHVAMC. These BMP and regulatory compliance measures are consistent with those regularly implemented on VA construction projects and in the State of Connecticut. These measures are common to all three alternatives.

The Proposed Action for all alternatives also includes mitigation to reduce the impact to above-ground historic properties from potentially significant to less-than-significant adverse levels.

Table 25 lists the BMPs, regulatory compliance, and mitigation measures that are incorporated into the Proposed Action for all alternatives.

Table 25. Measures Incorporated into the Proposed Action

AESTHETICS	Description
Construction	
<ul style="list-style-type: none"> Implement dust suppression methods identified in VA Specification 01 57 19: Temporary Environmental Controls. Available methods include application of water, dust palliative, or soil stabilizers; use of enclosures, covers, silt fences, or wheel washers; and suspension of dust-generating activities during sustained high wind conditions (10-40 mph with gusts at or above 50 mph). 	BMP
<ul style="list-style-type: none"> Install gravel pads at the construction site exit to prevent tracking loose soil onto roadways. 	BMP
<ul style="list-style-type: none"> Designate a central staging area for equipment and materials that is within or close to the construction site. 	BMP
<ul style="list-style-type: none"> Install construction privacy fencing between the construction area and the existing hospital grounds to reduce visual impacts to visitors and staff. 	BMP
<ul style="list-style-type: none"> Plant native, non-invasive, drought-resistant vegetation following grading to stabilize soils and minimize dust generation. 	BMP
Operation	
<ul style="list-style-type: none"> Professionally maintain newly landscaped areas with native, non-invasive vegetation. 	BMP
AIR QUALITY	
Construction	
<ul style="list-style-type: none"> Use Tier 4-compliant engines to reduce emissions of particulate matter and nitrogen oxides to meet emission standards established by USEPA. 	BMP
<ul style="list-style-type: none"> Limit the idling of mobile sources to three minutes. 	BMP
<ul style="list-style-type: none"> Implement dust suppression methods identified under Aesthetics. 	BMP

CULTURAL RESOURCES	
<ul style="list-style-type: none"> Execution of a Programmatic Agreement (PA) to evaluate and resolve potential adverse effects to historic properties. This may include avoidance or development of a Memorandum of Agreement should adverse effects be unavoidable. VA is working with CT SHPO and consulting parties to develop the PA and will include the executed PA in the final EA. 	Mitigation
<ul style="list-style-type: none"> Conclude Section 106 consultation with the CT SHPO and federally recognized tribes prior to construction. 	Mitigation
<ul style="list-style-type: none"> Implement a plan to address unanticipated discoveries in the event construction impacts previously unknown archaeological properties. 	BMP
GEOLOGY, SOILS, AND TOPOGRAPHY	
Construction	
<ul style="list-style-type: none"> Avoid blasting bedrock due to the proximity to the existing medical buildings at the WHVAMC. 	BMP
<ul style="list-style-type: none"> Develop and adhere to the terms of the CTDEEP-approved <i>General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities</i> (DEEP-WPED-GP-015) and implement and maintain the site-specific BMPs. These BMPs would also be consistent with VA's <i>Specification 01 57 19: Temporary Environmental Controls</i>. Install and maintain sedimentation and erosion control measures, including silt fences and water breaks, detention basins, filter fences, sediment berms, interceptor ditches, synthetic straw bales, rip-rap, and/or similar physical control structures. 	Permit-required regulatory compliance
<ul style="list-style-type: none"> Retain on-site vegetation to the maximum extent possible. 	BMP
<ul style="list-style-type: none"> Revegetate disturbed areas as soon as construction is completed. Use native, non-invasive vegetation. 	BMP
<ul style="list-style-type: none"> Implement spill and leak prevention and response procedures, including maintaining a complete spill kit at the site, to reduce the impacts of incidental releases of construction vehicle fluids to soil quality. Report releases of regulated quantities of regulated chemicals to VA and CTDEEP. Perform cleanup according to applicable regulatory requirements. 	BMP, Regulatory requirement
Operation	
<ul style="list-style-type: none"> Conduct professional routine landscaping to ensure soil remains vegetated and stabilized to prevent erosion. 	BMP
HYDROLOGY AND WATER QUALITY	
Construction and Operation	
<ul style="list-style-type: none"> Design the stormwater management systems to comply with the WHVAMC National Pollutant Discharge Elimination System and MS4 permits. 	Permit-required regulatory compliance
<ul style="list-style-type: none"> Design the Proposed Action to comply with EISA Section 438 to the maximum extent technically practicable. 	Regulatory requirement

<ul style="list-style-type: none"> Should excavations require dewatering, discharge the groundwater to the WHVAMC MS4 system only if the groundwater meets permit requirements for total suspended solids. 	Permit-required reg compliance
<ul style="list-style-type: none"> All construction vehicles would be equipped with spill kits, and contractors would be properly trained on their use. Should a release of regulated chemicals occur, the construction contractor would notify WHVAMC and CTDEEP immediately and implement required remedial measures to protect groundwater quality. 	BMP, Regulatory requirement
NOISE and VIBRATION	
Construction	
<ul style="list-style-type: none"> Do not operate construction equipment that exceeds 60 dBA between the hours of 9:00 p.m. and 7:00 a.m. and perform construction activities during daylight hours on weekdays. Inform the WHVAMC Public Information Office in advance of performing any notably loud work or work that must be completed on the weekend, so that notice can be made to sensitive receptors. 	Regulatory requirement
<ul style="list-style-type: none"> Implement VA's noise control requirements and noise management BMPs. 	BMP
<ul style="list-style-type: none"> Comply with OSHA requirements to protect hearing of workers around loud construction equipment. 	Regulatory requirement
<ul style="list-style-type: none"> Should pile driving be required, coordinate with WHVAMC Director in advance and implement precautions to reduce vibration impacts on vibration-sensitive receptors. 	BMP
HABITAT AND WILDLIFE	
Construction	
<ul style="list-style-type: none"> Minimize clearing or damaging the existing mature vegetation around the existing buildings and elsewhere at the site. 	BMP
<ul style="list-style-type: none"> Replace any damaged or removed vegetation with native, non-invasive, drought-resistant varieties. 	BMP
SOLID WASTE AND HAZARDOUS MATERIALS	
Construction	
<ul style="list-style-type: none"> Complete the abatement of regulated building materials prior to building demolition. Use licensed contractors and follow all applicable federal, state, and local regulations for material handling, transport, and disposal. 	Permit-required regulatory compliance
<ul style="list-style-type: none"> Prior to demolition of Building 7 or removal of the subsurface sludge trap outside of Building 7, complete a radiological investigation and review data with VACHS RSO to determine the appropriate federal, state, and local requirements for the removal of the tank and its transport off-site for disposal 	Regulatory requirement
<ul style="list-style-type: none"> Prior to building demolition, obtain a demolition permit from the City of West Haven per 2012 Connecticut General Statutes: <i>Title 29 - Public Safety and State Police, Chapter 541 - Building, Fire and Demolition Codes. Fire Marshals and Fire Hazards. Safety of Public and Other Structures.</i> 	Permit-required regulatory compliance

<ul style="list-style-type: none"> Recycle or reuse construction debris that does not require landfilling. 	BMP
Operation	
<ul style="list-style-type: none"> Follow VA's SOPs and applicable federal and state laws governing the use, generation, storage, or transportation and disposal of solid waste and hazardous materials. 	Regulatory requirement
TRANSPORTATION AND PARKING	
Construction	
<ul style="list-style-type: none"> Implement housekeeping measures to keep WHVAMC roadways free of debris, as specified for Aesthetics 	BMP
<ul style="list-style-type: none"> Utilize flaggers when transporting oversized vehicles to and from the construction site. 	BMP
UTILITIES	
Construction	
<ul style="list-style-type: none"> Incorporate energy efficiency elements in the design of the new tower. 	BMP

5. Agency and Public Involvement

VA invites public participation in decision-making on new proposals through the NEPA process. Public participation with respect to decision-making on the Proposed Action is guided by 38 CFR Part 26, VA's regulations for implementing NEPA. Additional guidance is provided in 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. Members of the public with a potential interest in the Proposed Action are encouraged to participate. A record of the public involvement associated with this EA is provided in Appendix C.

5.1 Scoping

VA initiated the public scoping process for the Proposed Action in March 2022, with publication of a notice in the *New Haven Register*, a daily newspaper with circulation throughout New Haven County, about the opportunity to provide early input on the Proposed Action. No comments from the public were received.

This notice requesting early input was also emailed to stakeholders who may have interest in the Proposed Action including federally recognized tribes; federal, state, and city regulatory agencies; and federal, state, and municipal elected officials. A list of stakeholders is provided in the following list. Copies of correspondence with stakeholders are provided in Appendix B. The Draft EA addresses and incorporates any input received from these stakeholders.

- Delaware Tribe of Indians
- Mashantucket Pequot Indian Tribe
- Mohegan Tribe of Indians of Connecticut
- Narragansett Indian Tribe
- US Fish and Wildlife Service - North Atlantic-Appalachian Regional Office
- USDA Natural Resource Conservation Service
- US Environmental Protection Agency Region 1
- US Army Corps of Engineers, Regulatory Division (CT)
- CTDEEP Office of Planning and Development, Environmental Review
- CTDEEP Bureau of Air Management
- CTDEEP Bureau of Natural Resources, Wildlife Division
- Connecticut Advisory Commission on Intergovernmental Relations
- Connecticut State Historic Preservation Office
- Connecticut Department of Economic and Community Development
- Connecticut Department of Transportation, Office of Environmental Planning
- City of West Haven Building Department
- City of West Haven Housing Authority
- City of West Haven Inland Wetlands Watercourse Agency
- City of West Haven Parks and Recreation
- City of West Haven Department of Planning and Development
- City of West Haven Public Works Department
- City of West Haven Office of the Mayor
- Southwest Conservation District
- The Honorable Richard Blumenthal, United States Senate

- The Honorable Chris Murphy, United States Senate
- The Honorable Rosa L. DeLauro, United States House of Representatives, 3rd District
- Connecticut Historical Society and Museum
- Preservation Connecticut
- West Haven Historical Society
- West Haven Veterans Museum
- New Haven Museum
- New haven Preservation Trust

5.2 Draft EA

The Draft EA has been published and released for a 30-day review and comment period, as announced by a Notice of Availability (NOA) published in the *New Haven Register*. The NOA was also mailed to selected federal, state, and local agencies, elected officials, and Native American Tribes, to inform them of the 30-day review and comment period. A copy of the Draft EA NOA is provided in Appendix C.

As stated in the NOA, the Draft EA is available for review in print at the West Haven Public Library at 300 Elm St, West Haven, CT 06516; and available for electronic download from the VA website: <https://www.cfm.va.gov/environmental/index.asp>.

Comments or requests for additional information should be sent to: Patrick Read, U.S. Department of Veterans Affairs, Office of Construction & Facilities Management, 425 I (eye) Street, NW, Room 6W317D, Washington, D.C., 20001; by email at VACOEnvironment@va.gov; or by telephone at (202) 632-5879. Reference “West Haven VAMC – Proposed Surgical and Clinical Tower Draft EA” in all correspondence.

Comments received during the Draft EA 30-day review period will be included and addressed in the Final EA.

6. References

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7. List of Preparers

US Department of Veterans Affairs	
P. Read	Office of Construction and Facilities Management, Project Manager
J. Simonetta	Connecticut Healthcare System, West Haven VAMC
Mabbett & Associates, Inc. (Contractor)	
A. Glucksman	Project Manager, Research and Data Gathering, Document Preparation, Affected Environment, Environmental Impact Analysis, and Scoping Coordination
D. McClaine	Architectural History Research and Affected Environment
K. Kittel	Research and Data Gathering, Affected Environment
E. Fernandes	Research and Data Gathering, Affected Environment
S. Grabelle	Environmental Justice, Technical QA/QC

8. Glossary

Sources:

- Army NEPA Glossary, <http://aec.army.mil/portals/3/nepa/glossary00.pdf>
- Glossary of Terms Used in Department of Energy NEPA Documents, http://energy.gov/sites/prod/files/NEPA_Glossary%2008_2011.pdf
- NEPA Glossary, U.S. Fish and Wildlife Service, <http://www.fws.gov/r9esnepa/Intro/Glossary.PDF>

Aesthetic resources: The components of the environment as perceived through the visual sense only. Aesthetic specifically refers to beauty in both form and appearance.

Affected environment: A portion of the NEPA document that succinctly describes the environment of the area(s) to be affected or created by the alternatives under consideration. Includes the environmental and regulatory setting of the proposed action.

Alternative: A reasonable way to fix the identified problem or satisfy the stated need.

Attainment area: An area that the Environmental Protection Agency has designated as being in compliance with one or more of the National Ambient Air Quality Standards (NAAQS) for sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, lead, and particulate matter. An area may be in attainment for some pollutants but not for others.

Conformity analysis: The *Clean Air Act* requires the Environmental Protection Agency to promulgate rules to ensure that federal actions conform to the appropriate state implementation plans (SIP) for air quality. Two sets of rules (one for transportation and one for all other actions) developed by USEPA establish the criteria and procedures governing the determination of this conformity. A conformity analysis follows these criteria and procedures to quantitatively assess whether a proposed federal action conforms with the SIP.

Council on Environmental Quality (CEQ): Established by Congress within the Executive Office of the President as part of the *National Environmental Policy Act of 1969*, CEQ coordinates federal environmental efforts and works closely with agencies and other White House offices in the development of environmental policies and initiatives. The Council's Chair, who is appointed by the President with the advice and consent of the Senate, serves as the principal environmental policy adviser to the President. The CEQ reports annually to the President on the state of the environment, oversees federal agency implementation of the environmental impact assessment process, and acts as a referee when agencies disagree over the adequacy of such assessments.

Criteria pollutant: An air pollutant that is regulated by National Ambient Air Quality Standards (NAAQS). Criteria pollutants include sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, lead, and two size classes of particulate matter, PM₁₀ and PM_{2.5}. New pollutants may be added to, or removed from, the list of criteria pollutants as more information becomes available.

Cumulative effect (cumulative impact): The impact on the environment that 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.

Decibel (dB): A unit for expressing the relative intensity of sounds on a logarithmic scale from zero for the average least perceptible sound to about 130 for the average level at which sound causes pain to humans. For traffic and industrial noise measurements, the A-weighted decibel (dBA), a frequency-weighted noise unit, is widely used. The A-weighted decibel scale corresponds approximately to the frequency response of the human ear and thus correlates well with the loudness perceived by people.

Effects: Effects and impacts, as used in NEPA, are synonymous. Effects include ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions that may have both beneficial and detrimental effects, even if on balance the agency believes that the effect would be beneficial. There are direct effects and indirect effects. Direct effects are caused by the action and occur at the same time and place. Indirect effects are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.

Endangered species: Plants or animals that are in danger of extinction through all or a significant portion of their ranges and that have been listed as endangered by the U.S. Fish and Wildlife Service or the National Marine Fisheries Service following the procedures outlined in the *Endangered Species Act (ESA)* and its implementing regulations.

Environmental assessment (EA): A concise public document for which a federal agency is responsible that serves to briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement (EIS) or a finding of no significant impact; aid an agency's compliance with NEPA when no environmental impact statement is necessary; or facilitate preparation of an EIS when one is necessary. Includes brief discussions of the need for the proposal, of alternatives, of the environmental impacts of the proposed action and alternatives, and a listing of agencies and persons consulted.

Environmental impact statement (EIS): A detailed written statement required by Section 102(2)(C) of NEPA, analyzing the environmental impacts of a proposed action, adverse effects of the project that cannot be avoided, alternative courses of action, short-term uses of the environment versus the maintenance and enhancement of long-term productivity, and any irreversible and irretrievable commitment of resources.

Environmental justice: The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies. Executive Order 12898 directs federal agencies to make achieving environmental justice part of their missions by identifying and addressing disproportionately high and adverse effects of agency programs, policies, and activities on minority and low-income populations.

Finding of no significant impact (FONSI): A public document issued by a federal agency briefly presenting the reasons why an action for which the agency has prepared an environmental assessment has no potential to have a significant effect on the human environment and, thus, would not require preparation of an environmental impact statement.

Floodplain: The lowland and relatively flat areas adjoining inland and coastal waters including flood-prone areas of offshore islands, including at a minimum, that area subject to a one percent or greater chance of flooding in any given year. **100-Year Flood** – A flood event of such magnitude that it occurs, on average, every 100 years; this equates to a one percent chance of it occurring in a given year.

Fugitive emissions: Emissions that do not pass through a stack, vent, chimney, or similar opening where they could be captured by a control device. Any air pollutant emitted to the atmosphere other than from a stack. Sources of fugitive emissions include pumps; valves; flanges; seals; area sources such as ponds, lagoons, landfills, and piles of stored material (such as coal); and road construction areas or other areas where earthwork is occurring.

Hazardous material: Any material that poses a threat to human health and/or the environment. Hazardous materials are typically toxic, corrosive, ignitable, explosive, or chemically reactive.

Historic property: Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria.

Impacts: see Effects.

Impervious surface: A hard surface area that either prevents or retards the entry of water into the soil or causes water to run off the surface in greater quantities or at an increased rate of flow. Common impervious surfaces include, but are not limited to, rooftops, walkways, patios, driveways, parking lots, storage areas, concrete or asphalt paving, and gravel roads.

National Ambient Air Quality Standards (NAAQS): Standards defining the highest allowable levels of certain pollutants in the ambient air (i.e., the outdoor air to which the public has access). Primary standards are established to protect public health; secondary standards are established to protect public welfare (for example, visibility, crops, animals, buildings).

National Pollutant Discharge Elimination System (NPDES): A provision of the *Clean Water Act* that prohibits discharge of pollutants into waters of the United States unless a special permit is issued by the Environmental Protection Agency, a state, or, where delegated, a tribal government on an Indian reservation.

National Register of Historic Places: The nation's inventory of known historic properties that have been formally listed by the National Park Service (NPS). The National Register of Historic Places is administered by the NPS on the behalf of the Secretary of the Interior. National Register listings include districts, landscapes, sites, buildings, structures, and objects that meet the set of criteria found in 36 CFR 60.4.

No action Alternative: The alternative where current conditions and trends are projected into the future without another proposed action.

Particulate matter (PM), PM10, PM2.5: Any finely divided solid or liquid material, other than uncombined (that is, pure) water. A subscript denotes the upper limit of the diameter of particles included. Thus, PM10 includes only those particles equal to or less than 10 micrometers (0.0004 inch) in diameter; PM2.5 includes only those particles equal to or less than 2.5 micrometers (0.0001 inch) in diameter.

Proposed action: In a NEPA document, this is the primary action being considered. Its impacts are analyzed together with the impacts from alternative ways to achieve the same objective and the required no action alternative, which means continuing with the status quo.

Runoff: The portion of rainfall, melted snow, or irrigation water that flows across ground surface and is eventually returned to streams. Runoff can pick up pollutants from the air or the land and carry them to streams, lakes, and oceans.

Scope: Consists of the range of actions, alternatives, and impacts to be considered in an environmental analysis. The scope of an individual statement may depend on its relationships to other statements (also see tiering).

Scoping: An early and open process for determining the extent and variety of issues to be addressed and for identifying the significant issues related to a proposed action (40 CFR §1501.7). The scoping process helps not only to identify significant environmental issues deserving of study, but also to deemphasize insignificant issues, narrowing the scope of the NEPA process accordingly, and for early identification of what are and what are not the real issues (40CFR §1500.5(d)). The scoping process identifies relevant issues related to a proposed action through the involvement of all potentially interested or affected parties (affected federal, state, and local agencies; recognized Indian tribes; interest groups, and other interested persons) in the environmental analysis and documentation.

Significantly: As used in NEPA, requires considerations of both context and intensity.

Context—significance of an action must be analyzed in its current and proposed short- and long-term effects on the whole of a given resource (for example, affected region).

Intensity—refers to the severity of the effect.

Solid waste: Non-liquid, non-soluble materials ranging from municipal garbage to industrial wastes that contain complex and sometimes hazardous substances. Solid wastes also include sewage sludge, agricultural refuse, demolition wastes, and mining residues. Technically, solid waste also refers to liquids and gases in containers.

Wetlands: Those areas that are inundated by surface water or groundwater with a frequency sufficient to support, and under normal circumstances do, or would support, a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas.

Jurisdictional wetlands are those wetlands protected by the *Clean Water Act*. They must have a minimum of one positive wetland indicator from each parameter (vegetation, soil, and hydrology). The U.S. Army Corps of Engineers requires a permit to fill or dredge jurisdictional wetlands.

APPENDICES

APPENDIX A

Air Quality Emissions Calculations

Total Emissions for Construction of the Proposed Action (annualized average)

Element	Construction Emissions (tons per year [tpy])						CO ₂ e
	CO	VOC	NO ₂	SO ₂	PM ₁₀	PM _{2.5}	
Heavy Duty Haul Truck Emissions	0.00014	0.00002	0.00061	0.000003	0.00001	0.00001	0.394
Construction Worker Vehicle Emissions	0.011	0.0002	0.0006	0.00001	0.00001	0.00001	1.489
Off-Road heavy Duty Construction Equipment (USEPA MOVES)	2.887	0.395	7.059	0.008	0.412	0.387	0.007
Fugitive Dust Emissions	--	--	--	--	0.045	0.007	--
Asphalt Curing Emissions	--	0.001	--	--	--	--	--
Total Construction Emissions, annualized average (tpy)	2.90	0.40	7.06	0.01	0.46	0.39	1.89
De Minimis threshold⁽¹⁾ (40 CFR 93.153(b)(1,2))	100	25	25	100	100	100	Not established

Notes:

1 - New Haven County is located in an ozone transport region AND is in marginal nonattainment for 8-Hour Ozone (2015). See <https://www3.epa.gov/airquality/greenbook/ancl.html#CT>

ON-ROAD Heavy Duty Haul Truck Emissions

Phase 1: Site Preparation/Demo/Grading/Utilities (15 months)

Haul trucks ⁽¹⁾	273
Miles per trip ⁽²⁾	40
Total miles	10,933

Heavy Duty Diesel Vehicle (HDDV) Average Emission Factors (grams/mile)

HDDV (8,501+lbs), Connecticut specific, Year 2025.	Conversion Factor:	CO	VOC	NO _x	SO _x	PM10	PM2.5	PM total (2.5+10)	CO ₂ e	NH ₃
Emissions, grams/mile ⁽³⁾		0.038	0.006	0.164	0.000879	0.00322	0.003	0.0062	106.877	0.0017
Emissions, lbs/mile	453.5920	0.00008	0.00001	0.0004	0.000002	0.00001	0.00001	0.000014	0.235624	0.000004
Emissions, lbs/mile times miles = total lbs for total miles for project/year	10,933.33	0.9	0.14	4.0	0.0212	0.0776	0.0713	0.1490	2,576	0.041
Emissions, tons for total miles for project/year	2000.000	0.00046	0.00007	0.00198	0.00001	0.00004	0.00004	0.00007	1.2881	0.0000

Phase 2: New Surgical and Clinical Tower Construction (48 months)

Haul trucks ⁽¹⁾	118.5
Miles per trip ⁽²⁾	100
Total miles	11,852

Heavy Duty Diesel Vehicle (HDDV) Average Emission Factors (grams/mile)

HDDV (8,501+lbs), Connecticut specific, Year 2025.	Conversion Factor:	CO	VOC	NO _x	SO _x	PM10	PM2.5	PM total (2.5+10)	CO ₂ e	NH ₃
Emissions, grams/mile ⁽³⁾		0.038	0.006	0.164	0.000879	0.00322	0.003	0.0062	106.877	0.0017
Emissions, lbs/mile	453.5920	0.00008	0.00001	0.00036	0.000002	0.00001	0.00001	0.00001	0.23562	0.000004
Emissions, lbs/mile times miles = total lbs for total miles for project/year	11,851.85	0.993	0.157	4.285	0.023	0.084	0.077	0.161	2,792.58	0.044
Emissions, tons for total miles for project/year	2000.000	0.00050	0.00008	0.00214	0.00001	0.00004	0.00004	0.00008	1.3963	0.0000

Phase 3: Renovation of Building 1 Vacated Space (24 months)

Haul trucks ⁽¹⁾	14.8
Miles per trip ⁽²⁾	100
Total miles	1,481

Heavy Duty Diesel Vehicle (HDDV) Average Emission Factors (grams/mile)

HDDV (8,501+lbs), Connecticut specific, Year 2025.	Conversion Factor:	CO	VOC	NO _x	SO _x	PM10	PM2.5	PM total (2.5+10)	CO ₂ e	NH ₃
Emissions, grams/mile ⁽³⁾		0.038	0.006	0.164	0.000879	0.00322	0.003	0.0062	106.877	0.0017
Emissions, lbs/mile	453.5920	0.000084	0.000013	0.000362	0.000002	0.000007	0.000007	0.000014	0.235624	0.000004
Emissions, lbs/mile times miles = total lbs for total miles for project/year	1,481.48	0.124	0.020	0.536	0.003	0.011	0.010	0.020	349.072	0.006
Emissions, tons for total miles for project/year	2000.000	0.00006	0.00001	0.00027	0.00000	0.00001	0.00000	0.00001	0.1745	0.0000

TOTAL HAUL TRUCK EMISSIONS	CO	VOC	NO _x	SO _x	PM10	PM2.5	PM total (2.5+10)	CO ₂ e	NH ₃
Phase 1: Site Preparation/Demo/Grading/Utilities (15 months)	0.00046	0.00007	0.00198	0.00001	0.00004	0.00004	0.00007	1.28808	0.00002
Phase 2: New Surgical and Clinical Tower Construction (48 months)	0.00050	0.00008	0.00214	0.00001	0.00004	0.00004	0.00008	1.39629	0.00002
Phase 3: Renovation of Building 1 Vacated Space (24 months)	0.00006	0.00001	0.00027	0.00000	0.00001	0.00000	0.00001	0.17454	0.00000
TOTAL HAUL TRUCK EMISSIONS (Annualized average) (tpy)	7.250	0.000149	0.000605	0.000003	0.000012	0.000011	0.000023	0.394331	0.000006

Notes:

1. Emission Estimation Method for Hauling Excavation Materials and Construction Supplies: United States Air Force (USAF) Institute for Environment, Safety and Occupational Health Risk Analysis (IERA) Air Emissions Inventory Guidance Document for Mobile Sources at Air Force Installations (Revised June, 2021). For year 2025, for Connecticut (Table 5-23).

<https://eohelp.com/Documents/2021%20Mobile%20Guide%20-%20Final.pdf>

Assumptions:

- See the assumptions on "Construction Truck assumptions" sheet.
- The average distance from the project site to a disposal site is estimated to be 20 miles; therefore, a haul truck will travel 40 miles round trip.
- The average distance from a material source is estimated to be 50 miles; therefore, a haul truck will travel 100 miles round trip.
- Estimated number of trips required by haul trucks = total amount of material/20 cubic yards per truck.

Construction Worker Vehicle Emissions

Emissions Factors for Light-Duty Trucks (LDGT; gasoline; 0-8,500 lbs)								
NAAQS:	CO	VOC	NO ₂	SO ₂	PM ₁₀	PM _{2.5}	CO _{2e}	NH ₃
Worker commute emissions								
Grams/mile ⁽¹⁾	0.069	0.001	0.004	6.15E-05	4.95E-05	4.38E-05	9.234	6.66E-04
Conversion for grams to pounds:	0.0022046	0.0022046	0.0022046	0.0022046	0.0022046	0.0022046	0.0022046	0.0022046
Lbs/mile	0.000152	0.000002	0.000009	0.000001	0.000001	0.000001	0.020357	0.000001

1-Emissions from USAF table 5-23, year 2025, Connecticut specific

Phase 1: Site Preparation, Demolition, Grading, Utilities (15 Months)	
Work Period, annually (days): 260	
CONSTRUCTION PHASE	
Number of construction workers:	50
Number of miles traveled to and from work site:	40
Average number of work days per year:	260
Commuting factor:	0.6
Total miles:	312,000.00

Phase 2: New Surgical and Clinical Tower Construction (48 months)	
Work Period, annually (days): 260	
CONSTRUCTION PHASE	
Number of construction Workers:	100
Number of miles traveled to and from work site:	40
Average number of work days per year:	260
Commuting factor:	0.6
Total miles:	624,000.00

Phase 3: Renovation of Building 1 Vacated Space (24 months)	
Work Period, annually (days): 260	
CONSTRUCTION PHASE	
Number of construction workers:	20
Number of miles traveled to and from work site:	40
Average number of work days per year:	260
Commuting factor:	0.6
Total miles:	124,800.00

Phase	Worker Miles
Phase 1: Site Preparation, Demolition, Grading, Utilities (15 Months)	312,000
Phase 2: New Surgical and Clinical Tower Construction (48 months)	624,000
Phase 3: Renovation of Building 1 Vacated Space (24 months)	124,800
TOTAL MILES	1,060,800

Construction Worker Vehicle Annual Emissions (tpy)								
NAAQS:	CO	VOC	NO ₂	SO ₂	PM ₁₀	PM _{2.5}	CO _{2e}	NH ₃
Phase 1: Site Preparation, Demolition, Grading, Utilities (15 Months)	0.023731	0.000344	0.001376	0.000021	0.000017	0.000015	3.175764	0.000229
Phase 2: New Surgical and Clinical Tower Construction (48 months)	0.047461	0.000688	0.002751	0.000042	0.000034	0.000030	6.351528	0.000458
Phase 3: Renovation of Building 1 Vacated Space (24 months)	0.009492	0.000138	0.000550	0.000008	0.000007	0.000006	1.270306	0.000092
TOTAL WORKER VEHICLE EMISSIONS (Annualized average) (tpy)	0.011129	0.000161	0.000645	0.000010	0.000008	0.000007	1.489324	0.000107

Haul Truck Construction Inputs

Phase 1: Site Preparation/Demo/Grading/Utilities (15 months)

Debris Inputs	Value:	Units:	Assumptions:
Number of buildings to be demolished	7	buildings	Maximum number of all alternatives
Total square feet	476,000	square feet	Based on building square footage and height
Cubic yards of debris	47,600	cubic feet	Volume of debris based on 1/10 of total square footage
Other debris/soil/pavement	100,000	cubic feet	Additional debris from pavement removal, excess soil cuttings, and utility tunnel reworking
Total cubic feet of debris	147,600		Buildings and other materials
Convert cubic feet to cubic yards	5,467	yards ³	
How many cubic yards does a truck hold?	20		Based on a triaxle trailer
How many trucks would be needed?	273		Haul trucks
Roundtrip miles (from site to off-site disposal area)	40		Miles
Total miles traveled for Phase 1 haul trucks	10,933		miles

Phase 2: New Surgical and Clinical Tower Construction (48 months)

Debris Inputs	Value:	Units:	Assumptions:
Square footage of new building	160,000	gross square feet	Based on information from VA
Volume of building materials	64,000	cubic feet	Based on 40% of building size
Convert cubic feet to cubic yards of material	2,370.4	cubic yards	Volume of materials to be delivered to the site
How many cubic yards of material does a truck hold?	20		Volume of material haul truck can deliver to the site
How many trucks would be needed?	119		Trucks
Roundtrip miles (from supplier to site)	100		miles
Total miles traveled for Phase 2 material delivery haul trucks	11,852		miles

Phase 3: Renovation of Building 1 Vacated Space (24 months)

Debris Inputs	Value:	Units:	Assumptions:
Square footage of renovation area	20,000	gross square feet	Rough order of magnitude
Volume of building materials	8,000	cubic feet	Rough order of magnitude
Cubic yards of material	296	cubic yards	
How many cubic yards does a truck hold?	20		
How many trucks would be needed?	15		Trucks
Roundtrip miles (from supplier to site)	100		miles
Total miles traveled for Phase 3 renovation material trucks	1,481		miles

Off-Road Heavy Duty Construction Equipment Emissions (MOVES)

Phase 1: Sitework, Utilities, Demolition (33 months)							
Work Period (days per year): 280							
MOVES Emissions in LBS/DAY (June (highest), 2025), for New Haven Area, CT							
Equipment	CO	VOC	NO2	SO2	PM10	PM2.5	CH4
Site Preparation/Demo/Grading/Utilities							
Other Construction Equipment ⁽¹⁾	15.8889	2.1645	38.5989	0.0440	2.2633	2.1254	NA

Equipment	CO	VOC	NO2	SO2	PM10	PM2.5	CH4
Other Construction Equipment ⁽¹⁾	15.8889	2.1645	38.5989	0.0440	2.2633	2.1254	NA

Equipment	CO	VOC	NO2	SO2	PM10	PM2.5	CH4
Other Construction Equipment ⁽¹⁾	15.8889	2.1645	38.5989	0.0440	2.2633	2.1254	NA

Phase 2: New Surgical and Clinical Tower Construction (48 months)							
Work Period (days per year): 280							
MOVES Emissions in LBS/DAY (June (highest), 2025), for New Haven Area, CT							
Equipment	CO	VOC	NO2	SO2	PM10	PM2.5	CH4
New Surgical and Clinical Tower Construction							
Other Construction Equipment ⁽¹⁾	15.8889	2.1645	38.5989	0.0440	2.2633	2.1254	NA
Paving (active toward end of project, assume 1 acre area)							
Rollers for leveling and compacting asphalt	1.3757	0.2973	4.2926	0.0061	0.2351	0.2038	NA
Paving Equipment for laying asphalt	17.2825	2.8930	62.1481	0.0902	2.8153	2.7308	NA

Equipment	CO	VOC	NO2	SO2	PM10	PM2.5	CH4
Other Construction Equipment ⁽¹⁾	15.8889	2.1645	38.5989	0.0440	2.2633	2.1254	NA

Equipment	CO	VOC	NO2	SO2	PM10	PM2.5	CH4
Other Construction Equipment ⁽¹⁾	15.8889	2.1645	38.5989	0.0440	2.2633	2.1254	NA

Phase 3: Renovation of Building 1 Vacated Space (24 months)							
Work Period (days per year): 280							
MOVES Emissions in LBS/DAY (June (highest), 2025), for New Haven Area, CT							
Equipment	CO	VOC	NO2	SO2	PM10	PM2.5	CH4
Building 1 Renovation							
Other Construction Equipment ⁽¹⁾	15.8889	2.1645	38.5989	0.0440	2.2633	2.1254	NA

Equipment	CO	VOC	NO2	SO2	PM10	PM2.5	CH4
Other Construction Equipment ⁽¹⁾	15.8889	2.1645	38.5989	0.0440	2.2633	2.1254	NA

Emissions (tpy)							
Equipment	CO	VOC	NO2	SO2	PM10	PM2.5	CH4
Building 1 Renovation							
Other Construction Equipment ⁽¹⁾	6.1959	0.8442	15.0536	0.0114	0.8827	0.8289	NA
Year (totals)	CO	VOC	NO2	SO2	PM10	PM2.5	CH4
Totals (tpy)	6.1959	0.8442	15.0536	0.0114	0.8827	0.8289	NA

Phase	CO	VOC	NO2	SO2	PM10	PM2.5	CH4
Phase 1: Sitework, Utilities, Demolition (33 months)	4.3336	0.5638	30.0357	0.0136	0.5885	0.5526	NA
Phase 2: New Surgical and Clinical Tower Construction (48 months)	10.8064	1.4566	28.0859	0.0058	1.5380	1.4295	NA
Phase 3: Renovation of Building 1 Vacated Space (24 months)	6.1959	0.8442	15.0536	0.0114	0.8827	0.8289	NA
TOTAL (TPY)	20.3359	2.8646	73.1752	0.0208	2.9992	2.8075	NA
TOTAL ANNUALIZED AVERAGE EMISSIONS (TPY)	2.8871	0.3984	7.0669	0.0002	0.4133	0.3832	NA

NOTES:
Source: US EPA MOVES 3.0 Software
(1) - Emissions based on category "Other Construction Equipment," a composite of multiple off-road construction equipment. Values are specific for year 2025, using June (highest emissions of all months) to represent emissions for each month as a conservative (high) estimate.

Revision:
Tons per year (TPY)_{tpy} = (E_{tpy} × N × D)/C1
E_{tpy} = emissions factor for the given pollutant
N = Number of pieces of equipment
D = Days of use of equipment in a given year
C1 = Conversion from lbs to tpy (2,000)

Fugitive Dust Emissions

$$E_{10} = (\text{acres} \times EF \times CF \times PM_{10}) / C$$

$$E_{2.5} = E_{10} \times PM_{2.5}$$

$$E_{\text{total}} = E_{10} + E_{2.5}$$

Acres	EF	CF	PM10	PM2.5	C
5.0	80	0.5	0.45	0.15	2000

E = Tons per year of Particulate Matter (sum of E10 and E2.5)

Acres = Number of acres to be cleared

EF = 80 lb Total Suspended Particles/acre

TSP = Total Suspended Particulates

CF = Capture Fraction

CF = 0.5 (50% of emissions captured)

PM = Particulate matter; specific for PM₁₀ and PM_{2.5}

PM₁₀ = 0.45 lb/TSP

PM_{2.5} = 0.15 lb/ PM₁₀ lb

C = Conversion from lbs to tpy (2,000)

E10= PM10 Emissions

E2.5= PM2.5 Emissions

E ₁₀	0.045
E _{2.5}	0.0068
E _{total} (tons/year)	0.052

Asphalt Curing VOC Emissions - Construction

Account for VOC emissions from the asphalt curing process. The emission factor is based on 2.62 lbs of VOCs emitted per acre of pavement and the following equation to determine VOC emissions from asphalt curing (SMAQMD, 1994)

$$\text{Equation: } \text{TPY}_{\text{VOC}} = (\text{EF}_A \times A) / C1$$

Where:

TPY_{VOC} = tons per year of VOCs emitted

EF_A = Emission factor in lbs VOC/acre = 2.62 lbs VOC/acre

A = Area paved

C1 = Conversion from lbs to tpy (2,000)

For this project:

EF/ 2.62 lbs VOC/acre

A= 1.0 acres

C1= 2000 conversion factor

TPY_{voc}= 0.0013

Pavement Assumptions

<u>Item</u>	<u>Value</u>	<u>Unit</u>	<u>source</u>
Aggregate impervious surface created	43,000	square feet	Repave Lot 7
<u>Depth of asphalt</u>			
asphalt wearing course	2 inches	0.17 feet	https://www.apai.net/Files/content/DesignGuide/Chapter_4B.pdf
asphalt binder course	4 inches	0.33 feet	
upper asphalt base course	6 inches	0.50 feet	
lower asphalt base course	6 inches	0.50 feet	
TOTAL	18 inches	1.50 feet	

Volume of aggregate needed

Area	43,000	square feet	
Depth	1.50	feet	
Volume	64,500	cubic feet	2,389 cubic yards

APPENDIX B

**SCOPING NOTICE DOCUMENTATION
(REQUESTS FOR EARLY INPUT)**

Agency	Attention	Dear	Street	City State Zip	Telephone	Email
Federal Agencies						
U.S. Fish and Wildlife Service - North Atlantic-Appalachian Regional Office	Ms. Wendi Weber, Regional Director	Director Weber	300 Westgate Center Dr.	Hadley, MA 01035	Phone: (413) 253-8200	Northeast@fws.gov
USDA Natural Resource Conservation Service	Ms. Diane Blais, District Conservationist	Ms. Blais	Hamden Service Center, 51 Mill Pond	Hamden, CT 06514	Phone: (203) 859-7002	Diane.Blais@ct.usda.gov
U.S. Environmental Protection Agency Region 1	Mr. Timothy Timmermann	Director Timmermann	5 Post Office Square - Suite 100	Boston, MA 02109-3912	Phone: (617) 918-1025	timmemman.timothy@epa.gov
U.S. Army Corps of Engineers, Regulatory Division (CT)	Ms. Leslie Martin	Ms. Martin	696 Virginia Road	Concord, MA 01742-2751	Phone: (978) 318-8338	cenae-r-ct@usace.army.mil ; Leslie.M
State and Municipal Agencies						
Connecticut Advisory Commission on Intergovernmental Relations	Mr. Bruce Wittchen	Mr. Wittchen	450 Capitol Avenue	Hartford, Connecticut 06106-1308	Phone: 860-418-6323	bruce.wittchen@ct.gov
Connecticut State Historic Preservation Office	Mr. Jonathan Kinney	Director of Operations, Deputy State	450 Columbus Boulevard, Suite 5	Hartford, CT 06103	(860) 500-2380	Jonathan.Kinney@ct.gov
Connecticut Department of Economic and Community Development	Mr. David Lehman, Commissioner	Commissioner Lehman	450 Columbus Boulevard	Hartford, CT 06103	(860) 500-2300	DEEP.Concierge@ct.gov
CTDEEP Office of Planning and Development, Environmental Review	Ms. Nicole Lugli, Director	Director Lugli	79 Elm Street	Hartford, CT 06106-5127	Phone: (860) 424-3003	DEEP.Concierge@ct.gov
CTDEEP Bureau of Air Management	Mr. Paul Farrell, Director	Director Farrell	79 Elm Street	Hartford, CT 06106-5127	Phone: (860) 424-4152	paul.farrell@ct.gov
CTDEEP Bureau of Natural Resources, Wildlife Division	Director	Director	79 Elm Street	Hartford, CT 06106-5128	Phone: (860) 424-3011	deep.wildlife@ct.gov
Southwest Conservation District (SWCD)	Mr. Chris Sullivan, Executive Director	Director Sullivan	51 Mill Pond Road	Hamden, CT 06514	Phone: (203) 859-7014	SWCD@conservect.org
Connecticut Department of Transportation, Office of Environmental Planning	Mr. Kevin Carifa, Transportation Assistant P	Mr. Carifa	2800 Berlin Turnpike, P.O. Box 3175	Newington, CT 06131-7546	Phone: (860) 594-3062	DOT.EnvReviews@ct.gov ; DOT-EPC@
City of West Haven Building Department	Mr. Frank Gladwin	Mr. Gladwin	City Hall, 355 Main Street	West Haven, CT 06516-0312	Phone: (203) 937-3590	gladwin@westhaven-ct.gov
City of West Haven Housing Authority	Mr. John Counter, Executive Director	Director Counter	15 Glade Street	West Haven, CT 06516	Phone: (203) 934-8671	whha@westhavenhousing.org
City of West Haven Inland Wetlands Watercourse Agency	Mr. William Kane, Chairman	Chairman Kane	City Hall, 355 Main Street	West Haven, CT 06516-0312	Phone: (203) 937-3580	see note
City of West Haven Parks and Recreation	Mr. Mark Paine, Jr., Director	Director Paine, Jr.	190 Kelsey Avenue	West Haven, CT 06516	Phone: (203) 937-3651	Park_Rec@cityofwesthaven.com
City of West Haven Department of Planning and Development	Mr. Christopher Soto, Director	Director Soto	City Hall, 355 Main Street	West Haven, CT 06516-0312	Phone: (203) 937-3580	csoto@westhaven-ct.gov
City of West Haven Public Works Department	Mr. Tom J. McCarthy	Commissioner McCarthy	City Hall, 355 Main Street	West Haven, CT 06516-0312	Phone: (203) 937-3585	tmccarthy@westhaven-ct.gov
Elected Officials						
City of West Haven Office of the Mayor	Ms. Nancy R. Rossi, Mayor	Mayor Rossi	City Hall, 355 Main Street	West Haven, CT 06516-0312	Phone: (203) 937-3510	nrossi@westhaven-ct.gov
The Honorable Richard Blumenthal, United States Senate	Senator Richard Blumenthal	Senator Blumenthal	90 State House Square, 10th Floor	Hartford, CT 06103	Phone: (860) 258-6940	https://www.blumenthal.senate.gov
The Honorable Chris Murphy, United States Senate	Senator Chris Murphy	Senator Murphy	120 Huyshope Avenue, Colt Gateway	Hartford, CT 06106	Phone: (860) 549-8463	https://www.murphy.senate.gov/contacts
The Honorable Rosa L. DeLauro, United States House of Representatives, 3rd District	Congresswoman Rosa L. DeLauro	Congresswoman DeLauro	59 Elm Street	New Haven, CT 06510	Phone: (203) 562-3718	https://delauro.house.gov/contact/e
Native American Tribes (from HUD TDAT)						
Delaware Tribe of Indians	Ms. Susan Bachor, Preservation Representative	Ms. Bachor	126 University Circle	East Stroudsburg , PA 18301	(610) 761-7452	sbachor@delawaretribe.org
Delaware Tribe of Indians	Mr. Chester "Chet" Brooks, Chief	Chief Brooks	5100 Tuxedo Boulevard	Bartlesville, OK 74006	(918) 337-6590	cbrooks@delawaretribe.org
Mashantucket Pequot Indian Tribe	Mr. Rodney Butler, Chairman	Chairman Butler	2 Matt's Path, PO Box 3060	Mashantucket, CT 06338	(860) 396-6133	RodneyButler@mptn-nsn.gov
Mashantucket Pequot Indian Tribe	Mr. Michael Johnson, THPO	Mr. Johnson	110 Pequot Trail	Mashantucket, CT 06338-3202	(860) 396-6887	MEJohnson@mptn-nsn.gov
Mohegan Tribe of Indians of Connecticut	Ms. Elaine Thomas, Deputy SHPO	Ms. Thomas	13 Crow Hill Road	Uncasville, CT 06382	(860) 862-6893	ethomas@moheganmail.com
Mohegan Tribe of Indians of Connecticut	Mr. R. James Gessner, Chairman	Chairman Gessner	13 Crow Hill Road	Uncasville, CT 06382	(860) 862-6100	communications@moheganmail.com
Mohegan Tribe of Indians of Connecticut	Mr. James Quinn, THPO	Mr. Quinn	13 Crow Hill Road	Uncasville, CT 06382	(860) 862-6893	quinn@moheganmail.com
Narragansett Indian Tribe	Mr. Anthony Stanton, Chief Sachem	Chief Sachem	P.O. Box 268	Charlestown, RI 02813	(401) 364-1100	adstanton@nitrive.org
Narragansett Indian Tribe	Mr. John Brown, Tribal Preservation Officer	Mr. Brown	PO Box 463	Charleston, RI 02813	(401) 491-9459	tashtesook@aol.com
Potentially Interested Parties (for Section 106)						
Connecticut Historical Society and Museum	Robert Kret, Executive Director and CEO	Mr. Kret	One Elizabeth Street	Hartford, CT 06105	(860) 236-5621	director@chs.org
Connecticut Historical Society and Museum	Michael A. Cantor, President, Board of Trustees	Mr. Cantor	One Elizabeth Street	Hartford, CT 06105	(860) 236-5621	director@chs.org
Preservation Connecticut	Jane Montanaro, Executive Director	Director Montanaro	940 Whitney Avenue	Hamden, CT 06517	(203) 562-6312	JMontanaro@preservationct.org
Preservation Connecticut	Caroline Sloat, Chair, Board of Trustees	Chairperson Sloat	940 Whitney Avenue	Hamden, CT 06517	(203) 562-6312	JMontanaro@preservationct.org
West Haven Historical Society	Jon E. Purmont, President	Mr. Purmont	686 Savin Avenue	West Haven, CT 06516	(203) 932-0088	info@whhistorical.society.org
New Haven Museum	Margaret Anne Tockarskewsky	Director Tockarskewsky	114 Whitney Avenue	New Haven, CT 06510		matockarskewsky@newhavenmuseum.org
The New Haven Preservation Trust	Rona Johnston	President Johnston	P.O. Box 8968	New Haven, CT 06532		president@nhpt.org
The New Haven Preservation Trust	Sarah Tisdale	Director Tisdale	P.O. Box 8968	New Haven, CT 06532		preservationist@nhpt.org



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

SUBJECT: Scoping for an Environmental Assessment for the Proposed New Surgical and Clinical Tower and Demolition of Selected Buildings at the West Haven Veterans Affairs Medical Center, West Haven, Connecticut, VA Project 689-040

Sent via email

Dear Valued Stakeholder:

The U.S. Department of Veterans Affairs (VA) proposes to construct and operate a new surgical and clinical tower (approximately 160,000 building gross-square feet) and demolish selected existing buildings at the West Haven Veterans Affairs Medical Center (VAMC) located at 950 Campbell Avenue, West Haven, New Haven County, CT (Figures 1 and 2). The Proposed Action is needed to address critical deficiencies related to utility failures, infection prevention issues, patient and staff safety concerns, and space constraints at the West Haven VAMC. This scoping notice has also been published in the *New Haven Register* to inform and solicit input from the public. The notice is also available on the VA website at <https://www.cfm.va.gov/environmental/>.

VA is preparing an Environmental Assessment (EA) to assess the potential environmental impacts associated with the Proposed Action. VA will prepare the EA according to the regulations implementing the procedural provisions of the National Environmental Policy Act of 1969 (42 U.S. Code 4321-4370h), as implemented by the Council on Environmental Quality regulations (40 Code of Federal Regulations [CFR] 1500-1508), and VA Implementing Regulations (38 CFR Part 26).

If you have comments on the scope of issues for analysis, or input on potential alternatives or information/analyses relevant to the Proposed Action, please submit your comments/input via email to vacoenvironment@va.gov with the subject line "West Haven VAMC Tower EA" within 30 days following receipt of this notice. For additional information or questions, please contact Mr. Patrick Read, VA Environmental Engineer, at Patrick.Read@va.gov.

VA anticipates publishing the Draft EA for a 30-day public review and comment. VA will notify stakeholders via email/mail, publish a notice of availability of the Draft EA in the *New Haven Register*, and solicit comments at that time. The Draft EA will be available for review at the West Haven Public Library (located at 300 Elm St., West Haven, CT) and via the VA website: <https://www.cfm.va.gov/environmental/>.

Respectfully,

Glenn Elliott
Director, Environmental Program Office

Figure 1. Regional location of the West Haven VAMC

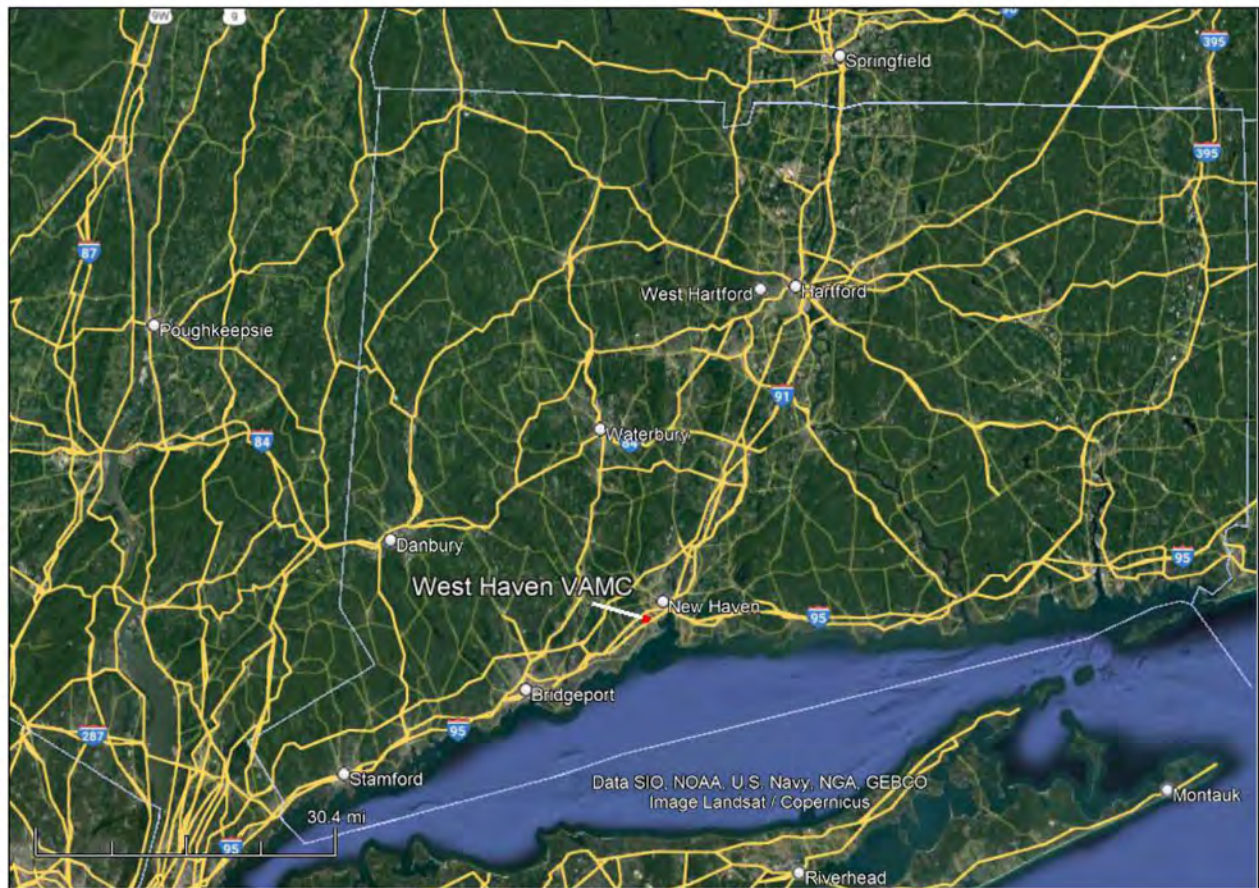
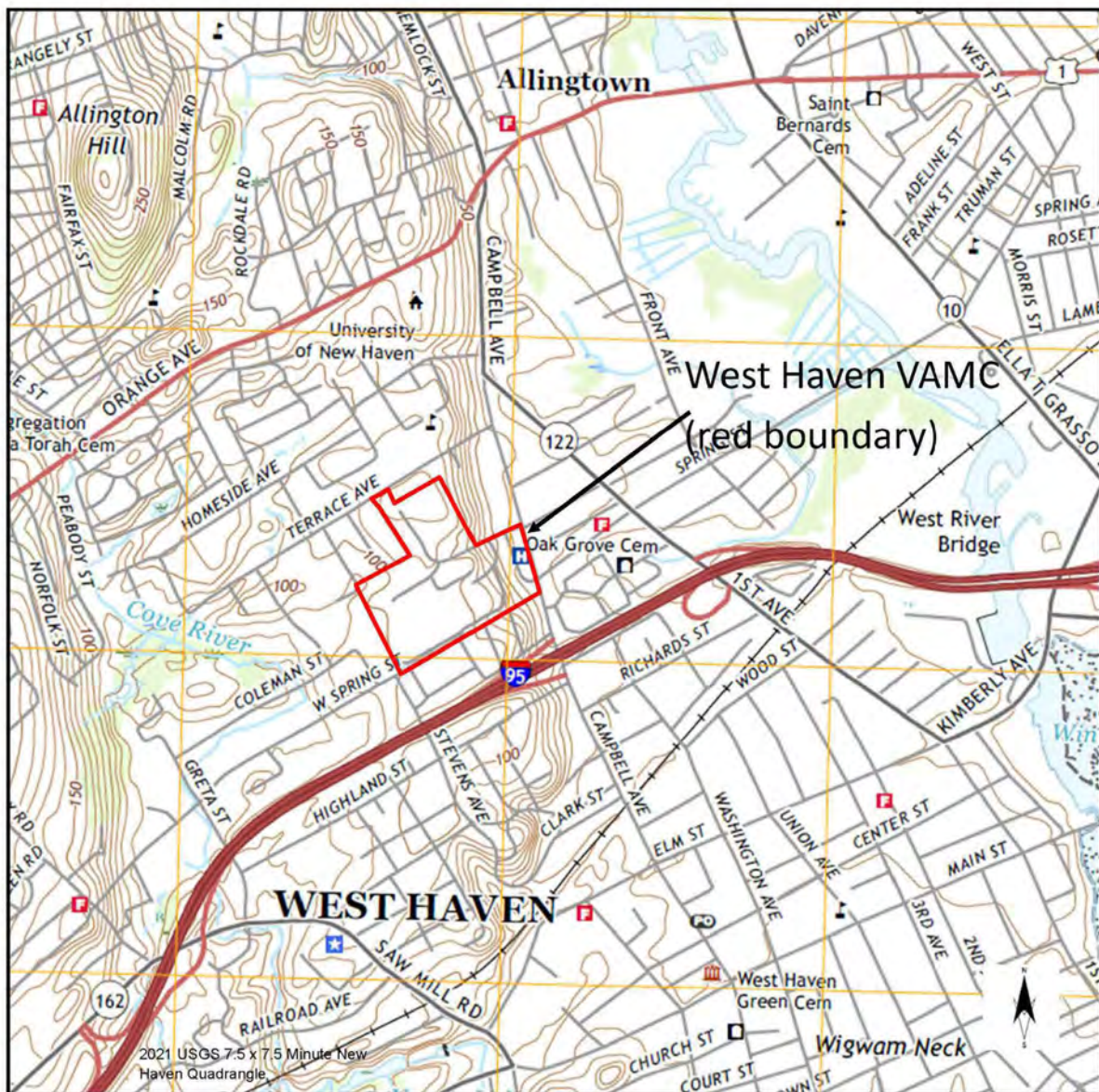


Figure 2. Location of the West Haven VAMC within West Haven, CT



To: Patrick Read, Environmental Engineer, Department of Veterans Affairs

Sent via email vacoenvironment@va.gov

From: Linda Brunza- Environmental Analyst 3
Office of Planning and Program Development

Telephone: 860-424-3739

Date: 4/13/2022

Email: Linda.Brunza@ct.gov

Subject: NEPA Scoping Notice: Proposed new surgical and clinical tower and demolition of selected buildings at the West Haven Veterans Affairs Medical Center, West Haven, CT
Project 689-040

Staff at the Connecticut Department of Energy and Environmental Protection (DEEP) have reviewed the scoping notice for the proposed construction of a 160,000 square foot building and demolition of existing buildings at the West Haven Veterans Affairs Medical Center at 950 Campbell Avenue, West Haven.

The following comments are submitted for your consideration.

Solid Waste Disposal

The disposal of demolition waste should be handled in accordance with applicable solid waste statutes and regulations. Demolition debris may be contaminated with asbestos, lead-based paint or chemical residues and require special disposal. Clean fill is defined in section 22a-209-1 of the Regulations of Connecticut State Agencies (RCSA) and includes only natural soil, rock, brick, ceramics, concrete and asphalt paving fragments. Clean fill can be used on site or at appropriate off-site locations. Clean fill does not include uncured asphalt, demolition waste containing other than brick or rubble, contaminated demolition wastes (e.g. contaminated with oil or lead paint), tree stumps, or any kind of contaminated soils. Land clearing debris and waste other than clean fill resulting from demolition activities is considered bulky waste, also defined in section 22a-209-1 of the RCSA. Bulky waste is classified as special waste and must be disposed of at a permitted landfill or other solid waste processing facility pursuant to section 22a-208c of the CGS and section 22a-209-2 of the RCSA. Additional information concerning disposal of demolition debris is available on-line at [Demolition Debris](#).

Construction and demolition debris should be segregated on-site and reused or recycled to the greatest extent possible. Waste management plans for construction, renovation or demolition projects are encouraged to help meet the State's reuse and recycling goals. Pursuant to section 22a-241a of the CGS, the state set a goal of 60% rate of diversion from disposal for municipal solid waste by the year 2024 and adopted that goal in the state's December 2016 *Comprehensive Materials Management Strategy*. Part of this effort includes increasing the amount of construction and demolition materials recovered for reuse and recycling in Connecticut. DEEP recommends

that contracts be awarded only to those companies who present a sufficiently detailed construction/demolition waste management plan for reuse/recycling. Additional information concerning construction and demolition material management and waste management plans can be found on-line at [Construction and Demolition Material Management](#) and [Construction and Demolition Waste Management Plans](#). If there are any questions please contact Frank Gagliardo at 860-424-3130 or Frank.P.Gagliardo@ct.gov, or Kevin Barrett at 860-424-3697 or Kevin.Barrett@ct.gov.

Special Waste

If abatement is required for asbestos containing materials (ACM), these materials are regulated as a “special waste” in Connecticut and may not be disposed of with regular construction and demolition waste. Instead, these materials may only be disposed of at facilities that are specifically authorized to accept ACM. Although the disposal of asbestos-containing material is typically arranged for by the licensed asbestos abatement contractor, project proponents should ensure that the contractor disposes of all such materials at properly licensed facilities. For further information, contact the Waste Engineering & Enforcement Division at 860-424-3023. A fact sheet regarding disposal of special wastes and the authorization application form may be obtained at: [Special Waste Fact Sheet](#).

Demolition debris may also include materials that contain polychlorinated biphenyls (PCBs). Such materials can include transformers, capacitors, fluorescent light ballast and other oil-containing equipment, and in certain building materials (i.e., paint, roofing, flooring, insulation, etc.). EPA has learned that caulk containing potentially harmful polychlorinated biphenyls (PCBs) was used around windows, door frames, masonry columns and other masonry building materials in many buildings starting in 1929 with increased popularity in the 1950s through the 1970s, including schools, large scale apartment complexes and public buildings. In general, these types of buildings built after 1978 do not contain PCBs in caulk. In 2009, EPA announced new guidance about managing PCBs in caulk and tools to help minimize possible exposure. The guidance can be found at: [PCBs in Caulk](#). Where schools or other buildings were constructed or renovated prior to 1978, EPA and DEEP recommend that PCB-containing caulk removal be scheduled during planned renovations, repairs (when replacing windows, doors, roofs, ventilation, etc.) and demolition projects, whenever possible. However, the continued use of such PCB materials is prohibited and, where it is identified, it must be addressed. EPA recommends testing caulk that is going to be removed as the first step in order to determine what protections are needed during removal. Where testing confirms the presence of PCBs, it is critically important to ensure that they are not released to air during replacement or repair of caulk in affected buildings. Many such PCB removal projects will need to include sampling of the substrate and soil, as well as require plans to be approved by EPA in coordination with DEEP. Further information concerning the DEEP PCB Program can be found on-line at: [DEEP PCB Program](#). Please contact Gary Trombley at 860-424-3486 with any questions.

In addition to asbestos and PCBs, demolition debris may also be contaminated with lead-based paint, chemical residues, or other materials that require special disposal. For more information on these materials and disposal, see the [DEEP's Renovation and Demolition Web Page](#).

Deconstruction, an environmentally friendly alternative to demolition, should be utilized in order to salvage as many of the reusable materials as possible, diverting them from the waste stream. Salvaged items typically include doors, windows, cabinets, lighting and plumbing fixtures,

framing lumber, roofing materials, and flooring. Additional information concerning deconstruction can be found on-line at: [Deconstruction](#).

Wildlife Division

Natural Diversity Database (NDDB) maps represent the approximate locations of species listed by the State, pursuant to section 26-306 of the Connecticut General Statutes (CGS), as endangered, threatened or of special concern. The maps are a pre-screening tool to identify potential impacts to state listed species. DEEP's Wildlife Division has no concerns or comments on the redevelopment.

Stormwater General Permit

The General Permit for [Stormwater and Dewatering Wastewaters from Construction Activities](#) may be applicable depending on the size of the disturbance regardless of phasing. This general permit applies to discharges of stormwater and dewatering wastewater from construction activities where the activity disturbs more than an acre. The requirements of the current general permit include registration to obtain permit coverage and development and implementation of a Stormwater Pollution Control Plan (SWPCP). The SWPCP contains requirements for the permittee to describe and manage their construction activity, including implementing erosion and sediment control measures as well as other control measures to reduce or eliminate the potential for the discharge of stormwater runoff pollutants (suspended solids and floatables such as oil and grease, trash, etc.) both during and after construction. A goal of 80 percent removal of the annual sediment load from the stormwater discharge shall be used in designing and installing post-construction stormwater management measures. Stormwater treatment systems must be designed to comply with the post-construction stormwater management performance requirements of the permit. These include post-construction performance standards requiring retention and/or infiltration of the runoff from the first inch of rain (the water quality volume or WQV) and incorporating control measures for runoff reduction and low impact development practices.

The construction stormwater general permit dictates separate compliance procedures for Locally Exempt projects (projects primarily conducted by government authorities) and Locally Approvable projects (projects primarily by private developers).

Projects that are exempt from local permitting that disturb over one acre must submit a registration form and Stormwater Pollution Control Plan (SWPCP) to the Department at least 60 or 90 days, as identified in the permit, prior to the initiation of construction. Locally Approvable construction projects with a total disturbed area of one to five acres are not required to register with the Department provided the development plan has been approved by a municipal land use agency and adheres to local erosion and sediment control land use regulations and the CT Guidelines for Soil Erosion and Sediment Control. Locally Approvable construction projects with a total disturbed area of five or more acres must submit a registration form and SWPCP to the Department at least 60 days prior to the initiation of construction. Registrations shall include a certification by the Qualified Professional who designed the project and a certification by a Qualified Professional or regional Conservation District who reviewed the SWPCP and deemed it consistent with the requirements of the general permit. In addition to measures such as erosion and sediment controls and post-construction stormwater management, the SWPCP must include a schedule for plan implementation and routine inspections.

Stormwater runoff in urban areas is one of the leading sources of water pollution in the United States. Under Section 438 of the Energy Independence and Security Act of 2007 ([EISA](#)) federal

agencies are required to reduce stormwater runoff from federal development and redevelopment projects to protect water resources. Federal agencies can comply using a variety of stormwater management practices often referred to as "green infrastructure" or "low impact development (LID)" practices.

DEEP supports the use of low-impact development techniques. Key strategies for effective LID include managing stormwater close to where precipitation falls; infiltrating, filtering, and storing as much stormwater as feasible; managing stormwater at multiple locations throughout the landscape; conserving and restoring natural vegetation and soils; preserving open space and minimizing land disturbance; designing the site to minimize impervious surfaces; and providing for maintenance and education. Water quality and quantity benefits are maximized when multiple techniques are grouped together. Some LID techniques are:

- the use of pervious pavement or grid pavers (which are very compatible for parking lot and fire lane applications), or impervious pavement without curbs or with notched curbs to direct runoff to properly designed and installed infiltration areas,
- the use of vegetated swales, tree box filters, and/or infiltration islands to infiltrate and treat stormwater runoff (from building roofs, roads and parking lots),
- the minimization of access road widths and parking lot areas to the maximum extent possible to reduce the area of impervious surface.

For further information, contact the division at 860-424-3025 or DEEP.StormwaterStaff@ct.gov. The construction stormwater general permit registrations must be filed electronically through DEEP's e-Filing system known as ezFile. Additional information can be found on-line at: [Construction Stormwater GP](#).

Inland Wetlands and Watercourses

If the reconnaissance of the site by a certified soil scientist identifies regulated areas, they should be clearly delineated. Any activity within federally regulated wetland areas or watercourses at the site may require a permit from the U.S. Army Corps of Engineers pursuant to section 404 of the Clean Water Act. Further information is available on-line at [Army Corps of Engineers, New England District](#) or by calling the Corps Regulatory Branch in Concord, Massachusetts at 978-318-8338. If a permit is required from the U.S. Army Corps of Engineers, a Water Quality Certificate will also be required from DEEP pursuant to section 401 of the Clean Water Act. For further information, contact the Land and Water Resources Division at 860-424-3019. A fact sheet regarding 401 Water Quality Certification is available online at [401 Certification](#).

Air Management

DEEP Bureau of Air Management typically recommends the use of newer off-road construction equipment that meets the latest EPA or California Air Resources Board (CARB) standards. If newer equipment cannot be used, equipment with the best available controls on diesel emissions including retrofitting with diesel oxidation catalysts or particulate filters in addition to the use of ultra-low sulfur fuel would be the second choice that can be effective in reducing exhaust emissions. The use of newer equipment that meets EPA standards would obviate the need for retrofits.

DEEP also recommends the use of newer on-road vehicles that meet either the latest EPA or California Air Resources Board (CARB) standards for construction projects. These on-road

vehicles include dump trucks, fuel delivery trucks and other vehicles typically found at construction sites. On-road vehicles older than the 2007-model year typically should be retrofitted with diesel oxidation catalysts or diesel particulate filters for projects. Again, the use of newer vehicles that meet EPA standards would eliminate the need for retrofits.

Additionally, Section 22a-174-18(b)(3)(C) of the Regulations of Connecticut State Agencies (RCSA) limits the idling of mobile sources to 3 minutes. This regulation applies to most vehicles such as trucks and other diesel engine-powered vehicles commonly used on construction sites. Adhering to the regulation will reduce unnecessary idling at truck staging zones, delivery or truck dumping areas and further reduce on-road and construction equipment emissions. Use of posted signs indicating the three-minute idling limit is recommended. It should be noted that only DEEP can enforce Section 22a-174-18(b)(3)(C) of the RCSA. Therefore, it is recommended that the project sponsor include language similar to the anti-idling regulations in the contract specifications for construction in order to allow them to enforce idling restrictions at the project site without the involvement of DEEP.

Thank you for the opportunity to review this project. These comments are based on the reviews provided by relevant staff and offices within DEEP during the designated comment period and may not represent all applicable programs within DEEP. Feel free to contact me if you have any questions concerning these comments.

cc: Camille Fontanella, Supervising Environmental Analyst/ DEEP

From: Timmermann, Timothy <Timmermann.Timothy@epa.gov>
Sent: Friday, April 15, 2022 11:27 AM
To: VACO Environment <VACOEnvironment@va.gov>
Cc: Timmermann, Timothy <Timmermann.Timothy@epa.gov>; Wintrob, Paul <Wintrob.Paul@epa.gov>; Margason, Nathan <Margason.Nathan@epa.gov>
Subject: [EXTERNAL] West Haven VAMC Tower EA

Dear Mr. Read:

As you work to prepare the Environmental Assessment (EA) for the construction and operation of a new surgical and clinical tower at the West Haven Veterans Affairs Medical Center (VAMC), we request that you include a discussion to demonstrate how the project will comply with Section 438 of the Energy Independence and Security Act (EISA) of 2007. More information on EISA can be found at:

<https://www.epa.gov/nps/stormwater-management-federal-facilities-under-section-438-energy-independence-and-security-act>

An excerpt from that webpage follows:

“Under Section 438 of the Energy Independence and Security Act of 2007 [\(EISA\)](#)~~EXT~~, federal agencies are required to reduce stormwater runoff from federal development and

redevelopment projects to protect water resources. Federal agencies can comply using a variety of stormwater management practices often referred to as "green infrastructure" or "low impact development" practices, including reducing impervious surfaces and using vegetative practices, porous pavements, cisterns and green roofs."

In addition to demonstrating how the as-built condition will be an improvement over the current condition for stormwater management with respect to flow and water quality we also recommend that you review the Connecticut General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4 General Permit) and the post-construction stormwater design standards contained in that permit and address permit compliance as appropriate in the EA.

Thank you for the opportunity to provide scoping comments related to the upcoming environmental analysis. Please provide me with a copy of the Environmental Assessment for review when it becomes available. Feel free to contact me with any questions.

Sincerely,

Timothy L. Timmermann, Director
Office of Environmental Review
EPA New England-Region 1
5 Post Office Square, Suite 100
Mail Code 06-3
Boston, MA 02109-3912

Email: timmermann.timothy@epa.gov
Telephone: 617-918-1025
E-Fax: 617-918-0025

Timothy L. Timmermann, Director
Office of Environmental Review
EPA New England-Region 1
5 Post Office Square, Suite 100
Mail Code 06-3
Boston, MA 02109-3912

Email: timmermann.timothy@epa.gov
Telephone: 617-918-1025
E-Fax: 617-918-0025

From: [VACO Environment](#)
To: [Brunza, Linda](#)
Subject: *EXTERNAL* RE: NEPA - VA project West Haven Veterans Affairs Medical Center
Date: Thursday, March 17, 2022 4:34:53 PM
Attachments: [image001.png](#)
[VA OCFM - West Haven - Scoping Notice - 17 March 2022.pdf](#)

This message originated from outside your organization. Please take care and verify the authenticity of the email prior to opening any questionable or unexpected attachments.

Hi Linda,

Please see the attached NEPA Scoping Notice. I believe this should address the information you requested.

Thank you for reaching out and please let me know if I can be of further assistance.

Thanks,

Pat

Patrick Read
Department of Veterans Affairs
Environmental Officer/Engineer, CFM Eastern Region
425 I Street 6th Floor RM-6W.502B
NW Washington, DC 20001
Work: 202-632-4169
Cell: 202-891-9713

"The environment is where we all meet; where we all have a mutual interest; it is the one thing all of us share. It is not only a mirror of ourselves, but a focusing lens on what we can become." – Lady Bird Johnson

From: Brunza, Linda Linda.Brunza@ct.gov
Sent: Thursday, March 17, 2022 4:16 PM
To: VACO Environment VACOEnvironment@va.gov
Cc: Fontanella, Camille Camille.Fontanella@ct.gov; Riese, Frederick Frederick.Riese@ct.gov; Richardson, Amy Amy.Richardson@ct.gov
Subject: [EXTERNAL] NEPA - VA project West Haven Veterans Affairs Medical Center

Hi Patrick,

I was forwarded your email regarding scoping for the demolition of selected buildings at the West Haven VA location.

In order to provide comments from our agency, I will need a project description, site map, timeframe for scoping, and contact information.

If you could send me the project details I can contact the divisions in our agency for any feedback. I see there might have been an attachment, but it didn't come through on my end.

Thank you,

Linda Brunza

Linda Brunza, Senior Environmental Analyst
Environmental Review Section
Office of Planning and Program Development
Connecticut Department of Energy and Environmental Protection
79 Elm Street, Hartford, CT 06106-5127
Phone: 860.424.3739 | Email: Linda.Brunza@ct.gov



www.ct.gov/deep

***Conserving, improving and protecting our natural resources and environment;
Ensuring a clean, affordable, reliable, and sustainable energy supply.***

From: [VACO Environment](#)
To: sbachor@delawaretribe.org; cbrooks@delawaretribe.org; tribe@delawaretribe.org
Cc: [Bennett, Alec \(CFM\)](#)
Subject: *EXTERNAL* Notice of Scoping and Stakeholder Involvement for the Proposed New Surgical and Clinical Tower and Demolition of Selected Buildings at the West Haven Veterans Affairs Medical Center, West Haven, Connecticut
Date: Thursday, March 17, 2022 12:03:26 PM
Attachments: [VA OCFM - West Haven - Scoping Notice - 17 March 2022.pdf](#)

*****This message originated from outside your organization. Please take care and verify the authenticity of the email prior to opening any questionable or unexpected attachments.*****

Dear Chief Butler, Dr. Obermeyer, and Ms. Bachor,

The U.S. Department of Veterans Affairs (VA) is proposing a project for a New Surgical and Clinical Tower and Demolition of Selected Buildings at the West Haven Veterans Affairs Medical Center, West Haven, Connecticut. As part of the decision-making process, VA will prepare an Environmental Assessment (EA) to comply with the National Environmental Policy Act (NEPA). VA seeks your input on issues to be addressed during the NEPA process, including environmental concerns.

VA initiated formal Section 106 consultation for the undertaking on March 8th 2022 with the Delaware Tribe of Indians. The Section 106 consultation process and conclusions will provide the major contribution to the EA's analysis of potential effects to historic and cultural resources. Please see the attached letter for additional project details and how to submit any initial comments on the scope of issues for analysis, or input on potential alternatives or information/analyses relevant to the proposed project. In particular, we invite you to provide preliminary information on any properties of historic, religious, or cultural significance that may be affected by our proposed undertaking.

Respectfully,

Patrick Read
Department of Veterans Affairs
Environmental Officer/Engineer, CFM Eastern Region
425 I Street 6th Floor RM-6W.502B
NW Washington, DC 20001

From: [VACO Environment](#)
Subject: *EXTERNAL* Notice of Scoping and Stakeholder Involvement for the Proposed New Surgical and Clinical Tower and Demolition of Selected Buildings at the West Haven Veterans Affairs Medical Center, West Haven, Connecticut
Date: Thursday, March 17, 2022 12:02:29 PM
Attachments: [VA OCFM - West Haven - Scoping Notice - 17 March 2022.pdf](#)

*****This message originated from outside your organization. Please take care and verify the authenticity of the email prior to opening any questionable or unexpected attachments.*****

Dear Valued Stakeholder,

The U.S. Department of Veterans Affairs (VA) is proposing a project for a New Surgical and Clinical Tower and Demolition of Selected Buildings at the West Haven Veterans Affairs Medical Center, West Haven, Connecticut. As part of the decision-making process, VA will prepare an environmental assessment (EA) to comply with the National Environmental Policy Act (NEPA). VA seeks your input on issues to be addressed during the NEPA process, including environmental concerns.

Please see the attached letter for additional project details and how to submit scoping comments.

Respectfully,

Patrick Read
Department of Veterans Affairs
Environmental Officer/Engineer, CFM Eastern Region
425 I Street 6th Floor RM-6W.502B
NW Washington, DC 20001

From: [VACO Environment](#)
To: RodneyButler@mptn-nsn.gov; MEJohnson@mptn-nsn.gov
Cc: [Bennett, Alec \(CFM\)](#)
Subject: *EXTERNAL* Notice of Scoping and Stakeholder Involvement for the Proposed New Surgical and Clinical Tower and Demolition of Selected Buildings at the West Haven Veterans Affairs Medical Center, West Haven, Connecticut
Date: Thursday, March 17, 2022 12:05:56 PM
Attachments: [VA OCFM - West Haven - Scoping Notice - 17 March 2022.pdf](#)

*****This message originated from outside your organization. Please take care and verify the authenticity of the email prior to opening any questionable or unexpected attachments.*****

Mr. Butler and Mr. Johnson,

The U.S. Department of Veterans Affairs (VA) is proposing a project for a New Surgical and Clinical Tower and Demolition of Selected Buildings at the West Haven Veterans Affairs Medical Center, West Haven, Connecticut. As part of the decision-making process, VA will prepare an Environmental Assessment (EA) to comply with the National Environmental Policy Act (NEPA). VA seeks your input on issues to be addressed during the NEPA process, including environmental concerns.

VA initiated formal Section 106 consultation for the undertaking on March 8th 2022 with the Mashantucket Pequot Indian Tribe. The Section 106 consultation process and conclusions will provide the major contribution to the EA's analysis of potential effects to historic and cultural resources.

Please see the attached letter for additional project details and how to submit any initial comments on the scope of issues for analysis, or input on potential alternatives or information/analyses relevant to the proposed project. In particular, we invite you to provide preliminary information on any properties of historic, religious, or cultural significance that may be affected by our proposed undertaking.

Respectfully,

Patrick Read
Department of Veterans Affairs
Environmental Officer/Engineer, CFM Eastern Region
425 I Street 6th Floor RM-6W.502B
NW Washington, DC 20001

From: [VACO Environment](#)
To: Communications@moheganmail.com; JQuinn@moheganmail.com; EThomas@moheganmail.com
Cc: [Bennett, Alec \(CFM\)](#)
Subject: *EXTERNAL* Notice of Scoping and Stakeholder Involvement for the Proposed New Surgical and Clinical Tower and Demolition of Selected Buildings at the West Haven Veterans Affairs Medical Center, West Haven, Connecticut
Date: Thursday, March 17, 2022 12:04:44 PM
Attachments: [VA OCFM - West Haven - Scoping Notice - 17 March 2022.pdf](#)

*****This message originated from outside your organization. Please take care and verify the authenticity of the email prior to opening any questionable or unexpected attachments.*****

Dear Chairman Gessner, Mr. Quinn, and Ms. Thomas,

The U.S. Department of Veterans Affairs (VA) is proposing a project for a New Surgical and Clinical Tower and Demolition of Selected Buildings at the West Haven Veterans Affairs Medical Center, West Haven, Connecticut. As part of the decision-making process, VA will prepare an Environmental Assessment (EA) to comply with the National Environmental Policy Act (NEPA). VA seeks your input on issues to be addressed during the NEPA process, including environmental concerns.

VA initiated formal Section 106 consultation for the undertaking on March 8th 2022 with the Mohegan Tribe of Indians of Connecticut. The Section 106 consultation process and conclusions will provide the major contribution to the EA's analysis of potential effects to historic and cultural resources.

Please see the attached letter for additional project details and how to submit any initial comments on the scope of issues for analysis, or input on potential alternatives or information/analyses relevant to the proposed project. In particular, we invite you to provide preliminary information on any properties of historic, religious, or cultural significance that may be affected by our proposed undertaking.

Respectfully,

Patrick Read
Department of Veterans Affairs
Environmental Officer/Engineer, CFM Eastern Region
425 I Street 6th Floor RM-6W.502B
NW Washington, DC 20001

From: [VACO Environment](#)
To: tashtesook@aol.com; AdStanton@nitribe.org
Cc: [Bennett, Alec \(CFM\)](#)
Subject: *EXTERNAL* Notice of Scoping and Stakeholder Involvement for the Proposed New Surgical and Clinical Tower and Demolition of Selected Buildings at the West Haven Veterans Affairs Medical Center, West Haven, Connecticut
Date: Thursday, March 17, 2022 12:04:20 PM
Attachments: [VA OCFM - West Haven - Scoping Notice - 17 March 2022.pdf](#)

*****This message originated from outside your organization. Please take care and verify the authenticity of the email prior to opening any questionable or unexpected attachments.*****

Dear Chief Stanton and Mr. Brown,

The U.S. Department of Veterans Affairs (VA) is proposing a project for a New Surgical and Clinical Tower and Demolition of Selected Buildings at the West Haven Veterans Affairs Medical Center, West Haven, Connecticut. As part of the decision-making process, VA will prepare an Environmental Assessment (EA) to comply with the National Environmental Policy Act (NEPA). VA seeks your input on issues to be addressed during the NEPA process, including environmental concerns.

VA initiated formal Section 106 consultation for the undertaking on March 8th 2022 with the Narragansett Indian Tribe. The Section 106 consultation process and conclusions will provide the major contribution to the EA's analysis of potential effects to historic and cultural resources. Please see the attached letter for additional project details and how to submit any initial comments on the scope of issues for analysis, or input on potential alternatives or information/analyses relevant to the proposed project. In particular, we invite you to provide preliminary information on any properties of historic, religious, or cultural significance that may be affected by our proposed undertaking.

Respectfully,

Patrick Read
Department of Veterans Affairs
Environmental Officer/Engineer, CFM Eastern Region
425 I Street 6th Floor RM-6W.502B
NW Washington, DC 20001

From: [VACO Environment](#)
To: Jonathan.Kinney@ct.gov
Cc: [Bennett, Alec \(CFM\)](#)
Subject: *EXTERNAL* Notice of Scoping and Stakeholder Involvement for the Proposed New Surgical and Clinical Tower and Demolition of Selected Buildings at the West Haven Veterans Affairs Medical Center, West Haven, Connecticut
Date: Thursday, March 17, 2022 12:03:36 PM
Attachments: [VA OCFM - West Haven - Scoping Notice - 17 March 2022.pdf](#)

*****This message originated from outside your organization. Please take care and verify the authenticity of the email prior to opening any questionable or unexpected attachments.*****

Dear Mr. Kinney,

The U.S. Department of Veterans Affairs (VA) is proposing a project for a New Surgical and Clinical Tower and Demolition of Selected Buildings at the West Haven Veterans Affairs Medical Center, West Haven, Connecticut. As part of the decision-making process, VA will prepare an Environmental Assessment (EA) to comply with the National Environmental Policy Act (NEPA). VA seeks your input on issues to be addressed during the NEPA process, including environmental concerns.

VA initiated formal Section 106 consultation for the undertaking on March 8, 2022 with your office. VA is also consulting with federally recognized Tribal Nations (Delaware Tribe of Indians, Mashantucket Pequot Indian Tribe, Mohegan Tribe of Indians of Connecticut, Narragansett Indian Tribe). The Section 106 consultation process and conclusions will provide the major contribution to the EA's analysis of potential effects to historic and cultural resources.

Please see the attached letter for additional project details and how to submit any initial comments on the scope of issues for analysis, or input on potential alternatives or information/analyses relevant to the proposed project.

Respectfully,

Patrick Read
Department of Veterans Affairs
Environmental Officer/Engineer, CFM Eastern Region
425 I Street 6th Floor RM-6W.502B
NW Washington, DC 20001

SECTION 106 CONSULTATION DOCUMENTATION



PROJECT REVIEW COVER FORM

This is: ☒ a new submittal ☐ supplemental information ☐ other Date Submitted: 03/08/2022

PROJECT INFORMATION

Project Name: New Surgical and Clinical Tower

Project Proponent: West Haven Veterans Administration Medical Center (VAMC)
The individual or group sponsoring, organizing, or proposing the project.

Project Street Address: 950 Campbell Avenue
Include street number, street name, and or Route Number. If no street address exists give closest intersection.

City or Town: West Haven County: New Haven
Please use the municipality name and **not** the village or hamlet.

PROJECT DESCRIPTION (REQUIRED)

Please summarize the project below. In a separate attachment, describe the project in detail. As applicable, provide any information regarding past land use, project area size, renovation plans, demolitions, and/or new construction.
The proposed undertaking is the development of a site at the West Haven VAMC for a new surgical and clinical tower.

List all state and federal agencies involved in the project and indicate the funding, permit, license or approval program pertaining to the proposed project:

Agency Type	Agency Name	Program Name
<input type="checkbox"/> State <input checked="" type="checkbox"/> Federal	Veterans Affairs	Office of Construction and Facilities Management (CFM)
<input type="checkbox"/> State <input type="checkbox"/> Federal		
<input type="checkbox"/> State <input type="checkbox"/> Federal		
<input type="checkbox"/> State <input type="checkbox"/> Federal		

If there is no state or federal agency involvement, please state the reason for your review request:

FOR SHPO USE ONLY

Based on the information submitted to our office for the above named property and project, it is the opinion of the Connecticut State Historic Preservation Office that no historic properties will be affected by the proposed activities.*

Jonathan Kinney
Deputy State Historic Preservation Officer

Date

*All other determinations of effect will result in a formal letter from this office



PROJECT REVIEW COVER FORM

CULTURAL RESOURCES IDENTIFICATION

Background research for previously identified historic properties within a project area may be undertaken at the SHPO's office. To schedule an appointment, please contact Catherine Labadia, 860-500-2329 or Catherine.labadia@ct.gov. Some applicants may find it advantageous to hire a qualified historic preservation professional to complete the identification and evaluation of historic properties.

Are there any historic properties listed on the State or National Register of Historic Places within the project area? (Select one)

☒ Yes ☐ No ☐ Do Not Know

If yes, please identify: _____

Architecture

Are there any buildings, structures, or objects within the Area of Potential Effects (houses, bridges, barns, walls, etc.)? The area of potential effects means the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties. If you're not sure, check "I don't know."

☒ Yes (attach clearly labeled photographs of each resource and applicable property cards from the municipality assessor)

☐ No (proceed to next section)

☐ I don't know (proceed to next section)

Date the existing building/structures/objects were constructed: 1916

If the project involves rehabilitation, demolition, or alterations to existing buildings older than 50 years, provide a work plan

(If window replacements are proposed, provide representative photographs of existing windows).

Archeology

Does the proposed project involve ground disturbing activities?

☒ Yes (provide below or attach a description of current and prior land use and disturbances. Attach an excerpt of the soil survey map for the project area. These can be created for free at: <https://websoilsurvey.nrcs.usda.gov>

Construction activities

☐ No

CHECKLIST (Did you attach the following information?)

Required for all Projects <ul style="list-style-type: none"><input checked="" type="checkbox"/> Completed Form<input checked="" type="checkbox"/> Map clearly labelled depicting project area<input checked="" type="checkbox"/> Photographs of current site conditions<input checked="" type="checkbox"/> Site or project plans for new construction	Required for Projects with architectural resources <ul style="list-style-type: none"><input type="checkbox"/> Work plans for rehabilitation or renovation<input checked="" type="checkbox"/> Assessor's Property Card Required for Projects with ground disturbing activities <ul style="list-style-type: none"><input checked="" type="checkbox"/> Soil survey map
Suggested Attachments, as needed <ul style="list-style-type: none"><input checked="" type="checkbox"/> Supporting documents needed to explain project<input checked="" type="checkbox"/> Supporting documents identifying historic properties<input type="checkbox"/> Historic maps or aerials (available at http://magic.lib.uconn.edu or https://www.historicaerials.com/)	

PROJECT CONTACT

Name: Alfred Montoya, Director

Firm/Agency: West Haven VAMC Medical Center

Address: 950 Campbell Avenue

City: West Haven

State: CT

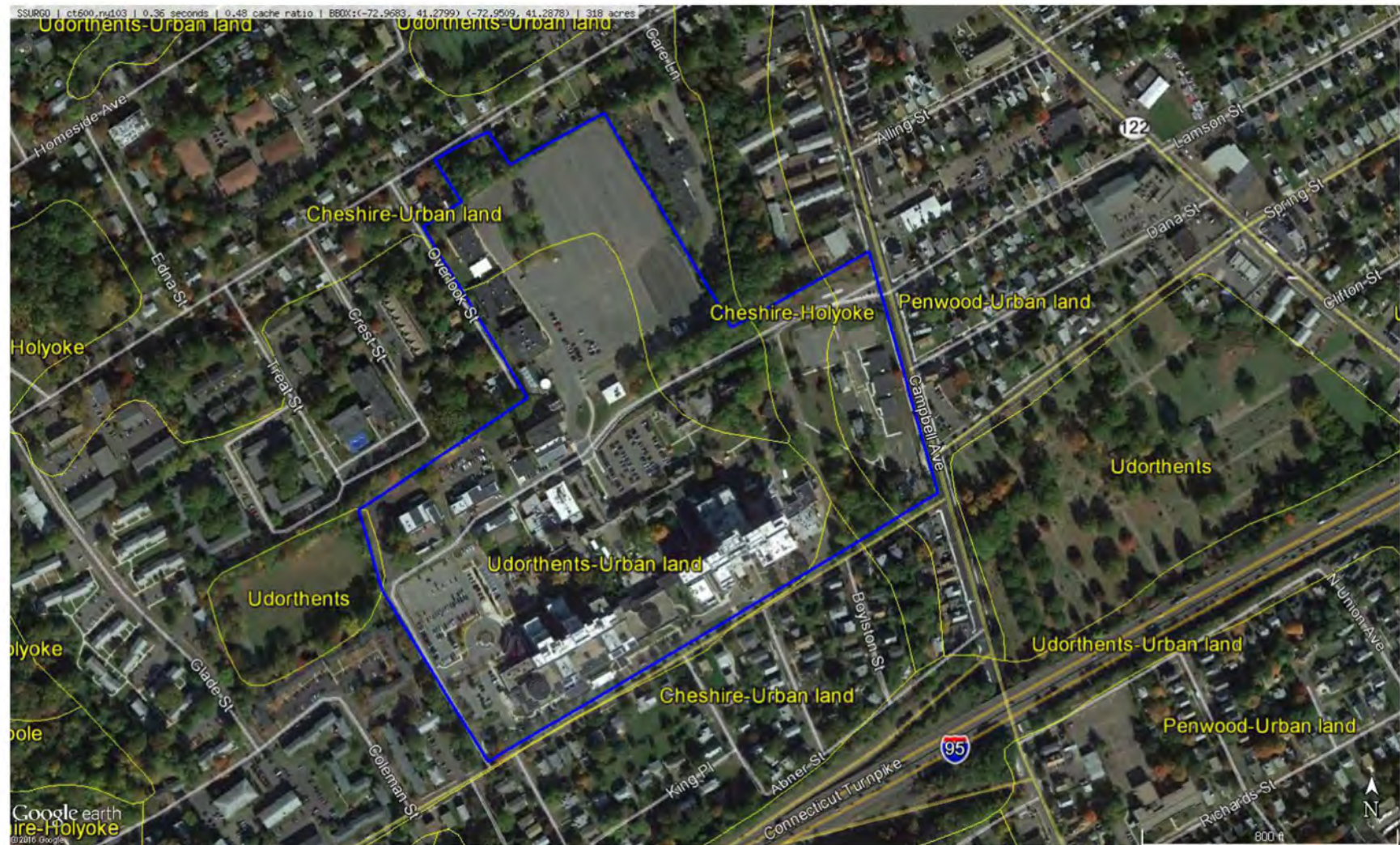
Zip: 06516

Phone: (203) 932-5711

Email: _____

Federal and state laws exist to ensure that agencies, or their designated applicants, consider the impacts of their projects on historic resources. At a minimum, submission of this completed form with its attachments constitutes a request for review by the Connecticut SHPO. The responsibility for preparing documentation, including the identification of historic properties and the assessment of potential effects resulting from the project, rests with the federal or state agency, or its designated applicant. The role of SHPO is to review, comment, and consult. SHPO's ability to complete a timely project review largely depends on the quality of the materials submitted. Please mail the completed form with all attachments to the attention of: Environmental Review, State Historic Preservation Office, 450 Columbus Boulevard, Suite 5, Hartford, CT. **Electronic submissions are not accepted at this time.**

US Department of Agriculture Soil Classification Map





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

February 14, 2022

Mr. Jonathan Kinney, SHPO
Director of Operations
CT Department of Economic and Community Development
450 Columbus Boulevard, Suite 5
Hartford, CT 06103

VIA ELECTRONIC MAIL

RE: Initiation of Section 106 Consultation
New Surgical and Clinical Tower at the West Haven Medical Center, VA
Connecticut Healthcare System, West Haven, New Haven County, CT

Dear Mr. Kinney:

The U.S. Department of Veterans Affairs (VA), pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations (36 CFR Part 800) is initiating Section 106 consultation with the Connecticut State Historic Preservation Office (SHPO) for the referenced project at the West Haven Veterans Affairs Medical Center (VAMC), 950 Campbell Avenue, West Haven, New Haven County, CT.

Undertaking

The VA is proposing to design and construct a new mission-critical surgical and clinical tower. The new tower is conceptually proposed to be between two and four levels with a mechanical/electrical/plumbing penthouse on top, and a utility corridor that is beneath the structure and ties into existing utilities at the VAMC. The Proposed Action would also involve the renovation of interior spaces in Building #1, the current general medical and surgical building, and Building #2, the current outpatient/nursing home, and would include construction of connections from the new surgical and clinical tower to Building 1 to facilitate movement of visitors, patients, staff, and materials or equipment.

Area of Potential Effect

The project's Area of Potential Effects (APE) has been determined to be the boundaries of the medical center (Attachment 1, Figure 3).

Identification of Historic Properties

At this time, the VA is considering multiple options regarding the location and design of the undertaking; however, VA has determined that, given the alternatives for the project,

the undertaking will likely result in the demolition of buildings previously identified as contributing resources to the West Haven Veterans Administration Hospital/William Wirt Winchester Memorial Hospital Historic District. In 2017, a draft National Register of Historic Places Nomination Form for the historic district was submitted to your office. On November 19, 2021, a revised nomination, responding to SHPO comments, was submitted to your office. VA received comments on the nomination from your office on January 12, 2022, and is preparing to resubmit the nomination shortly. VA's assessment of historic resources is based on this most recent nomination.

The proposed undertaking has the potential to affect several buildings in the NRHP-eligible historic district including Buildings #6, 7, 8, 9, and 10, all of which are located in the central portion of the West Haven VAMC and are identified as contributing resources to the historic district (Attachment 1, Figure 3). A site visit performed on September 28, 2021, confirmed current conditions of the buildings (see Attachment 2).

In 2015/2016, a baseline archaeological study including background research and pedestrian survey was conducted at the West Haven VAMC on behalf of VA by R. Christopher Goodwin & Associates, Inc. (Kosack et al. 2016). A copy of the 2016 study report detailed account of the archaeological assessment of the effects of the undertaking is provided in Attachment 3. As a result of that study and others, no archaeological sites have been identified at the West Haven VAMC. The 2016 report included a recommendation for no additional archaeological investigations at the West Haven VAMC, as follows:

Although research indicates that the area initially may have had a moderate potential for archeological resources from both the pre-Contact and twentieth century historic periods, the extensive and intensive development of the VAMC campus argues strongly against the presence of archeological resources that retain stratigraphic integrity or that possess the ability to provide data important to our understanding of significant research questions. The results of this archeological assessment support a recommendation for no further archeological work within the West Haven VAMC campus.¹

The site visit confirmed that these ground conditions, prior disturbance, and the extent of development remain at the West Haven VAMC as previously described. The extent of subsurface disturbance from utility installations is illustrated in Attachment 1, Figure 4. No archaeological sites have been identified within the West Haven VAMC. Extensive surface and subsurface disturbances are present in all areas of the West Haven VAMC, and the potential for intact, significant archaeological resources is negligible.

¹ Phase IA Archeological Assessment of the West Haven Veterans Affairs Medical Center (VAMC) West Haven, Connecticut, February 2016; Page 36.

Assessment of Effects to Historic Properties

Due to the extensive surface and subsurface ground disturbance in the project area, and the absence of any known archaeological sites, it is also our determination that no below-ground historic properties will be affected by the undertaking within the APE pursuant to 36 CFR 800.4(d)(1). VA requests SHPO's concurrence on this finding per 36 CFR Part 800.

Because VA has not yet determined the site or design for the undertaking, we do not have sufficient information to determine the specific effects of the undertaking on above-ground historic resources. Pursuant to 36 CFR § 800.16(b)(1), a programmatic agreement (PA) may be used when effects on historic properties cannot be fully determined prior to approval of an undertaking. Therefore, VA proposes to develop and execute a PA which will allow us to later determine which of the alternatives will be selected. Once VA has selected an alternative and has determined the potential adverse effects to historic properties, we can determine ways to avoid or minimize those effects or develop a Memorandum of Agreement if the effects cannot be avoided per the stipulation in the PA.

We welcome your comments and look forward to our consultation with you on this undertaking. Should you have questions about this particular project, please feel free to contact Mr. Joseph Simonetta, Project Engineer, at VA Connecticut Healthcare System, 950 Campbell Avenue, Building 15, Mailstop 138, West Haven, CT, 06516; at Joseph.Simonetta2@va.gov; or (203) 932-5711.

Sincerely,

Alfred Montoya
Director, West Haven VAMC

Attachments:

- Attachment 1 – Project Figures and Maps
- Attachment 2 – Photographs of Historic and Current Conditions
- Attachment 3 – Archaeological Resources Assessment Report and 2016 Phase IA Archeological Assessment Report (Kosack et al.)

cc: Héctor M. Abreu-Cintrón, VA Federal Preservation Officer
Alexis Clark, Advisory Council on Historic Preservation

ATTACHMENTS

Attachment 1

Project Figures and Maps

ATTACHMENT 1
PROJECT FIGURES AND MAPS



Figure 1. Location of the West Haven VAMC project area in West Haven, Connecticut.

Source: *Phase IA Archeological Assessment of the West Haven Veterans Affairs Medical Center (VAMC) West Haven, Connecticut*. Prepared by R. Christopher Goodwin & Associates, Inc. for Veterans Integrated Service Network 1 (VISN 1). 2016.

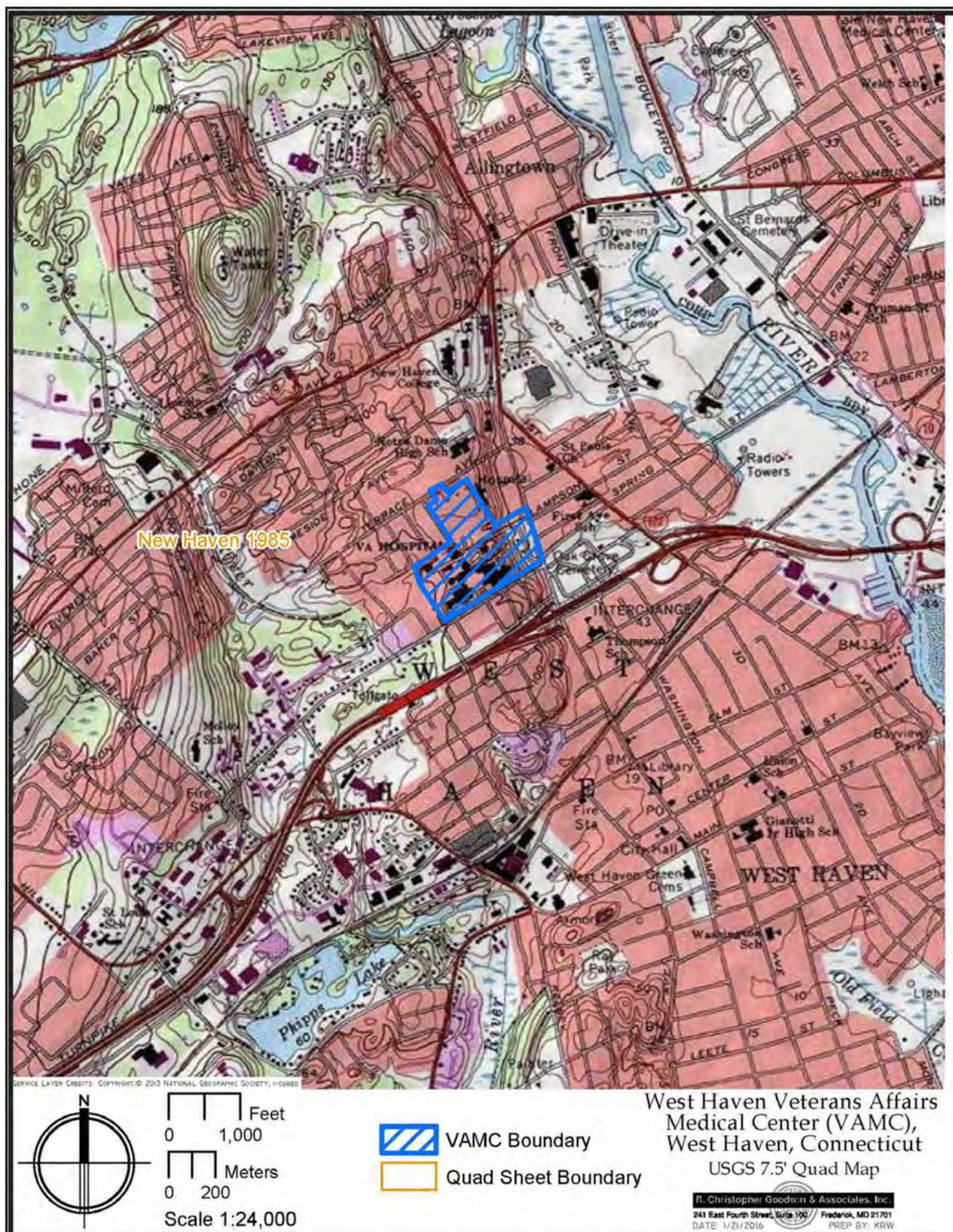


Figure 2. Excerpt from the 1985 USGS 7.5' New Haven quadrangle, showing the location and boundaries of the West Haven VAMC campus, West Haven, CT.

Source: *Phase IA Archeological Assessment of the West Haven Veterans Affairs Medical Center (VAMC) West Haven, Connecticut*. Prepared by R. Christopher Goodwin & Associates, Inc. for Veterans Integrated Service Network 1 (VISN 1). 2016.

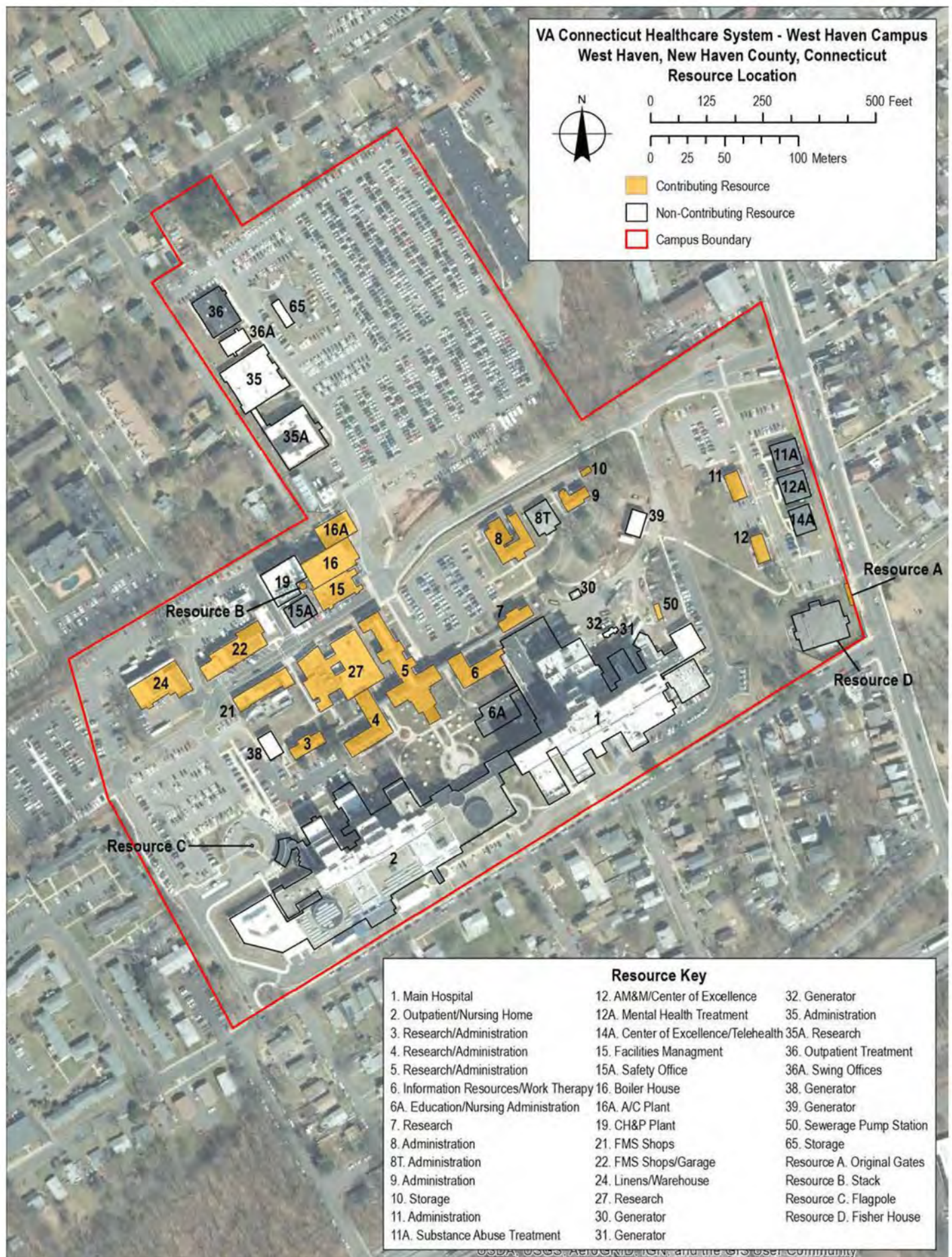


Figure 3. Area of Potential Effects Map for Architectural Resources for the New Surgical and Clinical Tower, West Haven VAMC. The APE corresponds to the proposed NRHP-eligible West Haven Veterans Administration Hospital Historic District/Campus Boundary.

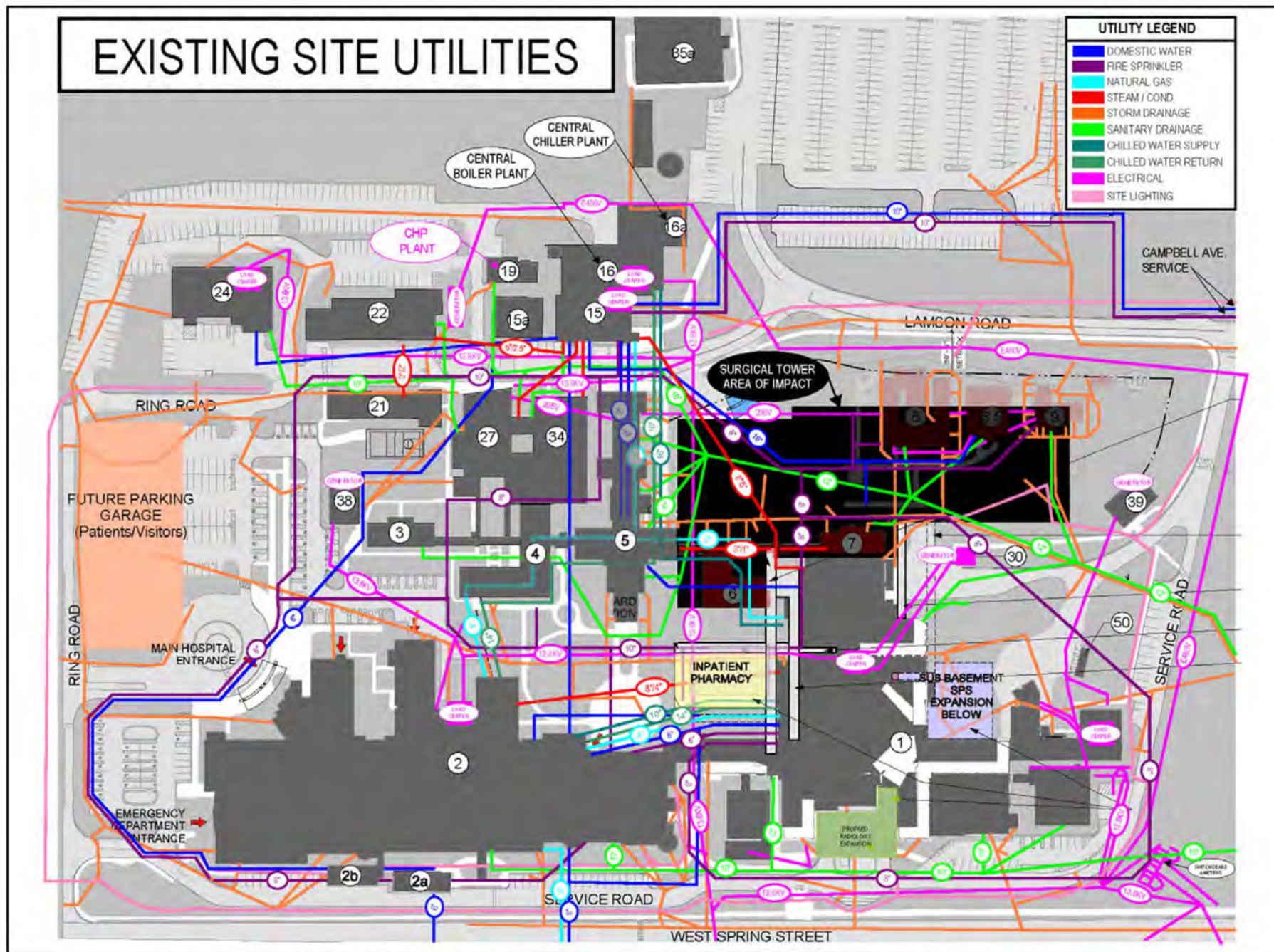


Figure 4. West Haven VAMC, Existing Site Utilities Map Showing Extent of Subsurface Disturbance throughout Project Area

Attachment 2

Photographs of Historic and Current Conditions



City of West Haven, CT

Property Listing Report

Map Block Lot

054-0290-0-0000

Building #

6

Section #

1

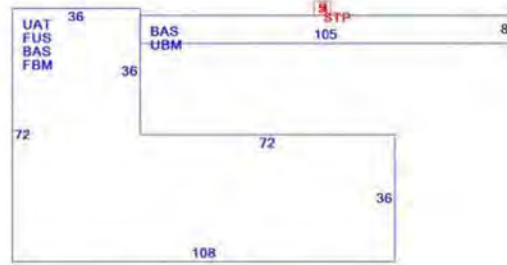
Account

00041759

Photo



Sketch



Primary Construction Details

Year Built	1916
Stories	2
Building Style	Medical Office
Building Use	Comm/Ind
Building Condition	G
Occupancy	1.00
Extra Fixtures	0
Bath Style	NA
Kitchen Style	NA
AC Type	01
Heating Type	Steam
Heating Fuel	Gas

Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Total Rooms	0
Roof Style	Gable
Roof Cover	Slate
Interior Floors 1	Vinyl/Asphalt
Interior Floors2	
Exterior Walls	Brick/Masonry
Exterior Walls 2	NA
Interior Walls	Drywall/Sheet
Interior Walls 2	Plastered

(*Industrial / Commercial Details)

Building Desc.	VA HOSPIT MDL-94
Building Grade	Good
Heat / AC	HEAT/AC SPLIT
Frame Type	MASONRY
Baths / Plumbing	AVERAGE
Ceiling / Wall	SUS-CEIL & WL
Rooms / Prtns	AVERAGE
Wall Height	10.00
First Floor Use	900C

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
First Floor	6024	6024
Basement, Finished	5184	5184
Upper Story, Finished	5184	5184
Stoop	20	0
Attic, Unfinished	5184	0
Basement, Unfinished	840	0

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area	22436	16392



City of West Haven, CT

Property Listing Report

Map Block Lot

054-0290-0-0000

Building #

7

Section #

1

Account

00041759

Photo



Sketch



Primary Construction Details

Year Built	1916
Stories	2
Building Style	Medical Office
Building Use	Comm/Ind
Building Condition	G
Occupancy	
Extra Fixtures	0
Bath Style	NA
Kitchen Style	NA
AC Type	03
Heating Type	Steam
Heating Fuel	Gas

Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Total Rooms	0
Roof Style	Gable
Roof Cover	Slate
Interior Floors 1	Vinyl/Asphalt
Interior Floors2	
Exterior Walls	Brick/Masonry
Exterior Walls 2	NA
Interior Walls	Drywall/Sheet
Interior Walls 2	NA

(*Industrial / Commercial Details)

Building Desc.	VA HOSPIT MDL-94
Building Grade	Average
Heat / AC	HEAT/AC SPLIT
Frame Type	MASONRY
Baths / Plumbing	AVERAGE
Ceiling / Wall	SUS-CEIL & WL
Rooms / Prtns	AVERAGE
Wall Height	10.00
First Floor Use	900C

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
First Floor	2202	2202
Porch, Open, Finished	24	0
Upper Story, Finished	2202	2202
Attic, Unfinished	2202	0
Basement, Unfinished	2202	0

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area	8832	4404



City of West Haven, CT

Property Listing Report

Map Block Lot

054-0290-0-0000

Building # 8

Section #

1 Account

00041759

Photo



Sketch



Primary Construction Details

Year Built	1916
Stories	2
Building Style	Medical Office
Building Use	Comm/Ind
Building Condition	G
Occupancy	
Extra Fixtures	0
Bath Style	NA
Kitchen Style	NA
AC Type	03
Heating Type	Steam
Heating Fuel	Oil

Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Total Rooms	0
Roof Style	Gable
Roof Cover	Slate
Interior Floors 1	Carpet
Interior Floors2	
Exterior Walls	Brick/Masonry
Exterior Walls 2	Vinyl Siding
Interior Walls	Plastered
Interior Walls 2	NA

(*Industrial / Commercial Details)

Building Desc.	VA HOSPIT MDL-94
Building Grade	Average
Heat / AC	NONE
Frame Type	MASONRY
Baths / Plumbing	AVERAGE
Ceiling / Wall	SUS-CEIL & WL
Rooms / Prtns	AVERAGE
Wall Height	8.00
First Floor Use	900C

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
First Floor	5849	5849
Porch, Open, Finished	1008	0
Upper Story, Finished	4450	4450
Slab	1579	0
Basement, Unfinished	4270	0

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area	17156	10299



City of West Haven, CT

Property Listing Report

Map Block Lot

054-0290-0-0000

Building # 8-1/2

Section #

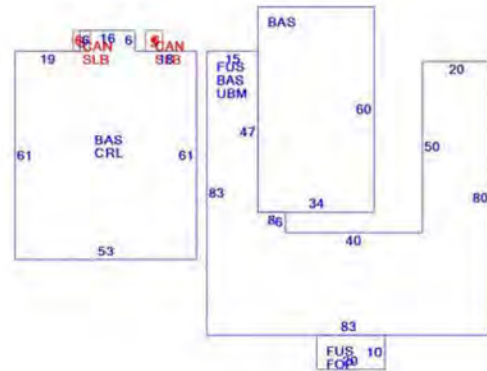
1 Account

00041759

Photo



Sketch



Primary Construction Details

Year Built	1985
Stories	1
Building Style	Office
Building Use	Comm/Ind
Building Condition	A
Occupancy	1.00
Extra Fixtures	0
Bath Style	NA
Kitchen Style	NA
AC Type	03
Heating Type	Steam
Heating Fuel	Gas

Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Total Rooms	0
Roof Style	Gable
Roof Cover	Asph/F Gls/Cmp
Interior Floors 1	Carpet
Interior Floors2	
Exterior Walls	Brick Veneer
Exterior Walls 2	NA
Interior Walls	Drywall/Sheet
Interior Walls 2	NA

(*Industrial / Commercial Details)

Building Desc.	VA HOSPIT MDL-94
Building Grade	Average
Heat / AC	HEAT/AC PKGS
Frame Type	WOOD FRAME
Baths / Plumbing	AVERAGE
Ceiling / Wall	SUS-CEIL & WL
Rooms / Prtns	AVERAGE
Wall Height	8.00
First Floor Use	900C

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
First Floor	9702	9702
Canopy	60	0
Crawl	3329	0
Porch, Open, Finished	200	0
Upper Story, Finished	4533	4533
Slab	60	0
Basement, Unfinished	4333	0

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area	22217	14235



City of West Haven, CT

Property Listing Report

Map Block Lot

054-0290-0-0000

Building # 9

Section # 1

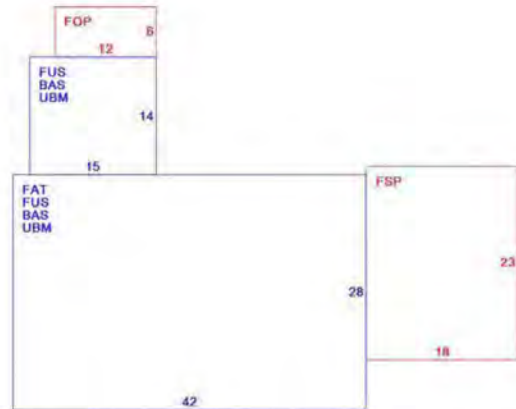
Account

00041759

Photo



Sketch



Primary Construction Details

Year Built	1919
Stories	2.5
Building Style	Office
Building Use	Comm/Ind
Building Condition	A
Occupancy	
Extra Fixtures	0
Bath Style	NA
Kitchen Style	NA
AC Type	03
Heating Type	Steam
Heating Fuel	Oil

Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Total Rooms	0
Roof Style	Gable
Roof Cover	Slate
Interior Floors 1	Carpet
Interior Floors2	
Exterior Walls	Brick/Masonry
Exterior Walls 2	NA
Interior Walls	Plastered
Interior Walls 2	NA

(*Industrial / Commercial Details)

Building Desc.	VA HOSPIT MDL-94
Building Grade	Good
Heat / AC	HEAT/AC SPLIT
Frame Type	MASONRY
Baths / Plumbing	AVERAGE
Ceiling / Wall	CEIL & WALLS
Rooms / Prtns	AVERAGE
Wall Height	8.00
First Floor Use	900C

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
First Floor	1386	1386
Attic, Finished	1176	412
Porch, Open, Finished	72	0
Porch, Screen, Finished	414	0
Upper Story, Finished	1386	1386
Basement, Unfinished	1386	0

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area	5820	3184

Attachment 3

Archaeological Resources Assessment Report and 2016 Phase IA Archeological Assessment Report (Kosack et al.)

FEBRUARY 10, 2016

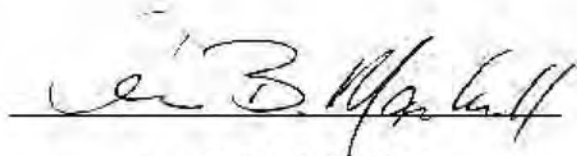
**PHASE IA ARCHEOLOGICAL ASSESSMENT
OF THE WEST HAVEN VETERANS AFFAIRS
MEDICAL CENTER (VAMC)
WEST HAVEN, CONNECTICUT**

PREPARED FOR:

**VETERANS INTEGRATED SERVICE NETWORK 1
1 VA CENTER
AUGUSTA, MAINE 04330**

**R. CHRISTOPHER GOODWIN & ASSOCIATES, INC.
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**PHASE IA ARCHEOLOGICAL ASSESSMENT OF THE
WEST HAVEN VETERANS AFFAIRS MEDICAL CENTER (VAMC)
WEST HAVEN, CONNECTICUT**

A handwritten signature in black ink, appearing to read 'Ann B. Markell', is written over a horizontal line.

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for

**Veterans Integrated Service Network 1
1 VA Center
Augusta, Maine 04330**

ABSTRACT

R Christopher Goodwin & Associates, Inc. (RCGA) has completed an assessment of archeological potential at the West Haven Veteran's Affairs Medical Center (VAMC) located at 950 Campbell Avenue, West Haven, Connecticut. This assessment has been completed as part of a baseline archeological study for the facility, intended to identify archeological resources that might be present, and to provide information essential to the VAMC's future planning. This study is part of a larger effort being conducted for the Veterans Integrated Service Network (VISN) located in New England (VISN I). The study is being completed under contract to VISN I.

This study included background research carried out to provide a working context for pre-

Contact and historic period land-use within the West Haven facility and the immediate vicinity. It also included review of historic cartographic resources, historic aerial photographs, historic plans of the facility, and of physiographic data related to the facility. Research was intended to identify changes in land-use over time as well as to provide information on current conditions and ground disturbance. In addition, a brief pedestrian reconnaissance of the facility was completed to assess current conditions. Based on the results of this assessment, and on the extent of documented development at the facility, this report includes a recommendation for no additional archeological investigations at the West Haven VAMC.

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INTRODUCTION

R Christopher Goodwin & Associates, Inc. (RCGA) has completed an assessment of archeological potential at the West Haven Veteran's Affairs Medical Center (VAMC) located at 950 Campbell Avenue, West Haven, Connecticut (Figures 1.1 and 1.2). This assessment has been completed as part of a baseline archeological study for the facility, intended to identify archeological resources that might be present, and to provide information essential to the VAMC's future planning. This study is part of a larger effort being conducted for the Veterans Integrated Service Network (VISN) located in New England (VISN I). Facilities also reviewed during this project include those located in Manchester, New Hampshire; Newington, Connecticut; White River Junction, Vermont; Providence, Rhode Island; and at five campuses in Massachusetts. The study is being completed under contract to VISN I; in addition to the archeological assessments, the project has included survey of medical facility interiors and monuments.

The results of background research carried out to provide a working context for pre-contact and historic period land-use within the West Haven facility and the immediate vicinity are included in this assessment. Also included is a review of historic cartographic resources and historic aerial photographs that are intended to identify changes in land-use over time as well as to provide information on current conditions and ground disturbance. Based on this background information, an assessment of archeological potential is included in this report. Based on the results of that assessment, this report also includes a recommendation for no additional archeological investigations at the West Haven VAMC.

Location and Description

The West Haven VAMC campus comprises 44.37 acres, and is bounded on the south by West

Spring Street, on the east by Campbell Avenue, to the north by Terrace Avenue, and on the west by Overlook Street and residential neighborhoods (Figure 1.3). The majority of the campus acreage is consumed by 39 buildings and associated parking facilities (Figure 1.4). The medical facility initially was constructed in 1916 with the intended use as a hospital for tubercular patients. The facility served as a military hospital upon its official opening (1918), was administered by the United States Public Health Services and then the Veteran's Bureau (ca. 1919-1927), and reverted back to the General Hospital Society of Connecticut for a tuberculosis treatment division (1927-1940). In 1948, the Veteran's Administration took ownership of the facility and the campus was dedicated in 1953. Nineteen of the campus' 39 buildings are from the predecessor tuberculosis hospital (1916). Unlike other campuses, where older buildings were demolished, the original buildings were incorporated into the new facility and remain today (Hannah 2014).

Research Objectives and Methods

Background research conducted for this project included on-site review of the archeological and architectural site files and relevant archeological reports maintained at the Connecticut State Historic Preservation Office. Site file information on built resources was augmented by referring to the National Register of Historic Places research database maintained by the National Park Service. Background material used to formulate the prehistoric and historic contexts for the report was obtained from a variety of on-line sources, as well as from sources contained in RCGA's extensive in-house reference library. In addition to the archival research, a brief reconnaissance of the facility was completed in June 2015 to corroborate current conditions at the facility and to identify areas of recent disturbance.



Figure I.1 Location of the West Haven VAMC project area in West Haven, Connecticut

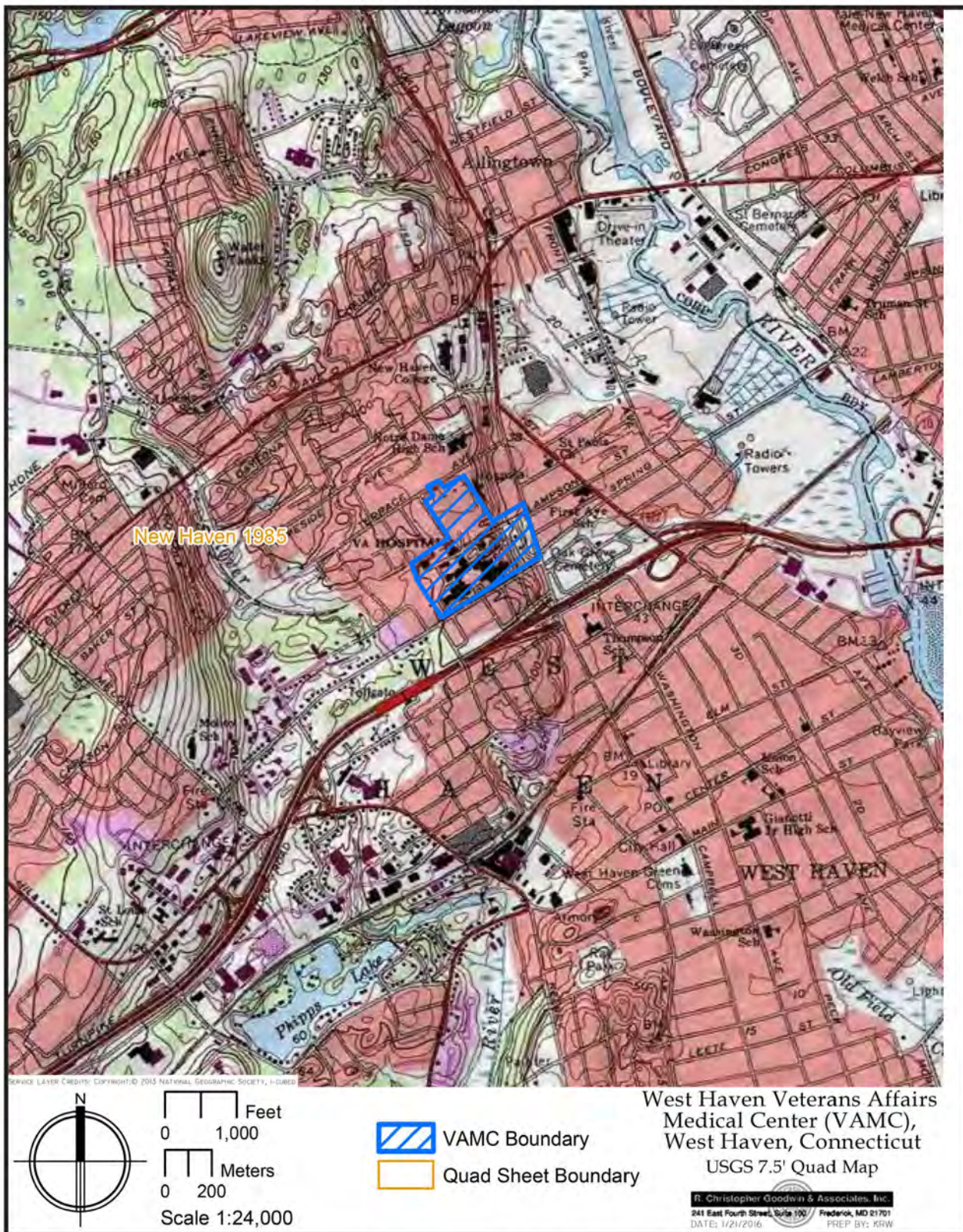


Figure 1.2 Excerpt from the 1985 USGS 7.5' New Haven quadrangle, showing the location and boundaries of the West Haven VAMC campus, West Haven, CT.



Figure 1.3 Aerial view of the location of the West Haven VAMC project area, showing roads and communities in Hartford County, Connecticut

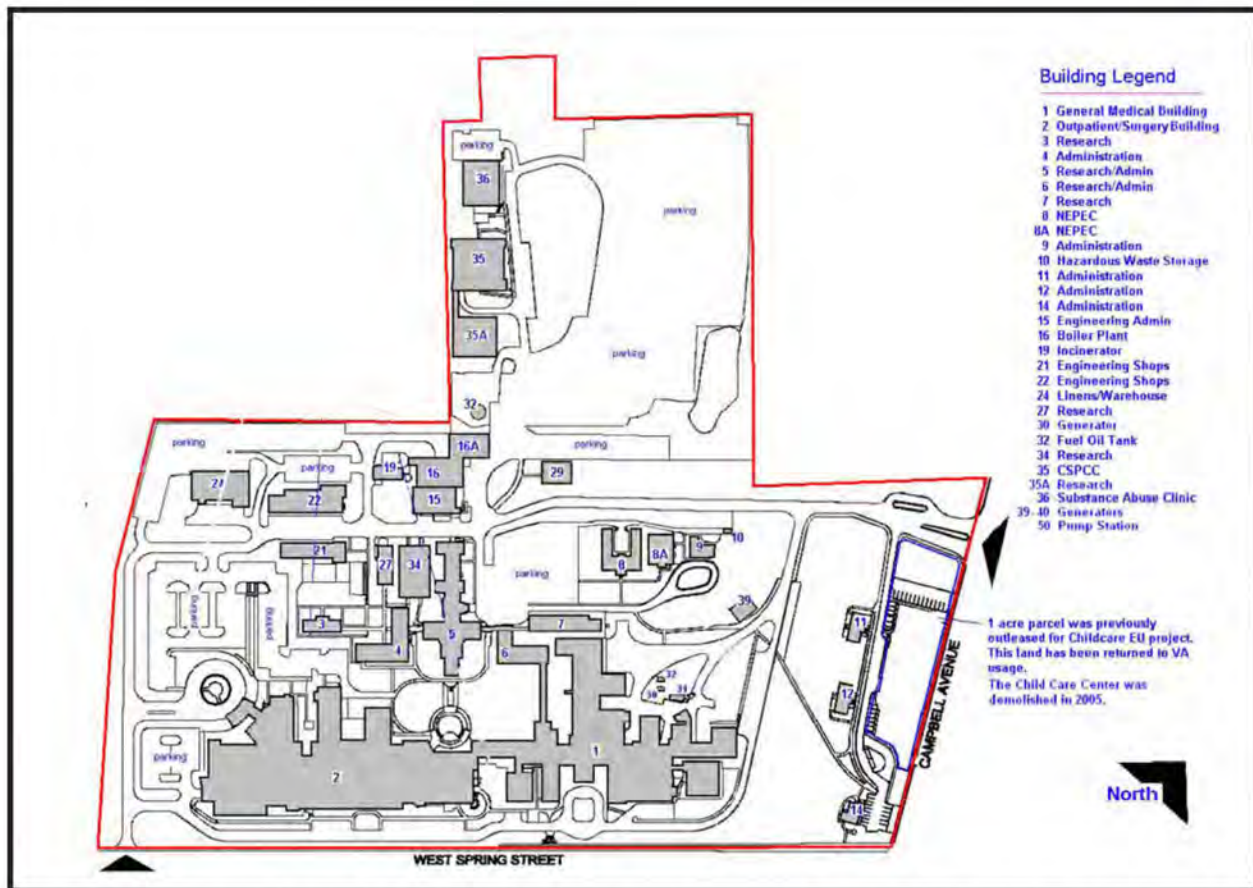


Figure 1.4 Plan of West Haven VAMC showing locations of buildings and infrastructure. (Courtesy West Haven VAMC).

Organization of the Report

Chapter I of the report is this introduction to the project. Chapter II presents information on previous investigations in the project area vicinity, as well as relevant summaries of the natural and cultural settings in the region. Chapter III is a review of current conditions and topographic

changes and disturbances, using historic maps and aerial photographs. Included is an assessment of potential for depositional integrity and intact cultural deposits within the VAMC campus. Chapter IV provides a summary of the study results and management recommendations. Appendix I contains resumes of key project personnel

ENVIRONMENTAL AND CULTURAL SETTING

Environmental Setting Physiography and Geology

The West Haven VAMC campus is located within the Western Coastal ecoregion of Connecticut (Dowhan and Craig 1976). Situated on a hill crest with a steep eastward slope towards the West River and New Haven Harbor, elevation at the facility varies from approximately 116 ft above mean sea level (amsl) at the center of the campus to 128 ft amsl at the northern boundary, and to only 40 ft amsl on the eastern side of the project area near the main entrance on Campbell Avenue. The campus is located northeast of the Cove River and west of the West River which runs north-south dividing New Haven and West Haven, Connecticut. Both rivers are part of the South Central Coast complex of drainages that flow into New Haven Harbor, and ultimately Long Island Sound. North of the project area are the

The current project area lies within the Iapetus Oceanic terrane (Rodgers 1985). The bedrock in the area is categorized as Buttress dolerite dike (J bu) and is described as dark gray to greenish gray medium to fine grained diabase and basalt from the Jurassic age (Rodgers 1985; USGS 2016). The majority of the project area lies in an area of thin glacial till deposits overlying bedrock. The VAMC is in an urban setting and has been extensively developed.

Soils

The USDA Natural Resources Conservation Service (NRCS) Soil Survey Geographic database (SSURGO) was consulted for information concerning soils within the project area. Distribution of soil complexes is illustrated in Figure 2.1 and the characteristics of the representative soil series are provided in Table 2.1. Overall, the soils within the current project area can be characterized as part of an urban land complex, re-

flecting the intensive development in the project area. The Udorthents-Urban land complex (UD) comprises the majority of the soils (62 percent) in the West Haven VAMC. Udorthents-Urban land complex is composed of udorthents (50 percent), urban land (35 percent) and other minor components (15 percent). These soils are described as gravelly loam and human-transported fill materials. Udorthents-Urban land complex covers most of the developed portions of the campus. The Cheshire-Urban land complex accounts for 22.3 percent of the soils at the facility and is mainly located in the northeastern portion of the current project area. The Cheshire-Urban land complex is made up of the Cheshire soil series (40 percent), the Urban land series (35 %), and less than 5 percent of the Wilbraham, Udorthents, Wethersfield, Watchauq, Yalesville, and Menlo series. The remaining 16 percent of soils include the Penwood-Urban land complex (8.3 percent), Cheshire-Holyoke complex (7.1 percent), and udorthents (>1 percent). The Cheshire-Holyoke complex, located on the eastern side of the campus (Figure 2.1) in a wooded area, is the only portion of natural soil mapped on the campus. The soil is described as very rocky on 15 to 35 percent slopes. The major components include the Cheshire series (45 percent) and the Holyoke series (35 percent). The remainder is composed of 10 percent or less of Yalesville, rock outcrop, Watchauq, Wilbraham, Wethersfield, and Menlo.

Hydrology

The West Haven VAMC is located within the South Central Coast major drainage basin and is situated between the West and Cove rivers. The West River lies approximately 1,307 m (4,289 ft) to the east of the Campbell Avenue entrance to the West Haven VAMC. The majority of the project area is within the South Central Western

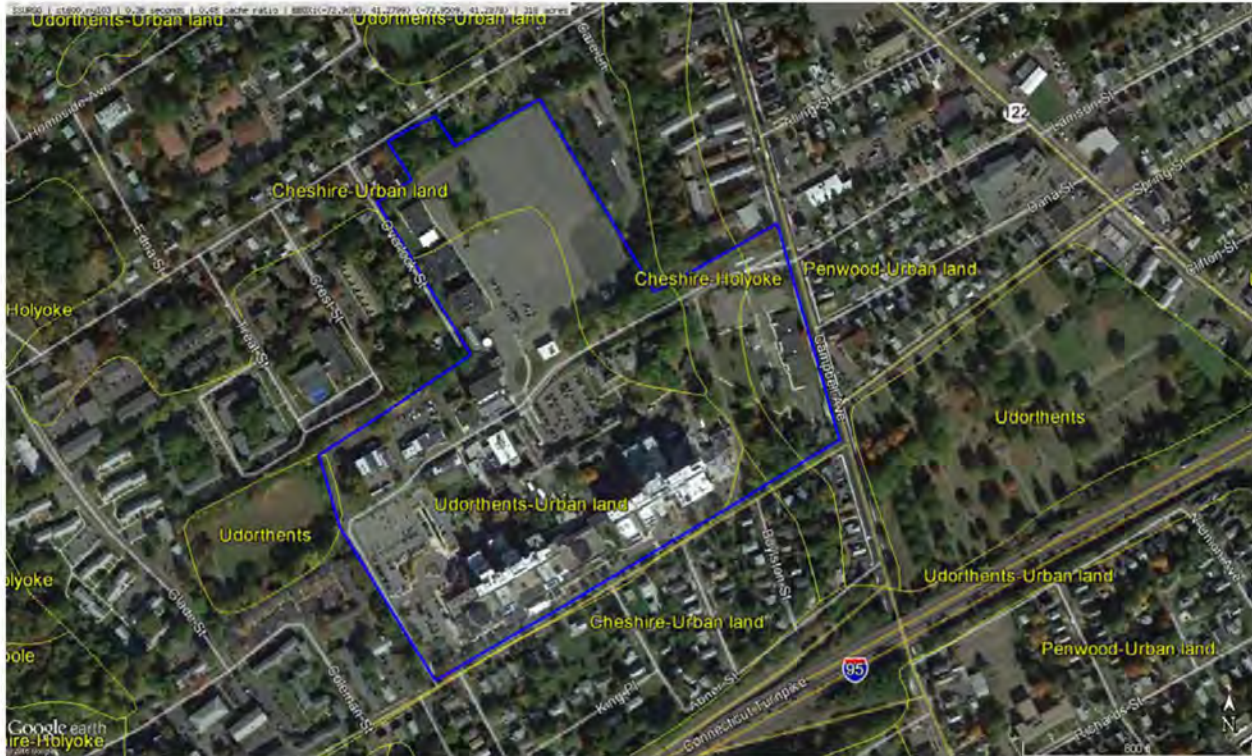


Figure 2.1 Aerial view of West Haven VAMC project area showing distribution of soil series types. (Image: Google Earth and USDA Web Soil Survey)

Complex regional drainage, which includes the West River. The closest water source is the Cove River, approximately 383 m (1,256 ft) to the west of the VAMC campus. The Cove River and the most western portion of the project area, west of Overlook Street, are part of the South Central Shoreline complex of regional drainages. The Cove River also drains into the New Haven Harbor at the coast and ultimately the Long Island Sound.

Previous Cultural Resources Investigations

Review of the archeological and architectural site files and report archives at the Connecticut State Historic Preservation Office in Hartford was completed revealed that only two previously identified archeological sites—one historic and one prehistoric—have been identified within a 1.75 mi radius of the West Haven VAMC campus (Table 2.2). Of the six archeological projects conducted within that same radius (Table 2.3), three (Raber et al. 1984, 1987, 1990) entailed studies of the Maltby Lakes development area, located northwest of the present project area. Those three studies collectively identified a series of small but

significant Late Woodland resource procurement and lithic processing sites on the upland terraces overlooking the floodplain of the Cove River.

Five historic resources listed on the National Register of Historic Places (NRHP) are located within the town of West Haven (Table 2.2). These range from eighteenth century dwellings to twentieth century institutional/educational structures. The Ward-Heitman house, a circa 1726 post and beam house with nineteenth century additions, served as a girls' school and an antique shop; it is the oldest structure in West Haven that occupies its original site.

Cultural Setting

Prehistoric Context

The chronological divisions used in the following prehistoric context are based upon those presented in the State of Connecticut's most recent historic preservation plan (State of Connecticut 2011).

Paleo-Indian (11,000 – 9,000 BP)

The Paleo-Indian period was conditioned by changing environments related to the gradual

Table 2.1 Representative profiles of the soil series within the West Haven VAMC Facility

Series	Stratum	Depth	Color	Texture
Cheshire	Ap	0-20 cm	7.5YR 3/2 dark brown	fine sandy loam with 5 percent gravel
	Bw1	20-41 cm	5YR 4/4 reddish brown	fine sandy loam with 10 percent gravel
	Bw2	41-66 cm	5YR 5/4 reddish brown	fine sandy loam with 10 percent gravel
	C	66-165 cm	2.5YR 4/4 reddish brown	gravelly sandy loam with 10 percent gravel
Wilbraham	Ap	0-10 cm	10YR 3/1 very dark gray	silt loam with 5 percent gravel
	Bw1	10-20 cm	5YR 3/3 dark reddish brown	silt loam with 10 percent gravel
	Bw2	20-51 cm	5YR 4/4 reddish brown	silt loam with 13 percent gravel and cobbles
	Cd	51-165 cm	5YR 3/3 dark reddish brown	gravelly loam with 25 percent gravel and cobbles
Wethersfield	Oe	0-3 cm	10YR 2/1 black	moderately decomposed plant material
	Ap	3-8 cm	7.5YR 3/2 dark brown	loam with 10 percent gravel
	Bw1	8-22 cm	5YR 4/4 reddish brown	loam with 10 percent gravel
	Bw2	22-69 cm	5YR 3/3 dark reddish brown	gravelly loam with 15 percent gravel and cobbles
	Cd	69-165 cm	2.5YR 4/4 reddish brown	gravelly loam with 20 percent gravel and cobbles
Watchaug	Ap	0-20 cm	5YR 3/3 dark reddish brown	fine sandy loam with 8 percent gravel
	Bw1	20-46 cm	5YR 4/4 reddish brown	fine sandy loam with 10 percent gravel
	Bw2	46-61 cm	5YR 5/6 yellowish red	fine sandy loam with 10 percent gravel
	C	61-165 cm	5YR 4/3 reddish brown	gravelly sandy loam with 25 percent gravel and cobbles
Yalesville	Ap	0-20 cm	7.5YR 3/2 dark brown	fine sandy loam with 5 percent gravel
	Bw1	20-36 cm	5YR 4/4 reddish brown	fine sandy loam with 5 percent gravel
	Bw2	36-64 cm	5YR 4/4 reddish brown	loam with 5 percent gravel
	C	64-91 cm	2.5YR 4/4 reddish brown	gravelly sandy loam with 12 percent gravel and 3 percent cobbles
	2R	91 cm	2.5YR 4/4 reddish brown	hard sandstone bedrock
Menlo	Oa	0-13 cm	10YR 2/1 black	muck
	Ap	13-41 cm	10YR 2/1 black	mucky silt loam with 2 percent quartz and basalt gravel
	Bg1	41-56 cm	7.5YR 5/1 gray	flaggy very fine sandy loam with 10 percent red sandstone flagstones, 10 percent quartz and basalt gravel and 5 percent red sandstone channers
	Bg2	56-69 cm	10YR 5/2 grayish brown	flaggy fine sandy loam with 10 percent quartz and basalt gravel and 5 percent red sandstone channers
	Cd1	69-102 cm	5YR 4/3 reddish brown	gravelly fine sandy loam with 5 percent basalt paragravel and red sandstone parachanners, 8 percent quartz and basalt gravel, 2 percent red sandstone channers and 2 percent red sandstone flagstones
	Cd2	102-152 cm	5YR 4/3 reddish brown	gravelly fine sandy loam with 5 percent quartz and basalt gravel, 2 percent red sandstones channers and 2 percent red sandstone flagstones
Urban land	H1	0 - 25 cm	na	na
	H2	25 - 200 cm	na	na
Udorthents	A	0 - 8 cm	na	na
	C	8 - 200 cm	na	na
Holyoke	Oe	0-1 cm	10YR 2/1 black	moderately decomposed plant material
	A	1-8 cm	10YR 3/3 dark brown	silt loam with 10 percent angular gravel
	Bw1	8-20 cm	7.5YR 4/4 brown	silt loam with 10 percent gravel
	Bw2	20-46 cm	5YR 4/6 yellowish red	gravelly silt loam with 15 percent gravel
	2R	46 cm	na	basalt bedrock
Penwood	Ap	0-20 cm	7.5YR 3/2 dark brown	loamy sand
	Bw1	20-46 cm	5YR 4/6 yellowish red	loamy sand
	Bw2	46-76 cm	5YR 4/4 reddish brown	sand
	C	76-152 cm	5YR 4/3 reddish brown	medium sand
Hartford	Ap	0-20 cm	5YR 3/4 dark reddish brown	sandy loam with 5 percent gravel
	Bw1	20-51 cm	5YR 4/6 yellowish red	sandy loam with 5 percent gravel
	Bw2	51-66 cm	5YR 4/4 reddish brown	loamy sand with 10 percent gravel
	2C	66-165 cm	5YR 4/4 reddish brown	stratified sand and gravel with 35 percent gravel
Branford	Ap	0-20 cm	5YR 3/3 dark reddish brown	silt loam with 10 percent gravel
	Bw1	20-46 cm	5YR 4/4 reddish brown	loam with 10 percent gravel
	Bw2	46-61 cm	5YR 4/4 reddish brown	loam with 14 percent gravel
	2C	61-165 cm	5YR 4/3 reddish brown	stratified sand and gravel with 25 percent gravel
Ellington	Ap	0-20 cm	5YR 3/2 dark reddish brown	silt loam with 5 percent gravel
	Bw1	20-46 cm	5YR 4/4 reddish brown	silt loam with 5 percent gravel
	Bw2	46-66 cm	5YR 4/4 reddish brown	very fine sandy loam with 10 percent gravel
	2C	66-165 cm	5YR 3/4 dark reddish brown	stratified sand and gravel with 50 percent gravel
Manchester	Ap	0-23 cm	7.5YR 3/2 dark brown	gravelly sand loam with 20 percent gravel
	Bw	23-46 cm	5YR 4/3 reddish brown	gravelly loamy sand with 25 percent gravel
	C	46-165 cm	5YR 4/4 reddish brown	very gravelly sand with 50 percent gravel

Table 2.2 Previously recorded cultural resources within two miles of the West Haven VAMC Facility

ID #	Approximate Distance from Project Site	Resource Name	Resource Type	Chronology	Function	NRHP Status/Date	Comments
<i>Archeological Resources</i>							
CT 156-9	0.65 mi SE	Ward Heitman House	Archeological site	Ca. 1726-20 th century	Domestic, educational, commercial	NRHP Listed 2003	Surface reconnaissance and 8 excavation units. Artifact assemblage included early materials; possible contamination from antiques sold in 20 th century shop on site
CT-156-5	1.35 mi NW	Maltby Lakes Site 2	Archeological site	1200-350 BP	Workshop	N/A	Phase I, II, III investigations performed across this general area. Site 2 was a cluster of 3 small quartz workshop stations; other areas utilized for animal and food processing activities.
<i>Built Resources</i>							
N/A	0.8 mi SE	Union School/Union School Senior Housing	Structure	1889, 1914	Educational, multi-family domestic	NRHP Listed 1987	Two-story brick main block in eclectic Victorian style; designed by Leoni Robinson of New Haven. Features terra cotta and red sandstone trim. Rear addition built 1914.
N/A	0.85 mi SSE	Old West Haven High School/ Gianotti JHS	Structure	1926-1929	Educational	NRHP Listed 1985	Built in Neo-Classical Revival style, this masonry building features an H-plan, and a columned entrance portico with pillar capitals executed in Neo-Egyptian style. Designed by Ray Foote, New Haven architect and protégé of Leoni Robinson. Sold for redevelopment in 1983.
N/A	0.5 mi SSE	Ward-Heitman House	Dwelling	Ca. 1726 to mid-19 th century	Domestic, Educational, Commercial	NRHP Listed 2003	Main block is early 18 th century post and beam studded construction; 2 stories w/ 2 rooms each floor around central chimney. Balloon framed additions on rear. Main block is earliest surviving in-situ structure in West Haven. Used in 19 th century as girls' school; antique shop/tea room in 20 th century.
N/A	0.8 – 1.0 mi SSE	West Haven Green H.D.	Historic District	Mid-19 th to early 20 th century	Residential, religious, commercial	NRHP Listed 2000, also on State Register	20 Contributing buildings, 1 site (cemetery), and 2 monuments. Styles range from Italianate through Colonial and Tudor Revival. Two most important structures are the Congregational Church (ca. 1859) and the Episcopal Church.
N/A	1 mi NNE	American Mills Web Shop	Structure	1903-1914	Industrial	NRHP Listed 1983	Brick structure, Commercial Italianate style, with work spaces on first floor and warehouse space on second. Features saw tooth skylights. Began as Narrow Fabrics Company; consolidated with other similar firms to form American Mills.

Table 2.3 Previous archeological investigations in the vicinity of the West Haven VAMC Facility

Year	Title	Author(s)	Survey Type	Approximate Location	Remarks
1977	An Archaeological Survey of Morse Park, West Haven, Connecticut	CT Archaeological Survey	Phase I	1.5 mi southeast of VA	Project found only landfill material to a depth of approximately 5 ft. Largely composed of construction debris.
1984	Summary Results and Management Recommendations of Archaeological Investigations, Maltby Lakes Development Parcel, West Haven and Orange, Connecticut.	Michael S. Raber, Ernest Weigand, and Jeffrey V. Kalin	Reconnaissance and Phase I testing	1.7 mi northwest	Survey found "prehistoric artifacts covered a much larger area than previously suggested by previous surveyors, who had identified a minor prehistoric site." At least 2.5 acres, with "several concentrations" were defined as high probability areas. 141 Sts within these areas yielded 156 lithic artifacts, w/ indications of two possible hearths and at least one defined "living floor."
1985	An Archeological Reconnaissance Survey of a Route 122 Drainage System in West Haven, CT.	CT Archaeological Survey	Reconnaissance and Phase I testing		No prehistoric materials found.
1987	Preliminary Archaeological Site Examination at the Proposed Pavilion Medical and Commercial Facilities, West Haven, Connecticut: Maltby Lakes Sites 1 and 2.	Michael S. Raber, Ernest Weigand, and Jeffrey V. Kalin	Phase II	1.7 mi northwest	Objective was to define boundaries for two previously identified sites, and to evaluate significance of Site 2. Both sites defined as probable foraging camps. Site #2 determined to be Mid-Late Woodland and a low density site. Site 1 complete with relatively intact quartz workshops.
1990	Archaeological Data Recovery at Maltby Lakes Site 2, West Haven Connecticut, for Construction of the Pavilion Complex, Towns of West Haven and Orange.	Michael S. Raber, Ernest Weigand, and Jeffrey V. Kalin	Phase III	1.7 mi northwest	Site identified as a cluster of 3 small quartz workshop stations, plus other areas utilized for animal and food processing activities. Date: 1200-350 ybp. Small group one-day encampment.
2000	Ward Heitman Management Summary: Letter report	Southern Connecticut State University	Reconnaissance and Phase I testing	0.65 mi southeast	Surface collection and limited excavation. No formal report on file

withdrawal of the Wisconsin ice sheet from New England. By circa 15,000 BP, most of Connecticut was ice-free (Long Island Sound Resource Center 2004-2011) (Figure 2.2), and some species of arctic/alpine vegetation like dwarf birch, willow and bilberry would have begun to populate exposed areas (McWeeney 1999: 6). Surviving in such a “harsh and unpredictable environment” (sometimes described as “tundra like”) would have required a nomadic lifestyle and subsistence strategy that entailed traversing large areas in search of scarce resources (State of Connecticut 2011:4).

The environment within the immediate New Haven/West Haven area also was influenced significantly by the presence of two glacial lakes: Lake Connecticut, which until circa 15,500 B.P. filled the area now occupied by Long Island Sound and extended northward into the estuaries of contemporary river systems like the Quinnipiac; and Lake Quinnipiac, which at one time submerged the present 34-mile

long Quinnipiac River Valley (Figure 2.2). Deglaciation, which occurred in this area over a period of perhaps 1,000 years, formed significant deltas whose sediments have been found to be as much as 100 m (328 ft) thick. These deltas, and indeed the entire lake bed, were sub-aerially exposed by about 15,000 BP, as the Harbor Hill-Fisher’s Island-Charlestown terminal moraine gradually eroded and released the water impounded behind it (Stone et al. 2005:7-8). Sea level rise during the millennia that followed gradually re-submerged the glacial lake bed, and resulted in the formation of Long Island Sound.

After about 12,000 BP, moderating climatic conditions facilitated the spread into southern New England of more temperate species, such as spruce, white pine, fir and larch (McWeeney 1999:7); these in turn eventually gave way to the mixed hardwood forests characteristic of today (State of Connecticut 2011:5). It was within this more moderate environment that the earliest documented Paleo-Indian occupations in Connecticut occurred. Charcoal samples from the Templeton Site in western Connecticut, C-14 dated to 10,215±90 YBP, suggest that numerous hardwood species, including oak and/or hickory, were present by that period (McWeeney 1999:7; Reeve

and Forgacs 1999:36; Lavin 2013:41). Although the prehistoric population during this period often has been characterized as nomadic hunters who depended upon bringing down large game species, in fact the faunal and botanical materials recovered from excavations in Connecticut and elsewhere (e.g., at Shawnee-Minisink in Pennsylvania) suggest that they used a more generalized hunting and foraging strategy (Parker 1987:6; State of Connecticut 2011:4).

For most of this period, the generally accepted diagnostic is the fluted projectile point (often called Clovis); most of the more than 50 Paleo-Indian “spot finds” recorded in the files at the State Historic Preservation Office fall into this category. However, the Paleo-Indian tool kit also incorporated a variety of other tools, including drills, knives, scrapers, spokeshaves, *pièces esquillées*, and hammerstones (Walwer and Walwer 2010:18). Late in the period, lanceolate (“Holcombe” like) spear points appeared; this type of point was recovered at the Hidden Creek site in southeastern Connecticut, where two carbon dates were calculated at around 9160 BP (White and George 2003:20; Doerrfeld et al. 2007:20; Lavin 2013:40). The type of chert utilized for tool manufacture at this site has been traced to the Hudson River Valley in New York (Lavin 2013:46), suggesting either long-distance travel for purposes of lithic procurement, or possibly long-distance exchange networks.

Archaic (9,000 – 2,700 B.P.)

In general, this 6,000 year period was marked by the adoption of a somewhat more settled and seasonal subsistence strategy, one that was made possible by an increasingly diverse array of exploitable plant and animal species. This less nomadic lifestyle, confined within more restricted geographic areas, may have given rise to first identifiable cultural traits associated with specific groups. The development of groundstone tools suggests the refinement of woodworking skills, while fishing appears to have become an increasingly important component of the diet (State of Connecticut 2011:5). The archeological community traditionally has subdivided this period into three separate stages: Early, Middle and Late. Some archeologists also recognize a “Tran-



Figure 2.2 Map of the State of Connecticut, showing stages of glacial recession, the limits of Lakes Quinnipiac and Connecticut, and the general location of the West Haven VAMC project area (Image: Long Island Sound Resource Center)

sitional Late Archaic” period that segues into the Early Woodland (White and George 2003:20; Doerrfeld et al. 2007:20).

In Connecticut, sites dating from the Early Archaic (9,000 –circa 7,000 BP) period appear to reflect two different cultural affinities—one reminiscent of the cultures of Northern New England and the other with ties to the Middle-Atlantic areas further south (State of Connecticut 2011:5). The Dill Farm site in East Haddam reflects the latter tradition, while the Sandy Hill site in eastern Connecticut exhibits cultural affinities with sites and populations further north in New England, often termed the “Gulf of Maine” tradition (Forrest 1999:83). The ambient environment during this period changed rapidly, with increasingly dense mixed pine and deciduous forests dominating the landscape. Diagnostic artifacts

from this period included stemmed and bifurcate-based projectile points, atlatls, anvils, and choppers (George et al. 2004:21; Walwer and Walwer 2010:21).

The Middle Archaic period extended roughly from 7,000 – 5,000 BP. During this time, those cultural characteristics that were associated with the southern population element appear to have become dominant. Large wetlands and riverine environments were the focal points for Middle Archaic settlement (State of Connecticut 2011:5), and the proportion of deciduous hardwoods relative to overall forest cover increased (Walwer and Walwer 2010:21). Middle Archaic sites in the lower Connecticut River valley occur in both upland and floodplain settings (Doerrfeld et al. 2007: 22). In addition to the diagnostic Neville and Stark projectile points traditionally associ-

ated with Middle Archaic occupations, assemblages also may contain tools associated with woodworking (i.e., celts, adzes, axes) and fishing (plummets or netsinkers) (Walwer and Walwer 2010:21).

The Late Archaic period (5,000 – 3,000 BP) saw an overall increase in the indigenous population, which tended to settle in what have been termed “resident” communities (State of Connecticut 2011:5). Tool kits became more elaborate and specialized, likely reflecting more intensive exploitation of the available resources within what may have been increasingly restricted territories. Two temporally sequential traditions are recognized for the northeast. The Laurentian Tradition is characterized by diagnostic Vosburg, Brewerton, and Otter Creek projectile points, fashioned principally from lithic materials other than quartz, as well as distinctive semi-lunar knives or *ulus*. Laurentian period sites contain relatively few features such as storage pits or structural remains, and occupy a relatively small area (<500m²). Diagnostics of the Narrow Stemmed Tradition include Squibnocket, Bare Island, and Poplar Island points, among others (Raber 2007:15-16). Although white-tailed deer were the predominant food animal, faunal remains from a wide variety of other species, including birds, have been recovered from Late Archaic period sites (Walwer and Walwer 2010:22). In coastal and riverine environments, anadromous fish (caught with hook and line or in nets or weirs) and shellfish began to form significant components of the Late Archaic diet (Bernstein and Merwin 2001:7).

Some archeological researchers also recognize a period that they term the “Terminal (or Transitional) Archaic (3,700-2,700 BP) (Walwer and Walwer 2012:23). Juli (1999:144), paraphrasing Lavin and Mozzi (1996) noted that “the cultural processes that were operating at this time wrought slow, gradual changes that were additive in nature. . . the distinction between Archaic and Woodland groups, and between those of each Woodland period, is in the cumulative technological innovations that were added and retained during each successive Woodland period.” Soapstone (steatite) bowls; a variety of stemmed, side-notched, and corner-notched projectile points,

and (late in the period) Vinette I ceramics all have been recovered from sites dating from this Transitional period (White and George 2003:25; Walwer and Walwer 2012:26). The shell middens often found in coastal and estuarine settings attest to the growing importance of shellfish in the diet (Lavin and Banks 2008:11-12, 16-18). In the New Haven area, the Grannis Island site, located upstream from the mouth of the Quinnipiac River, yielded materials diagnostic of the so-called Orient phase, a cultural complex associated with the Terminal Archaic period (McWeeney 1986:56).

Woodland (3,000 – 500 BP)

Prehistoric archeological chronologies for eastern North America generally associate the Woodland Period with the adoption of horticulture by indigenous peoples, particularly during the latter stages of the Woodland period; an increasingly sedentary lifestyle; settlement patterns that focus on villages and hamlets rather than temporary camp sites; a preference for riverine and coastal locations; and the proliferation of ceramic types that serve as culturally and temporally sensitive markers for all phases of the Woodland period. Students of eastern North American prehistory traditionally have applied a tripartite (Early, Middle, and Late) organizational framework to the Woodland Period, although alternative temporal divisions (e.g., McBride’s Broeder, Roaring Brook, Selden Creek and Niantic phases and Snow’s Early and Late Horticultural) have been offered for New England (White and George 2003:26).

Raber (2007:17) noted that the Early Woodland period in Connecticut (circa 3,000 – 2,000 BP) “is generally poorly documented, with pertinent components often hard to distinguish in multi-component sites, and the possibility that coastal sites from this period have been submerged and destroyed by rising seas,” Doerrfeld et al. (2007:28) generally agreed with this view. This difficulty in distinguishing and isolating specific cultural components may in part account for an apparent decline in population density during the immediate post-Archaic period (State of Connecticut 2011:5; Walwer and Walwer 2012:26). Subsistence strategies adopted during this period evidently diverged only slightly from those of

the Late Archaic. McBride (quoted in White and George 2003:27), describing the Early Woodland Broeder Phase in the lower Connecticut River valley, noted somewhat larger “population aggregations” that occupied seasonal base camps along “major rivers, interior lakes, and wetlands” Thick, cord-marked ceramics and side-notched Meadowood and stemmed Rossville projectile points are common Early Woodland diagnostic indicators (Walwer and Walwer 2010:23 [Table 1]).

During the Middle Woodland (Roaring Brook phase) period (2,000 – 1,000 BP), pre-historic populations in what is now Connecticut appear to have adopted a markedly more sedentary lifestyle. The settlement pattern entailed establishing small villages or hamlets along major rivers; these were supported by smaller resource extraction or processing camps located in uplands (State of Connecticut 2011:6). According to White and George (2007:28), one of the hallmarks of the period is the use of diverse, sometimes “exotic,” lithic materials obtained from sources in the Hudson Valley and eastern Pennsylvania to manufacture stone tools, including the diagnostic Jack’s Reef and narrow-stemmed projectile points. The numbers of distinctive ceramic types and vessel forms also proliferated (Walwer and Walwer 2012: 28). The degree to which plant domestication played a role in sustaining Middle Woodland settlements is a matter of some debate. Juli (1999:149-150) contended that the introduction of maize, or indeed any other cultigen, as a significant dietary element seems not to have occurred in Connecticut prior to 1,000 A. D.

The Late Woodland period saw the gradual transition of Middle Woodland hamlets into full-blown villages, usually located along major rivers, near estuaries, or in coastal areas (White and George 2003:29; State of Connecticut 2011:6). Late Woodland village sites generally display multiple features, including hearths, storage and refuse pits, and human and dog burials, as well as discrete, archeologically identifiable, activity areas (Doerrfeld et al. 2007:30). Fertile floodplains became particularly attractive settlement loci once maize agriculture came to provide an important component of the population’s diet. Walwer and Walwer (2012:28) contended, however,

that Late Woodland “[S]ettlements in Connecticut . . . tended to remain smaller with only small-scale agricultural efforts, and as part of a seasonal round in which smaller post-harvest hunting and task-specific settlements were established in fall, and protected settlements occupied in winter.” The Morgan Site, located on the floodplain of the Connecticut River at Rocky Hill, reflects Walwer and Walwer’s view. Analysis of the botanical remains from this base camp indicated that the site was occupied repeatedly, but only during the spring, summer and fall months. Maize kernels, which were recovered from “virtually all of the features and adjacent occupation levels” at the site, attested to the intensive slash-and-burn agriculture practiced there (Lavin 1988:17-18). However, Lavin (1988:19) also hypothesized that maize agriculture may not have been as important a resource for coastal-dwelling populations, given the year-round availability of marine resources in that environment.

White and George (2003:29-31) summarized the cultural characteristics for two Late Woodland phases recognized by archeologists working in Connecticut. The Selden Creek phase (circa 1,200 to 450 B. P.) encompasses the period during which maize first was introduced into the Connecticut River Valley. The broad range of stone tools found on Selden Creek sites encompasses the diagnostic Levanna and Madison triangular projectile points as well as a variety of implements used in wood-working, grain processing, hide preparation and fishing. No fewer than ten ceramic types, classified according to surface treatments and vessel morphology, also are associated with this period. The ensuing Niantic (also termed “Final Woodland”) phase saw some adjustments with regard to subsistence patterns and cultural materials. Chief among these adjustments was an apparent return to the use of small seasonal camps in upland interior settings, and a decrease in the variety and complexity of ceramic types being utilized.

In the West Haven area, two sites located northwest of the VAMC project area represent small, temporary, Late Woodland (1,200 – 450 YBP) resource procurement sites within an upland interior setting. Maltby Lakes Site One was determined to be a largely intact quartz workshop

(Raber et al. 1987:15). Data recovery at Maltby Lakes Site Two revealed not only three distinct quartz workshop stations, but also horizontally discrete areas that were utilized for other activities, including animal and food processing (Raber et al. 1990).

Historic Context

Colonial Period through Early National Period (1638-1800)

The indigenous people who occupied the New Haven area at the time of European contact were known as the Quinnipiacs. This group initially may have participated in the beaver trade established by the Dutch trading out of New Amsterdam. However, in 1638, the Quinnipiacs agreed to sell most of their land to a group of 500 English Puritans led by the Reverend John Davenport and Theophilus Eaton, a merchant. In return, the English agreed to provide protection for the tribe, which apparently had been harassed by rival groups like the Pequots from Rhode Island and the Mohawks in New York. The tribe also agreed to confine themselves to an approximately 1,200 acre tract on the east side of the Quinnipiac River estuary, in what is now East Haven, an area that encompassed the tribe's principal village and burial ground (Society of Colonial Wars in the State of Connecticut [SCW] 2011; Connecticut Archaeological Society [CAS] 1977:8). Walwer and Walwer (2012:29) also reference a possible Native American burial site at the mouth of the West River, directly across from the town of West Haven. Although the tribe generally sided with the residents of Connecticut in the Indian conflicts of the seventeenth century, conflicts over land rights continued to trouble the relationship. Eventually, much of the tribe withdrew to another tract near Farmington (Walwer and Walwer 2012:37-39).

Eaton and Davenport's original Quinnipiac settlement was re-christened Newhaven in 1640, and in 1701, with Hartford, became the co-capital of the Connecticut colony, a political position that it held until 1873. The town had been founded in part to create a competitive trading port to control Long Island Sound and challenge the commercial supremacy of New Amsterdam. However, by the

mid-1640s, the port of Boston had eclipsed New Haven in terms of trade volume, and in 1664, the former Dutch settlement at New Amsterdam became the British colony of New York. As a result, New Haven remained the center of a largely agricultural township, and the mercantile dream that the town fathers had envisioned remained elusive (City of New Haven, Connecticut 2015).

West Haven emerged as a settled place soon after the establishment of the New Haven community. Known originally as "West Farms," the area was used for pasturing cattle and for harvesting salt hay from the extensive salt marshes (Raber 2013:4). Local inhabitants gathered oysters and clams from the waters of Long Island Sound, and also undoubtedly exploited the annual runs of anadromous finfish such as herring, alewives, and shad, much as their prehistoric predecessors had (Raber 2013:2; Quinnipiac River Fund 2015). Development was gradual; in 1639, a footbridge was constructed across West River to connect New Haven town with these "common lands." One year later, the "common lands" were divided into lots and a cart bridge over the West River was built shortly thereafter. Most of West Farms' property owners continued to reside in New Haven, and development did not really accelerate until after 1690. However, by 1715, the population of this area had grown sufficiently to generate support for formal separation from the town of New Haven. The parish of West Haven was included in a new jurisdiction that became known as the Town of Orange. By the mid-eighteenth century, West Haven supported two religious congregations, Episcopal and Congregational (North and Dorman 1986:1-2).

West Haven remained primarily agricultural throughout the remainder of the eighteenth century, with roads connecting it to markets in the growing community of New Haven. The only major development to affect the community was the landing of British troops at Savin Rock in 1779, a maneuver conducted in connection with the invasion of New Haven by 3,000 British troops (Rockey 1892:330, 333; State of Connecticut 2011). British troops reportedly looted the town, and 27 Americans lost their lives during

this incident (Connecticut Archeological Survey 1977:10; Ransom 1999:11).

Nineteenth Century

Transportation infrastructure improvements were the key to fueling the growth and development of West Haven during the nineteenth century. New roads improved on thoroughfares that had been established earlier in the eighteenth century. The most significant of these were the Derby and Milford Turnpikes, chartered in 1798 and 1804, respectively (Rockey 1892:47-48). In time, these routes were replaced by the New York and New Haven Railroad, chartered in 1844 (Walwer and Walwer 2012:47), which maintained a station at West Haven, and the Derby railroad, with a station at Allington, at the north end of West Haven (Rockey 1892:331). The Derby railroad line crossed through the current VAMC campus, just to the north of the main building complex. By the middle of the nineteenth century, horse-drawn (and later electric) streetcar routes also connected the residential suburb of West Haven to the urban employment center of New Haven (Rockey 1892:142; Dameron 2014:15).

Improved transportation access pulled residents into West Haven, and also encouraged the location of industrial concerns there, particularly after the Civil War. The growth and distribution of West Haven's residential population is reflected in the 1856 Smith map of New Haven County (Figure 2.3). The town's population included some merchants and vessel owners, and Gessner and Marr's shipyard, established in the 1860s, produced two- and three-masted schooners that were used in coastwise trade. Other industrial concerns included the West Haven Buckle Company (established 1853), the Mathuseck (piano) Manufacturing Company (established circa 1876), and firms that produced keys and key blanks, water pipes, and carriages (Rockey 1892:333; North and Dorman 1986:5). One of the most significant drivers of late nineteenth century West Haven's economy was the resort and amusement center that gradually developed at the southern end of town near Savin Rock (Figure 2.4). The group of "several dozen villas and buildings for accommodation of the public" (Rockey 1892:330) included the Sea View Hotel, built in the 1870s, as

well as an amusement park, a zoo, and a museum. A daily ferry and horse car lines rendered access to the park easy for those who worked in New Haven's growing industries (North and Dorman 1986:5-6; Connecticut History.org 2015b).

The community's accelerating post-bellum commercial and residential character, and its increasingly close connection to the employment centers of New Haven proper, opened a rapidly widening rift between West Haven and the more rural/agrarian areas in the western part of Orange. As a result, West Haven was designated as an independent borough within the Town of Orange in 1873 (Dameron 2014:36).

Twentieth Century to Present

The trends that began in the late nineteenth century continued through the first half of the twentieth, as West Haven continued to develop as a residential and commercial suburb tied ever more closely to New Haven by numerous transportation links (Figure 2.5). Its population increasingly was composed of semi-skilled workers employed in New Haven's industries (Dameron 2014:36); native-born households predominated, but by 1930, approximately one-third of West Haven's households were headed by foreign-born individuals (Dameron 2014:41). The town began to develop its own "downtown" commercial district centered on the historic West Haven Green (Ransom 1999). The scope of industrial development also broadened; Gessner and Mars shipbuilders switched from building schooners to producing barges and pleasure craft, while in 1902, the Narrow Belt Company erected a modern factory at the northern end of town to manufacture elastic fabric (Gold 1982; Connecticut History.org. 2015a). The Armstrong Rubber Company, founded in West Haven in 1912, manufactured replacement tires and supplied rafts for the military during World War II (West Haven Historical Society 2005; Connecticut History.org 2015c). The first half of the twentieth century also represented a "Golden Age" for the Savin Rock Amusement Park as the complex added myriad new rides, theaters, restaurants, casinos, and additional hotels. Daily ferry service to Lighthouse point in East Haven was inaugurated in 1901 (North and Dorman 1986:5-6). By the



Figure 2.4 Excerpt from Bogart and Andrews' 1877 City and Vicinity of New Haven, Connecticut, showing development of amusement area around Savin Rock, West Haven. (Image: US Coastal Survey Historic Map Collection)

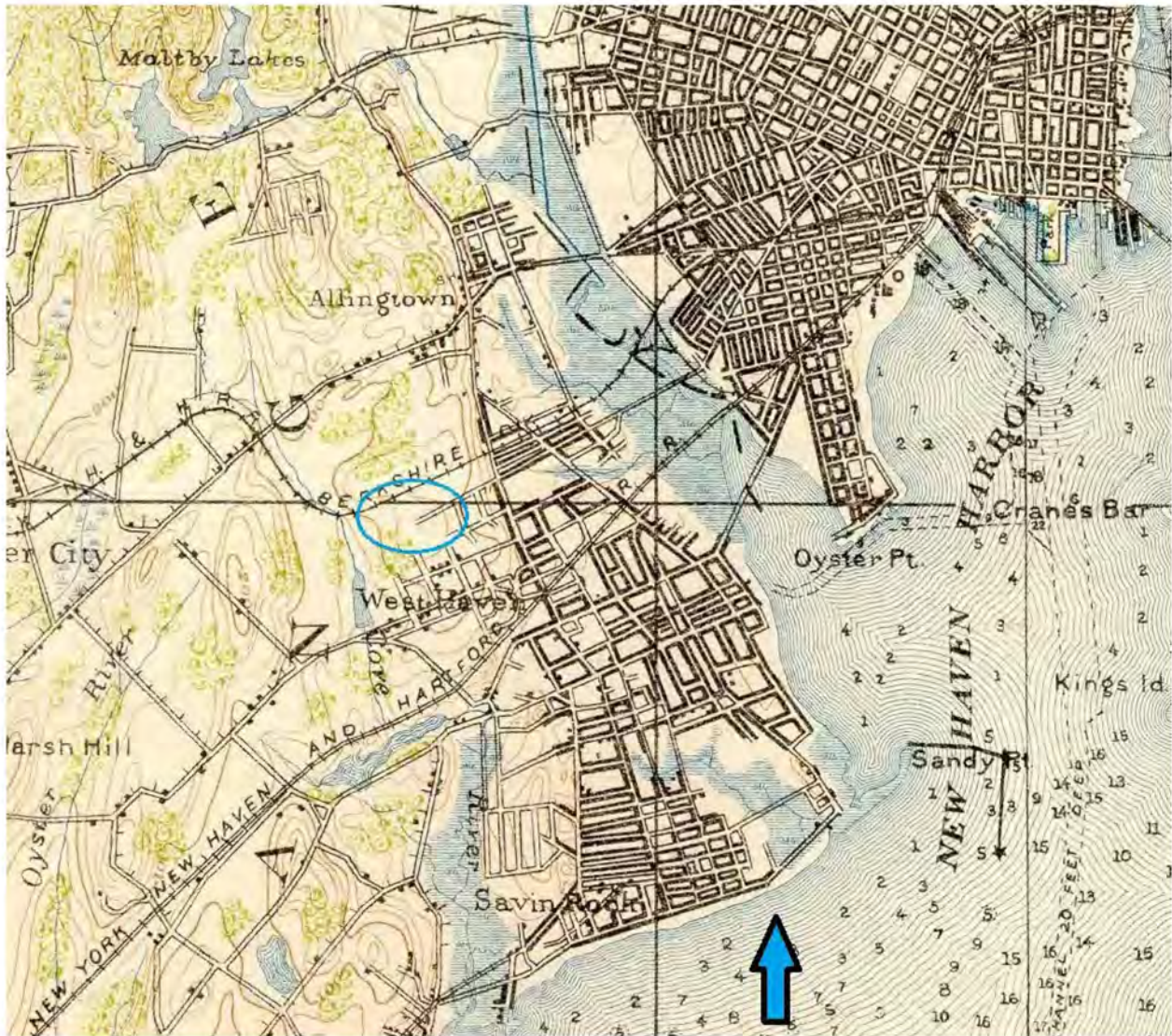


Figure 2.5 Excerpt from 1914 USGA New Haven 15' topographic quadrangle, showing increasing development of West Haven, the proliferation of transportation links with New Haven, and the approximate location of the VAMC project area.

end of World War I, West Haven clearly differed significantly from its parent Town of Orange; in part in recognition of those differences, West Haven was accorded independent political status in 1921 (Dameron 2014:36).

Tied as they were to the economic prosperity of its urban neighbor New Haven, West Haven's economic fortunes wavered somewhat in the years following the end of World War II. Downtown New Haven experienced significant economic problems in the 1950s and 1960s. By the 1960s, Savin Rock Amusement Park also was in decline, and the economic recession of the 1970s forced Armstrong first to lay off workers from its West Haven plant, and finally, to close the facility entirely in 1980 (Connecticut History.org 2015c). The United Elastic Company, which had acquired the old Narrow Belt Company manufacturing complex, closed shop and moved its operations south to Alabama (Connecticut History.org 2015a).

Project area history

One constant was the presence of a hospital on the western edge of town in an area that, until the twentieth century, had not attracted much attention or development. The Smiths' 1856 map of property owners in West Haven (Figure 2.3) showed the high hill west of Campbell Avenue virtually unoccupied; only one property owner's name, E. Lines, was depicted within that large tract. The 1850, 1860, and 1880 Federal Censuses listed Edwin Lines as a farmer residing in the Town of Orange. The 1870 Agricultural Census showed that Lines' farm was a rather small operation, measuring only 16 acres total area; on that tract, Lines produced Indian corn, potatoes, milk, and hay (Ancestry.com 1850, 1860, 1870, 1880). As late as 1914, the only intrusion onto the tract was the Berkshire spur of the New York, New Haven, and Hartford Railroad (Figure 2.5). However, the relative absence of intensive development within the parcel changed significantly in 1916. In that year, using funds provided by Sarah Winchester, widow of arms manufacturer William Wirt Winchester, construction began on

a 200-bed hospital for tubercular patients. However, before the facility was completed, the United States government leased the complex for use as a military hospital (Yale University Medical School 2015).

General Hospital No. 16, New Haven, was, in the words of Army medical historians, "a small hospital. . .that embodied modern ideas of the required facilities for the treatment of tuberculosis." The components of the original complex included "a three-story administration building, an east ward, a west ward, two dormitories, a private ward, and a nurses' home;" all buildings were brick and adopted a "colonial" style (United States Army 1925:539)(Figure 2.6). The hospital opened for business in March, 1918, but the demand for beds outstripped the capacity of the facility almost immediately, and the Surgeon General authorized expansion of the complex. By October, 1918, 23 additional buildings, including open-air wards (Figure 2.7), quarters and mess halls for hospital staff, an exchange, and storage facilities had been added to the hospital complex. By the time the Army ended its use of the hospital in September, 1919, some 1,968 patients had been treated there (United States Army Medical Department 1925:540).

Between 1919 and 1927, when the government's lease expired, the hospital complex was administered first, by the United States Public Health Service, and then by the newly created Veterans' Bureau (Hannah 2014:9-20). Operation of the facility reverted back to the General Hospital Society of Connecticut, and it functioned as the Tuberculosis Division of New Haven Hospital until its closure in 1940 (Yale University Medical School 2015). The military once again temporarily operated the complex during World War II. The Veterans' Administration purchased the entire facility in 1948, and it re-opened formally in 1953 after additional construction expanded its capacity to 900 beds (Hartford *Courant* 1953) (Figures 2.8 and 2.9). Since that time, the site and its buildings have seen major changes and upgrades; however, 17 of the original 1916-1918 buildings and structures survive (Hannah 2014).



WILLIAM WIRT WINCHESTER HOSPITAL, NORTHERN VIEW

Figure 2.6 Undated photograph of the Winchester Hospital, orientation south. The depression in the foreground of the photograph may be the right-of-way cut for the New York, New Haven, and Hartford Railroad spur. (Image: Yale University Medical School archives)



FIG. 178.—Open-air tuberculosis ward, General Hospital No. 16, New Haven, Conn.

Figure 2.7 1918 photograph showing one of the tuberculosis wards installed by the Army at the former Winchester Hospital. (Image: U.S. Army Medical Department 1925)

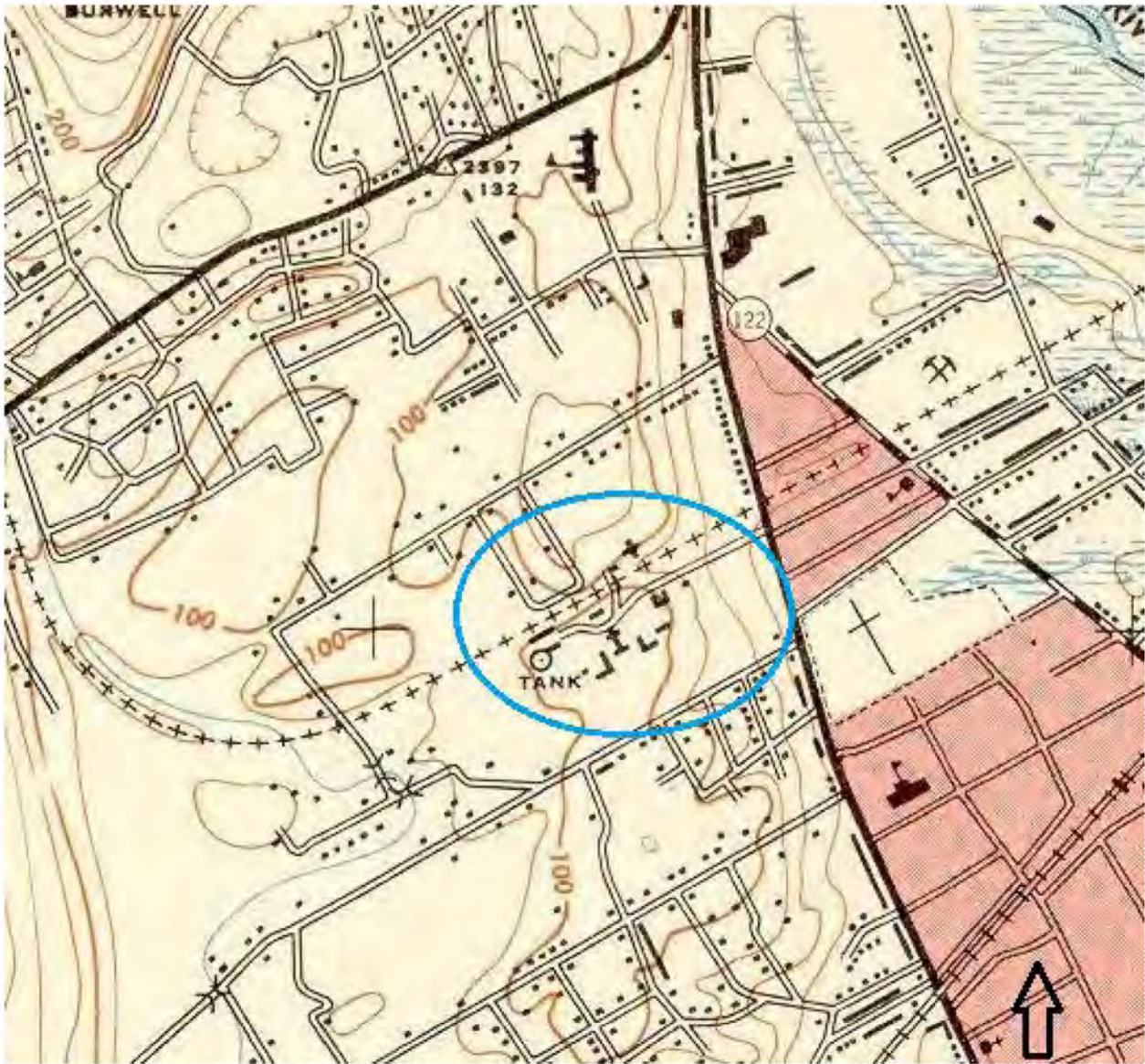


Figure 2.8 Excerpt from the 1947 USGS 7.5' New Haven topographic quadrangle, showing the configuration of the former New Haven Hospital Complex prior to its acquisition by the Veterans' Administration in 1948. The last of the temporary structures built in 1919 still are visible north of the rail line.

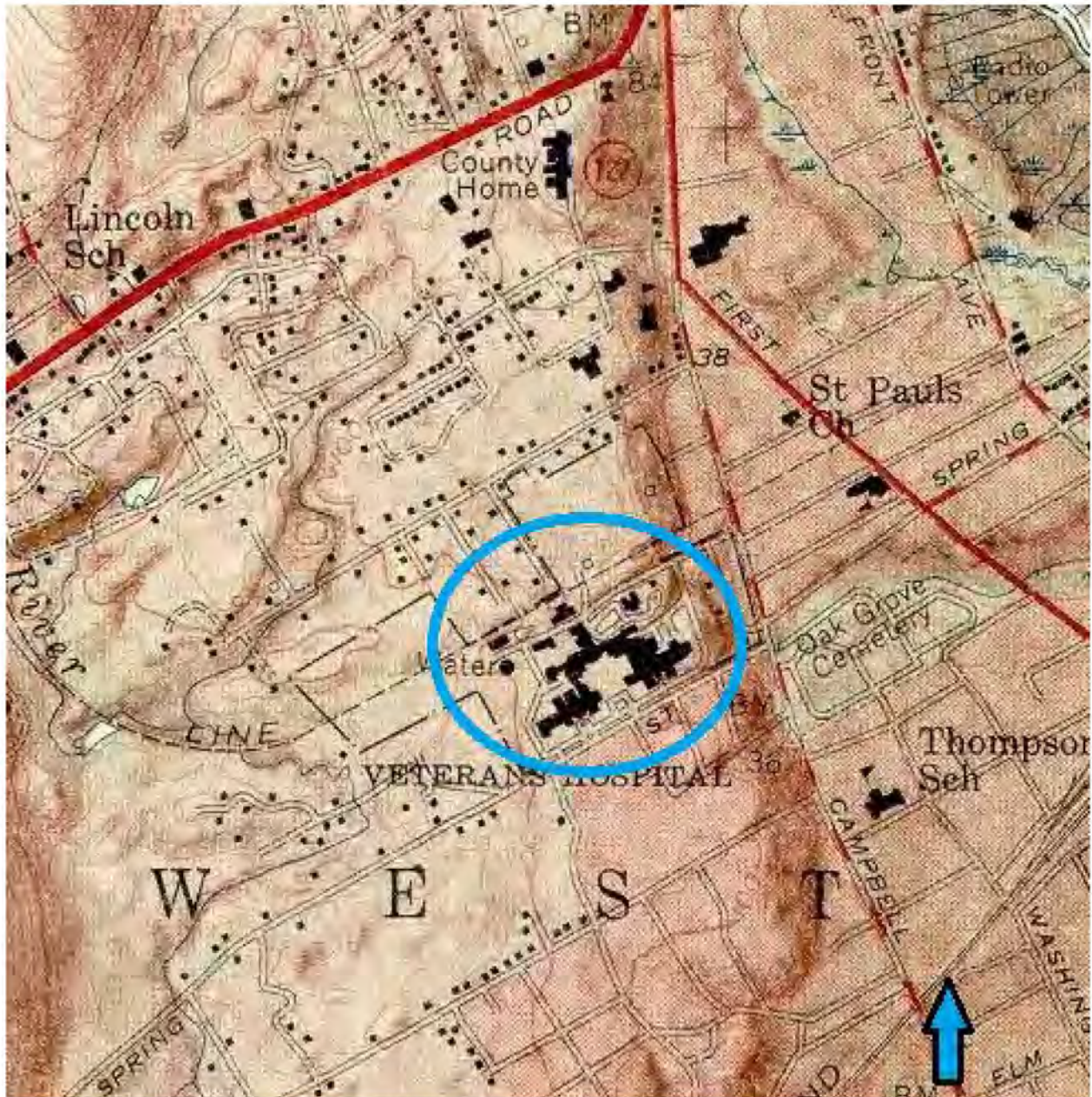


Figure 2.9 Excerpt from 1954 USGS 7.5' New Haven quadrangle, showing the enlargement of the former New Haven Hospital complex after its acquisition by the Veterans' Administration.

The assessment of archeological potential at the West Haven VAMC includes the review of current conditions of the project area in addition to the examination of the topography, soils, historic land use, and known agents of disturbance. Research has included cartographic review of aerial and historic maps; review of historic background data; GIS data from the state of Connecticut concerning topography, hydrology, and soils; and review of previous archeological studies of the area. This chapter offers an overview of land use history and development of the VAMC facility, as well as a description of current conditions and the results of a brief pedestrian survey to corroborate those conditions. These are used to provide an assessment of the potential for significant archeological resources within the West Haven VAMC campus

Previous Land Use

Pre-Contact

The West Haven VAMC is located at a moderate elevation above the floodplains of the Cove and West rivers. It has been noted that particularly during the Woodland Period there was a preference for locations along rivers and the coast and that villages were usually located along major rivers, near estuaries, or in coastal areas (White and George 2003: 29; State of Connecticut 2011: 6). As previously stated, a small group of significant Late Woodland resource procurement and lithic processing sites were investigated as part of the Maltby Lakes development area (Raber et al. 1984, 1987, 1990). These were located on the upland terraces overlooking the Cove River floodplain 1.75 mi to the northwest of the current project area. These sites were described as a cluster of 3 small quartz workshops plus evidence of animal and food processing activities (Raber

et al. 1984, 1987, 1990). Similarly, the current project area, located in proximity to the Cove and West rivers, as well as the coast along the Long Island Sound, could have been an acceptable location for occupation during the Archaic period and beyond.

Historic Map Review

Until the early twentieth century, development and use of the land that now is part of the West Haven VAMC appears to have been limited. The H. and C.T. Smith's 1856 map of New Haven, Connecticut (see Figure 2.3) shows significant residential development to the north, east, and southeast of the project area in the mid-19th century as the town benefited from new transportation routes. Despite this growth there were few residents in the immediate vicinity of the project area. By 1892, the rail line established circa 1871 that crossed the project area towards the West River and New Haven, was apparent on maps (Figure 3.1). Originally part of the Housatonic railroad established in the mid-nineteenth century, this line appears on maps variously as the Derby Division of the Housatonic Railroad (Figure 3.1), as the Berkshire Division of the New York, New Hampshire and Hartford railroad (USGS New Haven 1914; see Figure 2.5), and later as the New York, New Hampshire, and Hartford railroad (Figure 3.2). The rail line was established in the project area by 1871, and operated until 1941 (Orange Historical Society 2016). A 1949 plan of the project area property indicated that the rail line crossing the project area property, labeled as the "N.Y.N.H.&H.R.R.", had been removed by that time (Figure 3.3). A review of historic maps suggests that while the town of West Haven grew, with the exception of the railroad, little development occurred in the immediate vicinity of the



Figure 3.1 Excerpt from the 1892 USGS 7.5' New Haven quadrangle, showing the location of the VAMC campus and the rail line crossing that location.

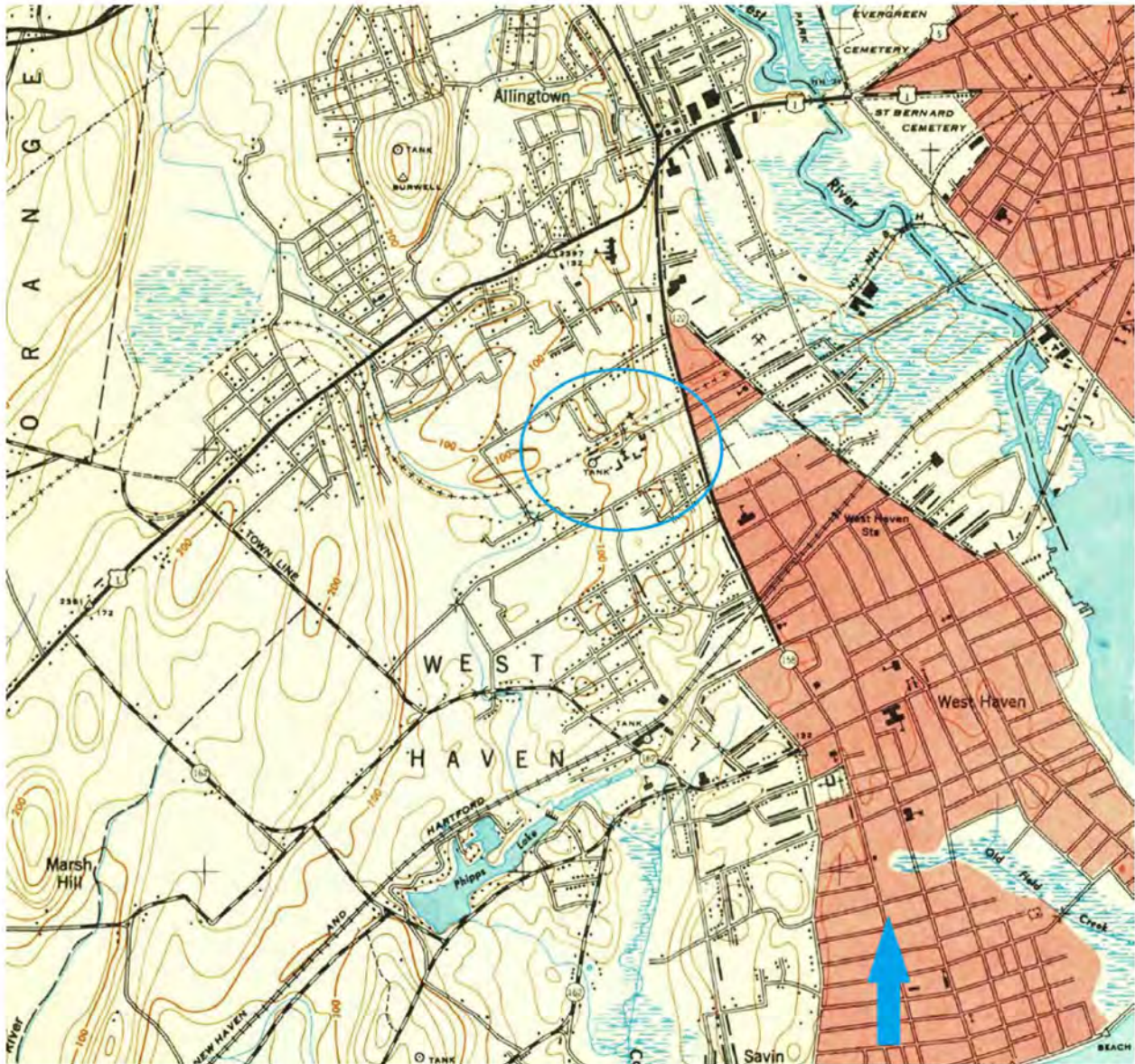


Figure 3.2. Excerpt from the 1943 USGS 7.5' New Haven quadrangle, showing the location of the VAMC campus and the newly abandoned rail line crossing it.

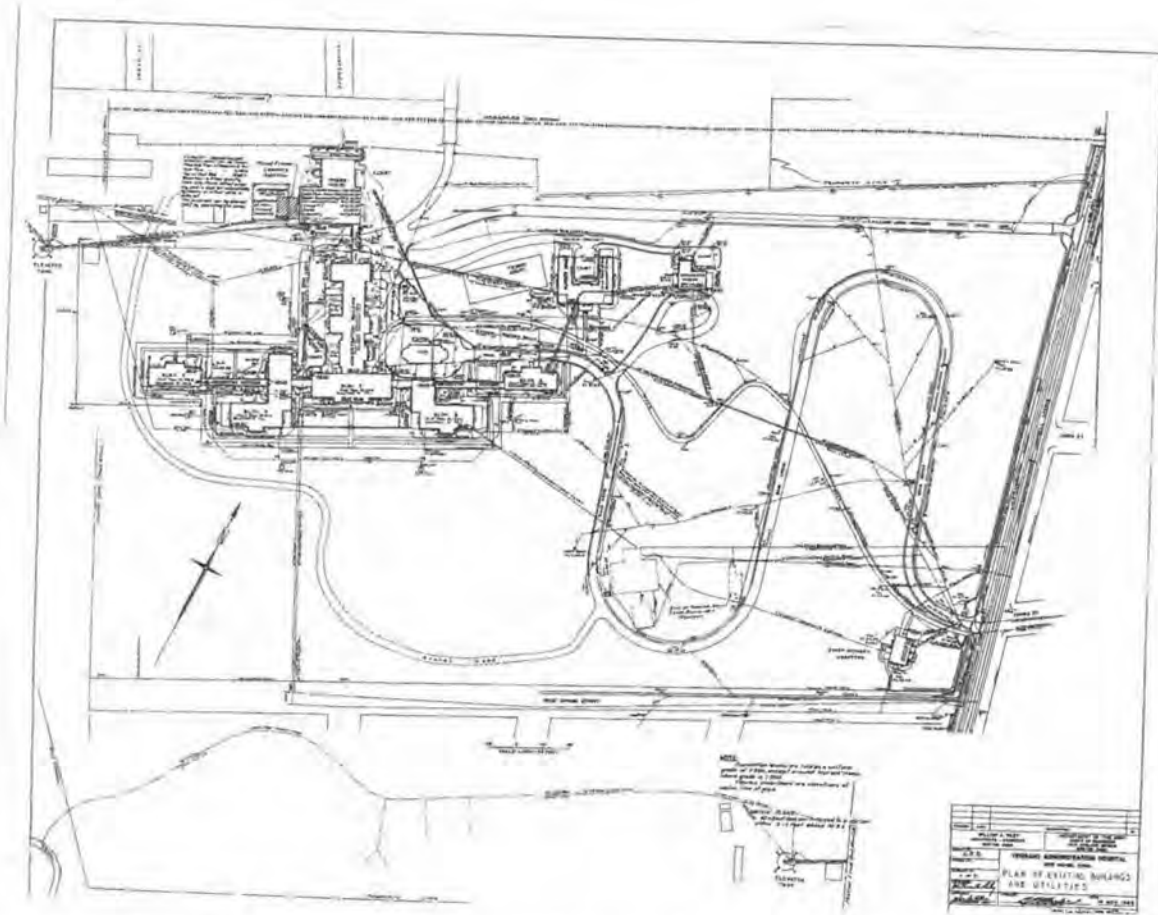


Figure 3.3 Plan of the buildings at the facility in 1949, showing the abandoned rail line at the north, and the extensive utility lines running through the campus.

current project area until 1916 - 1918 when the William Wirt Winchester hospital was constructed.

Aerial Photography Review

Aerial photographs for the area were available online through the University of Connecticut Libraries Map and Geographic Information Center (MAGIC). Images from 1934, 1951, 1965, and 1970 were reviewed, and an aerial image from 1991 was available through Google Earth. The earliest image, from 1934, shows the buildings of the main hospital, as well as remnants of the expansion of temporary housing for additional patients that was constructed in 1918 in the smaller parcel of land bounded by the railroad on the south, by Overlook Street on the west, and by Terrace Avenue in the north (Figure 3.4). Those temporary improvements included a roadway

over the rail line to connect with the main campus. In 1927, the facility was transferred to the General Hospital Society of Connecticut, which continued operating the campus as a tuberculosis hospital until 1940. After a brief period when it was run as Camp Happyland, a tuberculosis facility for children, the campus was again taken over by the federal government in 1943 (Hannah 2014).

In 1946, the VA approved plans to add a new hospital complex housing 900 patients at the old Winchester hospital. Existing building were to be retained and used as support facilities for the two new hospital buildings (Hannah 2014). Work was completed and the new complex was dedicated in 1953. The 1951 aerial photograph of the VAMC complex shows the extensive ground disturbance that was involved in the construction. Renovation also appears to have included the removal



Figure 3.4 1934 aerial view of the West Haven vicinity, showing the VAMC campus. Note the remaining structures on the north side of the rail line; these are likely the surviving temporary buildings from the 1918 – 1919 expansion. (Image: The University of Connecticut Libraries Map and Geographic Information Center [MAGIC]).

of the abandoned railroad track that crossed the facility. The only area that did not appear to be heavily impacted was the northern annex that once had housed the temporary, WWI facilities (Figure 3.5). The 1949 plan of the facility showed the buildings and utilities that had been installed prior to 1951 and indicated extensive utility installation throughout the occupied portion of the campus (Figure 3.3).

By 1970, the aerial photograph of the campus indicated some additional construction of ancillary buildings and infrastructure, including parking facilities (Figure 3.6). The 1991 aerial of the VAMC (Figure 3.7) shows the continued development, of the campus; of particular note is the expansion of parking facilities on both the main campus and in the northern annex. The current aerial view of the campus (see Figure 1.3) shows the result of the continued expansion and

construction at the VAMC. The only areas remaining that appear not to have been included in building or infrastructure construction are along Terrace Avenue in the north, and within the eastern third of the main campus. These two areas were included in the pedestrian reconnaissance of the facility to assess disturbance and archeological potential. That reconnaissance is discussed below.

Current Conditions

The West Haven VAMC campus is situated in an area of steep topography; as such the majority of the 39 buildings on campus are clustered along the crest of a hill along West Spring Street. Nineteen of the 39 buildings on the campus are original to the original tuberculosis hospital, and despite new construction in the areas surrounding the original core, including expanded park-



Figure 3.5 1951 aerial view of the West Haven vicinity, showing the VAMC campus as it was undergoing significant expansion and construction. (Image: The University of Connecticut Libraries Map and Geographic Information Center [MAGIC]).



Figure 3.6 1970 aerial view of the West Haven vicinity, showing the VAMC campus. (Image: The University of Connecticut Libraries Map and Geographic Information Center [MAGIC]).



Figure 3.7 1991 aerial view of the West Haven vicinity, showing the VAMC campus and the continued expansion of infrastructure. (Image: The University of Connecticut Libraries Map and Geographic Information Center [MAGIC]).

ing areas and the addition of new buildings, the configuration and use of the core buildings remains the same (Hannah 2014). The northern annex, bounded on the west by Overlook Street, once was the heavily developed site of temporary hospital wards, a mess hall, warehouses, nursing quarters, and other ancillary structures. It now is dominated by a large, paved parking lot. Small areas of lawn and trees are present across the camps, but none of the large park-like expanse that was present in the early twentieth century remains. Pedestrian reconnaissance was carried out in August 2015 to assess the level of disturbance and the potential for intact archeological resources within the campus as a whole and in particular within two areas that appeared to have remained relatively undeveloped in comparison to the remainder of the campus. One of these locations was a small, approximately 0.5 acre rect-

angular parcel located on the north side of the campus, along Terrace Avenue. Because of tree cover, aerial review did not permit a view of the ground surface in this area. At the time of pedestrian inspection, the area was being used as storage for sand and gravel as well as for storage and staging of construction equipment (Figure 3.8). Also within the northern parking lot, aerial images had indicated a small area of trees and lawn that had not been paved, but was surrounded by the parking lot (see Figure 1.3). At the time of reconnaissance, that area was the site of significant construction activities (Figure 3.9)

Also reviewed during the pedestrian reconnaissance was the grassy, thinly wooded slope on the eastern side of the campus, just to the west of Campbell Street (Figure 3.10). That area did not appear as the site of any construction on any of the historic plans of the facility, however, the



Figure 3.8 Small area at the northern edge of the campus, adjacent to Terrace Avenue. View is to the northeast. (Image: RCGA August 2015).



Figure 3.9 Small area in northern annex parking lot, showing intensive construction activity. (Image: RCGA August 2015)

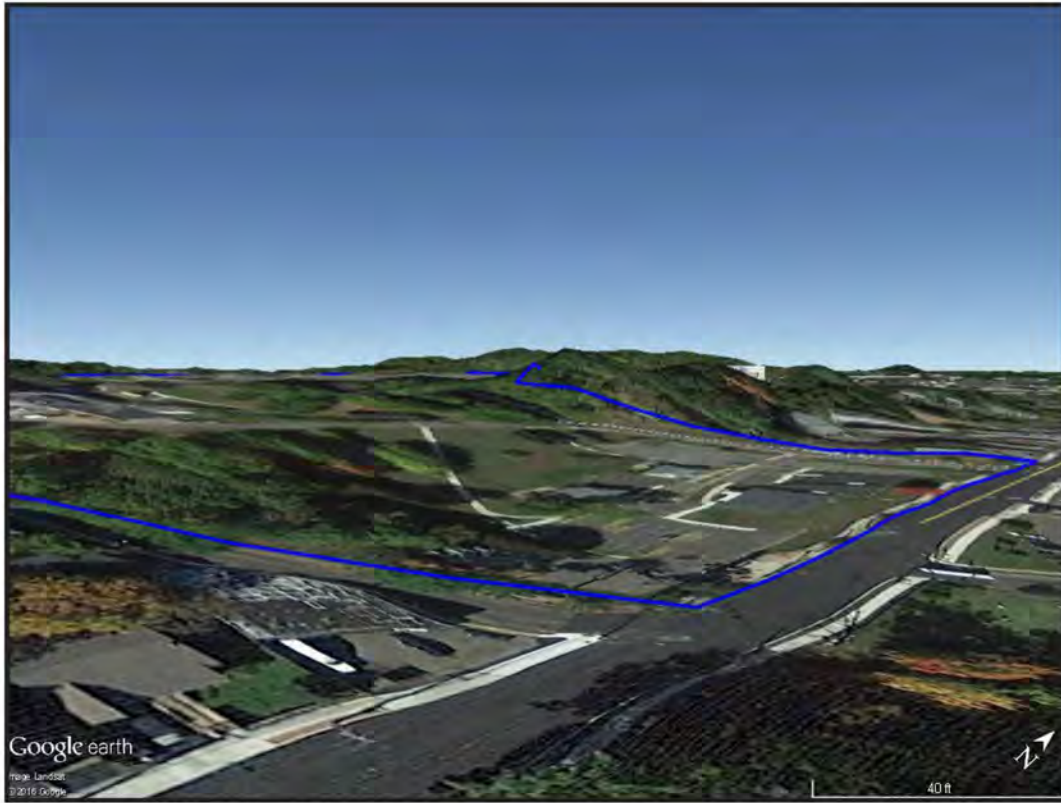


Figure 3.10 Oblique view of the eastern section of the VAMC campus, showing the terrain to the west of Campbell Avenue. (Image: Google Earth 2016).

1949 plan of the facility (see Figure 3.3) indicated numerous utility lines running through the area. Reconnaissance confirmed the slope in the area, as well as the presence of underground utilities (Figure 3.11).

Cultural Resource Potential

The pre-modern and historic development of the project area suggests that prior to extensive development, the West Haven VAMC campus would have had potential for archeological resources from both the pre-contact and the late historic period. However, the extensive development of the campus from the mid-twentieth century through the present argues strongly against the potential for intact archeological resources. The review of previous cultural resources investigations in the vicinity of the West Haven VAMC indicated that there are no previously recorded sites within the facility boundaries, or within the immediate vicinity. Only one prehistoric and one historic archeological site have been identified

within 1.75 mi of the West Haven VAMC. Although the VAMC facility itself has been nominated for listing in the NRHP (Hannah 2014), there are no recorded archeological sites associated with the structures, and because of the extent of construction that has taken place, it is not likely that archeological manifestations of the original buildings remain intact.

The current aerial view of the campus (see Figure 1.3) shows that the vast majority of the campus has been graded and developed. The two areas that appeared from the aerials to retain potential integrity were found during the reconnaissance also to have been heavily disturbed by recent construction activities or by utility installation. The vast majority of soils in the project area are classified as Urban Land or Urban Land; the small area where natural soils are mapped is in the sloped land west of Campbell Avenue.

Based on these factors, there appears to be little remaining potential for intact archeological resources within the West Haven VAMC campus.



Figure 3.11 Photograph of the area to the west of Campbell Avenue, facing west. (Image: RCGA August 2015).

CURRENT CONDITIONS AND CULTURAL RESOURCES POTENTIAL

Summary

The intent of this study was to assess the potential for significant archeological resources within the West Haven VAMC campus. In order to do that, this study has provided information on the physical setting, historical development, and current conditions within the 44.37-acre West Haven VAMC campus. In addition, a review of previously recorded archeological sites and investigations within a two-mile radius of the facility has been completed, and a brief summary of pre-Contact and historic development in the region has been included in the study. A review of historic cartographic sources, historic plans from the VAMC, historic and current aerial photographs and historic photographs of the facility has been completed. Finally, a brief pedestrian reconnaissance of the facility was completed in August 2015.

The assessment indicated that there are no previously recorded archeological sites within the facility boundaries, and there have been few recorded sites within the two-mile study radius. The closest identified sites were a small complex of Late Woodland sites near the Maltby Lakes, northwest of the facility near the Cove River (Raber et al. 1984, 1987, 1990). Based on a review of the pre-Contact period context, it is likely that prior to development, the VAMC facility had a moderate potential for archeological evidence of

occupation. The proximity to the floodplains of the Cove River and the West River would have permitted exploitation of the abundant resources in those areas.

Review of the historic period context, including historic maps, indicated that there was little development or activity within the facility boundaries prior to the circa 1871 construction of the railroad that ran through the campus. Despite that, there does not seem to have been any development within the property until 1918, when the Winchester Hospital was begun. Any historic archeological resources would have been related to the development and use of the hospital and medical facilities during the twentieth century.

Recommendations

Although research indicates that the area initially may have had a moderate potential for archeological resources from both the pre-Contact and twentieth century historic periods, the extensive and intensive development of the VAMC campus argues strongly against the presence of archeological resources that retain stratigraphic integrity or that possess the ability to provide data important to our understanding of significant research questions. The results of this archeological assessment support a recommendation for no further archeological work within the West Haven VAMC campus.

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APPENDIX I

RESUMES OF KEY PROJECT PERSONNEL



KATIE L. KOSACK, M.A.

LABORATORY SUPERVISOR/HISTORIC ANALYST

Katie L. Kosack, M.A., Laboratory Supervisor/Historic Analyst, received her M.A. in Historical Archeology from the University of Massachusetts Boston in Boston, Massachusetts in 2010. She also holds a B.A. in Historic Preservation and American Studies from the University of Massachusetts Boston in Boston, Massachusetts.

At R. Christopher Goodwin & Associates, Inc. (RCG&A) Ms. Kosack oversees the organization of all archeological collections in the laboratory, and manages the processing and curation of archeological collections from testing and mitigation/data recovery excavations spanning prehistoric to modern times. She manages over 200 archeological collections with experience in Louisiana, Maryland, Virginia, West Virginia, Pennsylvania, Ohio, New Jersey, Puerto Rico, Oklahoma, and Massachusetts. Ms. Kosack collaborates regularly with state and federal curation facilities to coordinate curation. In addition, she conducts analyses of historic artifacts and possesses a suite of technical skills that allows her to specialize in historic ceramic and glass analyses. She has contributed to numerous reports, including temporal and socioeconomic analyses for data recoveries.

Dr. Ann B. Markell received her Ph.D. in Anthropology/Historical Archaeology from the University of California, Berkeley in 1990, working with Dr. James Deetz. Since 1993, she has been a Senior Project Manager with R. Christopher Goodwin & Associates, Inc. She has been resident in the New Orleans and Frederick, Maryland offices, has managed the former Hampton, Virginia office, and assisted in starting the Lawrence, Kansas office. Dr. Markell has authored more than 100 technical reports on surveys, evaluations and mitigations carried out throughout the United States. She also has prepared brochures, papers, and exhibits for public interpretation. Her special expertise in plantation archeology, colonial settlement, and vernacular architecture has led to her publications in the journal *Historical Archaeology* and the edited volume *Chesapeake Archaeology*.

While in New Orleans, Dr. Markell directed a major archeological data recovery at Nina Plantation, a nineteenth century Louisiana sugar plantation near New Roads, Louisiana. That project was completed for the U.S. Army Corps of Engineers, as were Phase I and Phase II excavations at the historic Cook's Landing Site in Point Coupee Parish and for the Comite River Diversion Project. She has prosecuted numerous other Phase I and II projects throughout Louisiana and Mississippi. In Florida, Dr. Markell completed data recovery excavations at Site 8JE102, a contact period site in Jefferson County. She also was the principal investigator for data recovery excavations at Etna, a late nineteenth and twentieth century turpentine town in Citrus County, Florida. For these two Federal Energy Regulatory Commission (FERC) regulated projects, Dr. Markell supervised the field investigations and the analyses, and was the principal author of the technical reports. She also designed and authored the public interpretation brochure completed for the Etna data recovery.

Projects in Virginia have included the development of a detailed archeological predictive model for the Norfolk Naval Base in Norfolk, Virginia; Phase I identification and Phase II evaluation projects for the Navy at NSGA Northwest, Cheatham Annex, and the Norfolk Naval Air Station; a predictive model for the Defense Supply Center in Richmond, Virginia; and archeological investigations at NASA Langley Research Center in Hampton, Virginia. Other Phase I and Phase II projects were completed for Virginia Department of Transportation (VDOT) projects and for private development. Dr. Markell was the Principal Investigator for Phase I, II, and III investigations at the site of the Tappahannock Regional Airport in Tappahannock, Virginia; that project included the identification and mitigation of two unmarked eighteenth century cemeteries. Dr. Markell coordinated mitigation efforts for those cemeteries and for an associated National Register eligible eighteenth century plantation site with the client and the Virginia Department of Historic Resources (VDHR).

Since joining the Maryland office, in addition to numerous projects carried out for private, state, and local governments throughout the Mid-Atlantic region, Dr. Markell has supported federal clients through the development of Integrated Cultural Resources Management Plans (ICRMPs) for Dover Air Force Base in Delaware and for White Sands Missile Range in New Mexico. She has been the Principal Investigator for extensive cultural resources survey and evaluation projects at Smoky Hill Air National Guard (ANG) Range in Salina, Kansas, and at Fort Riley, Kansas and for survey and evaluation work at a number of ANG facilities in Virginia, Vermont, Washington, and Delaware. For the past several years, Dr. Markell has been coordinating the cultural resources requirements of a major electrical transmission line project extending across southern Maryland, the Chesapeake Bay, and Maryland's Eastern Shore and she continues to work on numerous electrical transmission line projects in the Mid-Atlantic region.

Martha R. Williams, M.A., M.Ed., Research Associate, holds a B.A. (1960) from Lebanon Valley College; a Master of Education, with emphasis in the Social Sciences, from the University of Pennsylvania (1965); and an M.A. in History, with emphasis in Applied History, from George Mason University (1987). She was a Coe Fellow in American Studies at SUNY Stony Brook in 1982 and 1989. While completing her internship with George Mason University, she co-authored the original Heritage Resource Management Plan for Fairfax County, Virginia.

Ms. Williams' experience in cultural resource management and in historical archeology began in 1972 with a field school at Colonial Williamsburg, under the direction of Ivor Noel Hume. From 1973 to 1987, she co-directed the Fairfax County Seminars in historical archeology for high school students, a program that investigated 15 archeological sites in Fairfax County. Her archeological experience also includes extensive volunteer work with the Fairfax County (VA) Heritage Resources Branch; the City of Alexandria, VA; the Virginia Division of Historic Resources; and the Museum of the Albemarle in North Carolina. She has been a member of the Lost Colony archeological team since its inception in 1991.

Following her retirement from teaching, Ms. Williams joined the professional staff at R. Christopher Goodwin & Associates, Inc. in 1989. Until her retirement from full-time employment in 2007, Ms. Williams served as historian, project archeologist, project manager, and public interpretation specialist for the company. Her historical research supported both terrestrial and underwater projects in a states ranging from Louisiana and Illinois to Maine and Florida. She also managed all types of archeological projects, including preparation of archeological predictive models and disturbance studies; Phase I and II archeological surveys and evaluations; Phase III archeological data recovery projects; and preparation of cultural resource planning documents for Federal agencies and local governments. As public interpretation specialist, she designed and executed a wide range of public information activities, including two public information and training booklets and a CRM training video for the Legacy Program of the Department of Defense. Since 2007, she has continued to support projects for Goodwin & Associates as a Research Associate.

Ms. Williams has been and remains actively involved in the field of historic preservation. She has contributed articles and reviews to the *Yearbook* of the Historical Society of Fairfax County, *Museum News*, *Interpretation* (NPS), the *Quarterly Bulletin* of the ASV, *American Antiquity*, and the *Journal of Mid-Atlantic Archaeology*. She presently sits on the Board of Directors of the Archeological Society of Virginia, and serves on the Society's Kittiewan Plantation Committee, which manages the cultural resources of the ASV's 18th century plantation property. Williams also continues to work with the First Colony Foundation, a group committed to archeological research at the Lost Colony, and was recently appointed as its Education Coordinator. These efforts have led to several awards, including the Fairfax County History Commission's Distinguished Service Award (1991); the Archeological Society of Virginia's "Professional Archeologist of the Year" (1996) and "Out of State Professional of the Year" (2008); and the Society for Historical Archaeology's Award of Merit (2001) for her contributions to archeological education. In 2011, Ms. Williams received a Ben Brenman Outstanding Professional Archaeologist award from the City of Alexandria, VA, for "her nearly 40 years of outstanding teaching, historic research, and archaeological investigations in and near Alexandria."



Department of Economic and
Community Development

State Historic Preservation Office

April 6, 2022

Mr. Joseph Simonetta
US Department of Veterans Affairs
950 Campbell Avenue
West Haven, CT 06516

Subject: Proposed Surgical and Clinical Tower
West Haven Veterans Administration Hospital
950 Campbell Avenue
West Haven, CT
ENV-22-0652

Dear Mr. Simonetta:

The State Historic Preservation Office (SHPO) has reviewed the information submitted for the above-named property. The undertaking is being conducted under the auspices of the US Department of Veterans Affairs (VA), and is therefore subject to the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended.

The property located at 950 Campbell Avenue, known as the West Haven Veterans Administration Hospital (William Wirt Winchester Memorial Hospital), is eligible for listing on the National Register of Historic Places under Criterion A, in the area of Health/Medicine, as an example of a Third Generation Hospital belonging to the Department of Veteran's Affairs, and as the VA's sole dedicated tuberculosis hospital constructed during the Third Generation period. The Subject Property is also significant under Criterion C for its association with architectural firm Scopes & Feustmann, which specialized in the design of tuberculosis facilities and is responsible for the core campus of the original hospital, as well as for a landscape design by noted landscape architect Beatrix Farrand. This office has affirmed the campus's eligibility in correspondence to the Department of Veterans Affairs dated January 13, 2016, July 18, 2018, November 14, 2018, November 13, 2020, July 23, 2021, and February 16, 2022.

The proposed undertaking includes construction of a new, surgical and clinical tower, between two and four stories in height, with underground utility corridor, and mechanical penthouse. Interior renovations are also proposed for Building #1 (Main

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Hospital Building, 1955) and Building #2 (Outpatient/Nursing Home, 1955). Both Building #1 and Building #2 are noncontributing resources. The tower is proposed to be placed in the central portion of the campus, to the north of Building #1. Though plans are not yet finalized, the undertaking has the potential to require demolition of Buildings #6 (Information Resources/Work Therapy, 1916), Building #7 (Research, 1916), Building #8 (Administration, 1916), Building #9 (Administration, 1916), and Building #10 (Storage, 1916), all of which are contributing resources to the Subject Property.

A Phase IA archaeological survey, dated February 16, 2016, indicated that the subject parcel was unlikely to contain intact, significant archaeological deposits. This Office concurs with the opinion that no additional archaeological work is necessary.

However, the proposed undertaking has the potential to adversely effect the historic resource, through the demolition of multiple contributing resources. SHPO concurs that the full effect of the undertaking cannot be determined at this time; given that the effect will vary widely depending on final design, and that design plans (including site plan) are in early conceptual phases, we do not feel it is appropriate to enter into a programmatic agreement at this time. This office requests that alternatives be considered to the siting of the proposed tower, and that they be provided to SHPO for review. If they have already been considered, this office requests that they be provided for review, with a narrative as to why they do not meet the needs of the project.

The State Historic Preservation Office appreciates the opportunity to review and comment upon this project. We look forward to reviewing the above-requested information. These comments are provided in accordance with Section 106 of the National Historic Preservation Act. For further information please contact Marena Wisniewski, Environmental Reviewer, at (860) 500-2357 or marena.wisniewski@ct.gov.

Sincerely,

A handwritten signature in black ink that reads "Jonathan Kinney".

Jonathan Kinney
State Historic Preservation Officer

State Historic Preservation Office

450 Columbus Boulevard, Suite 5 | Hartford, CT 06103 | P: 860.500.2300 | ct.gov/historic-preservation

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U.S. Department of Veterans Affairs

Veterans Health Administration
Connecticut Healthcare System

Memorandum

09 June 2022

Marena Wisniewski, Environmental Review
State Historic Preservation Office
450 Columbus Boulevard, Suite 5
Hartford, CT 06103

RE: **Response to Section 106 Consultation Letter**
New Surgical and Clinical Tower at the West Haven Medical Center, VA Connecticut
Healthcare System, West Haven, CT (ENV-22-0652)
VA Project: VHA1-689-2018-33888

Dear Ms. Wisniewski:

We are in receipt of Mr. Kinney's response dated 06 April 2022, to the U.S. Department of Veterans Affairs' (VA) initial Section 106 consultation letter for the above-referenced undertaking at the West Haven Veterans Affairs Medical Center (VAMC). We appreciate the timely response and the SHPO's concurrence with our finding that no additional archaeological work is necessary for the proposed undertaking.

As requested, we are providing additional information on the project planning, siting considerations, and project alternatives. Our Section 106 initiation letter noted that construction of a new surgical and clinical tower at the West Haven VAMC is required to address current critical deficiencies related to utility failures, infection prevention issues, patient and staff safety concerns, and space constraints. VA's proposed surgical and clinical tower is classified as mission critical due to its inclusion of inpatient beds, surgery, and hospital functions.

Project Considerations

Currently, the West Haven VAMC's Surgery Department Operating Suite is located on Level 3 in Building #1. Staff lockers, the staff lounge, and bulk Operating Room (OR) storage are located on Level 2, and the Surgery Administrative space is located on Level 4. The location of the locker space and OR bulk storage a floor below the main OR Suite, Post-Anesthesia Care Unit (PACU), and the Ambulatory Procedures Unit results in staff inefficiencies and creates the potential for increased infection control issues. Medical equipment is being stored in the corridors presenting serious life-safety egress concerns.

The current Surgery Operating Suite is less than 60% of the VA Standards for VA Connecticut's space and patient population. Deficits in space occur in patient registration, patient and family waiting areas, toilets and outpatient preparation and recovery. The Operating Rooms themselves are undersized in comparison to contemporary standards and are not equipped with the infrastructure to accommodate newer Smart Technologies.

The proposed clinical and surgical tower is intended to address these deficiencies by creating more operating room space, and by establishing functional adjacency with the existing clinical services that are predominantly located in Building #1 (Figure 1). The "fit test" for siting the new building was based on a preferred adjacency of having the OR Suite, the PACU, and the Surgical Intensive Care Unit (SICU) on the same floor of the same building. Relocating the Surgery Operating Suite to the new surgical and clinical tower will provide a better patient experience, optimize workflow, and improve patient and staff safety.

Initial project planning for the new surgical and clinical tower began in August 2021. Although other, less developed or undeveloped locations at the West Haven VAMC were considered, they were eliminated due to the lack of continuity with and physical proximity to Building #1. In addition to adjacency with Building #1, other siting considerations included utilities, security, and minimizing interruptions to the existing hospital and medical workflow. This planning process concluded with three different locations (“Site Options 1, 2, and 3”) for the new surgical and clinical tower. These options are depicted on the enclosed Figures 2, 3, and 4, respectively. VA notes that the Site Option figures depict footprints for the proposed Inpatient Pharmacy expansion and Sterile Processing Services (SPS) facility; these projects are separate from the proposed undertaking and not part of this Section 106 consultation.

Architectural Area of Potential Effects (APE)

As noted in our letter, because the proposed undertaking would result in the demolition of buildings that contribute to an NRHP-eligible historic district, the architectural APE for this project has been determined to consist of the proposed boundaries of the West Haven Veterans Administration Hospital/William Wirt Winchester Memorial Hospital Historic District.

Each of the three Site Options for the undertaking requires the demolition of buildings previously identified as contributing resources to the West Haven Veterans Administration Hospital/William Wirt Winchester Memorial Hospital Historic District. A discussion of each Site Option and buildings that may be affected under each option is provided below.

Project Site Options and Considerations

Site Option 1: Courtyard

Site Option 1 would locate the new surgical and clinical tower in the courtyard between Buildings #1 and #2, and adjacent to Buildings #4 and #5 (Figure 2). Site Option 1 provides the opportunity to make direct connections into the existing horizontal and vertical circulation systems of Building #1. Site Option 1 also provides convenient parking areas for both staff and visitors. This option retains Buildings #8, #9, and #10, but results in the demolition of Buildings #6, #6A and #7. Each of these buildings has been identified as a contributing resource to the NRHP-eligible historic district except for Building #6A, which is non-contributing.

Site Option 1 would require an elongated building footprint that would negatively affect optimal layout and flow for staff and patient care. Due to the presence of many existing utilities and tunnels, construction in this location would require significant replacement and rerouting of these utilities. This location would also require eliminating loading docks in Building #2, potentially impacting delivery of materials and distribution for West Haven VAMC facilities.

Site Option 2: Parking Lot 7

Site Option 2 considers locating the new surgical and clinical tower in the existing Parking Lot 7, which provides for ease of connection to the northern portion of Building #1 (Figure 3). The site layout affords more design flexibility to provide efficient configuration of the proposed services and natural and diffused light into the new tower. Additionally, Site Option 2 would require less modification to existing utilities and tunnels compared to Site Option 1. Site Option 2 would require the demolition of Buildings #6, #7, #8, #9 and #10, all of which have been identified as contributing resources, and the demolition of Buildings #8½ and #6A, both of which are non-contributing.

Site Option 3: Loading Dock

Site Option 3 considers locating the new surgical and clinical tower west of Parking Lot 7 (Figure 4). In this option, the connections to Building #1 are longer and more circuitous than the other two options, resulting in a less efficient and less secure environment. Site Option 3 would result in the demolition of Buildings #7, #8, #9, and #10, which are contributing resources to the NRHP-eligible historic district, and the demolition of Building #6A, a non-contributing resource to the district.

VA recognizes that all three Site Options would result in the demolition of buildings identified as contributing to the NRHP-eligible historic district. However, no other location at the West Haven VAMC is adequately sited to meet VA's goals for patient care. Therefore, the VA finds that the proposed undertaking would have an adverse effect on historic resources. Because the proposed building is still in the pre-design phase, VA anticipates the development of a Programmatic Agreement for the undertaking that will provide stipulations to address the undertaking's effects. We look forward to discussing the project with you. Please feel free to contact me at Alfred.Montoya@va.gov or (203) 932-5711 or Mr. Joseph Simonetta, Project Engineer, at Joseph.Simonetta2@va.gov or (203)932-5711.

Sincerely, **Russell W.
Armstead**
362112

Alfred Montoya, Jr.
Director, West Haven VAMC

Digitally signed by
Russell W. Armstead
362112
Date: 2022.06.20
13:56:00 -04'00'

Attachments:

Attachment 1 – Project Figures

cc: Patrick Read, VA OCFM Environmental Engineer
Hector Abreu, VA Federal Preservation Officer
Alec Bennett, VA Senior Historic Preservation Specialist

ATTACHMENT 1

Project Figures

Figure 1. West Haven VAMC Campus Map

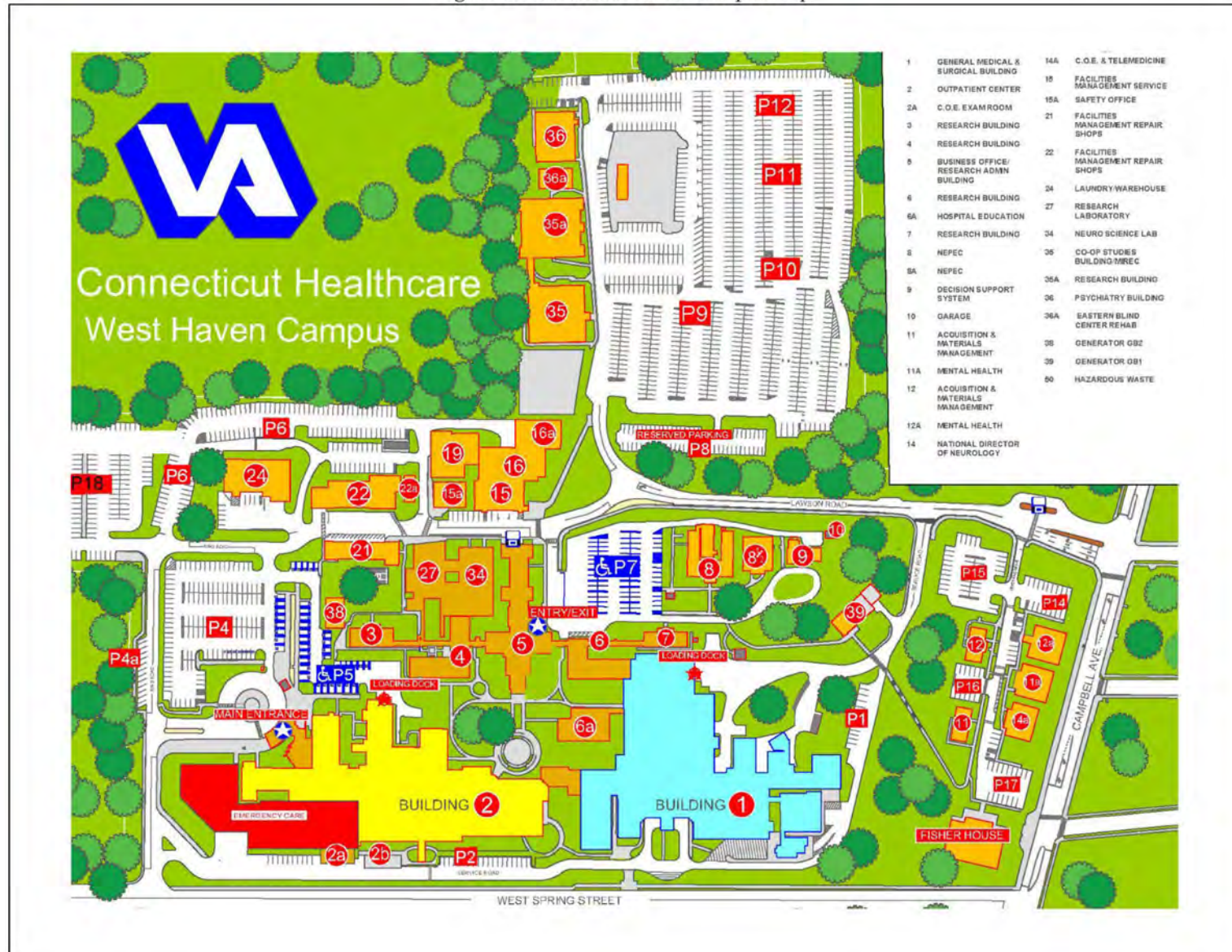


Figure 2. Site Option 1

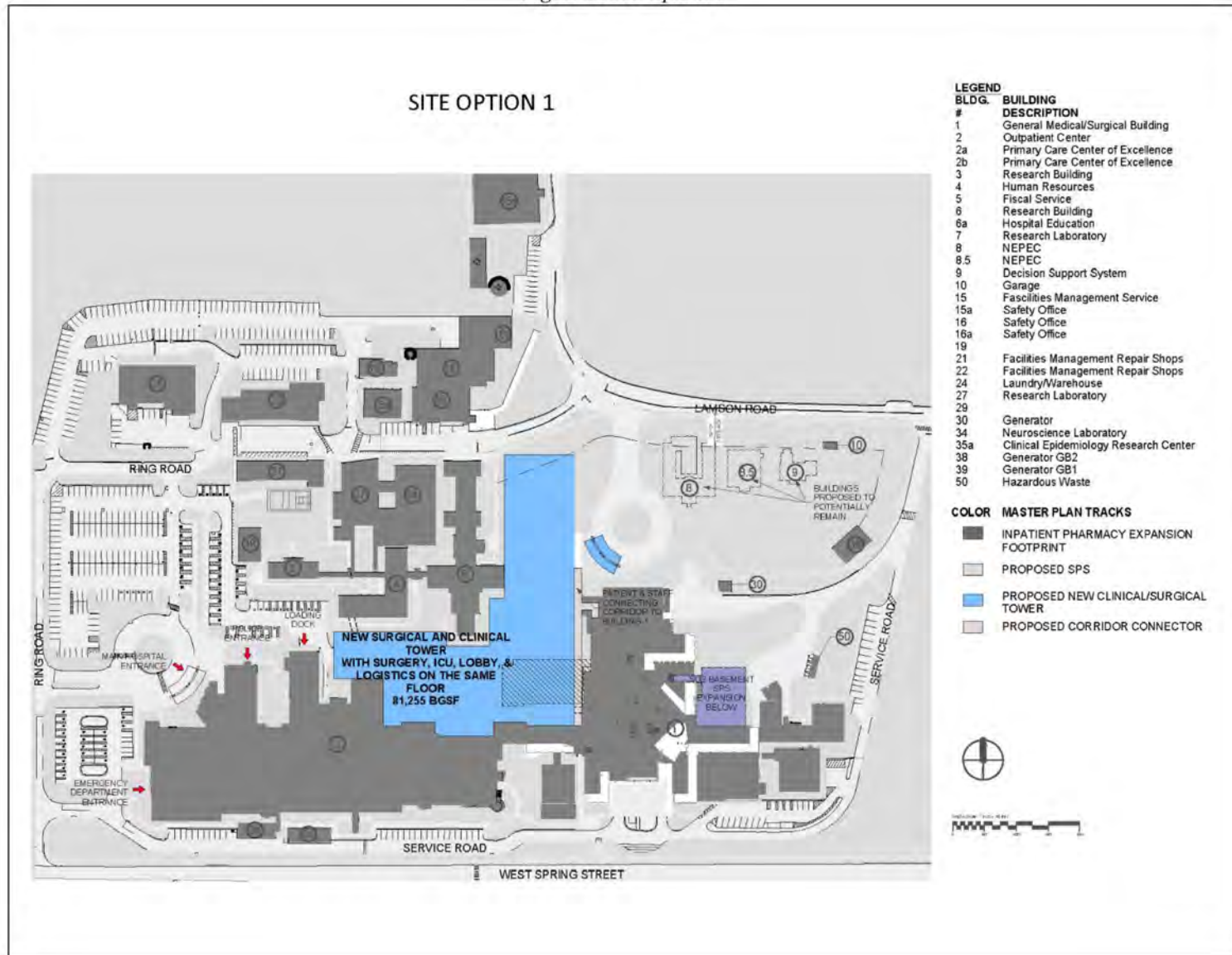


Figure 3. Site Option 2

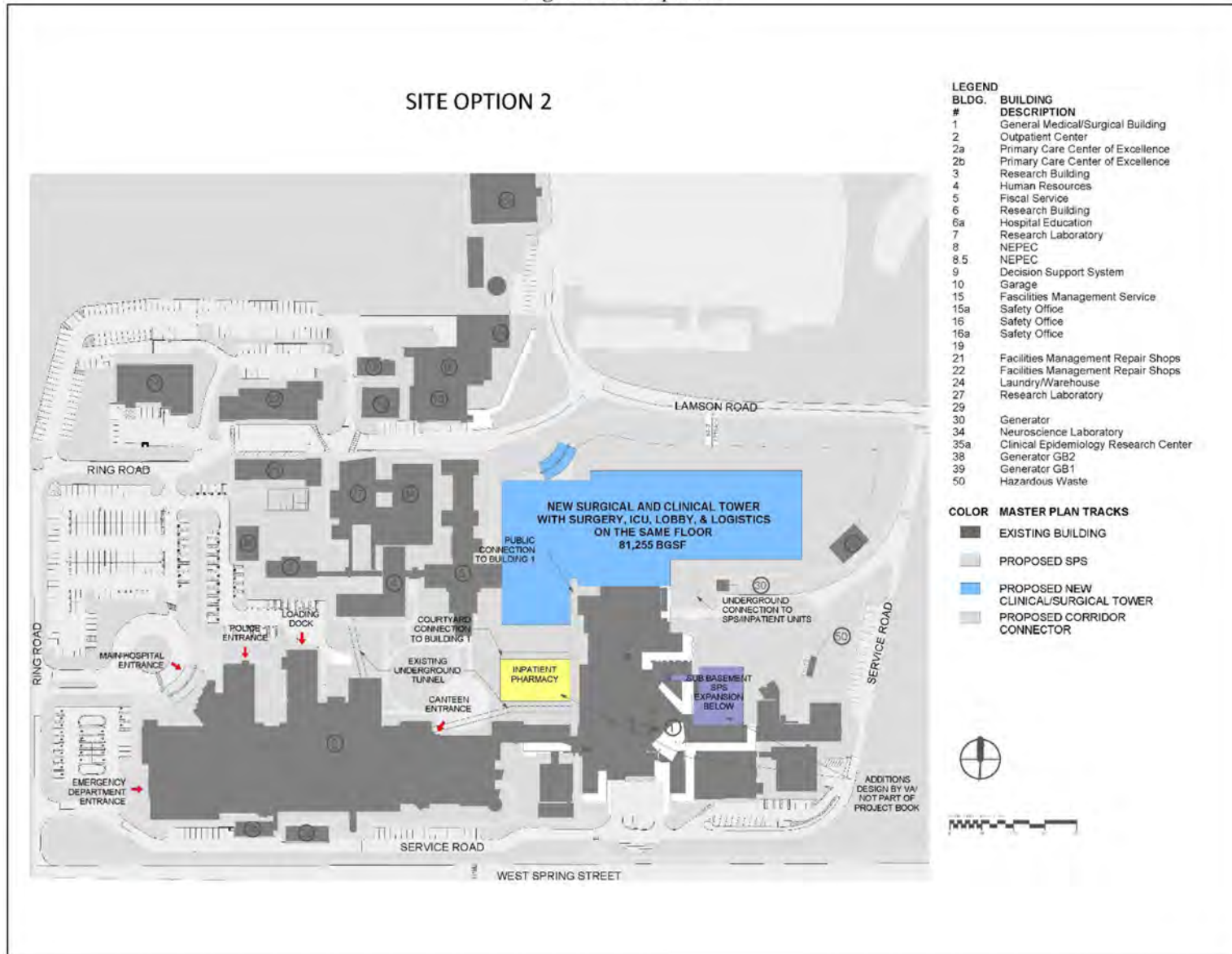
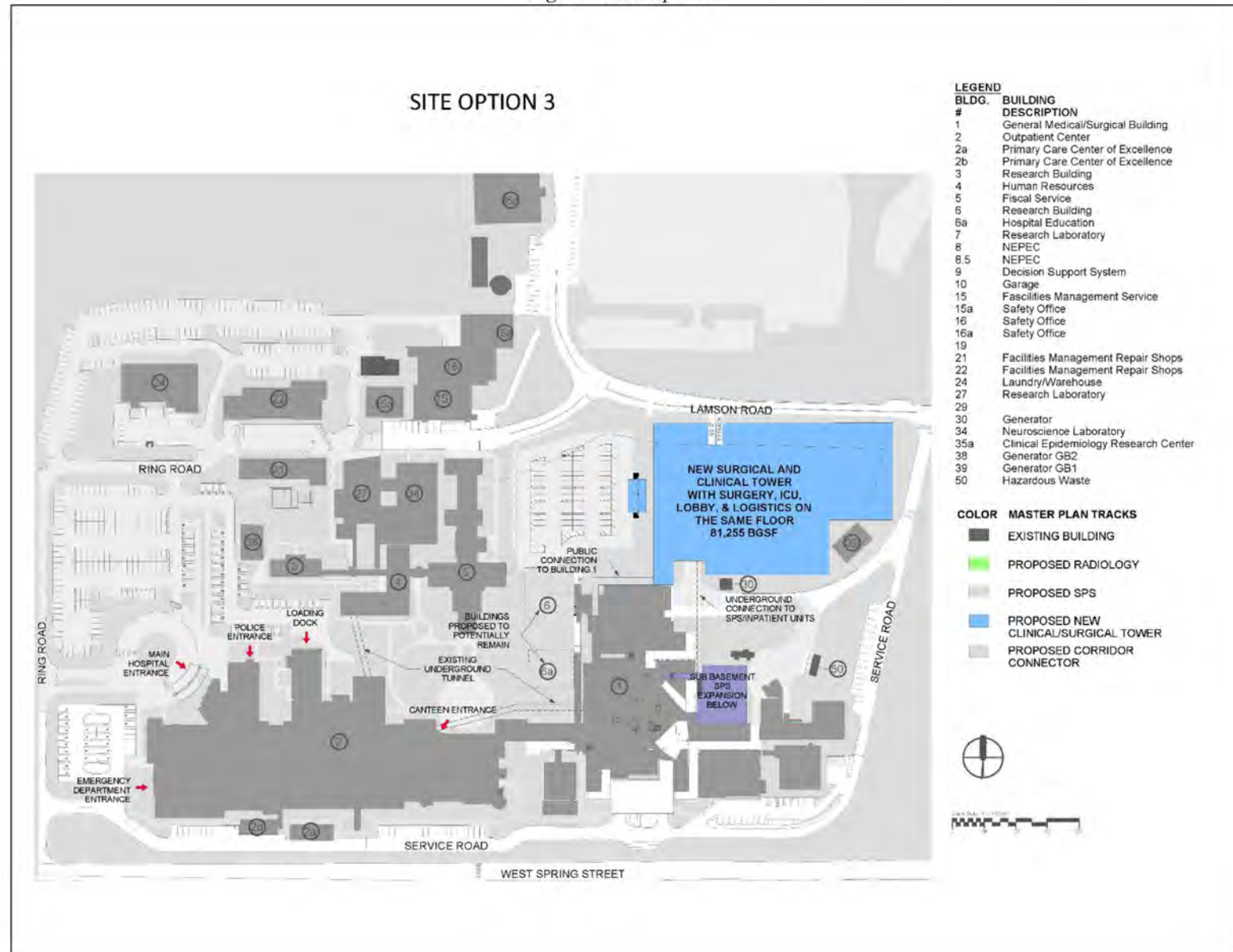


Figure 4. Site Option 3



From: [Read, Patrick R. \(CFM\)](#)
To: director@chs.org
Cc: [Bennett, Alec \(CFM\)](#); [Simonetta, Joseph](#)
Subject: Initiation of Section 106 Consultation New Surgical and Clinical Tower at the West Haven Medical Center, VA Connecticut Healthcare System, West Haven, New Haven County, CT
Date: Tuesday, March 8, 2022 9:07:59 AM
Attachments: [VA OCFM - 689-040 VAMC - Section 106 Consult Package -Connecticut Historical Society and Museum - 23 February 2022.pdf](#)

Dear Mr. Kret,

The U.S. Department of Veterans Affairs (VA) pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations (36 CFR Part 800) submits this letter to initiate Section 106 consultation with the Connecticut Historical Society and Museum for the referenced undertaking at the West Haven Veterans Affairs Medical Center (VAMC), 950 Campbell Avenue, West Haven, New Haven County, CT.

Please confirm receipt of this email.
The VA looks forward to receiving your response.

Thank you,

Patrick Read
Department of Veterans Affairs
Environmental Officer/Engineer, CFM Eastern Region
425 I Street 6th Floor RM-6W.502B
NW Washington, DC 20001
Work: 202-632-4169
Cell: 202-891-9713

"The environment is where we all meet; where we all have a mutual interest; it is the one thing all of us share. It is not only a mirror of ourselves, but a focusing lens on what we can become." – Lady Bird Johnson

From: [Read, Patrick R. \(CFM\)](#)
To: csoto@westhaven-ct.gov
Cc: [Bennett, Alec \(CFM\)](#); [Simonetta, Joseph](#); [Hemenway, Thomas](#)
Subject: Initiation of Section 106 Consultation New Surgical and Clinical Tower at the West Haven Medical Center, VA Connecticut Healthcare System, West Haven, New Haven County, CT
Date: Tuesday, March 8, 2022 9:19:24 AM
Attachments: [VA OCFM - 689-040 VAMC - Section 106 Consultation Package - City of West Haven Planning Director - 23 February 2022.pdf](#)

Dear Mr. Soto,

The U.S. Department of Veterans Affairs (VA) pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations (36 CFR Part 800) submits this letter to initiate Section 106 consultation with the City of West Haven for the referenced undertaking at the West Haven Veterans Affairs Medical Center (VAMC), 950 Campbell Avenue, West Haven, New Haven County, CT.

Please confirm receipt of this email.

The VA looks forward to receiving your response.

Thank you,

Patrick Read
Department of Veterans Affairs
Environmental Officer/Engineer, CFM Eastern Region
425 I Street 6th Floor RM-6W.502B
NW Washington, DC 20001
Work: 202-632-4169
Cell: 202-891-9713

"The environment is where we all meet; where we all have a mutual interest; it is the one thing all of us share. It is not only a mirror of ourselves, but a focusing lens on what we can become." – Lady Bird Johnson

From: [Read, Patrick R. \(CFM\)](#)
To: info@whhistoricalsociety.org
Cc: [Bennett, Alec \(CFM\)](#); [Simonetta, Joseph](#); [Hemenway, Thomas](#)
Subject: Initiation of Section 106 Consultation New Surgical and Clinical Tower at the West Haven Medical Center, VA Connecticut Healthcare System, West Haven, New Haven County, CT
Date: Tuesday, March 8, 2022 9:23:02 AM
Attachments: [VA OCFM - 689-040 VAMC - Section 106 Consultation Package - West Haven Historical Society - 23 February 2022.pdf](#)

Dear Mr. Purmont,

The U.S. Department of Veterans Affairs (VA) pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations (36 CFR Part 800) submits this letter to initiate Section 106 consultation with the West Haven Historical Society for the referenced undertaking at the West Haven Veterans Affairs Medical Center (VAMC), 950 Campbell Avenue, West Haven, New Haven County, CT.

Please confirm receipt of this email.
The VA looks forward to receiving your response.

Thank you,

Patrick Read
Department of Veterans Affairs
Environmental Officer/Engineer, CFM Eastern Region
425 I Street 6th Floor RM-6W.502B
NW Washington, DC 20001
Work: 202-632-4169
Cell: 202-891-9713

"The environment is where we all meet; where we all have a mutual interest; it is the one thing all of us share. It is not only a mirror of ourselves, but a focusing lens on what we can become." – Lady Bird Johnson

From: [Read, Patrick R. \(CFM\)](#)
To: whmilmuseum@snet.net
Cc: [Bennett, Alec \(CFM\)](#); [Simonetta, Joseph](#); [Hemenway, Thomas](#)
Subject: Initiation of Section 106 Consultation New Surgical and Clinical Tower at the West Haven Medical Center, VA Connecticut Healthcare System, West Haven, New Haven County, CT
Date: Tuesday, March 8, 2022 9:26:26 AM
Attachments: [VA OCFM - 689-040 VAMC - Section 106 Consultation Package - West Haven Veterans Museum - 23 February 2022.pdf](#)

Dear Mr. Chesney:

The U.S. Department of Veterans Affairs (VA) pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations (36 CFR Part 800) submits this letter to initiate Section 106 consultation with the West Haven Veterans Museum for the referenced undertaking at the West Haven Veterans Affairs Medical Center (VAMC), 950 Campbell Avenue, West Haven, New Haven County, CT.

Please confirm receipt of this email.

The VA looks forward to receiving your response.

Thank you,

Patrick Read
Department of Veterans Affairs
Environmental Officer/Engineer, CFM Eastern Region
425 I Street 6th Floor RM-6W.502B
NW Washington, DC 20001
Work: 202-632-4169
Cell: 202-891-9713

"The environment is where we all meet; where we all have a mutual interest; it is the one thing all of us share. It is not only a mirror of ourselves, but a focusing lens on what we can become." – Lady Bird Johnson

From: [Read, Patrick R. \(CFM\)](#)
To: cbrooks@delawaretribe.org; bobermeyer@delawaretribe.org; sbachor@delawaretribe.org
Cc: [Bennett, Alec \(CFM\)](#); [Simonetta, Joseph](#); [Hemenway, Thomas](#)
Subject: Initiation of Section 106 Consultation New Surgical and Clinical Tower at the West Haven Medical Center, VA Connecticut Healthcare System, West Haven, New Haven County, CT
Date: Tuesday, March 8, 2022 9:31:14 AM
Attachments: [VA OCFM - West Haven VAMC Project Book - Section 106 Consultation Package -Delaware Tribe - 23 February 2022.pdf](#)

Dear Chief Butler, Dr. Obermeyer, and Ms. Bachor,
The U.S. Department of Veterans Affairs (VA) pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations (36 CFR Part 800) submits this letter to initiate Section 106 consultation with the Delaware Tribe of Indians for the referenced undertaking at the West Haven Veterans Affairs Medical Center (VAMC), 950 Campbell Avenue, West Haven, New Haven County, CT.

Please confirm receipt of this email.
The VA looks forward to receiving your response.

Thank you,

Patrick Read
Department of Veterans Affairs
Environmental Officer/Engineer, CFM Eastern Region
425 I Street 6th Floor RM-6W.502B
NW Washington, DC 20001
Work: 202-632-4169
Cell: 202-891-9713

“The environment is where we all meet; where we all have a mutual interest; it is the one thing all of us share. It is not only a mirror of ourselves, but a focusing lens on what we can become.” – Lady Bird Johnson

From: [Read, Patrick R. \(CFM\)](#)
To: RodneyButler@mptn.org; MTurnbull@mptn-nsn.gov
Cc: [Bennett, Alec \(CFM\)](#); [Simonetta, Joseph](#); [Hemenway, Thomas](#)
Subject: Initiation of Section 106 Consultation New Surgical and Clinical Tower at the West Haven Medical Center, VA Connecticut Healthcare System, West Haven, New Haven County, CT
Date: Tuesday, March 8, 2022 9:36:37 AM
Attachments: [VA OCFM - West Haven VAMC Project Book - Section 106 Consultation Package -Mashantucket Tribe - 23 February 2022.pdf](#)

Dear Mr. Butler and Ms. Turnbull:

The U.S. Department of Veterans Affairs (VA) pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations (36 CFR Part 800) submits this letter to initiate Section 106 consultation with the Mashantucket Pequot Indian Tribe for the referenced undertaking at the West Haven Veterans Affairs Medical Center (VAMC), 950 Campbell Avenue, West Haven, New Haven County, CT.

Please confirm receipt of this email.

The VA looks forward to receiving your response.

Thank you,

Patrick Read
Department of Veterans Affairs
Environmental Officer/Engineer, CFM Eastern Region
425 I Street 6th Floor RM-6W.502B
NW Washington, DC 20001
Work: 202-632-4169
Cell: 202-891-9713

"The environment is where we all meet; where we all have a mutual interest; it is the one thing all of us share. It is not only a mirror of ourselves, but a focusing lens on what we can become." – Lady Bird Johnson

From: [Read, Patrick R. \(CFM\)](#)
To: Communications@moheganmail.com; JQuinn@moheganmail.com; EThomas@moheganmail.com
Cc: [Bennett, Alec \(CFM\)](#); [Simonetta, Joseph](#); [Hemenway, Thomas](#)
Subject: Initiation of Section 106 Consultation New Surgical and Clinical Tower at the West Haven Medical Center, VA Connecticut Healthcare System, West Haven, New Haven County, CT
Date: Tuesday, March 8, 2022 9:41:50 AM
Attachments: [VA OCFM - West Haven VAMC Project Book - Section 106 Consultation Package -Mohegan Tribe - 23 February 2022.pdf](#)

Dear Chairman Gessner, Mr. Quinn, and Ms. Thomas,
The U.S. Department of Veterans Affairs (VA) pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations (36 CFR Part 800) submits this letter to initiate Section 106 consultation with the Mohegan Tribe of Indians of Connecticut for the referenced undertaking at the West Haven Veterans Affairs Medical Center (VAMC), 950 Campbell Avenue, West Haven, New Haven County, CT.

Please confirm receipt of this email.
The VA looks forward to receiving your response.

Thank you,

Patrick Read
Department of Veterans Affairs
Environmental Officer/Engineer, CFM Eastern Region
425 I Street 6th Floor RM-6W.502B
NW Washington, DC 20001
Work: 202-632-4169
Cell: 202-891-9713

"The environment is where we all meet; where we all have a mutual interest; it is the one thing all of us share. It is not only a mirror of ourselves, but a focusing lens on what we can become." – Lady Bird Johnson

From: [Read, Patrick R. \(CFM\)](#)
To: AdStanton@nitribe.org; tashtesook@aol.com
Cc: [Bennett, Alec \(CFM\)](#); [Simonetta, Joseph](#); [Hemenway, Thomas](#)
Subject: Initiation of Section 106 Consultation New Surgical and Clinical Tower at the West Haven Medical Center, VA Connecticut Healthcare System, West Haven, New Haven County, CT
Date: Tuesday, March 8, 2022 9:46:46 AM
Attachments: [VA OCFM - West Haven VAMC Project Book - Section 106 Consultation Package -Narragansett Tribe - 23 February 2022.pdf](#)

Dear Chief Stanton and Mr. Brown,

The U.S. Department of Veterans Affairs (VA) pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations (36 CFR Part 800) submits this letter to initiate Section 106 consultation with the Narragansett Indian Tribe for the referenced undertaking at the West Haven Veterans Affairs Medical Center (VAMC), 950 Campbell Avenue, West Haven, New Haven County, CT.

Please confirm receipt of this email.
The VA looks forward to receiving your response.

Thank you,

Patrick Read
Department of Veterans Affairs
Environmental Officer/Engineer, CFM Eastern Region
425 I Street 6th Floor RM-6W.502B
NW Washington, DC 20001
Work: 202-632-4169
Cell: 202-891-9713

"The environment is where we all meet; where we all have a mutual interest; it is the one thing all of us share. It is not only a mirror of ourselves, but a focusing lens on what we can become." – Lady Bird Johnson

From: [Read, Patrick R. \(CFM\)](#)
To: JMontanaro@preservationct.org
Cc: [Bennett, Alec \(CFM\)](#); [Simonetta, Joseph](#); [Hemenway, Thomas](#)
Subject: Initiation of Section 106 Consultation New Surgical and Clinical Tower at the West Haven Medical Center, VA Connecticut Healthcare System, West Haven, New Haven County, CT
Date: Tuesday, March 8, 2022 9:53:30 AM
Attachments: [VA OCFM -689-040 VAMC - Section 106 Consultation Package - Preservation Connecticut - 23 February 2022.pdf](#)

Dear Ms. Montanaro,

The U.S. Department of Veterans Affairs (VA) pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations (36 CFR Part 800) submits this letter to initiate Section 106 consultation with Preservation Connecticut for the referenced undertaking at the West Haven Veterans Affairs Medical Center (VAMC), 950 Campbell Avenue, West Haven, New Haven County, CT.

Please confirm receipt of this email.

The VA looks forward to receiving your response.

Thank you,

Patrick Read
Department of Veterans Affairs
Environmental Officer/Engineer, CFM Eastern Region
425 I Street 6th Floor RM-6W.502B
NW Washington, DC 20001
Work: 202-632-4169
Cell: 202-891-9713

"The environment is where we all meet; where we all have a mutual interest; it is the one thing all of us share. It is not only a mirror of ourselves, but a focusing lens on what we can become." – Lady Bird Johnson

ATTACHMENT 1

Project Figures

Figure 1. West Haven VAMC Campus Map

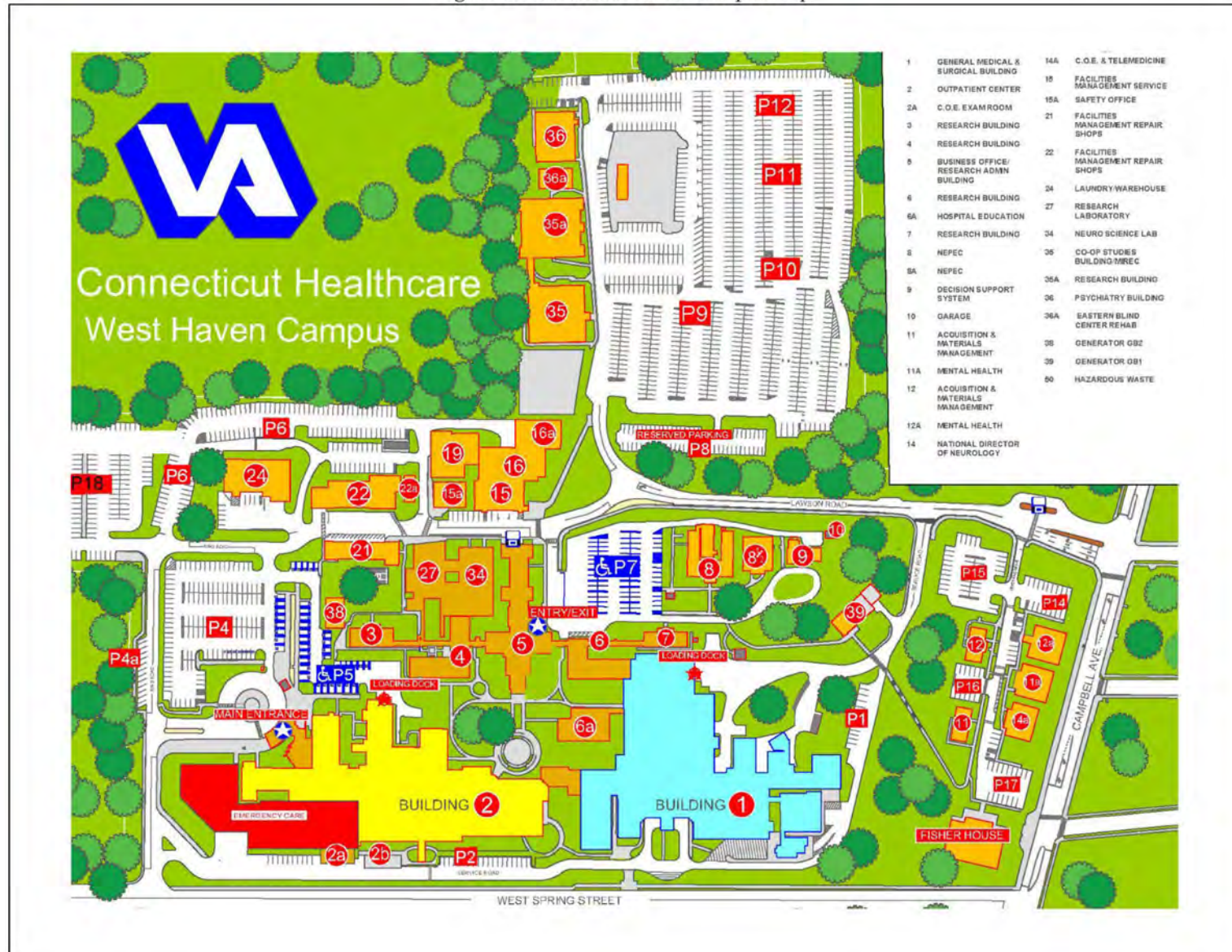


Figure 2. Site Option 1

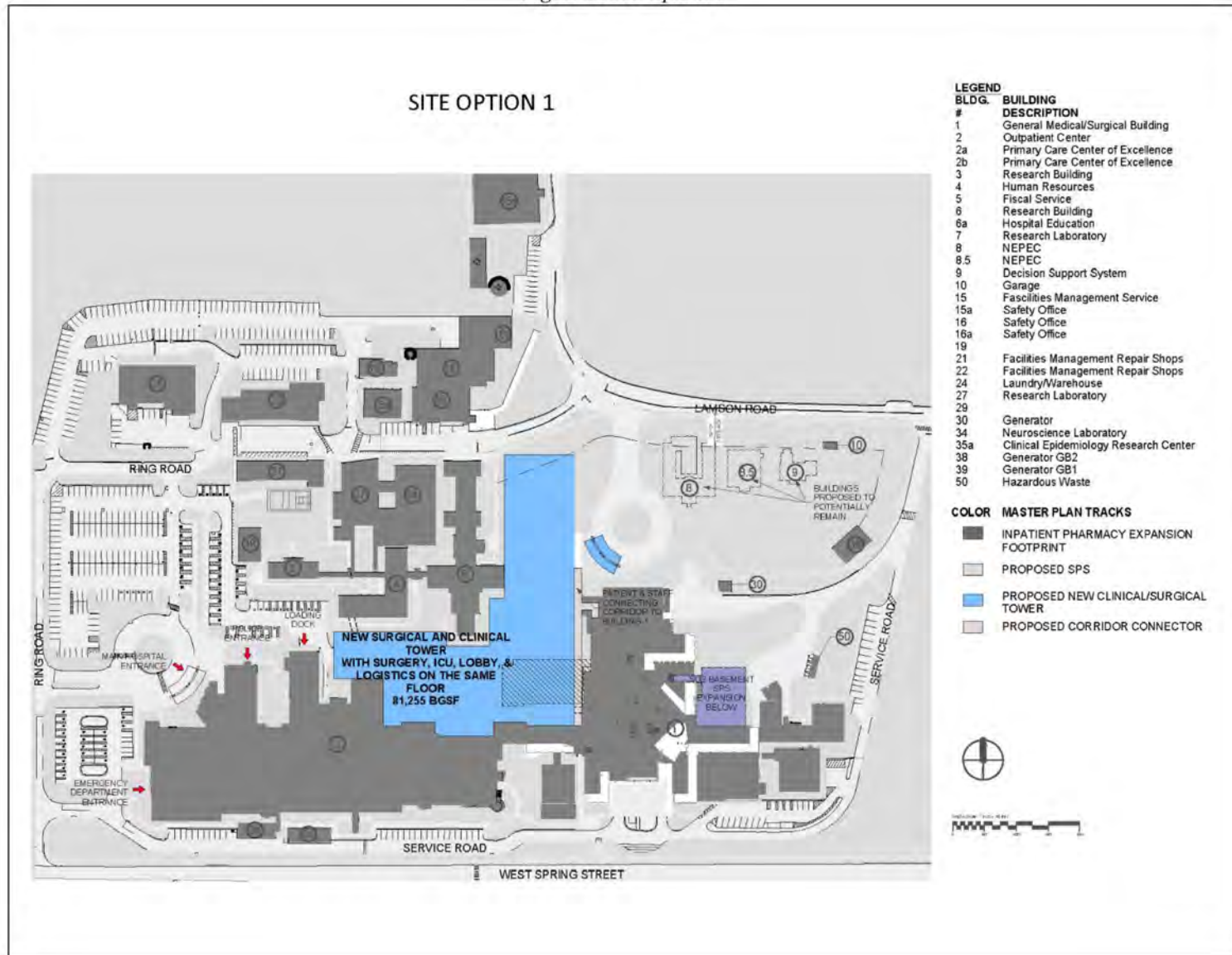


Figure 3. Site Option 2

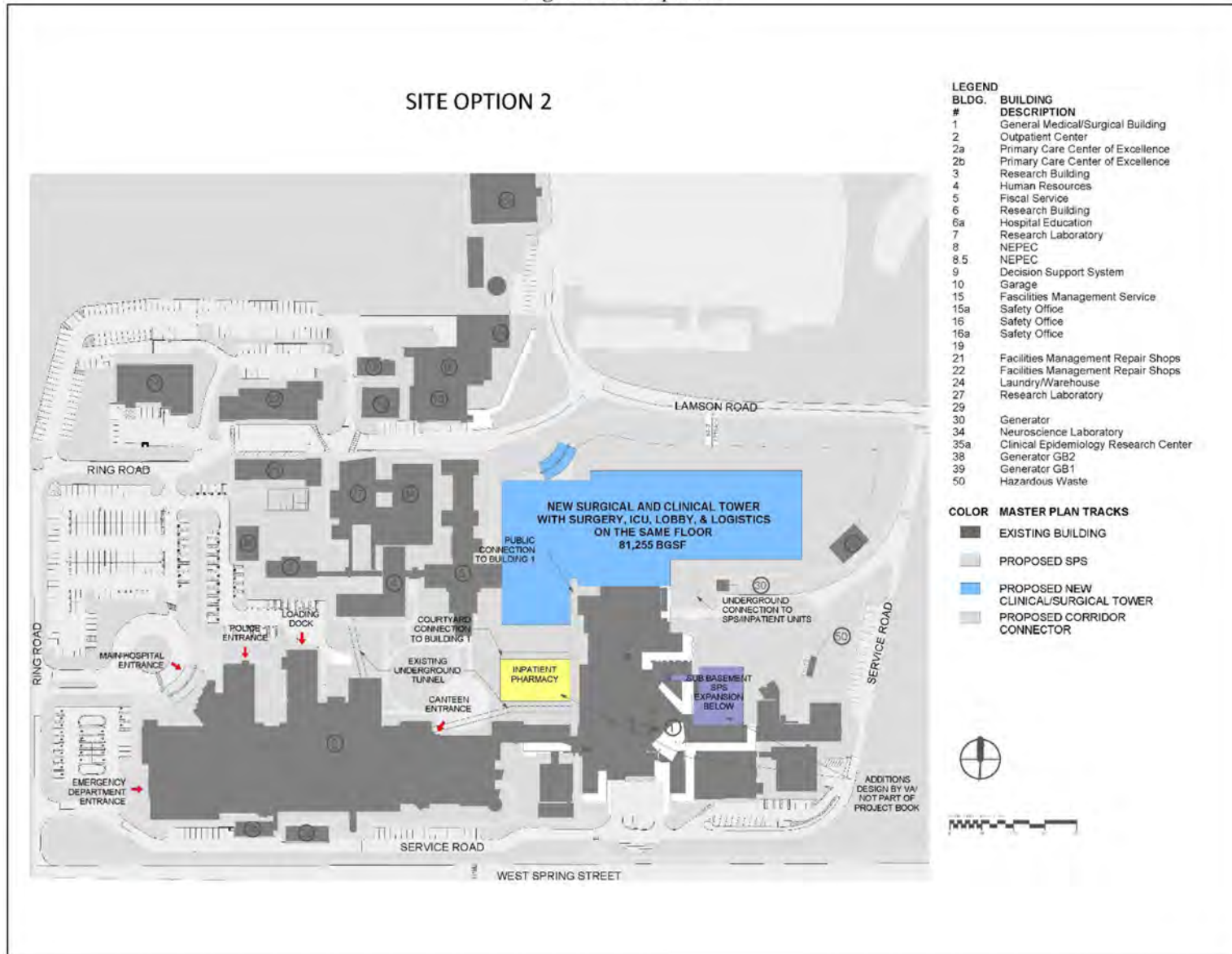
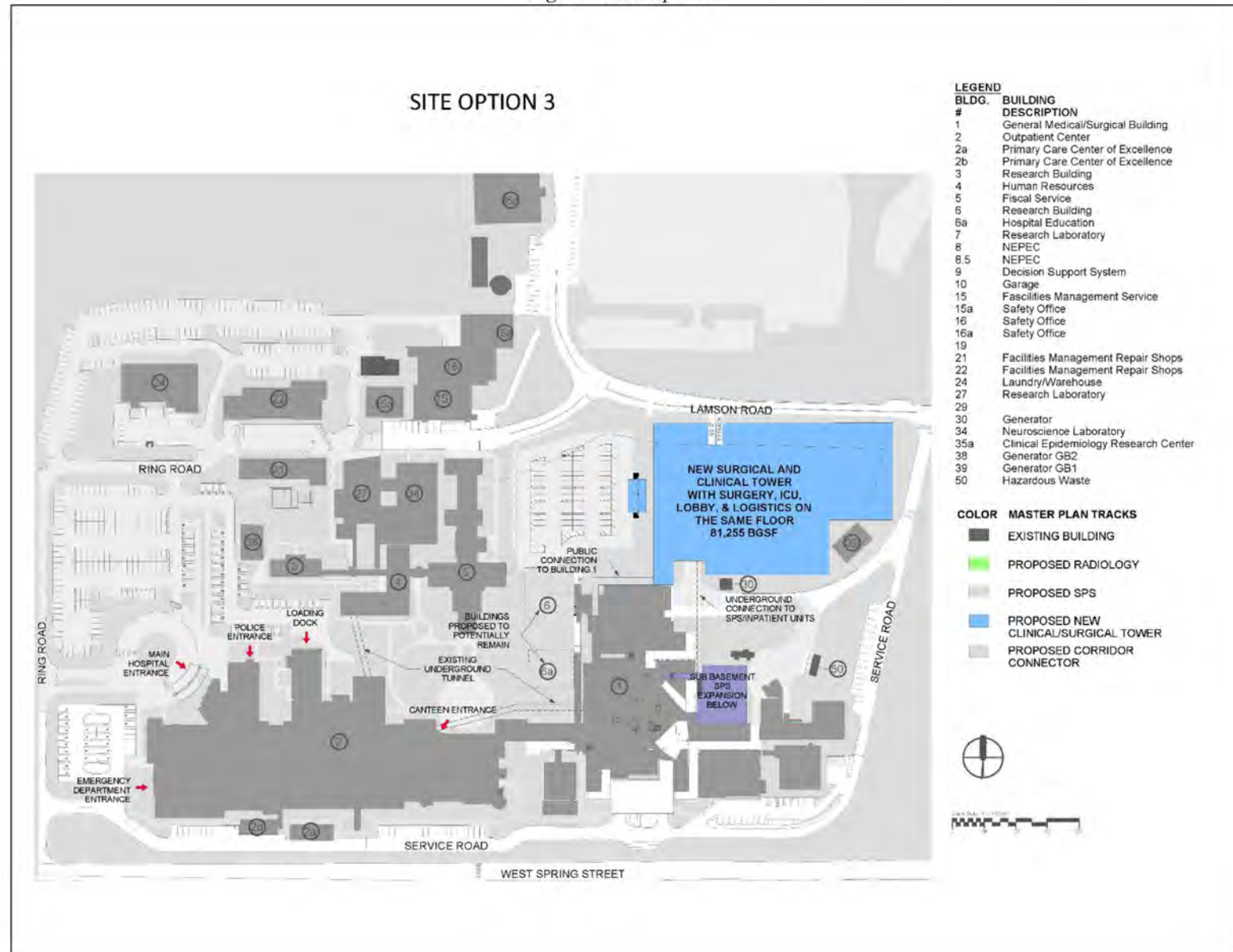


Figure 4. Site Option 3



APPENDIX C

Connecticut Post | Greenwich Time | New Haven Register | Stamford Advocate | The Middletown Press
The News-Times | The Norwalk Hour | The Register Citizen

Fairfield Citizen | New Canaan Advertiser | Shelton Herald | Shoreline Times | The Darien Times | The Dolphin | The Foothills Trader | The Litchfield County Times
The Milford Mirror | The Ridgefield Press | The Spectrum | The Trumbull Times | The Wilton Bulletin | West Hartford News | Westport News

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STATE OF CONNECTICUT
COUNTY OF FAIRFIELD


PUBLIC NOTICE

**SCOPING FOR AN ENVIRONMENTAL ASSESSMENT U.S.
DEPARTMENT OF VETERANS AFFAIRS VA Connecticut
Healthcare System
Proposed New Surgical and Clinical Tower and Building
Demolition at the West Haven Veterans Affairs Medical
Center, West Haven, Connecticut**

The U.S. Department of Veterans Affairs (VA) requests scoping input for the preparation of an Environmental Assessment (EA) for the Proposed Action to construct and operate a new surgical and clinical tower (~160,000 building gross-square feet) and demolition of selected historic buildings at the West Haven Veterans Affairs Medical Center (VAMC) located at 950 Campbell Avenue, West Haven, New Haven County, CT. The Proposed Action is needed to address critical deficiencies related to utility failures, infection prevention issues, patient and staff safety concerns, and space constraints at the West Have VAMC. Additional project details are available in the scoping notice at <https://www.cfm.va.gov/environmental/>.

If you have comments on the scope of issues for analysis, or input on potential alternatives or information/analyses relevant to the Proposed Action, please submit your comments/input via email within 30 days following publication of this notice, to vacoenvironment@va.gov with the subject line "West Haven VAMC New Tower EA."

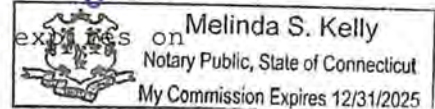
Once the Draft EA is completed, VA will make it available for a 30-day review and comment period. VA will announce the start of this review period by publishing a notice of availability (NOA) for the Draft EA in the New Haven Register. The NOA will explain that the Draft EA will be available for public review at West Haven Public Library (located at 300 Elm St., West Haven, CT) and via the VA website: <https://www.cfm.va.gov/environmental/>.

I, 
Being duly sworn, depose and say
that I am a Representative in the
employ of HEARST CONNECTICUT MEDIA
GROUP, Publisher of the New Haven
Register, that a LEGAL NOTICE as
stated below was published in the
New Haven Register.

Subscribed and sworn to before me on
this 21st Day of March, A.D. 2022.


Notary Public

My commission expires on



PO Number

Ad Caption

PUBLIC NOTICE SCOPING FO

Publication

New Haven Register

Ad Number

0002692758-01

Publication Schedule

3/17/2022, 3/20/2022

