FINAL

ENVIRONMENTAL ASSESSMENT

OF THE PROPOSED

VA CONNECTICUT HEALTHCARE SYSTEM WEST HAVEN CAMPUS PARKING GARAGE

950 CAMPBELL AVENUE
WEST HAVEN, NEW HAVEN COUNTY, CONNECTICUT

U.S. DEPARTMENT OF VETERANS AFFAIRS

VA CONNECTICUT HEALTHCARE SYSTEM

950 CAMPBELL AVENUE

WEST HAVEN, CONNECTICUT 06516

PREPARED BY:

TTL ASSOCIATES, INC.

MARCH 25, 2022

EXECUTIVE SUMMARY

This environmental assessment (EA) has been prepared to identify, analyze, and document the potential physical, environmental, cultural, and socioeconomic impacts associated with the U.S. Department of Veterans Affairs (VA's) proposed construction and operation of a new parking garage at the VA Connecticut Healthcare System, West Haven Campus (West Haven VA Medical Center (VAMC)) located at 950 Campbell Avenue in West Haven, New Haven County, Connecticut. This EA has been prepared as required in accordance with the National Environmental Policy Act of 1969 ([NEPA]; 42 United States Code 4321 et seq.), the President's Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] 1500-1508), *Environmental Effects of the Department of Veterans Affairs Actions* (38 CFR Part 26), and in accordance with *VA NEPA Interim Guidance for Projects* (U.S. Department of Veterans Affairs, 2010).

Proposed Action

VA's Proposed Action is to construct and operate a new four and one-half story parking garage in the western portion of the West Haven VAMC campus. The parking garage would be constructed in an existing campus parking lot (Lot P4), which is located near the main patient entrance of the hospital. The two-bay parking garage is designed to accommodate the potential future horizontal expansion of one additional bay to provide additional patient parking. The proposed 403 parking space garage would provide a net gain of approximately 282 parking spaces for the campus.

VA anticipates construction of the proposed parking garage would begin in 2022 and the facilities would open in 2023. The potential future parking garage expansion is not planned or funded at this time.

Purpose and Need

The purpose of the Proposed Action is to provide increased on-site parking capacity to support the current and growing needs of the West Haven VAMC. The proposed parking garage would provide approximately 282 additional parking spaces at the West Haven VAMC campus.

The Proposed Action is needed to address the parking deficiency at the West Haven VAMC. Current parking at the campus is inadequate to meet the current and projected future needs of Veteran patients, VA employees, and visitors to the facility. The campus currently includes approximately 1,500 on-site parking spaces provided by surface parking lots. VA estimates that more than 400 additional parking spaces are needed to meet the current demand for on-campus parking. The overflow of patients and VAMC staff has resulted in the need for two off-site parking leases. Approximately 200 leased parking spaces are located at 318 Washington Avenue (approximately 1.4 miles from the West Haven VAMC campus). The second off-site leased lot is approximately 0.5-mile away and allows for approximately 75 parking spaces. Patients and VAMC staff routinely wait for extended periods of time to find a parking space or use a VA shuttle from the off-site leased parking lots, causing delays in getting to the VAMC on time and missed appointments. The parking shortage has impacted patient satisfaction and VAMC staff morale. VA plans to build new medical facilities at the West Haven VAMC campus in the next ten years,

which will increase the demand for on-campus parking and exacerbate the current parking shortage.

The Proposed Action would create approximately 282 additional on-campus parking spaces to reduce the need for off-site parking by patients and staff at the facility. The additional parking would reduce missed appointments, increase patient satisfaction, and improve VAMC staff commute times and morale.

Alternatives

This EA examines in-depth two alternatives, the Proposed Action and the No Action Alternative.

- **Proposed Action:** VA proposes to construct and operate a new four and one-half story parking garage in the western portion of the West Haven VAMC campus, near the main patient entrance to the hospital. This area is currently an asphalt-paved campus parking lot (Lot P4). The proposed garage would be a two-bay, approximately 124 feet by 272 feet elevated parking structure that includes a total of approximately 403 parking spaces. One level would be at grade, the other three and a half levels would be elevated. The proposed parking garage is designed to accommodate the potential future horizontal expansion of one additional bay to provide additional patient parking near the main hospital entrance. The main hospital entrance drive, located adjacent to the proposed parking garage, would be turned into a one-way drive with dedicated delivery and shuttle parking to increase traffic flow in the drop off zone. Approximately 121 parking spaces would be removed as a result of the proposed parking garage and entrance reconfiguration, resulting in a net gain of approximately 282 parking spaces for the campus. Entry to the proposed parking garage would be via the main entrance drive to the hospital from Ring Road (accessed from West Spring Street) with one main entrance on the south side and one secondary entrance on the east side of the garage, to allow entrance after a patient is dropped off at the hospital.

  The parking garage would be built to VA's specifications by a VA-selected contractor. The parking garage would be owned, operated and maintained by VA. Construction is anticipated to begin in 2022 and be completed in 2023. Once operational, the parking garage would provide additional on-campus parking for West Haven VAMC patients and visitors, and would reduce the need for off-site parking.

  VA currently has off-site parking leases to off-set the shortage of on-campus parking. These off-site leased parking areas would be used to address the temporary reduction in on-campus parking during the construction of the parking garage. Following the completion of the parking garage, the number of spaces required at the off-site leased parking areas would be reduced.

- **No Action Alternative:** Under the No Action Alternative, the Proposed Action would not be implemented and operations at the West Haven VAMC would continue as currently conducted. On-site parking at the campus would continue to be deficient. This deficiency in on-site parking is projected to grow, as Veteran demand for health care services

increases and new medical facilities are constructed at the campus. VA would continue to rely on off-site, leased parking lots due to insufficient on-campus parking.

The Proposed Action effectively provides the best combination of land and location for increased on-campus West Haven VAMC parking without limiting potential future developments at the campus. The Proposed Action would reduce the on-campus parking deficiency at the West Haven VAMC. The No Action Alternative would not reduce the parking deficiency at the West Haven VAMC, would not enable VA to provide adequate parking to Veterans, VAMC staff, and would not meet the purpose of or need for the Proposed Action. However, the No Action Alternative was evaluated in this EA as required under the CEQ regulations, and provides a benchmark analysis for comparing the effects of the Proposed Action.

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

The affected environment of the proposed parking garage Site and its immediate surroundings, or the region of influence of the Proposed Action, is discussed in Section 3 of this EA.

The Proposed Action and No Action Alternative are evaluated in this EA to determine their potential direct or indirect impact(s) on the physical, environmental, cultural, and socioeconomic aspects of the Proposed Action's region of influence. Technical areas evaluated in this EA include:

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

Potential Effects of the Proposed Action

The Proposed Action would result in the impacts identified throughout Section 3 and summarized in the table below. These include short-term and/or long-term, potential adverse impacts to aesthetics, air quality, soils, hydrology and water quality, noise, solid waste and hazardous materials, parking (short-term), and transportation. All of these potential impacts are less than significant and would be further reduced through careful coordination and implementation of general best management practices (BMPs), management measures, and compliance with regulatory requirements, as identified in Section 5.

The Proposed Action would result in beneficial short-term impacts to the local socioeconomic environment in the form of temporary employment during the parking garage construction. Beneficial long-term socioeconomic impacts (reduced patient stress and missed appointments, increased patient and staff satisfaction) and beneficial long-term parking impacts would result from the Proposed Action.

Potential Effects of the No Action Alternative

Under the No Action Alternative, the Proposed Action would not be implemented and no improvements to the current parking conditions at the West Haven VAMC campus would occur. No beneficial impacts attributable to the Proposed Action would occur and VA's ability to provide sufficient, on-campus parking for patients and staff at the West Haven VAMC campus would remain compromised.

Summary of Impact Analysis		
Resource Area	**Proposed Action**	**No Action**
Aesthetics	New parking garage would be visually consistent with the surrounding West Haven VAMC development, which is comprised of buildings generally ranging from one to eleven stories in height. Less-than-significant adverse impact.	None
Air Quality	Dust and particulate matter emissions during construction managed with BMPs. Vehicle emissions during operation similar to current area levels. Less-than-significant adverse impact.	Similar area vehicle emissions
Cultural Resources	No NRHP-listed or eligible historic properties are present at the Site or would be affected. Connecticut SHPO concurred no adverse effects to historic properties. No/negligible impact.	None
Geology and Soils	Soil erosion and sedimentation impacts during construction managed with BMPs. Less-than-significant adverse impact	None
Hydrology and Water Quality	Nearest surface water is 950 feet from the Site. Stormwater runoff during construction managed through BMPs. Stormwater from the top level of the parking garage would be directed to a detention basin under the ramp of the parking garage and then pass through a hydrodynamic separator prior to discharging to the existing West Haven VAMC stormwater management system. Less-than-significant adverse impact	Similar operational stormwater discharges
Wildlife and Habitat	Site currently an asphalt-paved parking lot with no habitat for federally or state protected species. No/negligible impact.	None

Summary of Impact Analysis		
Resource Area	**Proposed Action**	**No Action**
Noise	Short-term noise impacts during construction managed through BMPs. Operational noise impacts associated with vehicle traffic similar to existing noise levels. Less-than-significant adverse impact.	Similar operational noise levels
Land Use	Proposed parking garage would be consistent with current land use (asphalt-paved parking lot for the VAMC) and local zoning (Public Facility). No/negligible impact.	None
Floodplains, Wetlands, and Coastal Zone Management	No wetlands or floodplains located on the Site or adjacent properties. Not located within a designated coastal zone. No/negligible impact.	None
Socioeconomics	Short-term localized beneficial impact to employment during construction. Expanded on-campus parking would be a significant beneficial impact to Veterans in the West Haven area and VAMC staff.	Inadequate on-campus parking-adverse impact to Veterans
Community Services	Proposed parking garage would not put a significant additional load on local community services. No/negligible impact.	None
Solid Waste and Hazardous Materials	No recognized environmental conditions identified at the site. Potential impacts from petroleum and hazardous substance handling during construction and operation would be managed through BMPs and regulatory compliance. Less-than-significant adverse impact.	None
Transportation and Parking	Minor short-term adverse impact from construction traffic and temporary loss of parking. Minor long-term adverse traffic impact. Significant long-term beneficial parking impact.	Inadequate on-campus parking – adverse impact to Veterans
Utilities	Utilities adequate for the parking garage are already available at the Site. Parking garage would use minimal utilities No/negligible impact.	None

Summary of Impact Analysis		
Resource Area	**Proposed Action**	**No Action**
Environmental Justice	Site is located in an area with a larger than average low income and minority population. Proposed Action would have a negligible impact on local residents. No/negligible impact.	None

Cumulative Impacts

This EA also examines the potential cumulative effects of implementing each of the considered alternatives. This analysis finds that the Proposed Action, with the implementation of the general BMPs, management measures, and regulatory compliance measures specified in this EA, would not result in significant adverse cumulative impacts to onsite or regional natural or cultural resources and would maintain or enhance the socioeconomic environment through the provision of construction related jobs and improved on-campus parking facilities for Veteran patients and staff. The No Action Alternative would not produce these potential positive socioeconomic gains. No significant cumulative effects are identified.

AGENCY AND PUBLIC INVOLVEMENT

Agencies consulted for this EA include:

- U.S. Fish and Wildlife Service
- U.S. Environmental Protection Agency (USEPA)
- U.S. Army Corps of Engineers
- U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS)
- Connecticut Department of Transportation
- Connecticut Department of Energy and Environmental Protection (CT DEEP) (various departments)
- Connecticut Department of Economic and Community Development State Historic Preservation Office (CT SHPO)
- Advisory Council on Historic Preservation
- Connecticut Council on Environmental Quality
- Connecticut Association of Conservation Districts
- West Haven Inland Wetlands Watercourse Agency
- West Haven Department of Planning and Development
- West Haven Public Works Department

Responses with project input or information were received from USEPA, USDA NRCS, CT DEEP, CT SHPO, and the City of West Haven Inland Wetland Watercourse Agency. Agency information and comments have been incorporated into this EA, as and where appropriate, and are summarized in Section 4. Copies of relevant correspondence can be found in Appendix A.

Four federally recognized Native American tribes [Delaware Tribe of Indians, Mohegan Indian Tribe of Connecticut, Mashantucket Pequot Indian Tribe, and Narragansett Indian Tribe] were identified as having possible ancestral ties to the West Haven area. VA invited each of these Tribes to provide input regarding the Proposed Action. Responses were received from the Delaware Tribe of Indians and the Mohegan Indian Tribe of Connecticut. Tribal information and comments have been incorporated into this EA (Section 3.4) as appropriate. Tribal input is summarized in Section 4. Tribal correspondence is provided in Appendix B.

VA published and distributed the Draft EA for a 30-day public comment period, as announced by a Notice of Availability (NOA) published in a local newspaper of general circulation (New Haven Register) from January 15 through 17, 2022. The Draft EA was made available for public review and comments at the West Haven Public Library and on the West Haven VAMC website from January 15, 2022 to February 14, 2022. The USEPA reviewed the Draft EA, thanked VA for addressing their scoping comments, and indicated that they had no comments on the Draft EA. VA received no other public comments regarding the Draft EA.

CONCLUSIONS

This EA concludes there would be no significant adverse impact, either individually or cumulatively, to the local environment or quality of life associated with the Proposed Action, provided the BMPs, management measures, and regulatory compliance measures described in this EA are implemented. This EA's analysis determines, therefore, that an Environmental Impact Statement (EIS) is unnecessary for implementation of the Proposed Action, and that a Finding of No Significant Impact (FONSI) is appropriate.

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1.1 Introduction

This Environmental Assessment (EA) has been prepared as required in accordance with the National Environmental Policy Act of 1969 ([NEPA]; 42 United States Code [USC] 4321 et seq.), the President's Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] 1500-1508), and *Environmental Effects of the Department of Veterans Affairs Actions* (38 CFR Part 26) and the U.S. Department of Veterans Affairs' (VA) *NEPA Interim Guidance for Projects* (U.S. Department of Veterans Affairs, 2010). Federal agencies are required to consider the environmental and related social and economic effects of their proposed actions. This EA is required to determine if VA's Proposed Action would have significant environmental impacts.

This EA has been prepared to identify, analyze, and document the potential physical, environmental, cultural, and socioeconomic impacts associated with VA's proposed construction and operation of a four and one half-story parking structure in the western portion of the VA Connecticut Healthcare System, West Haven Campus (West Haven VA Medical Center (VAMC)) located at 950 Campbell Avenue in West Haven, New Haven County, Connecticut. Figures 1 through 5 depict the general locations of the West Haven VAMC campus and the proposed parking garage.

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

1.2 Background

The West Haven VAMC campus is approximately 45 acres in area and is located within the north-central portion of the City of West Haven, approximately one mile west of New Haven Harbor (Long Island Sound). The West Haven VAMC is a full care hospital providing emergency, inpatient and outpatient, surgical, ambulatory, primary, secondary, and tertiary care and research services.

The original hospital building was constructed at the West Haven VAMC campus in the 1910s (dedicated in 1918) for the care of patients with tuberculosis. VA purchased the hospital in the late 1940s and constructed the two, current, main hospital buildings (Buildings 1 and 2) on the southern portion of the campus in the 1950s.

The exteriors of the two main hospital buildings were completely replaced with skins of metal and glass in the 1990s. However, many of the original, smaller, 1910s-era hospital buildings remain intact with limited alteration. Approximately 15 of the 32 buildings at the campus date back to the 1910s. Patient, staff, and visitor parking is provided by 18 surface parking lots across the campus, totaling approximately 1,500 parking spaces, and two off-campus leased parking lots that are serviced by a VA shuttle van.

The proposed parking garage Site is located in the western portion of the West Haven VAMC campus, near the main patient entrance to the hospital. The approximately one-acre Site has been a paved parking lot associated with the VAMC since the late 1960s/early 1970s.

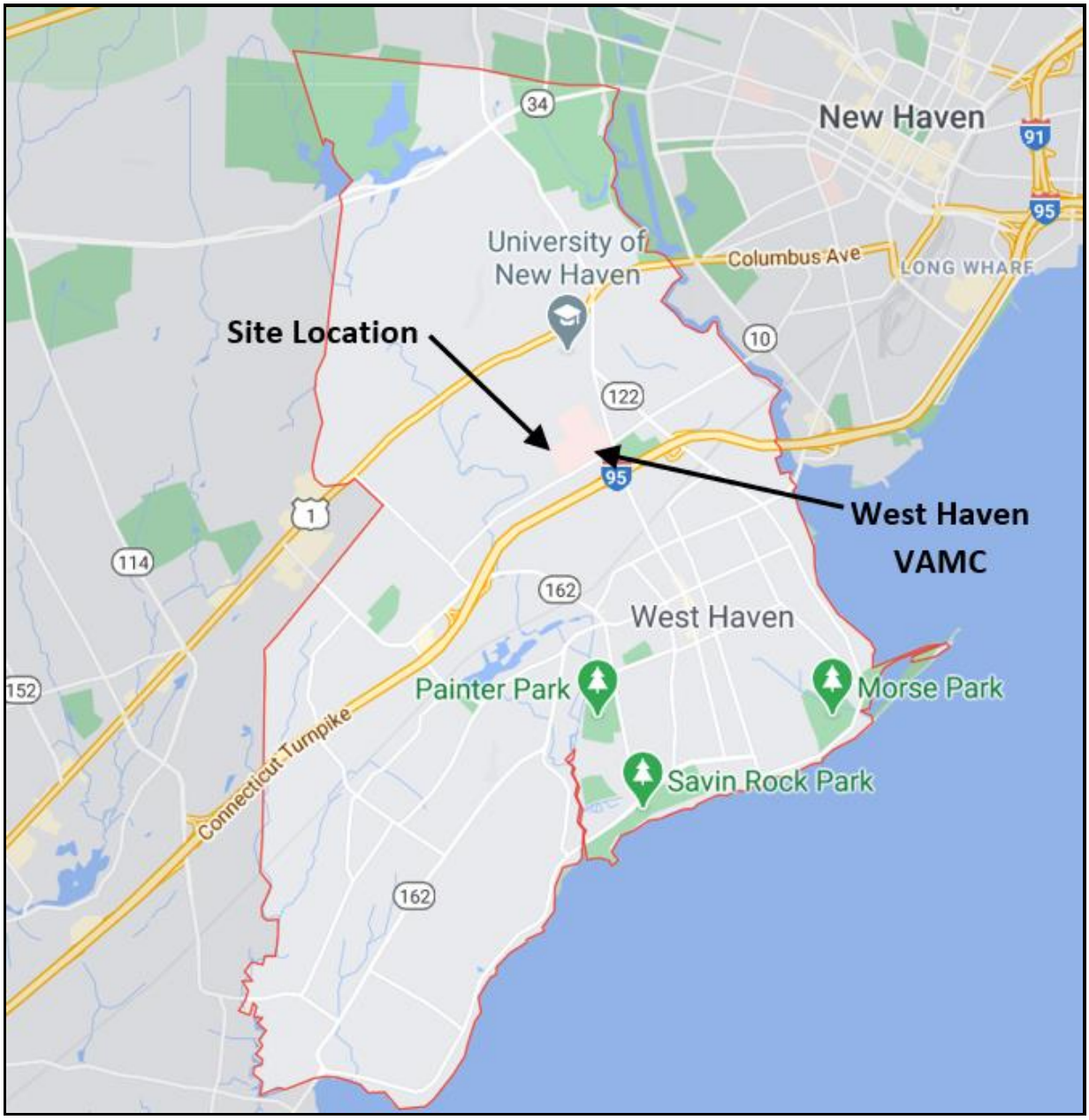

Figure 1
Regional Location Map

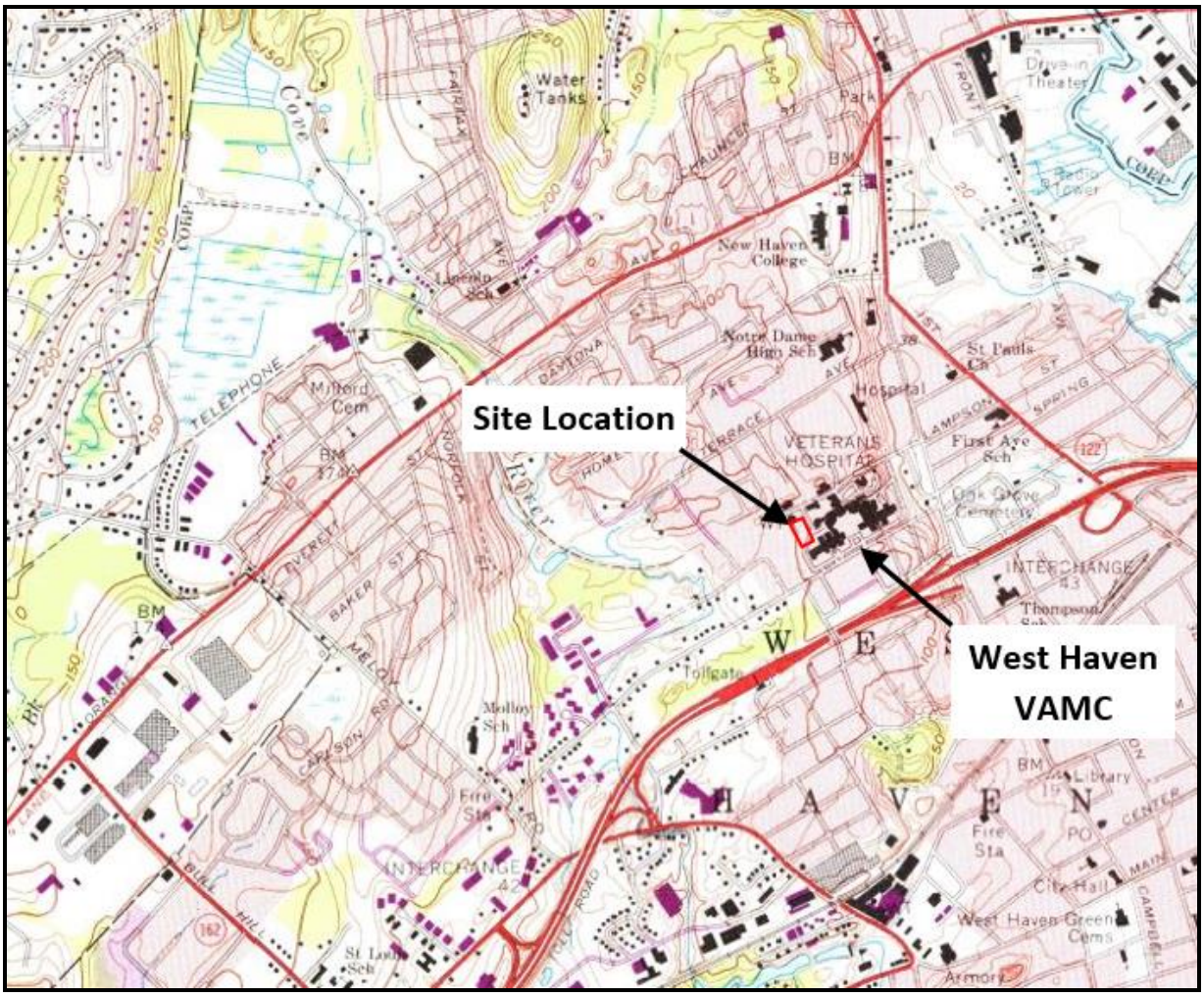

Figure 2
Regional Topographic Map

Figure 3
Vicinity Aerial Map

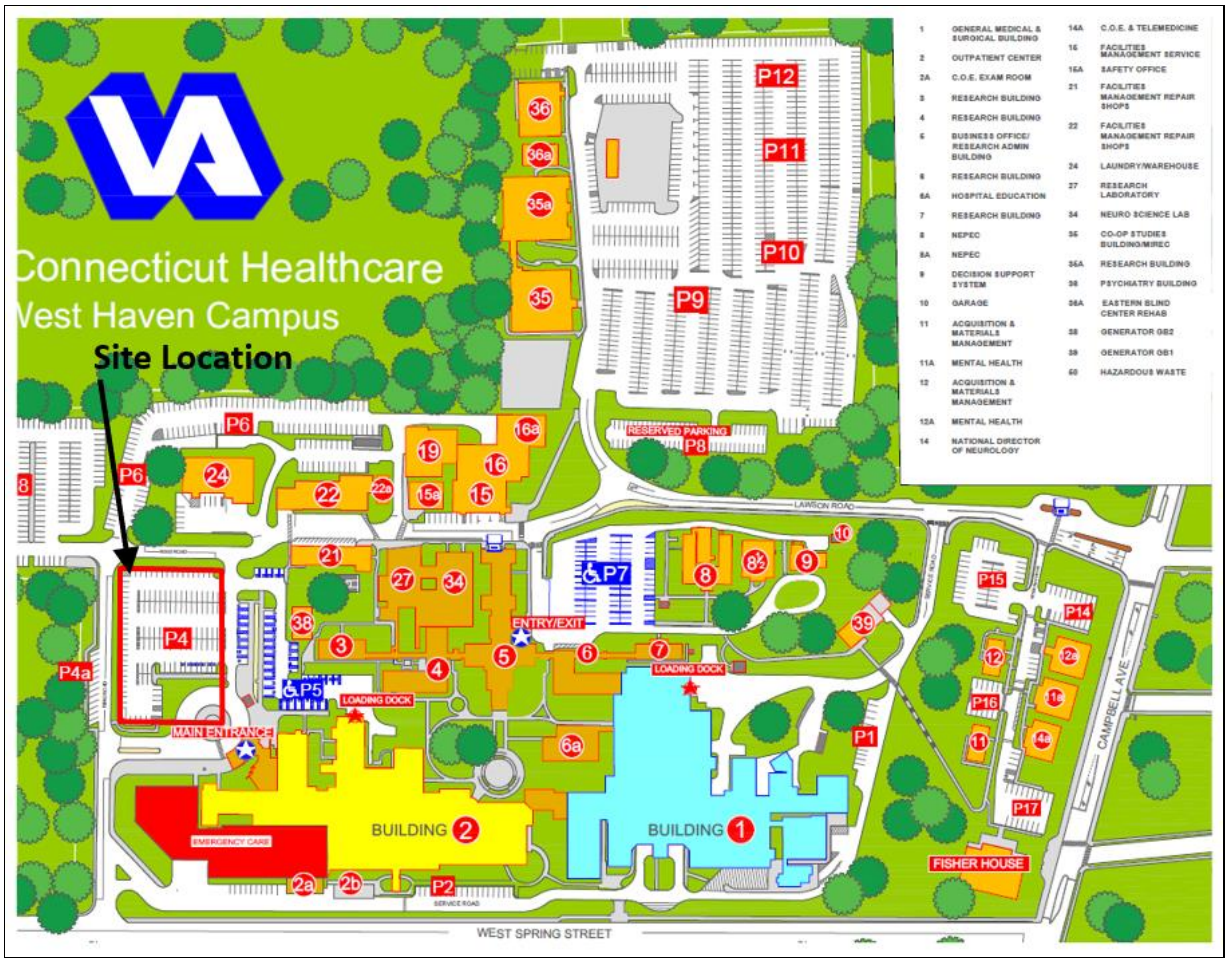

Figure 4
West Haven VAMC Campus Map

Figure 5
Site Aerial Map (2019)

1.3 Purpose and Need

The purpose of the Proposed Action is to provide increased on-site parking capacity to support the current and growing needs of the West Haven VAMC. The proposed parking garage would provide approximately 282 additional parking spaces at the West Haven VAMC campus.

The Proposed Action is needed to address the parking deficiency at the West Haven VAMC. Current parking at the campus is inadequate to meet the current and projected future needs of Veteran patients, VA employees, and visitors to the facility. The campus currently includes approximately 1,500 on-site parking spaces provided by surface parking lots. VA estimates that more than 400 additional parking spaces are needed to meet the current demand for on-campus parking. The overflow of patients and VAMC staff has resulted in the need for two off-site parking leases. Approximately 200 leased parking spaces are located at 318 Washington Avenue (approximately 1.4 miles from the West Haven VAMC campus). The second off-site leased lot is approximately 0.5-mile away and allows for approximately 75 parking spaces. Patients and VAMC

staff routinely wait for extended periods of time to find a parking space or use a VA shuttle from the off-site leased parking lots, causing delays in getting to the VAMC on time and missed appointments. The parking shortage has impacted patient satisfaction and VAMC staff morale. VA plans to build new medical facilities at the West Haven VAMC campus in the next ten years, which will increase the demand for on-campus parking and exacerbate the current parking shortage.

The Proposed Action would create approximately 282 additional on-campus parking spaces to reduce the need for off-site parking by patients and staff at the facility. The additional parking would reduce missed appointments, increase patient satisfaction, and improve VAMC staff commute times and morale.

1.4 Decision-Making

This EA has been prepared to identify, analyze, and document the potential physical, environmental, cultural, and socioeconomic impacts associated with VA's proposed construction and operation of a new parking garage in an existing surface parking lot located in the western portion of the West Haven VAMC campus.

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

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

SECTION 2: DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 Introduction

This Section provides information regarding the Proposed Action and its alternatives, including those that VA initially considered, but eliminated, and the reasons for eliminating them. The screening criteria and process developed and applied by VA for selection of viable alternatives are described, providing an understanding of VA's rationale in ultimately analyzing the Proposed Action and No Action Alternative in this EA.

2.2 Proposed Action

VA's Proposed Action is to construct and operate a new four and one-half story parking garage in the western portion of the West Haven VAMC campus. The parking garage would be constructed in an existing West Haven VAMC parking lot (Lot P4), which is located near the main patient entrance to the hospital. The two-bay parking garage is designed to accommodate the potential future horizontal expansion of one additional bay to provide additional patient parking; however, the potential future expansion is not planned or funded at this time. The proposed 403 parking space garage would provide a net gain of approximately 282 parking spaces for the campus. The parking garage would operate 365 days a year, 24 hours per day.

VA established the size of the proposed parking garage based on the current on-campus parking deficiency at the West Haven VAMC (more than 400 parking spaces), the projected future parking needs of the campus, the space constraints of the campus, and available funding. VA retained Guidon Design, Inc. (Guidon), an architectural and engineering company, to design the parking garage according to VA specifications. VA anticipates selecting a construction contractor in 2022, who would build the parking garage to VA specifications.

The parking garage would meet all requirements set forth in EO 13423: *Strengthening Federal Environmental, Energy, and Transportation Management*. The parking garage would be designed and built to VA design criteria and in general accordance with City of West Haven building and zoning codes.

2.3 Alternatives Analysis

The CEQ and VA regulations for implementing NEPA require reasonable alternatives to be explored and objectively evaluated. Alternatives that are eliminated from detailed study must be identified along with a brief discussion of the reasons for eliminating them. For purposes of analysis, an alternative was considered "reasonable" only if it would enable VA to provide suitable additional on-campus parking that meets the purpose of and need for the Proposed Action. "Unreasonable" alternatives would not enable VA to meet the purpose of and need for the Proposed Action.

2.3.1 Alternatives Development

After identifying the deficiency of on-campus parking spaces to accommodate the needs of West Haven VAMC employees and patients, VA examined various options to reduce the parking demand and/or increase the parking capacity of the campus.

VA currently supports various programs for West Haven VAMC staff, such as the use of public transportation and van pooling, which reduce parking demands at the campus. VA is actively working to expand the use of these programs; however, the expansion of these programs alone is inadequate to address the parking shortage at the campus.

VA also examined the West Haven VAMC campus for the creation of additional on-site surface parking; however, the West Haven VAMC campus is fully developed with no available land to establish additional surface-level parking lots.

Through this analysis, VA determined that the construction of a new parking structure in an existing surface parking lot of the West Haven campus best met its need for additional on-campus parking.

VA identified four potential locations on the campus for the proposed parking garage. VA evaluated each of these locations (described below) based on the following project goals/considerations: maximizing parking, safety and security, vehicle and pedestrian traffic flow, potential future campus expansion, minimizing campus disruption during construction, potential for expansion, and proximity to the main outpatient building (Building 2).

- Option 1 – The parking garage would be located in the existing Lots P9 and P10, located on the northeast side of the West Haven VAMC campus, and would be generally oriented east-west. This arrangement would maintain the current pedestrian crossing, allow for future horizontal expansion, and be close to the planned future hospital expansion. However, this area is already congested and would add to the vehicle counts in this portion of the campus, would require an additional raised pedestrian crossing to separate vehicle and pedestrian interactions, and construction in this location would be at an increased cost and disruption to electrical and information technology (IT) services due to its distance from the hospital. As such, Option 1 was eliminated from further consideration.

- Option 2 – The parking garage would be located in existing Lot P4, located northwest of the main patient entrance into the hospital (Building 2). The garage would be placed so that a future horizontal expansion is possible. Additional improvements would turn the hospital main entrance drive/drop off area into a one-way drive with dedicated delivery and shuttle parking to enhance traffic flow. This garage location is closer to electrical and IT services, decreasing site costs to allow more of the budget to be dedicated to parking. This option included the largest net gain of parking spaces (approximately 282 parking spaces) for the campus. Option 2 is the Proposed Action alternative.

- Option 3 – The parking garage would be located in the southwest corner of existing Lot P9, located adjacent to Lamson Road on the northeast side of the West Haven VAMC campus. The parking garage would generally be oriented north-south. Option 3 would result in the least amount of parking spaces gained and would block the current pedestrian

pathway, increasing the risk of vehicle and pedestrian interactions. As such, Option 3 was eliminated from further consideration.

- Option 4 – The parking garage would be located in existing Lot P9, north of Option 3, and parallel to Buildings 35 and 35A on the northeast side of the West Haven VAMC campus. This proposed location would move most vehicular traffic south of the garage for both the surface and parking garage traffic and would limit vehicle and pedestrian interaction. Additionally, the garage arrangement would allow for a future horizontal expansion; however, the design requires additional interior drive aisles in the existing parking lot which reduce the overall parking gain. As such, Option 4 was eliminated from further consideration.

Through this evaluation, VA determined that Option 2 (the Proposed Action) best met the project goals and objectives and would provide the most additional parking capacity for the West Haven VAMC. Figure 6 depicts the preliminary site plan for the parking garage.

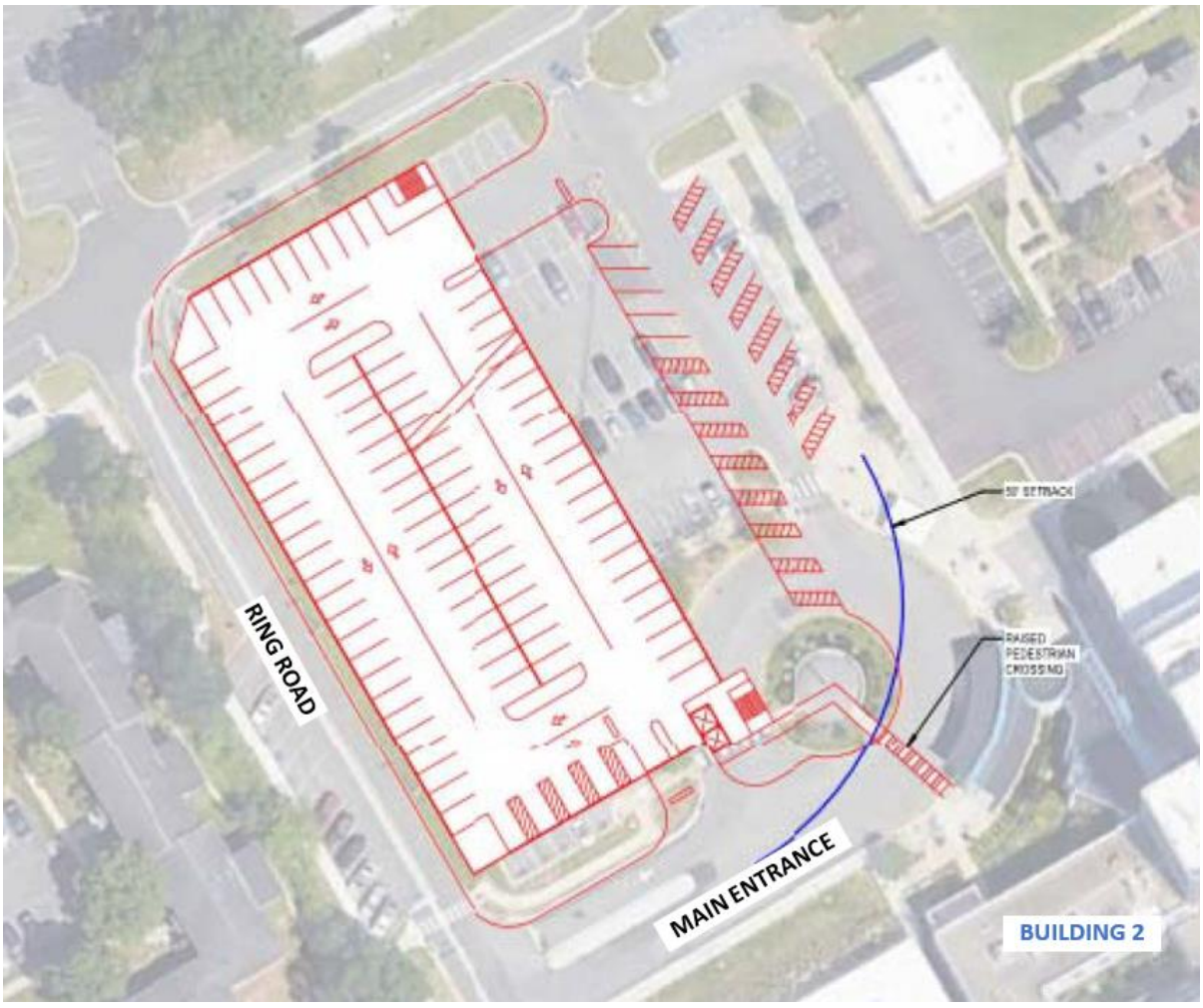

Figure 6 Proposed Parking Garage Site Plan

2.3.2 Evaluated Alternatives

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

Proposed Action

VA proposes to construct and operate a new four and one-half story parking garage in the western portion of the West Haven VAMC campus, near the main patient entrance to the hospital. This area is currently an asphalt-paved campus parking lot (Lot P4). The proposed garage would be a two-bay, approximately 124 feet by 272 feet elevated parking structure and includes a total of approximately 403 parking spaces. One level would be at grade, the other three and a half levels would be elevated. The proposed parking garage is designed to accommodate the potential future horizontal expansion of one additional bay to provide additional patient parking near the main hospital entrance. The main hospital entrance drive, located adjacent to the proposed parking garage, would be turned into a one-way drive with dedicated delivery and shuttle parking to increase traffic flow in the drop off zone. Approximately 121 parking spaces would be removed as a result of the proposed parking garage and entrance reconfiguration, resulting in a net gain of approximately 282 parking spaces for the campus. Entry to the proposed parking garage would be via the main entrance drive to the hospital from Ring Road (accessed from West Spring Street) with one main entrance on the south side and one secondary entrance on the east side of the garage, to allow entrance after a patient is dropped off at the hospital. Figures 4 and 5 depict the proposed parking garage location. Figure 6 depicts the preliminary site plan for the parking garage.

The parking garage would be built to VA's specifications by a VA-selected contractor. The parking garage would be owned, operated and maintained by VA. Construction is anticipated to begin in 2022 and be completed in 2023. Once operational, the parking garage would provide additional on-campus parking for West Haven VAMC patients and visitors, and would reduce the need for off-site parking.

VA currently has off-site parking leases to off-set the shortage of on-campus parking. These off-site leased parking areas would be used to address the temporary reduction in on-campus parking during the construction of the parking garage. Following the completion of the parking garage, the number of spaces required at the off-site leased parking areas would be reduced.

No Action Alternative

Under the No Action Alternative, the Proposed Action would not be implemented and operations at the West Haven VAMC would continue as currently conducted. On-site parking at the campus would continue to be deficient. This deficiency in on-site parking is projected to grow, as Veteran demand for health care services increases and new medical facilities are constructed at the campus. VA would continue to rely on off-site, leased parking lots due to insufficient on-campus parking.

The No Action Alternative would not reduce the parking deficiency at the West Haven VAMC campus and would not meet the purpose of or need for the Proposed Action; however, the No

Action Alternative was evaluated in this EA as required under the CEQ regulations and provides a comparative benchmark analysis against which to analyze the effects of the Proposed Action.

2.3.3 Alternatives Eliminated from Further Consideration

As described in Section 2.3.1, VA considered various alternatives and options to address the on-site parking deficiency at the West Haven VAMC campus, including the reduction in parking demand, the development of additional on-campus surface parking, and various locations for the proposed parking structure. Each of the initially considered alternatives and options, with the exception of the Proposed Action alternative, did not meet VA's requirements. As such, the remaining alternatives and options were eliminated from further consideration.

SECTION 3: AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

This Section describes the baseline (existing) environmental, cultural, and socioeconomic conditions at the proposed parking garage Site (see Figures 1 through 5) and its general vicinity (that is, the Proposed Action's region of influence), with emphasis on those resources potentially affected by the Proposed Action. Appendix C provides photographs, with captions, of the Site and its vicinity. Under each resource area (Sections 3.2 through 3.16), the potential direct and indirect effects of the Proposed Action and the No Action Alternative are identified. Potential cumulative impacts are discussed in Section 3.17.

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

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

Context refers to the significance of an effect to society as a whole (human and national), to an affected region, to affected interests, or to just the locality. Significance varies with the setting of the Proposed Action.

Intensity refers to the magnitude or severity of the effect, and whether it is beneficial or adverse.

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

Resource areas considered in this EA are as follows.

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

3.2 Aesthetics

The approximately one-acre Site is located in the western portion of the West Haven VAMC campus, and is currently an asphalt-paved parking lot located near the main patient entrance to Building 2. The West Haven VAMC campus is located in a fully-developed mixed institutional, residential, and commercial area. Areas adjacent to the northwest, north, east, and southeast of the Site are part of the West Haven VAMC campus and consist of an asphalt-paved parking lot (northwest), one and two-story brick buildings and associated parking lots (north and east), and the 11-story metal and glass skinned Building 2 hospital (southeast). Areas south and southwest of the Site, across Ring Road, are occupied by two and three-story apartment buildings. Additional apartments are located approximately 400 to 600 feet west and northwest of the Site. The Site and surrounding properties are depicted on Figures 3 and 5.

Aesthetics are maintained by the City of West Haven through Chapter 106 (Zoning) of the Code and Charter of the City of West Haven. However, VA (as a federal agency) is exempt from local ordinances.

3.2.1 Effects of the Proposed Action

The Proposed Action would result in less-than-significant adverse aesthetics impacts. The proposed four and one-half story parking garage would be located in the western portion of the West Haven VAMC campus and would be visible from the surrounding residential (apartment) properties to the south and southwest and more distant apartments to the west and northwest, but would not represent an abrupt change to the skyline. The new parking garage would be designed and constructed in a way that is visually consistent with the surrounding West Haven VAMC development, which is comprised of buildings generally ranging from one to eleven stories in height.

3.2.2 Effects of the No Action Alternative

Under the No Action Alternative, no aesthetics impacts would result. No development or changes to the West Haven VAMC campus would occur.

3.3 Air Quality

3.3.1 Ambient Air Quality

The ambient air quality in an area can be characterized in terms of whether or not it complies with the primary and secondary National Ambient Air Quality Standards (NAAQS). The Clean Air Act requires the 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 Clean Air Act):

- Carbon monoxide
- Lead
- Nitrogen oxides
- Ozone
- Particulate matter, divided into two size classes:
  Aerodynamic size less than or equal to 10 micrometers

Aerodynamic size less than or equal to 2.5 micrometers
- Sulfur dioxide

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 as maintenance status if the state completes an air quality planning process for the area. Areas for which no monitoring data is available are designated as unclassified, and are by default considered to be in attainment of the NAAQS. According to the USEPA Green Book (July 2021), New Haven County, Connecticut is currently designated as a non-attainment area for 2008 standard 8-hour ozone (serious), 2015 standard 8-hour ozone (moderate), and a maintenance area for carbon monoxide, PM-10, and PM-2.5.

3.3.2 State and Local Regulations

The Connecticut Department of Energy and Environmental Protection (DEEP) and City of West Haven are responsible for air quality planning and permitting for the West Haven area. CT DEEP developed and promulgated the Abatement of Air Pollution Regulations (Connecticut General Statutes, Section 22a-174), which are implemented by CT DEEP Bureau of Air Management. The City of West Haven maintains local air quality through Chapter 67 (Air Pollution) of the WHCO.

CT DEEP Bureau of Air Management provided several recommendations to reduce smog-forming motor vehicle pollution and greenhouse gas emissions, to meet the State of Connecticut’s targets to put zero emission vehicles on the road, and to meet the federal Clean Air Act’s health-based ozone standards. These recommendations included making 20% of all parking spaces in the project design ready to accept Level 2 electric vehicle charging stations and that half of these parking spaces actually be equipped with Level 2 electric vehicle charging stations. CT DEEP also recommended the use of newer construction equipment that meets the latest USEPA or California Air Resources Board standards for construction projects. If newer equipment cannot be used, CT DEEP recommended equipment with the best available controls on diesel emissions, including retrofitting with diesel oxidation catalysts or particulate filters. Additionally, CT DEEP indicated Section 22a-174-18(b)(3)(C) of the Regulations of Connecticut State Agencies 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. The regulation does not apply to vehicles idling due to traffic conditions.

3.3.3 Sensitive Receptors

Sensitive air quality receptors in the immediate vicinity of the Site include the West Haven VAMC campus in general, multi-family residential properties located across Ring Road to the south and southwest of the Site, Glade Street Park (300 feet west of the Site), and other residential properties in the vicinity of the Site. The closest school is Notre Dame High School, located approximately 1,450 feet northeast of the Site. No additional sensitive receptors were identified in the vicinity of the Site.

3.3.4 Effects of the Proposed Action

Air emissions generated from the Proposed Action would have less-than-significant direct and indirect, short-term and long-term adverse impacts to the existing air quality environment around the Site. Impacts would include short-term and long-term increased air emission levels as a result of construction activities and operation of the proposed parking garage.

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

The proposed parking garage would not have a significant adverse air quality impact during operation. Vehicles using the parking garage are already drawn to the Site area by the existing West Haven VAMC campus facilities. VA does not anticipate an increase in Veteran visits to the West Haven VAMC as a result of the parking garage. Therefore, there would be no significant increase in the number of vehicles, vehicle miles travelled, or associated emissions in the general West Haven VAMC area as a result of the Proposed Action.

Very localized changes to air quality could result from the Proposed Action as Veterans and VAMC staff who currently park in the off-campus leased parking lots and other available areas would park in the parking garage instead of these areas. Minor adverse air quality impacts would occur in the immediate Site area and minor beneficial air quality impacts would occur in the areas currently used for parking. These impacts would be very minor and localized.

The Site is located in a non-attainment area for ozone and a maintenance area for carbon monoxide and particulate matter; therefore, VA would be subject to the General Conformity Rule of the Clean Air Act. Based on similar construction projects, criteria pollutant emissions from the Proposed Action construction activities are anticipated to be well below the *de minimis* emission levels. Consequently, a Conformity Determination is not required.

3.3.5 Effects of the No Action Alternative

Under the No Action Alternative, no air quality impacts associated with VA's Proposed Action would result. Air emissions associated with the current parking conditions at the West Haven VAMC campus would remain.

3.4 Cultural Resources

The original hospital was constructed at the campus in the 1910s (dedicated in 1918) for the care of patients with tuberculosis. VA purchased the hospital in the late 1940s and constructed two new, large hospital buildings (Buildings 1 and 2) on the southern portion of the campus in the 1950s. Exterior cladding was added over top of the existing brick façade of the two main 1950s hospital buildings and the windows were replaced and/or added in the new cladded façade in the 1990s. However, many of the original, smaller, 1910s-era hospital buildings remain intact with limited alteration. VA is in the process of evaluating many of its campuses across the country for potential listing on the National Register of Historic Places (NRHP). It is anticipated that the portion of the West Haven VAMC campus that contains the original hospital buildings will be considered eligible for listing on the NRHP as a Historic District with several extant buildings as contributing resources. The two main hospital buildings have been heavily altered since their construction and are not considered eligible for listing on the NRHP or contributing resources to the potential Historic District.

Based on a review of historical aerial photographs and topographic maps, the proposed parking garage Site was unimproved land in the early 1900s, unimproved grassy or agricultural land from at least 1934 to at least 1940, disturbed land associated with the construction of the main hospital buildings in 1951, occupied by a baseball diamond and tennis courts in 1963, unimproved grassy land in 1966, and has been occupied by a paved parking lot associated with the West Haven VAMC since at least 1972.

3.4.1 Effects of the Proposed Action

VA has determined that no historic properties potentially eligible for listing on the NRHP would be affected by the proposed parking garage. No historic buildings are located at the proposed parking garage Site, nor is there evidence that historic buildings were formerly located on the Site. No archaeological resources are known to exist at the Site and the history of ground disturbance in early 1950s (during the main hospital building construction) and in late 1960s/early 1970s (during the parking lot construction) would likely have disturbed any archaeological resources that may have been present so that no intact artifacts remain.

Although the original hospital buildings at the West Haven VAMC campus may be considered part of an NRHP-eligible Historic District, the boundaries of the Historic District would not include the site. The closest 1910s-era hospital buildings are located approximately 125 to 150 feet north and east of the proposed parking garage Site. The proposed parking garage would be associated with Building 2, a large (11 stories) building that was heavily renovated in the 1990s with a metal and glass skin. The proposed parking garage would be consistent with the character and massing of Building 2.

In May 2021, VA initiated National Historic Preservation Act (NHPA) Section 106 consultation with the Connecticut State Historic Preservation Office (CT SHPO) regarding the Proposed Action. VA submitted information regarding historic properties in the Site area, the history of the Site, and the Proposed Action to CT SHPO and requested CT SHPO concurrence that the Proposed Action would have no effect on NRHP-listed or eligible historic properties (Appendix A). In a letter dated July 23, 2021, CT SHPO noted that the West Haven Veterans Administration Hospital is eligible for listing on the NRHP; however, the approximately one-acre Site does not contribute to the significance of the Historic District. CT SHPO concluded the Proposed Action would have no adverse effects to historic resources.

Four federally recognized Native American tribes [Delaware Tribe of Indians, Mohegan Indian Tribe of Connecticut, Mashantucket Pequot Indian Tribe, and Narragansett Indian Tribe] were identified as having possible ancestral ties to the West Haven area. VA invited each of these Tribes to provide input regarding the Proposed Action. Responses were received from the Delaware Tribe of Indians and the Mohegan Indian Tribe of Connecticut. The Mohegan Indian Tribe of Connecticut indicated they do not have any concerns with the project as it is proposed, but requested that they be contacted upon any inadvertent discoveries. The Delaware Tribe provided no input on the project.

3.4.2 Effects of the No Action Alternative

Under the No Action Alternative, no cultural resources impact would occur.

3.5 Geology and Soils

The West Haven VAMC campus is located in the southern portion of New Haven County. A review of the New Haven, Connecticut USGS Topographic Quadrangle (dated 2012) indicates the West Haven VAMC campus is relatively level. The campus and Site are at an elevation of approximately 100 feet above mean sea level (amsl). From the Site, the area slopes down to the southwest toward Cove River (approximately 70 feet amsl), located approximately 950 feet west-southwest of the Site (see Figure 2).

Connecticut lies within the Coastal Lowland portion of the New England Upland Physiographic Section of the New England Physiographic Province. Post-glacial deposits in the area include floodplain alluvium consisting of sand, gravel, silt, and some organic material on the floodplains of modern streams. The post-glacial deposits are generally thin (commonly less than five feet thick) and overlay sandy/stony glacial ice-laid deposits generally less than 10 to 15 feet thick. The glacial and post-glacial deposits are underlain by Precambrian igneous rocks (primarily granite) and bedrock outcropping is common (U.S. Geological Survey, 1992).

In response to a request for information regarding the Site, the U.S. Department of Agriculture (USDA), Natural Resource Conservation District (NRCS) provided a custom Soil Resource Report that identified the Site soils as Udorthents-Urban land complex. The Udorthent soils are noted to be well drained loam, gravelly loam, and very gravelly sandy loam soils that are nearly level and gently sloping areas where the original soils have been cut away or covered with a loamy fill material. Urban land consists mainly of buildings, streets, and parking lots, with small areas of open space where the soils have been disturbed. Very little natural soil remains and identification of the original soils is not feasible.

According to the Northeast States Emergency Consortium and the USGS, the northeast United States is characterized as a region of low to moderate earthquake hazard. The northeastern United States earthquakes are intraplate earthquakes that occur in the center of a tectonic plate. Most of the earthquakes generated in this area are of small magnitude and are not damaging (The Northeast States Emergency Consortium, 2021). The closest earthquakes (registering above 2.0 on the Richter Scale) to the West Haven area originated approximately 3.5 and 4 miles to the east on October 24, 1980 and registered at 3.0 and 3.1 magnitude, respectively (U.S. Geological Survey, 2021).

3.5.1 Prime and Unique Agricultural Land Soils

Prime and Unique Farmlands are regulated in accordance with the Farmland Protection Policy Act (7 USC 4201, et seq.) to ensure preservation of agricultural lands that are of Statewide or local importance. Soils designated as prime farmland are capable of producing high yields of various crops when managed using modern farming methods. Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion. Unique farmlands are also capable of sustaining high crop yields and have special combinations of favorable soil and climate characteristics that support specific high-value foods or crops. According to the USDA NRCS Soil Resource Report, Site soils are not characterized as prime farmland.

3.5.2 Effects of the Proposed Action

Less-than-significant impacts to geology and soils are anticipated. Although some minor grading would be required, the Site is currently a mostly level parking lot; it is anticipated that the parking garage would be constructed near current grades. No significant impacts to mineral resources 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. No prime farmland soils would be impacted by the Proposed Action.

During construction, less-than-significant, direct and indirect, short-term soil erosion and sedimentation impacts would be possible as the Site is graded and the proposed parking garage is constructed. Construction would remove the existing asphalt pavement, disturb the soil surface, and compact the soil. The soil would then be susceptible to erosion by wind and surface runoff. Exposure of the soils during construction has the potential to result in increased sedimentation to stormwater management systems and offsite discharges of sediment-laden runoff. However, such potential adverse erosion and sedimentation effects would be prevented through utilization of appropriate BMPs (Section 5) and adherence to the terms of an approved CT DEEP-issued General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities/National Pollutant Discharge Elimination System (NPDES) permit.

Once construction is complete, no long-term erosion and sedimentation impacts would be anticipated. Areas where soils are exposed during construction would be covered with pavement. No long-term soil erosion impacts would occur as a result of impervious surfaces onsite; these effects would be mitigated by the including appropriately designed stormwater management systems included in the site design.

3.5.3 Effects of the No Action Alternative

Under the No Action Alternative, no construction would occur. No impacts to soils, topography, or geology would occur.

3.6 Hydrology and Water Quality

3.6.1 Surface Waters

The City of West Haven is included in Connecticut's South Central Coast Watershed. There are no surface waters present on or adjacent to the Site. The nearest surface water, the Cove River, is located approximately 950 feet west-southwest of the Site.

3.6.2 Groundwater

Aquifers that supply fresh groundwater to the Site vicinity include New England crystalline rock aquifers. In areas, such as the Site, 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 (U.S. Geological Survey, 1995). However, according to the USEPA map of Sole Source Aquifer locations, the West Haven VAMC campus is not located within the area of a sole source aquifer.

3.6.3 Effects of the Proposed Action

The proposed parking garage would be a slab-on-grade building, which would use little or no water, during operation. If shallow groundwater is encountered during construction, appropriate groundwater engineering controls would be utilized to ensure no adverse effects to groundwater. Impacts to groundwater are anticipated to be less than significant.

The Proposed Action would not result in significant impacts to surface waters, provided that the BMPs described in Section 5 are implemented. These BMPs would control construction-related impacts of soil erosion and sedimentation and would provide proper stormwater management following the completion of the parking garage construction. The stormwater management systems would be designed and constructed in accordance with CT DEEP and the City of West Haven requirements.

The Site is currently an asphalt-paved parking lot that discharges directly into the West Haven VAMC stormwater management system. No additional impervious surfaces would be created for the proposed parking garage. Stormwater from the top level of the parking garage would be directed into a detention basin located beneath the ramp of the parking garage to control rate and volume of stormwater discharge during storm events. The detention basin would also remove sediment and other materials from the stormwater. Stormwater from the detention basin would pass through a hydrodynamic separator to remove additional sediments and oils prior to discharging into the existing West Haven VAMC stormwater management system. The West Haven VAMC Stormwater Management Plan (part of the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4) permit requirements) would be amended to add the parking garage.

Stormwater on the interior levels of the parking garage would pass through and an oil/grit separator and discharge to the existing campus sanitary sewer system.

The City of West Haven Inland Wetland Watercourse Agency indicated based on the location, the Site is not in an area with surface water and groundwater resources and the Proposed Action would not impact any watercourse.

3.6.4 Effects of the No Action Alternative

Under the No Action Alternative, no construction would occur. Stormwater from the existing parking lot would continue to discharge to the West Haven VAMC stormwater management system.

3.7 Wildlife and Habitat

3.7.1 Vegetation and Wildlife

The Site is located in an area of the City of West Haven that has been developed since at least the 1910s. The Site consists of an asphalt-paved parking lot with a small area of landscaped grass and a few, small, planted trees along the parking lot periphery. The properties surrounding the Site are fully developed with some associated landscaped areas and consist of surface parking lots and buildings associated with the West Haven VAMC to the northwest, north, northeast, east, and southeast. The areas to the south and southwest are occupied by multi-family residential apartment complexes. Vegetation communities at the Site support minimal wildlife species associated with urban areas in West Haven.

3.7.2 Threatened and Endangered Species

As part of the preparation of this EA, the USFWS and state natural resources agencies were contacted to identify the potential for the presence of state or federally listed species on or in the vicinity of the Site.

The USFWS did not respond to the information request. The USFWS Information for Planning and Conservation (IPaC) internet application identified no threatened, endangered, or candidate species for the Site vicinity. Additionally, no critical habitat for protected species was identified at the Site. The IPaC report is provided in Appendix D.

CT DEEP indicated the Natural Diversity Data Base (NDDB), maintained by CT DEEP's Wildlife Division, contains no records of extant populations of federally listed endangered or threatened species or species listed by the state, pursuant to Section 26-306 of the Connecticut General Statutes, as endangered, threatened or special concern at the Site. An application for NDDB review request was submitted to the Wildlife Division to verify that there would be no impact to area state or federally listed species. CT DEEP verified that negative impacts to listed species resulting from the Proposed Action are not anticipated. The NDDB determination is good for two years (through April 28, 2023).

The City of West Haven Inland Wetland Watercourse Agency indicated the proposed parking garage would not impact any parks, nature preserves, conservation areas, designated wild or scenic rivers, migratory bird habitats or special wildlife areas.

3.7.3 Effects of the Proposed Action

Based on information from the USFWS IPaC report, CT DEEP, and the City of West Haven Inland Wetland Watercourse Agency regarding protected species in the Site area, and the nature of the Site (mostly asphalt-paved) and surrounding area, the Proposed Action would not affect state or federally listed protected species or their critical habitats.

In addition, no impacts to species protected under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act are anticipated.

3.7.4 Effects of the No Action Alternative

Under the No Action Alternative, no impacts to biological resources would occur.

3.8 Noise

The existing noise environment around the Site is dominated by operations (mostly vehicle traffic) associated with the West Haven VAMC, with lower noise levels associated with vehicle traffic on local roads and the apartment complexes in the Site area. The Connecticut Turnpike (Interstate 95), a busy and noisy road, is located approximately 900 feet south of the Site. No other notable noise-generating sources are present in the immediate vicinity of the Site. As such, the Site's noise environment can be characterized as that typical of an urban area. The City of West Haven maintains noise levels in the City through Chapter 154 (Noise) of the WHCO.

3.8.1 Sensitive Receptors

Sensitive noise receptors in the vicinity of the Site include the West Haven VAMC campus medical facilities, apartments located south and southwest of the Site across Ring Road, Glade Street Park (300 feet west of the Site), and other residential properties in the vicinity of the Site.

3.8.2 Effects of the Proposed Action

The Proposed Action would have short-term impacts to the existing noise environment due to construction activities. Noise generating sources during construction activities would be primarily associated with standard construction equipment and construction equipment transportation. These increased noise levels could directly affect the neighboring areas.

Construction activities generate noise by their very nature and are highly variable, depending on the type, number, and operating schedules of equipment. Construction projects are usually executed in stages, each having its own combination of equipment and noise characteristics and magnitudes. Construction activities are expected to be typical of other similar construction projects and would include mobilization, site preparation, excavation, placing foundations, utility development, heavy equipment movement, and paving roadways and parking areas. The most prevalent noise source at typical construction sites is the internal combustion engine. General construction equipment using engines includes heavy, medium, and light equipment such as excavators; roller compactors; front-end loaders; bulldozers; graders; backhoes; dump trucks; water trucks; concrete trucks; pump trucks; utility trucks; cranes; and lube, oil, and fuel trucks.

Peak noise levels vary at a given location based on line of sight, topography, vegetation, and atmospheric conditions. In addition, peak noise levels would be variable and intermittent because each piece of equipment would only be operated when needed. However, peak construction noise levels would be considerably higher than existing noise levels. Relatively high peak noise levels in the range of 93 to 108 dBA (decibels, A-weighted scale) would occur on the active construction site, decreasing with distance from the construction areas. Generally speaking, peak noise levels within 50 feet of active construction areas and material transportation routes would most likely be considered “striking” or “very loud”, comparable to peak crowd noise at an indoor sports arena. At approximately 200 feet, peak noise levels would be loud - approximately comparable to a garbage disposal or vacuum cleaner at 10 feet. At 0.25 miles, construction noise levels would generally be quiet enough so as to be considered insignificant, although transient noise levels may be noticeable at times. Table 1 presents peak noise levels that could be expected from a range of construction equipment during proposed construction activities.

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

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

Areas that could be most affected by noise from construction are those closest to the construction footprint, including the apartments located across Ring Road from the Site and the remaining West Haven VAMC campus. Indoor noise levels would be expected to be 15-25 decibels lower than outdoor levels. In addition, BMPs (described in Section 5) would be implemented to reduce noise impacts. Construction activities would be conducted in accordance with the City of West Haven noise control ordinance. Direct construction noise impacts would be temporary and less than significant.

Indirect impacts include noise from workers commuting and material transport. Area traffic volumes and noise levels would increase slightly as construction employees commute to and from work at the project area, and delivery and service vehicles (including trucks of various sizes) transit to and from the site. Persons in the project area would experience temporary increases in traffic noise during daytime hours. These effects are not considered significant because they would be temporary, intermittent, and generally similar to existing traffic noise levels in the area.

Table 1
Peak Noise Levels

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

Combined Peak Noise Level (Bulldozer, Jackhammer, Scraper)					
Combined Peak Noise Level	**Distance from Source**				
	50 feet	**100 feet**	**200 feet**	**¼ mile**	**½ mile**
	103	97	91	74	68

Source: (Tipler, 1976)

Operational activities associated with the proposed parking garage would include vehicle traffic to and from the Site. Local vehicular traffic and associated noise would increase due to the parking garage. However, this traffic would not produce excessive noise; noise levels would be generally consistent with existing noise levels at the Site and the West Haven VAMC campus. Operational noise impacts would be less than significant.

3.8.3 Effects of the No Action Alternative

Under the No Action Alternative, the noise environment of the Site would not change. Vehicular noise associated with the existing Site parking lot would remain.

3.9 Land Use

The Site is approximately one acre and consists of an asphalt-paved parking lot associated with the West Haven VAMC with minor periphery landscaping. The Site is located within a fully

developed, mixed institutional, residential, and commercial urban area. Surrounding properties are mostly occupied by parking lots and buildings associated with the West Haven VAMC. Properties south and southwest of the Site, across Ring Road, are occupied by apartment complexes. The Site and remaining portions of the West Haven VAMC are owned by the federal government and are zoned Public Facility (PF). Hospitals and government offices/facilities are permitted uses of PF zoning districts. The multi-family residential apartments to the south and southwest are currently zoned Multi Family Residence (R4). Zoning designations for the Site and surrounding properties are shown on Figure 7.

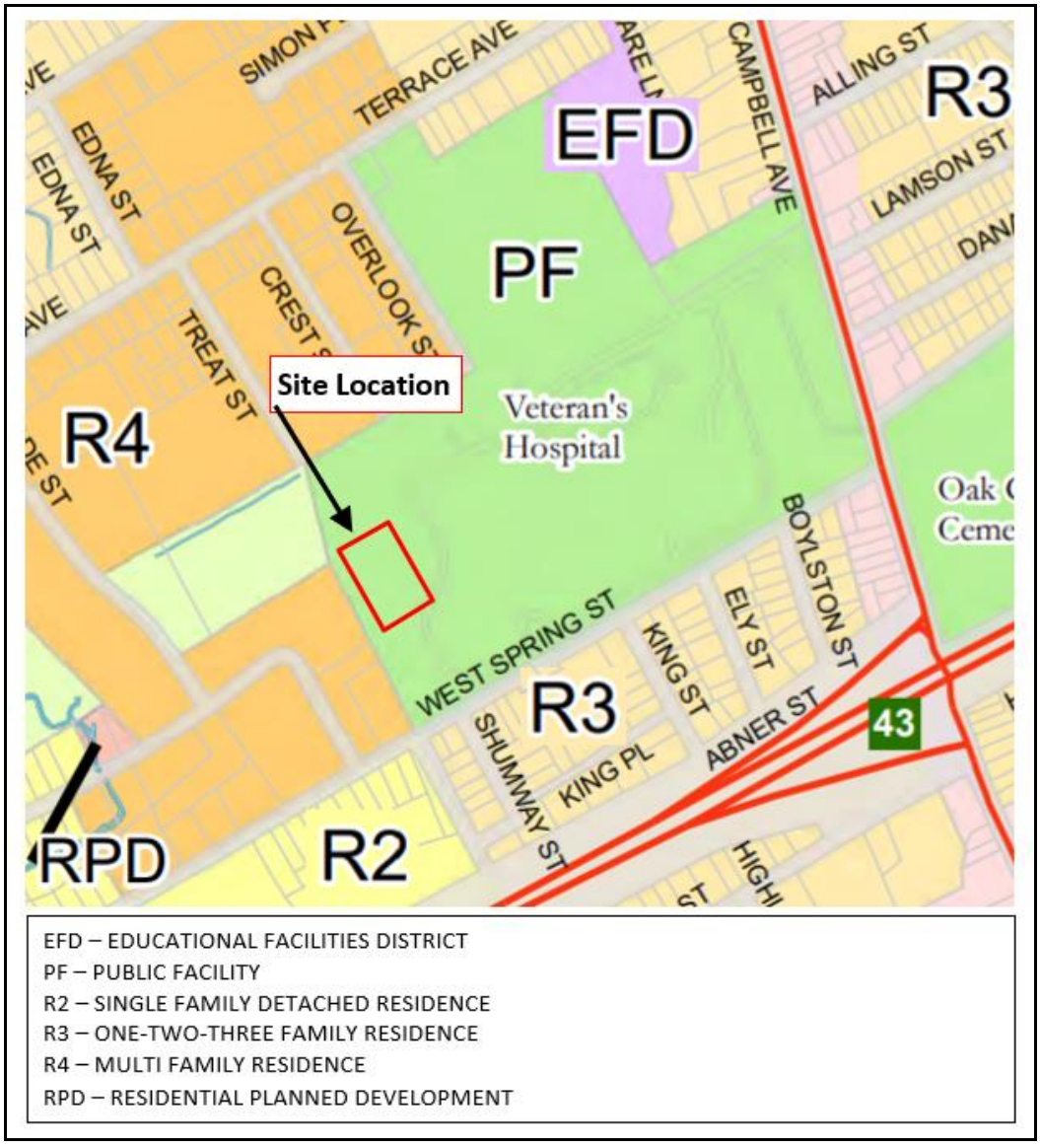

Figure 7
Zoning Map

3.9.1 Effects of the Proposed Action

Although, as a federal agency, VA is not subject to local zoning regulations or restrictions, the proposed parking garage would be consistent with local zoning and compatible with surrounding land use. In addition, the proposed parking garage would be consistent with the current use of the Site (a parking lot for the West Haven VAMC). No adverse onsite building function or architecture impacts are anticipated. The parking garage would be designed and constructed to ensure it is consistent with other West Haven VAMC buildings and surrounding area development.

3.9.2 Effects of the No Action Alternative

Under the No Action Alternative, no land use impacts would occur. The Site would remain a surface parking lot for the West Haven VAMC.

3.10 Wetlands, Floodplains, and Coastal Zone Management

3.10.1 Wetlands

No wetlands or natural surface waters were identified at the Site or surrounding properties on the USFWS National Wetland Inventory (NWI) internet wetland mapper. No visual evidence of wetlands or natural water features were observed at the Site or surrounding properties during the Site reconnaissance. The City of West Haven Inland Wetland Watercourse Agency indicated the closest wetland (associated with Cove River) is located approximately 950 feet south of the Site. The NWI map for the Site vicinity is shown on Figure 8.

Figure 8
NWI Wetlands Map

3.10.2 Floodplains

The Federal Emergency Management Agency (FEMA) National Flood Hazard Flood Layer FIRMette internet mapping application was used to determine if the Site or surrounding properties are located in designated floodplains. The Site and surrounding properties are not located within the 100-year or 500-year floodplain (Figure 9).

Figure 9
Floodplains Map

3.10.3 Coastal Zone

The Coastal Zone Management Act (CZMA) was promulgated to control nonpoint pollution sources that affect coastal water quality. The CZMA of 1990, as amended (16 USC 1451 et seq.) encourages states to preserve, protect, develop, and where possible, restore or enhance valuable natural coastal resources such as wetlands, floodplains, estuaries, beaches, dunes, barrier islands, and coral reefs, as well as the fish and wildlife using those habitats. In Connecticut, the CZMA is administered by the CT DEEP-Coastal Management Program.

According to the Connecticut Environmental Conditions Online data viewer, the Site is located outside of the designated coastal zone boundary (Figure 10).

Figure 10
Coastal Zone Map

3.10.4 Effects of the Proposed Action

No wetlands were identified on or near the Site. In addition, the Site is not located within the 100-year or 500-year floodplains or a designated coastal zone. No impacts to wetlands, floodplains, or coastal zones would occur as a result of the Proposed Action.

3.10.5 Effects of the No Action Alternative

Under the No Action Alternative, no impacts to wetlands, floodplains, or coastal zones would occur.

3.11 Socioeconomics

The following subsections identify and describe the socioeconomic environment of the City of West Haven, New Haven County, and the State of Connecticut. Presented data provide an understanding of the socioeconomic factors that have developed the area. Socioeconomic areas of discussion include the local demographics, regional and local economy, local housing, and local recreation activities. Data used were collected from the 2010 Census of Population and Housing (U.S. Census Bureau, 2021), subsequent U.S. Census Bureau data, and the U.S. Department of Labor, Bureau of Labor Statistics (U.S. Bureau of Labor Statistics, 2021).

3.11.1 Demographics

Demographic data for the State of Connecticut is presented in Table 2. The City of West Haven has a larger minority population and slightly lower high school graduation rate than New Haven County and the State of Connecticut as a whole. Minority population rates specific to the Site area are discussed in Section 3.16 (Environmental Justice).

Table 2
Demographic Data for West Haven, New Haven County, and Connecticut

Area	All Individuals (2019)	Population Under 18 Age Years (2019)	Population Over 65 Age Years (2019)	Minority (2019)	High School Graduates (2019)	Veterans (2019)
Connecticut	3,565,287	20.4%	17.7%	34.1%	90.6%	167,521
New Haven County	854,757	20.0%	17.9%	38.4%	90.1%	38,410
West Haven	54,620	19.7%	13.7%	49.7%	87.9%	2,751

Source: U.S. Census Bureau, 2021

3.11.2 Employment and Income

The City of West Haven has a lower median household income than New Haven County and the State of Connecticut as a whole. New Haven County and the City of West Haven have a slightly higher population below the poverty level than the State of Connecticut (Table 3). Household income specific to the Site area is discussed in Section 3.16. The unemployment rate in the City of West Haven is higher than New Haven County, but lower than the State of Connecticut as a whole.

Table 3
Regional Income for West Haven, New Haven County, and Connecticut

Area	Number of Households	Median Household Income	Population Below Poverty Level	Unemployment Rate May 2021
Connecticut	1,370,746	$78,444	10.0%	8.1%
New Haven County	330,572	$69,905	12.0%	6.3%
West Haven	19,886	$62,985	11.8%	7.2%

Sources: U.S. Census Bureau, 2021; U.S. Bureau of Labor Statistics, 2021

3.11.3 Protection of Children

Because children may suffer disproportionately from environmental health risks and safety risks, Executive Order (EO) 13045, *Protection of Children From Environmental Health Risks and Safety Risks*, was introduced in 1997 to prioritize the identification and assessment of environmental health risks and safety risks that may affect children and to ensure that federal agencies' policies, programs, activities, and standards address environmental risks and safety risks to children. This section identifies the distribution of children and locations where numbers of children may be proportionately high (such as schools, child care centers, family housing) in areas potentially affected by the Proposed Action.

Due to the Site's location at a VAMC campus, children are not regularly present. Children may be present in the off-site apartment complexes southerly and southwesterly adjoining the Site and intermittently present in Glade Street Park, located approximately 300 feet west of the Site. No additional schools, playgrounds, or child care centers where children may be present are located within the immediate vicinity of the Site.

3.11.4 Commuting Patterns

Residents of West Haven are largely dependent on personal automobiles for transportation to and from work. Other methods of transit include public transportation [CT Transit], carpooling, and walking. The average commuting time in West Haven was approximately 23 minutes in 2019.

3.11.5 Effects of the Proposed Action

The Proposed Action is anticipated to result in minor short-term, beneficial impacts to local employment and personal income. Construction of the proposed parking garage would provide temporary construction jobs in the private sector, thus providing short-term socioeconomic benefit to the Site area. However, the operation of the parking garage would not provide long-term employment for the area. The proposed parking garage would result in long-term beneficial socioeconomic impacts (reduced patient stress and missed medical appointments, increased patient and VAMC staff satisfaction) by providing additional on-campus parking for the West Haven VAMC.

No significant adverse health or safety risks to children are anticipated to result from construction or operation of the new parking garage. Children would only be present at the Site as visitors; all Veterans are above the age of 18. Construction areas would be secured to prevent unauthorized

access by children from the nearby residential areas. The construction contractor would limit and control construction dust and noise as discussed in Section 5, thereby minimizing adverse effects to children in the area.

3.11.6 Effects of the No Action Alternative

The No Action Alternative would result in no construction and no increased short-term or long-term economic benefit due to VA's action.

Most importantly, the No Action Alternative would not enable VA to provide adequate parking for the West Haven VAMC and would result in an adverse, long-term impact to U.S. Veterans.

3.12 Community Services

The Site is located within the West Haven Public School District, which serves all of West Haven and includes six elementary schools, two middle schools, and one high school. Notre Dame High School (a private school) is located approximately 1,450 feet northeast of the Site. West Haven is also the home of the University of New Haven located approximately 2,500 feet north of the Site. No other schools are located within 0.5 mile of the Site (West Haven School District, 2021).

West Haven Parks and Recreation maintains numerous urban parks and recreational facilities through the City of West Haven, with a greater concentration of parks located along the shoreline of Long Island Sound. Other than Glade Street Park, located approximately 300 feet to the west, there are no other parks or recreational facilities within 0.5-mile of the Site.

The City of West Haven provides police protection, local road and bridge maintenance, fire protection, and emergency medical services to the Site and its vicinity.

Other than the West Haven VAMC, there are no other hospitals within one mile of the Site.

Public transportation is provided by the CT Transit system, with bus stops located northeast of the Site, including the 265 and 268 bus lines, which make stops at the West Haven VAMC and surrounding areas. Additional information regarding public transportation in the Site vicinity is provided in Section 3.14.

3.12.1 Effects of the Proposed Action

No significant additional load is expected to be placed on the local fire or police departments as the result of the Proposed Action. Use of other public or community services as a result of the proposed parking garage is not expected. As such, the Proposed Action is expected to have a negligible impact on local public services.

3.12.2 Effects of the No Action Alternative

Under the No Action Alternative, the parking garage would not be constructed and no impacts to community services would occur.

3.13 Solid Waste and Hazardous Materials

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

Based on a review of historical aerial photographs and topographic maps, the proposed parking garage Site was unimproved land in the early 1900s, unimproved grassy or agricultural land from at least 1934 to at least 1940, disturbed land associated with the construction of the main hospital buildings in 1951, occupied by a baseball diamond and tennis courts in 1963, unimproved grassy land in 1966, and has been occupied by a paved parking lot associated with the West Haven VAMC since at least 1972. No significant petroleum product or hazardous substance storage, use, or handling is known to have occurred at the Site.

3.13.1 Effects of the Proposed Action

The Proposed Action could result in short-term, less-than-significant adverse impacts due to the increased presence and use of petroleum and hazardous substances during construction. An increase in construction vehicle traffic would increase the likelihood for release of vehicle operating fluids (such as oil, diesel, gasoline, and antifreeze) and maintenance materials. As such, a less-than-significant, direct, short-term adverse impact from petroleum and hazardous substance use during construction is possible. Implementation of standard construction BMPs would serve to ensure this impact is further minimized.

No contamination is suspected to be present at the Site. Consequently, no contaminated soil management issues or potential unacceptable exposures for construction workers or future site occupants are anticipated.

No significant adverse long-term impacts during operation of the parking garage are anticipated. No significant storage, handling, or use of petroleum or hazardous substances would occur during operation of the facility.

3.13.2 Effects of the No Action Alternative

Under the No Action Alternative, no construction by VA would occur, with no potential for less-than-significant, direct, short-term adverse impacts from petroleum and hazardous substance use during construction.

3.14 Transportation and Parking

Traffic in the vicinity of the Site is regulated by the Connecticut Department of Transportation (CDOT) and the City of West Haven, Public Works Department.

Public transportation is provided to the vicinity of the Site by CT Transit via bus stops located northeast of the Site 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, approximately 1,400 feet east of the Site) and at the intersection of West Spring Street and Stevens Avenue (Bus Route 268, approximately 370 feet south of the Site) on and/or adjacent to the West Haven VAMC campus.

Primary vehicular access to the West Haven VAMC area campus is provided by the Connecticut Turnpike (Interstate 95), a six-lane divided highway, located approximately 900 feet southeast of the Site. Traffic approaches the campus from I-95 from Campbell Avenue and 1st Avenue (Route 122), two-lane roads. The Interstate 95 exit ramps to Campbell Avenue and 1st Avenue are fully signalized. The campus is bordered to the east by Campbell Avenue and to the south by Spring Street. Traffic enters 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.

A Traffic and Safety Review conducted by Ron Műller & Associates in 2014 evaluated circulation, access, and safety of the West Haven VAMC campus to make recommendations of potential improvement measures to increase pedestrian and vehicular safety and capacity. The Traffic Study stated that all of the studied intersections at the West Haven VAMC campus operate at Level of Service (LOS) of C or better, with the exception of the weekday PM peak southbound approach to the intersection of Ring Road and Lamson Road (LOS D), located approximately 700 feet northeast of the Site. This intersection was reconfigured in 2019 to increase safety and efficiency and likely, currently operates at a LOS C or better. The Traffic Study stated that Ring Road near the main hospital (Site) entrance operated at a LOS of A/B.

Primary access to the existing Site parking lot is provided by Ring Road (from the south) with secondary access from Lamson Road (from the east).

Roads near the Site are illustrated on Figures 2, 3, 4, and 5. Refer to Table 4 for roadway information for the West Haven VAMC campus area.

Table 4
Area Roadways

Route	Direction	Road Width (feet)	Lanes	Average Daily Traffic	Estimated Level of Service
Interstate 95 Exit ramps	Northeast-Southwest	108	6 lane divided highway with shoulders	At Campbell Avenue 14,800 (2012) At 1st Avenue 14,100 (2012)	LOS C or better
Campbell Avenue	North-South	38	2 lanes plus street parking and dedicated turn lane at Spring Road	At Lamson Road 4,170 (2014)	LOS A/B
1st Avenue (Route 122)	Northwest-Southeast	38	2 lanes plus street parking and dedicated turn lane at Spring Road	Near Spring Street 16,000 (2012)	LOS C or better
Lamson Road	East-West	24	2 lanes	At Lamson Road 4,170 (2014)	LOS A/B
Spring Street	East-West	28	2 lanes plus street parking	West of Ring Road 4,100 (2012)	LOS C or better
Ring Road	East-West north of Site and North-South west of Site	24	2 lanes	At Spring Street 3,136 (2014)	LOS A

Average daily traffic data sources: Ron Műller & Associates, 2014; CDOT, 2021; and CDOT, 2012.

Patient, staff, and visitor parking at the West Haven VAMC is currently provided by 18 surface lots across the campus, totaling approximately 1,500 parking spaces. Primary parking is provided by parking lots P9, P10, P11, and P12, located in the northeastern portion of the campus. Approximately 121 parking spaces are provided by the Site parking lot (P4). In addition to on-campus parking, VA leases two off-site parking lots to address the shortage of on-campus parking. Approximately 200 parking spaces are leased at 318 Washington Avenue (approximately 1.4 miles from the campus) and approximately 75 parking spaces are leased at a second lot, located approximately 0.5 mile from the campus. The leased parking lots are serviced with a VA shuttle van. VA estimates that more than 400 additional parking spaces are needed to meet the current demand for on-campus parking.

3.14.1 Effects of the Proposed Action

Construction of the proposed parking garage at the Site would have short-term, direct and indirect, transportation impacts. Construction traffic, consisting of trucks, workers' personal vehicles, and construction equipment, would increase traffic volumes in the local area, and could cause delays if this occurred during morning and evening peak periods. Less-than-significant, short-term adverse impacts would be anticipated. These impacts would be reduced through the implementation of BMPs described in Section 5.

During operation, patients, staff and visitors of the West Haven VAMC (primarily patients) would use the proposed parking garage at various times during the day and night. However, the parking

garage would receive the majority of its use during week days from approximately 7 AM to 5 PM. Public roadways in the vicinity of the West Haven VAMC would experience minor traffic changes as a result of the use of the parking garage at the Site. The primary transportation effect of the Proposed Action would be to modify the existing traffic and parking patterns rather than increase of traffic. The majority of the vehicles that would use the parking garage currently park in other areas of the campus, the off-campus leased parking lots, and other areas near the campus. The proposed parking garage would not substantially increase trips to the campus.

38 CFR 26(26.62)(ii) defines 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." The proposed parking garage would not result in a significant increase in traffic on public roads in the vicinity of West Haven VAMC, as the patients and VA staff that would use the parking garage already park in the area. The increased parking capacity provided by the proposed parking garage (282 parking spaces) represents only a 17 percent increase in on-campus VAMC parking and a much smaller increase in traffic on local public roads.

Some on-campus traffic impacts are anticipated as a result of the parking garage. However, traffic operations on Ring Road near the proposed parking garage would likely remain at acceptable levels. VA would implement internal roadway improvements as necessary, to maintain acceptable traffic flow.

The Proposed Action would have short-term, less-than-significant adverse parking impacts and long-term significant beneficial parking impacts. During construction, the existing surface parking at the Site (approximately 112 parking spaces) would be temporarily eliminated. However, upon completion, the Proposed Action would have a significant beneficial impact on parking by providing approximately 282 additional parking spaces to help overcome the parking deficiencies at the West Haven VAMC.

3.14.2 Effects of the No Action Alternative

Under the No Action Alternative, no transportation or parking impacts would occur. Parking at the West Haven VAMC campus would continue to be deficient. West Haven VAMC visitors and staff would continue to use the leased off-site parking and other off-site parking when campus parking is unavailable.

The No Action Alternative would not enable VA to provide adequate on-campus parking for the West Haven VAMC and would result in an adverse, long-term direct impact to VAMC patients and staff.

3.15 Utilities

Basic utilities in the City of West Haven (i.e., water, sewer, natural gas, and electric) are provided by the various utility providers. The following identifies the utility providers to the West Haven VAMC campus:

- The **South Connecticut Regional Water Authority** supplies municipal potable water service to the Site vicinity. Based on the minimal potable water service needs of the proposed parking garage, the existing potable water service is likely to be adequate.

- The **City of West Haven Public Works Department** supplies municipal sanitary sewer service to the Site vicinity. The West Haven VAMC campus is connected to the municipal sanitary sewer system. The parking garage would discharge stormwater collected from the interior levels of the garage through an oil/grit separator to the municipal sanitary sewer system.

- The **City of West Haven Public Works Department**, under direction from CT DEEP, is responsible for stormwater management in the Site vicinity and maintains a municipal separate storm sewer system (MS4) NPDES permit. The West Haven VAMC maintains a MS4 permit for stormwater discharges from the campus. Stormwater from the top level of the parking garage would be directed into a detention basin located beneath the ramp of the parking garage to control rate and volume of stormwater discharge during storm events. The detention basin would also remove sediment and other materials from the stormwater. Stormwater from the detention basin would pass through a hydrodynamic separator to remove additional sediments and oils prior to discharging into the existing West Haven VAMC stormwater management system. The West Haven VAMC Stormwater Management Plan (part of its MS4 permit requirements) would be amended to add the parking garage.

- **United Illuminating** supplies the electrical service to the Site vicinity. Based on the minimal electrical service needs of the proposed parking garage, the existing electrical service is likely to be adequate.

- **Southern Connecticut Gas Company** provides natural gas service to the West Haven VAMC campus. Natural gas service is not anticipated to be required for the proposed parking garage.

- Various companies provide telecommunication service to the Site vicinity.

3.15.1 Effects of the Proposed Action

The proposed parking lot would result in a negligible increase in the consumption of utilities, including electricity, potable water, and sanitary sewer discharges. All major utility services are available at the West Haven VAMC campus. Adequate utilities likely exist to supply the proposed parking garage. Each utility provider would review final design plans to determine connection/extension requirements to service the proposed parking garage. No significant adverse impacts to local utilities are anticipated.

3.15.2 Effects of the No Action Alternative

Under the No Action Alternative, no utility impacts would occur.

3.16 Environmental Justice

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

According to the USEPA-developed EJSCREEN (an environmental justice mapping and screening internet application), the Site is located in an area with a higher minority population (64 percent) and higher low-income population (39 percent) relative to the State of Connecticut as a whole (32 percent and 23 percent, respectively). The EJSCREEN report for the Site area is provided in Appendix D.

3.16.1 Effects of the Proposed Action

The Proposed Action would have negligible environmental justice effects. Although the Site is located in an area with a larger than average minority population and a larger than average low-income population, the Proposed Action would have very little impact on the residents in the area. During construction, effects on nearby residential land uses, such as through noise and dust, would be limited and controlled through BMPs, thereby minimizing adverse effects to populations within the region of influence.

Proposed Action construction activities are anticipated to have a short-term beneficial socioeconomic (and environmental justice) effect on the local employment and personal income in the region of influence, as described in Section 3.11.

3.16.2 Effects of the No Action Alternative

Under the No Action Alternative, the proposed parking garage would not be constructed at the Site and there would be no environmental justice effect.

3.17 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 Site is located in a fully developed mixed institutional, residential, and commercial area located in the north-central portion of the City of West Haven. The Site is surrounded to the northwest, north, northeast, east, and southeast by the remaining approximately 44 acres of the West Haven VAMC campus, which is fully developed with medical, administrative, and support buildings and associated asphalt-paved parking lots. Apartment complexes adjoin the Site across Ring Road to the south and southwest. The approximately two-acre Glade Street Park is located approximately 300 feet west of the Site. The remaining properties in the immediate Site area are mostly residential, with apartment buildings north of Spring Street and single-family homes south of Spring Street. Most of the properties in the Site area were developed in the 1940s and 1950s, with little change in the past 50 years. 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 (2023/2024) and the relocation and addition of an approximately 8,000 square-foot sterile processing service (2023/2024). VA is also planning the construction of an approximately 162,000 square-foot surgical and clinical/bed tower at the West Haven VAMC campus (approximately 2028). The location of the proposed surgical and clinical/bed tower has not been determined; however, surface parking lot P7, located approximately 500 feet northeast of the Site, is being considered. VA may also expand the proposed Site parking garage to include one more bay to the east at some point in the future, but this expansion has not been planned or funded.

3.17.1 Effects of the Proposed Action

The Proposed Action would result in impacts to the Site area as identified throughout Section 3. These include short-term and/or long-term potential adverse impacts to aesthetics, air quality, soils, hydrology and water quality, noise, solid waste and hazardous materials, parking (short-term) and transportation. All of these potential impacts are less than significant and would be further reduced through careful implementation of the general BMPs), management measures, and compliance with regulatory requirements, as identified in Section 5. Given the nature of the Proposed Action and the limited recent and potential future off-campus development in the Site area, no significant cumulative adverse effects to any of these resource areas are anticipated. Potential off-campus development in the Site area would be subject to zoning requirements and site plan approval by the City of West Haven, which would serve to maintain and control regional potentially cumulative impacts.

The planned inpatient pharmacy addition and planned sterile processing service addition at the West Haven VAMC campus, although relatively small projects, have the potential to result in cumulative impacts with the proposed parking garage construction because they would be constructed during a similar timeframe. If the construction schedules for these projects were to overlap, VA would carefully coordinate the projects to minimize impacts to campus operations and the surrounding area. With this coordination, potential cumulative impacts would be minor.

The proposed surgical and clinical/bed tower project is much larger and; therefore, has a greater potential for cumulative adverse effects in conjunction with the Proposed Action. However, it is anticipated that the proposed parking garage would be constructed and in operation prior to the beginning of the construction of the surgical and clinical/bed tower; therefore, potential simultaneous construction impacts would not occur. In fact, the proposed parking garage would provide the VAMC additional on-campus parking that would reduce the parking impact of the surgical and clinical/bed tower, a complementary effect.

No significant adverse cumulative impacts to the environment, induced by the Proposed Action, are anticipated within the region. Close coordination between federal and state agencies, the City of West Haven, and community representatives would serve to manage and control cumulative effects within the region, including managing regional transportation increases with adequate infrastructure. Implementation of local land use and resource management plans would serve to control the extent of environmental impacts, and continued planning would ensure future

socioeconomic conditions maintain the quality of life the area's residents currently enjoy. Implementation of effective resource management plans and programs should minimize or eliminate any potential cumulative degradation of the natural ecosystem, cultural, or human environment within the region of influence of the Proposed Action.

3.17.2 Effects of the No Action Alternative

Under the No Action Alternative, no cumulative impacts due to the Proposed Action would occur.

3.18 Potential for Generating Substantial Public Controversy

As discussed in Section 4, VA has solicited input from various federal, state, and local government agencies regarding the Proposed Action. Several of these agencies have provided input; none of the input has identified opposition or controversy related to the Proposed Action.

VA published and distributed the Draft EA for a 30-day public comment period from January 15, 2022 to February 14, 2022. VA received no public comments during the public review of the Draft EA. Based on the significant beneficial effects of the Proposed Action and the findings of this EA (no significant adverse environmental impact), it is not anticipated that there would be substantial public controversy regarding the Proposed Action.

SECTION 4: 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 policy for implementing NEPA. Additional guidance is provided in VA's *NEPA Interim Guidance for Projects*. Consideration of the views and information of all interested persons promotes open communication and enables better decision-making. Agencies, organizations, and members of the public with a potential interest in the Proposed Action, including minority, low-income, and disadvantaged persons, are urged to participate. A record of agency coordination and public involvement associated with this EA is provided in Appendix A and Appendix E, respectively.

4.1 Agency Coordination

VA consulted with the following agencies during the preparation of this EA:

- U.S. Fish and Wildlife Service
- U.S. Environmental Protection Agency (USEPA)
- U.S. Army Corps of Engineers
- U.S. Department of Agriculture Natural Resources Conservation Service (USDA NRCS)
- Connecticut Department of Transportation
- Connecticut Department of Energy and Environmental Protection (CT DEEP) (various departments)
- Connecticut Department of Economic and Community Development State Historic Preservation Office (CT SHPO)
- Advisory Council on Historic Preservation
- Connecticut Council on Environmental Quality
- Connecticut Association of Conservation Districts
- West Haven Inland Wetlands Watercourse Agency
- West Haven Department of Planning and Development
- West Haven Public Works Department

Responses with project input or information were received from USEPA, USDA NRCS, CT DEEP, CT SHPO, and the City of West Haven Inland Wetland Watercourse Agency. Input provided by these agencies is addressed in the appropriate resource sub-sections of Section 3. Written correspondence from the agencies is provided in Appendix A. The following summarizes that input, which VA used to focus this EA's analysis:

- **USEPA** requested the inclusion of a discussion to demonstrate how the project will comply with the Section 438 of the Energy Independence and Security Act (EISA) of 2007. 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, U.S. EPA recommended a review of 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. Stormwater is discussed in Section 3.6.

USEPA reviewed the Draft EA and indicated that they had no comments.

- **USDA NRCS** provided a Custom Soil Resource Report for the Site area. No comments specific to the Proposed Action were provided. Soils are discussed in Section 3.5.

- **CT DEEP Office of Planning and Program Development** provided comments from the following applicable state programs:

  - *Natural Diversity Database (NDDB)*: DEEP stated the NDDB contains no records of federally listed endangered or threatened species or state-listed species at the Site. DEEP recommended the submittal of a request for NDDB review to the DEEP Wildlife Division to verify that there would be no impact. In response to the NDDB review request, DEEP verified that negative impacts to listed species resulting from the Proposed Action are not anticipated. The NDDB determination is good for two years (through April 28, 2023). Threatened and endangered species are discussed in Section 3.7.

  - *Stormwater Management*: DEEP stated that parking garages with roof level parking must separate their drainage into two separate systems. Roof drainage is considered stormwater and may be regulated by the stormwater discharge program. DEEP stated that drainage from the remaining interior levels must discharge to an oil/water separator that connects to the sanitary sewer system. DEEP indicated the project should follow the guidance for post-construction stormwater management found in the DEEP *General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities*. DEEP also stated that the construction general permit would be required from projects that disturb more than one acre and provided information regarding the permitting requirements. DEEP also noted the requirement of federal agencies to comply with Section 438 of the EISA and noted their support for low-impact development techniques. Stormwater is discussed in Section 3.6.

  - *Air Emissions*: DEEP Air Bureau recommended that 20% of all parking spaces in the project design be made ready to accept electric vehicle charging stations and that half of these spaces be equipped with vehicle charging stations to meet targets to put zero emission vehicles on roads to reduce greenhouse gas emissions and smog-forming pollution. DEEP also recommended using newer construction equipment or that older equipment be retrofitted with diesel oxidation catalysts or diesel particulate filters. DEEP also indicated 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 to reduce emissions. Air Quality is discussed in Section 3.3.

- In May 2021, VA initiated NHPA Section 106 consultation with the **CT SHPO** regarding the Proposed Action. VA submitted information regarding historic properties in the Site area, the history of the Site, and the Proposed Action to CT SHPO and requested CT SHPO concurrence that the Proposed Action would have no effect on NRHP-listed or eligible historic properties (Appendix A). In a letter dated July 23, 2021, CT SHPO noted

that the West Haven Veterans Administration Hospital is eligible for listing on the NRHP; however, the approximately one-acre Site does not contribute to the significance of the Historic District. CT SHPO concluded the Proposed Action would have no adverse effects to historic resources. Cultural Resources are discussed in Section 3.4.

- **City of West Haven Inland Wetland Watercourse Agency** indicated the Proposed Action would not impact any wetland or watercourse areas; the closest wetland is located 950 feet south of the Site. The agency stated the project would not impact any parks, nature preserves, conservation areas, designated wild or scenic rivers, migratory bird habitats, or special wildlife areas. Wetlands are discussed in Section 3.10.

4.2 Native American Consultation

VA consulted with four federally recognized Native American Tribes [Delaware Tribe of Indians, Mohegan Indian Tribe of Connecticut, Mashantucket Pequot Indian Tribe, and Narragansett Indian Tribe] as part of this NEPA process, in accordance with 36 CFR 800.2 and EO 13175, *Consultation and Coordination with Indian Tribal Governments*, 6 November 2000. These Tribes, identified as having possible ancestral ties to the area of the Site, were invited by VA to participate in the EA process as Sovereign Nations per EO 13175. VA sent consultation and coordination letters to these Tribes on June 8, 2021. VA received responses from the Delaware Tribe of Indians and the Mohegan Indian Tribe of Connecticut. The Delaware Tribe indicated they had received the project information and had forwarded the information to another office for review. No additional input has been received from the Delaware Tribe. The Mohegan Indian Tribe of Connecticut indicated they do not have any concerns with the project as it is proposed, but requested that they be contacted upon any inadvertent discoveries. Written correspondence with the Tribes is provided in Appendix B.

4.3 Public Review

VA published and distributed the Draft EA for a 30-day public comment period, as announced by a Notice of Availability (NOA) published in a local newspaper of general circulation (New Haven Register) from January 15 through 17, 2022. The Draft EA was made available for public review and comments at the West Haven Public Library and on the West Haven VAMC website from January 15, 2022 to February 14, 2022. The USEPA reviewed the Draft EA, thanked VA for addressing their scoping comments, and indicated that they had no comments on the Draft EA. VA received no other public comments regarding the Draft EA.

SECTION 5: MANAGEMENT AND MINIMIZATION MEASURES

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

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

The routine BMPs and management measures summarized in Table 5 would be included by VA in the Proposed Action to minimize and maintain adverse effects at less-than-significant levels.

Table 5
Best Management Practices and Management Measures Incorporated into the Proposed Action

Technical Resource Area	Best Management Practice/Management Measure
Aesthetics	Comply with the development standards of the Code and Charter of the City of West Haven to the extent practicable.
	Use shielded, downward-facing outdoor lighting.
Air Quality	Use appropriate dust suppression methods (such as the use of water, dust, palliative, covers, suspension of earth moving in high wind conditions) during onsite construction activities.
	Stabilize disturbed areas through re-vegetation or mulching if the areas would be inactive for several weeks or longer.
	Implement measures to reduce diesel particulate matter emissions from construction equipment, such as reducing idling time (limited to 3 minutes per CT regulations) and using newer equipment with emissions controls.
	Comply with the applicable CT DEEP Bureau of Air Management air quality regulations. Secure any required minor air emissions permits from CT DEEP prior to construction.
	Include electrical vehicle charging stations in the site design, to the extent practicable.

Technical Resource Area	Best Management Practice/Management Measure
Cultural Resources	Should potentially historic or culturally significant items be discovered during project construction, the construction contractor would immediately cease work in the area until VA, a qualified archaeologist, CT SHPO, and other consulting parties are contacted to properly identify and appropriately treat discovered items in accordance with applicable state and federal law(s).
Geology and Soils	Control soil erosion and sedimentation impacts during construction by implementing erosion prevention measures and complying with the CT DEEP NPDES permitting process. The General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (Construction General Permit) would require stormwater runoff and erosion management using BMPs, such as earth berms, vegetative buffers and filter strips, and spill prevention and management techniques. The construction contractor would implement the sedimentation and erosion control measures specified in the Construction General Permit to protect surface water quality.
Hydrology and Water Quality	Control soil erosion and sedimentation impacts during construction by complying with the CT DEEP Construction General Permit.
	Incorporate low-impact development into the site design, to the extent practicable.
	Design improvements in accordance with the requirements of Energy Independence Security Act Section 438 with respect to stormwater runoff quantity and characteristics.
	Ensure the design of the parking garage includes sufficient stormwater management so as not to adversely affect the water quantity/quality in receiving waters and/or offsite areas.
Wildlife and Habitat	Native species should be used to the extent practicable when re-vegetating land disturbed by construction to avoid the potential introduction of non-native or invasive species.
Noise	Limit, to the extent possible, construction and associated heavy truck traffic to occur between 7:00 a.m. and 7:00 p.m. on Monday through Friday, or during normal, weekday, work hours.
	Locate stationary operating equipment as far away from sensitive receptors as possible.
	Comply with the noise control provisions of the Code and Charter of the City of West Haven.
	Shut down noise-generating heavy equipment when it is not needed.
	Maintain equipment per manufacturer's recommendations to minimize noise generation.
	Encourage construction personnel to operate equipment in the quietest manner practicable (such as speed restrictions, retarder brake restrictions, engine speed restrictions).
Land Use	Comply with the City of West Haven zoning regulations and development standards, to the extent practicable.
Wetlands, Floodplains, and Coastal Zone Management	None required.
Socioeconomics	Secure construction areas to prevent unauthorized access by children from the nearby residential areas.
Community Services	None required.

Technical Resource Area	Best Management Practice/Management Measure
Solid Waste and Hazardous Materials	Comply with applicable federal and state laws governing the use, generation, storage, transportation, and disposal of solid and hazardous materials during construction.
Transportation and Parking	Plan, manage, and schedule construction activities to minimize the number of and duration that current parking spaces are temporarily eliminated.
Utilities	Submit detailed design plans to each utility provider to determine the specific connection/extension requirements and implement the necessary requirements.
Environmental Justice	None required.

SECTION 6: LIST OF ENVIRONMENTAL PERMITS REQUIRED

6.1 Regulatory Framework

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

- Endangered Species Act of 1973, as amended (7 USC 136; 16 USC 1531 et seq.).
- Executive Order 11988, *Floodplain Management* (May 1977).
- Executive Order 11990, *Protection of Wetlands* (May 1977).
- Executive Order 12898, *Environmental Justice* (February 1994).
- Executive Order 13834, *Efficient Federal Operations* (May 2018).
- Energy Independence Security Act Section 438.
- Farmland Protection Policy Act (7 USC 4201, et seq.).
- Federal Clean Air Act of 1990 (42 USC 7401 et seq., as amended).
- Federal Clean Water Act (Federal Water Pollution Control Act) of 1948, as amended (1972, 1977) (33 USC 1251 et seq.); Sections 401 and 404.
- Migratory Bird Treaty Act; 16 USC 703-712, 3 July 1918; as amended 1936, 1960, 1968, 1969, 1974, 1978, 1986, and 1989).
- National Historic Preservation Act of 1949.4, as amended (36 CFR Part 800).
- Regulations of Connecticut State Agencies.
- Connecticut General Statutes.
- West Haven Code of Ordinances.

6.2 Environmental Permits Required

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

- Connecticut Department of Energy and Environmental Protection, National Pollution Discharge Elimination System *General Permit for Storm Water Discharges Associated with Construction Activity*.

SECTION 7: AGENCIES AND INDIVIDUALS CONSULTED

AGENCIES CONSULTED

U.S. Fish and Wildlife Service - Northeast Region
Glenn Smith, Section 7/Federal Consultation
300 Westgate Center Drive
Hadley. Massachusetts 01035-9587

U.S. Environmental Protection Agency - Region 1
Deborah Szaro, Deputy Regional Administrator
5 Post Office Square
Boston, Massachusetts 02109

U.S. Army Corps of Engineers - New England District
Col. John A. Atilano II, Commander and District Engineer
696 Virginia Road
Concord, Massachusetts 01742-2751

U.S. Department of Agriculture
Natural Resource Conservation Service
Hamden Service Center
Diane Blais, District Conservationist
51 Mill Pond Road
Hamden, Connecticut 06514

Connecticut Department of Economic and Community Development
State Historic Preservation Office
Environmental Review
450 Columbus Boulevard, Suite 5
Hartford, Connecticut 06103

Advisory Council on Historic Preservation
Angela McArdle, Program Analyst/Veterans Affairs Liaison
401 F Street NW, Suite 308
Washington, DC 20001-2637

Connecticut Department of Transportation
Joseph Giulietti, Commissioner
2800 Berlin Turnpike
Newington, Connecticut 06131-7546

Connecticut Department of Energy and Environmental Protection
Bureau of Water Protection and Land Resue
Graham Stevens, EEP Bureau Chief
79 Elm Street
Hartford, Connecticut 06106-5127

Connecticut Department of Energy and Environmental Protection
Bureau of Air Management
Tracy Babbidge, EEP Bureau Chief
79 Elm Street
Hartford, Connecticut 06106-5127

Connecticut Department of Energy and Environmental Protection
Bureau of Materials Management and Compliance Assurance
Yvonne Bolton, EEP Bureau Chief
79 Elm Street
Hartford, Connecticut 06106-5127

Connecticut Department of Energy and Environmental Protection
Bureau of Natural Resources
Richard Jacobson, EEP Bureau Chief
79 Elm Street
Hartford, Connecticut 06106-5127

Connecticut Council on Environmental Quality
Peter B. Hearn, Executive Director
79 Elm Street
Hartford, Connecticut 06106

Connecticut Association of Conservation Districts
Southwest Conservation District
Chris Sullivan, Executive Director
51 Mill Pond Road
Hamden, Connecticut 06514

West Haven Inland Wetlands Watercourse Agency
William Kane, Chairman
City Hall, 355 Main Street
West Haven, Connecticut 06516

West Haven Department of Planning and Development
Fred A. Messore, Commissioner
City Hall, 355 Main Street, 1st Floor
West Haven, Connecticut 06516

West Haven Public Works Department
Tom J. McCarthy, Commissioner
City Hall, 355 Main Street, 3rd Floor
West Haven, Connecticut 06516

NATIVE AMERICAN TRIBES CONSULTED

Delaware Tribe of Indians
Dr. Brice Obermeyer, Historic Preservation
1 Kellog Circle
Emporia, KS 66801

Mohegan Indian Tribe of Connecticut
Mr. James Quinn, THPO
13 Crow Hill Road
Uncasville, Connecticut 06382

Mashantucket Pequot Indian Tribe
Ms. Marissa Turnbull, THPO
110 Pequot Trail
Mashantucket, Connecticut 06338

Narragansett Indian Tribe
Mr. John Brown, Tribal Preservation Officer
P.O. Box 463
Charleston, Rhode Island 02813

SECTION 8: LIST OF PREPARERS

U.S. DEPARTMENT OF VETERANS AFFAIRS STAFF

Mr. Joseph Simonetta, Engineer
VA Connecticut Health Care System, West Haven Campus
U.S. Department of Veterans Affairs

TTL ASSOCIATES, INC. (CONSULTANTS)

Rob Clark
Role: Project Manager, Technical Lead, Technical QA/QC Review, Program Management, Project Coordination
Degree: B.S. Aquatic Environments/Environmental Science, 1985
Years of Experience: 35

Carrie Hess
Role: Scoping Coordination, Research and Data Gathering, Document Preparation, Affected Environment, Environmental Impact Analysis
Degree: B.S. Geology, 2003
Years of Experience: 15

SECTION 9: REFERENCES

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West Haven School District. (2021). West Haven Board of Education. Retrieved from School Directory: http://www.whschools.org/district/school_directory

Other Internet Searches and Data (accessed January 2021 – August 2021)

City of West Haven: https://www.cityofwesthaven.com/

Federal Emergency Management Agency Flood Hazard Insurance Map: http://msc.fema.gov/portal

Connecticut Department of Energy and Environmental Protection: https://portal.ct.gov/DEEP, https://portal.ct.gov/DEEP/Endangered-Species/Natural-Diversity-Data-Base-Maps

Connecticut Department of Transportation: https://portal.ct.gov/dot

CT Transit: https://www.cttransit.com/

National Wetlands Inventory: http://www.fws.gov/wetlands/Data/Mapper.html

U.S. Bureau of Census (2010 and 2019 Census Data): http://www.census.gov

USGS: https://earthquake.usgs.gov/earthquakes/map/

Mapping tools to locate properties: www.maps.google.com, www.google.earth.com

SECTION 10: LIST OF ACRONYMS AND ABBREVIATIONS

amsl	above mean sea level
BMPs	Best Management Practices
CEQ	President's Council on Environmental Quality
CFR	Code of Federal Regulations
CT	Connecticut
CZMA	Coastal Zone Management Act
dBA	decibels (A-weighted scale)
DEEP	Connecticut Department of Energy and Environmental Protection
DOT	Department of Transportation
EA	Environmental Assessment
EISA	Energy Independence and Security Act of 2007
EJSCREEN	EPA's Environmental Justice Screening and Mapping Tool
EO	Executive Order
Guidon	Guidon Design Inc.
IPaC	USFWS Information for Planning and Conservation
IT	Information Technology
LOS	level of service
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Properties
PF	Public Facility
R4	Multi Family Residential
SHPO	Connecticut Department of Economic and Community Development, State Historic Preservation Office
SWPPP	Stormwater Pollution Prevention Plan
U.S.	United States
USC	United States Code
USDA	U.S. Department of Agriculture
U.S. EPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VA	U.S. Department of Veterans Affairs
VAMC	VA Medical Center

SECTION 11: GLOSSARY

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

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

Agricultural land - Cropland, pastures, meadows, and planted woodland.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Emission - A release of a pollutant.

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

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

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.

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

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

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

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

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

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

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

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

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

Any toxic pollutant listed under the Toxic Substances Control Act of 1976.

Any hazardous air pollutant listed under Section 112 of CAA.

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

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

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

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

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.

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

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

Listed Species - Any plant or animal designated by a state or the federal government as a threatened, endangered, special concern, or candidate species.

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

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

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

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

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

National Register of Historic Places (NRHP) - 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 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.

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

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

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

Potable Water - Water which is suitable for drinking.

Prime Agricultural land - A special category of highly productive cropland that is recognized and described by the U.S. Department of Agriculture's Natural Resources Conservation Service and receives special protection under the Surface Mining Law.

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

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

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 Part 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 (40 CFR Part 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.

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

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

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

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

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

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

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

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

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

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

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

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

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

APPENDIX A

AGENCY CORRESPONDENCE

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

March 4, 2021

Deborah Szaro, Deputy Regional Administrator
U.S. Environmental Protection Agency - Region 1
5 Post Office Square
Boston, Massachusetts 02109

SUBJECT: **NEPA Scoping Letter**
U.S. Department of Veterans Affairs
Proposed Parking Garage
VA Connecticut Healthcare System, West Haven Campus
950 Campbell Avenue
West Haven, Connecticut

Dear Ms. Szaro,

The U.S. Department of Veterans Affairs (VA) is conducting an environmental impact analysis of the proposed construction and operation of a new four and one half-level parking garage at the VA Connecticut Healthcare System, West Haven Campus (West Haven VAMC), located at 950 Campbell Avenue in West Haven, New Haven County, Connecticut (Proposed Action). The proposed parking garage would be constructed in an existing West Haven VAMC parking lot located near the main patient entrance of the hospital. The proposed garage would be a two-bay, approximately 124 feet by 272 feet structure with three and one-half elevated levels and would be designed to accommodate potential future horizontal expansion of one full bay width to the east. The proposed parking garage would provide a net gain of approximately 254 parking spaces for the West Haven VAMC campus, which is currently operating at a significant parking deficit. The locations of the West Haven VAMC campus and the proposed parking garage area are shown in Attachments 1a, 1b, and 1c.

VA is conducting a National Environmental Policy Act (NEPA) Environmental Assessment (EA) to evaluate the environmental, cultural, and socioeconomic issues associated with the Proposed Action.

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

- Potential environmental concerns or issues;
- Surface and groundwater resources, including streams, wetlands, floodplains, open water features, wells, and local aquifers;
- Federally or state listed threatened or endangered species, or any species proposed for such listing, or critical habitat for such species that may occur within a one-mile radius around the proposed Site;
- Parks, nature preserves, conservation areas, designated wild or scenic rivers, migratory bird habitats, or special wildlife issues;
- Natural resource issues;
- Soils and geologic data, including lists of hydric soils;

- Prime and unique farmland;
- Traffic, noise, or socioeconomic concerns;
- Air quality concerns; and
- Additional environmental, cultural, land use, or socioeconomic information or concerns your agency may have with regard to the referenced Site.

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

Other Agencies and Organizations: A listing of agencies and organizations to which this request was sent is provided in Attachment 2. Should you know of any additional agencies or organizations that may have data or concerns relevant to this project or Site, please forward them a copy of this letter, include their information in your response, or contact us directly with this information.

VA will also be consulting separately with the Connecticut State Historic Preservation Office (SHPO), Native American Tribes, and other consulting parties to identify historic properties that may potentially be affected by the undertaking, and to seek ways to avoid, minimize, or mitigate potential adverse effects.

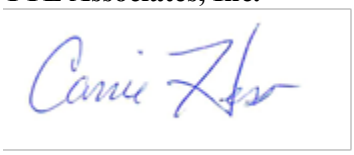
We look forward to and welcome your participation in this process. **Please respond on or before April 5, 2021** to enable us to complete this scoping phase of the project within the scheduled timeframe. TTL Associates, Inc. is assisting the VA in conducting this NEPA process.

Please send your response via e-mail to:

TTL Associates, Inc.
44265 Plymouth Oaks Boulevard
Plymouth, Michigan 48170
ATTN: Carrie Hess, Geologist
chess@ttlassoc.com

If you have any questions concerning this request, please direct them to Ms. Hess at (419) 214-5048.

Sincerely,
TTL Associates, Inc.



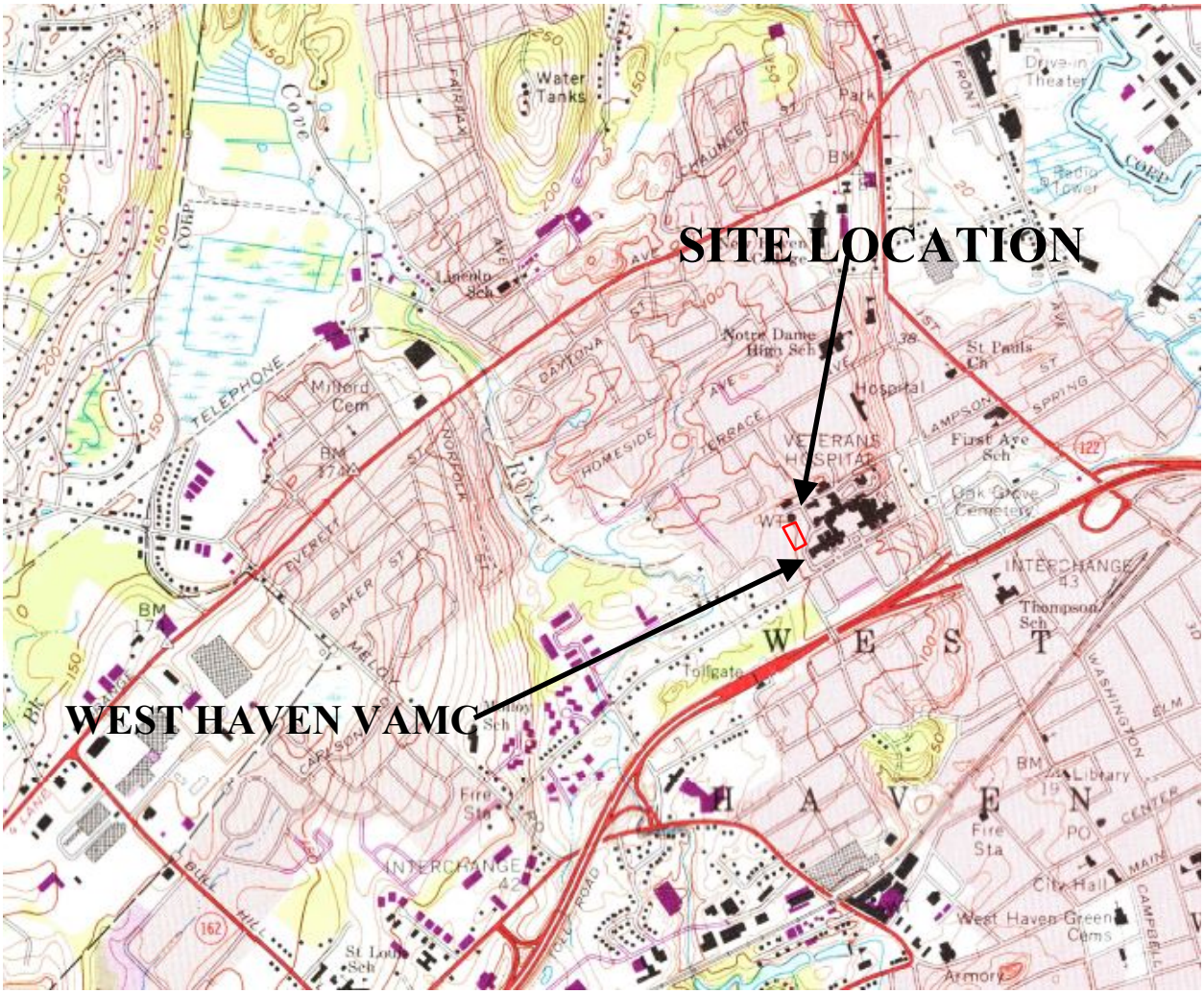
Carrie Hess
Geologist

Attachment 1a: Proposed Parking Lot Site Location Map (Topographic Map)
Attachment 1b: Proposed Parking Lot Site Location Map (Street Map)
Attachment 1c: Proposed Parking Lot Location Map (Aerial Map)
Attachment 2: List of Agencies and Organizations Contacted

ATTACHMENTS 1A THROUGH 1C
SITE LOCATION MAPS

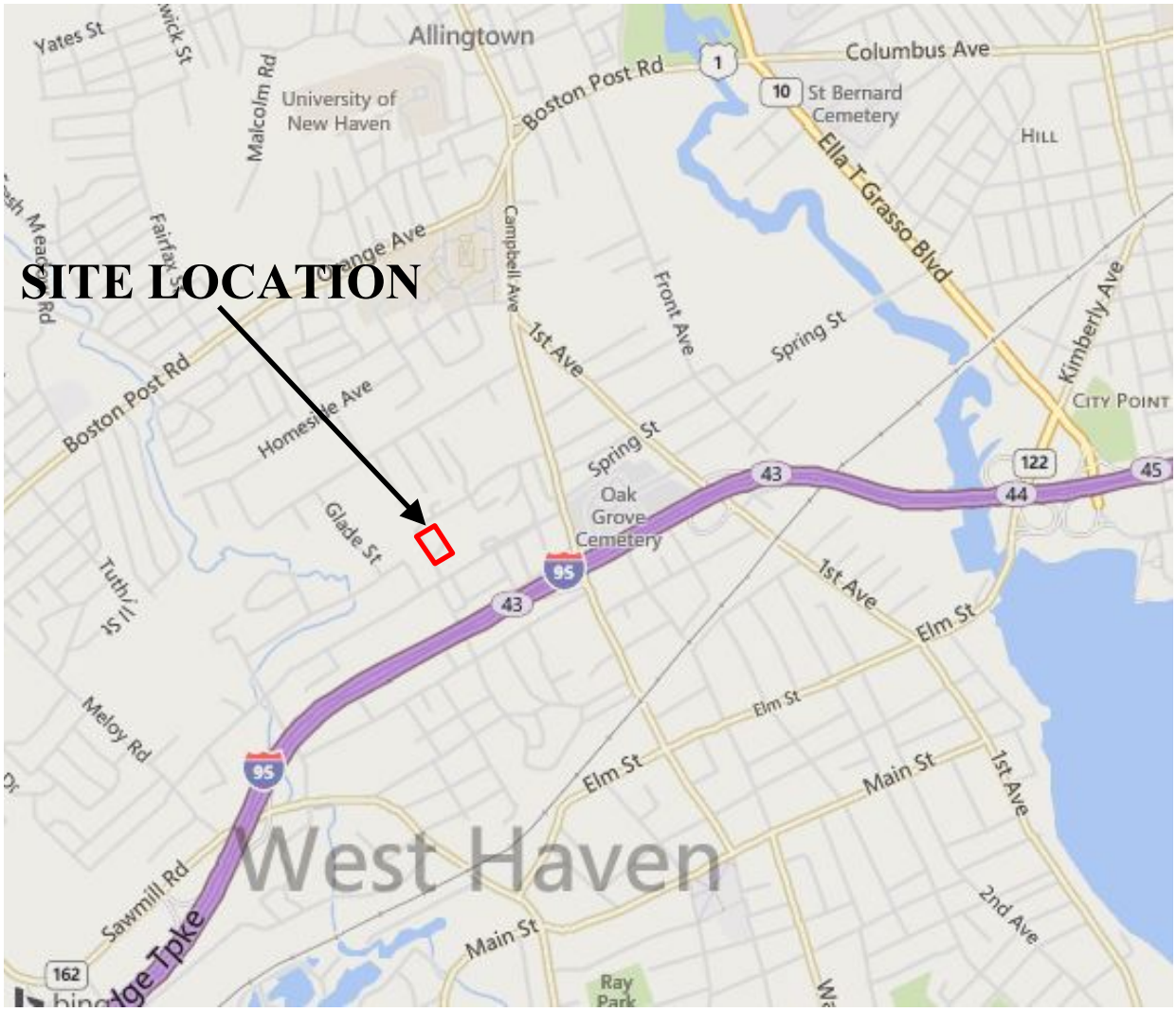
ATTACHMENT 1A

SITE LOCATION MAP (TOPOGRAPHIC MAP)
Proposed Parking Garage
VA Connecticut Healthcare System, West Haven Campus
West Haven, Connecticut



ATTACHMENT 1B

SITE LOCATION MAP (STREET MAP)
Proposed Parking Garage
VA Connecticut Healthcare System, West Haven Campus
West Haven, Connecticut



ATTACHMENT 1C

SITE LOCATION MAP (2019 AERIAL MAP)
Proposed Parking Garage
VA Connecticut Healthcare System, West Haven Campus
West Haven, Connecticut

Attachment 2
List of Agencies and Organizations Contacted
U.S. Department of Veterans Affairs
NEPA Environmental Assessment
Proposed Parking Garage
VA Connecticut Healthcare System, West Haven Campus
West Haven, Connecticut

U.S. Fish and Wildlife Service - Northeast Region
Glenn Smith, Section 7/Federal Consultation
300 Westgate Center Drive
Hadley. Massachusetts 01035-9587
Phone: (413) 253-8627

U.S. Environmental Protection Agency - Region 1
Deborah Szaro, Deputy Regional Administrator
5 Post Office Square
Boston, Massachusetts 02109
Phone: (617) 918-1011

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Carrie Hess

From: Timmermann, Timothy <Timmermann.Timothy@epa.gov>
Sent: Tuesday, April 6, 2021 3:59 PM
To: Carrie Hess
Cc: Timmermann, Timothy; Wintrob, Paul
Subject: Veterans Affairs Connecticut Healthcare System Parking Garage, West Haven Campus Scoping Comment

Dear Ms. Hess:

As you work to prepare the Environmental Assessment (EA) for the Veterans Affairs Connecticut Healthcare System Parking Garage (West Haven Campus) 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)EXIT, 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,

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United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for State of Connecticut

950 Campbell Ave, West Haven, CT

March 4, 2021

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

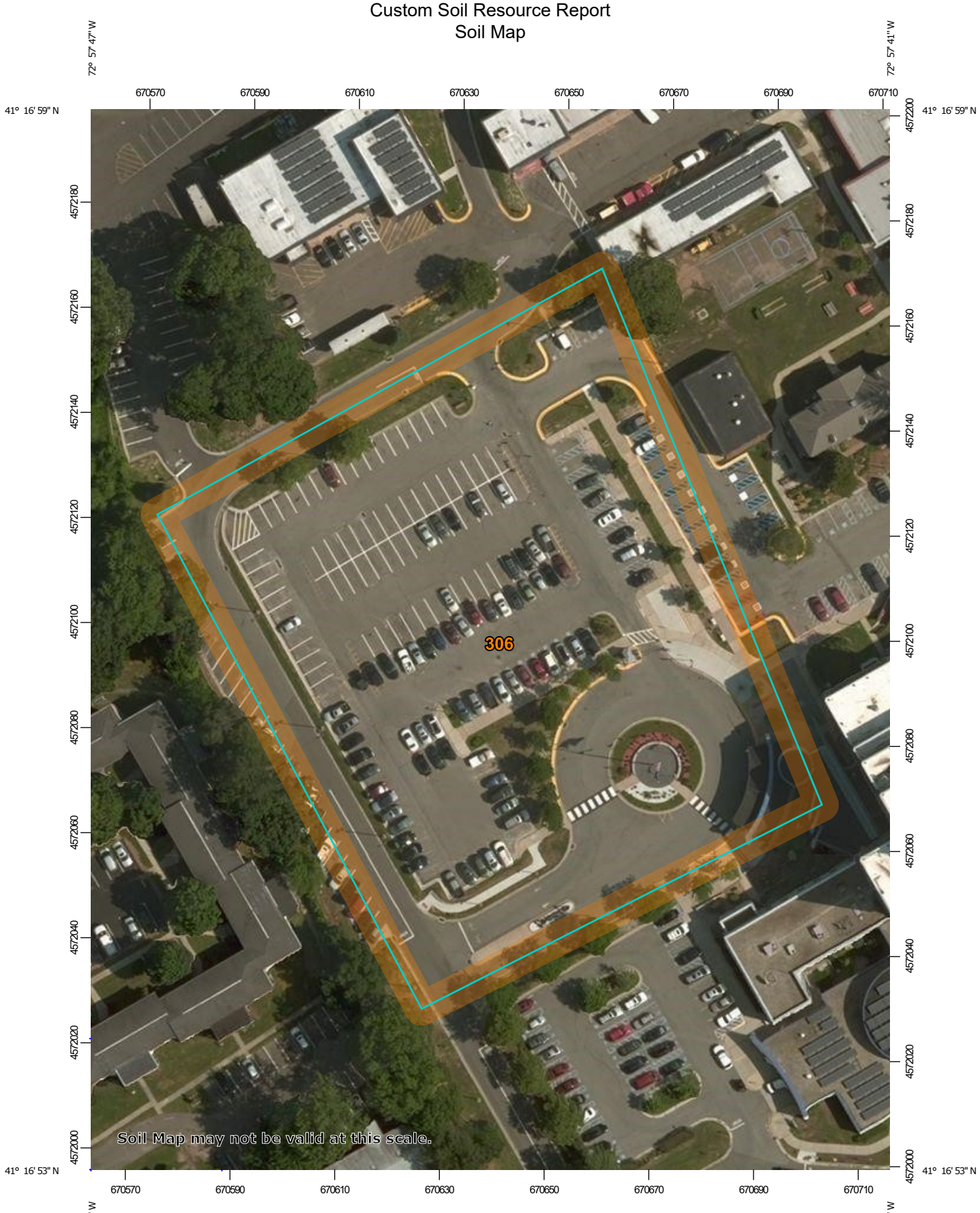
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:984 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 45 90 180 270

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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

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

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

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

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

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

Soil Survey Area: State of Connecticut
Survey Area Data: Version 20, Jun 9, 2020

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

Date(s) aerial images were photographed: Jun 27, 2014—Jul 22, 2014

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
306	Udorthents-Urban land complex	2.5	100.0%
Totals for Area of Interest		**2.5**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

State of Connecticut

306—Udorthents-Urban land complex

Map Unit Setting

National map unit symbol: 9lmg
Elevation: 0 to 2,000 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 120 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents and similar soils: 50 percent
Urban land: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents

Setting

Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Drift

Typical profile

A - 0 to 5 inches: loam
C1 - 5 to 21 inches: gravelly loam
C2 - 21 to 80 inches: very gravelly sandy loam

Properties and qualities

Slope: 0 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 1.98 in/hr)
Depth to water table: About 54 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Urban Land

Typical profile

H - 0 to 6 inches: material

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8

Hydrologic Soil Group: D
Hydric soil rating: Unranked

Minor Components

Unnamed, undisturbed soils
Percent of map unit: 8 percent
Hydric soil rating: No

Udorthents, wet substratum
Percent of map unit: 5 percent
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Rock outcrop
Percent of map unit: 2 percent
Hydric soil rating: No

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Glossary

Many of the terms relating to landforms, geology, and geomorphology are defined in more detail in the following National Soil Survey Handbook link: “National Soil Survey Handbook.”

ABC soil

A soil having an A, a B, and a C horizon.

Ablation till

Loose, relatively permeable earthy material deposited during the downwasting of nearly static glacial ice, either contained within or accumulated on the surface of the glacier.

AC soil

A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

Aeration, soil

The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil

Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alkali (sodic) soil

A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Alluvial cone

A semiconical type of alluvial fan having very steep slopes. It is higher, narrower, and steeper than a fan and is composed of coarser and thicker layers of material deposited by a combination of alluvial episodes and (to a much lesser degree) landslides (debris flow). The coarsest materials tend to be concentrated at the apex of the cone.

Alluvial fan

A low, outspread mass of loose materials and/or rock material, commonly with gentle slopes. It is shaped like an open fan or a segment of a cone. The material was deposited by a stream at the place where it issues from a narrow mountain valley or upland valley or where a tributary stream is near or at its junction with the main stream. The fan is steepest near its apex, which points upstream, and slopes gently and convexly outward (downstream) with a gradual decrease in gradient.

Alluvium

Unconsolidated material, such as gravel, sand, silt, clay, and various mixtures of these, deposited on land by running water.

Alpha,alpha-dipyridyl

A compound that when dissolved in ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction implies reducing conditions and the likely presence of redoximorphic features.

Animal unit month (AUM)

The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions

Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Argillic horizon

A subsoil horizon characterized by an accumulation of illuvial clay.

Arroyo

The flat-floored channel of an ephemeral stream, commonly with very steep to vertical banks cut in unconsolidated material. It is usually dry but can be transformed into a temporary watercourse or short-lived torrent after heavy rain within the watershed.

Aspect

The direction toward which a slope faces. Also called slope aspect.

Association, soil

A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

Available water capacity (available moisture capacity)

The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low: 0 to 3
Low: 3 to 6
Moderate: 6 to 9
High: 9 to 12
Very high: More than 12

Backslope

The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Backswamp

A flood-plain landform. Extensive, marshy or swampy, depressed areas of flood plains between natural levees and valley sides or terraces.

Badland

A landscape that is intricately dissected and characterized by a very fine drainage network with high drainage densities and short, steep slopes and narrow interfluves. Badlands develop on surfaces that have little or no vegetative cover overlying unconsolidated or poorly cemented materials (clays, silts, or sandstones) with, in some cases, soluble minerals, such as gypsum or halite.

Bajada

A broad, gently inclined alluvial piedmont slope extending from the base of a mountain range out into a basin and formed by the lateral coalescence of a series of alluvial fans. Typically, it has a broadly undulating transverse profile, parallel to the mountain front, resulting from the convexities of component fans. The term is generally restricted to constructional slopes of intermontane basins.

Basal area

The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

Base saturation

The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Base slope (geomorphology)

A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).

Bedding plane

A planar or nearly planar bedding surface that visibly separates each successive layer of stratified sediment or rock (of the same or different lithology)

from the preceding or following layer; a plane of deposition. It commonly marks a change in the circumstances of deposition and may show a parting, a color difference, a change in particle size, or various combinations of these. The term is commonly applied to any bedding surface, even one that is conspicuously bent or deformed by folding.

Bedding system

A drainage system made by plowing, grading, or otherwise shaping the surface of a flat field. It consists of a series of low ridges separated by shallow, parallel dead furrows.

Bedrock

The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bedrock-controlled topography

A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

Bench terrace

A raised, level or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.

Bisequum

Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Blowout (map symbol)

A saucer-, cup-, or trough-shaped depression formed by wind erosion on a preexisting dune or other sand deposit, especially in an area of shifting sand or loose soil or where protective vegetation is disturbed or destroyed. The adjoining accumulation of sand derived from the depression, where recognizable, is commonly included. Blowouts are commonly small.

Borrow pit (map symbol)

An open excavation from which soil and underlying material have been removed, usually for construction purposes.

Bottom land

An informal term loosely applied to various portions of a flood plain.

Boulders

Rock fragments larger than 2 feet (60 centimeters) in diameter.

Breaks

A landscape or tract of steep, rough or broken land dissected by ravines and gullies and marking a sudden change in topography.

Breast height

An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.

Brush management

Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

Butte

An isolated, generally flat-topped hill or mountain with relatively steep slopes and talus or precipitous cliffs and characterized by summit width that is less than the height of bounding escarpments; commonly topped by a caprock of resistant material and representing an erosion remnant carved from flat-lying rocks.

Cable yarding

A method of moving felled trees to a nearby central area for transport to a processing facility. Most cable yarding systems involve use of a drum, a pole, and wire cables in an arrangement similar to that of a rod and reel used for fishing. To reduce friction and soil disturbance, felled trees generally are reeled in while one end is lifted or the entire log is suspended.

Calcareous soil

A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

Caliche

A general term for a prominent zone of secondary carbonate accumulation in surficial materials in warm, subhumid to arid areas. Caliche is formed by both geologic and pedologic processes. Finely crystalline calcium carbonate forms a nearly continuous surface-coating and void-filling medium in geologic (parent) materials. Cementation ranges from weak in nonindurated forms to very strong in indurated forms. Other minerals (e.g., carbonates, silicate, and sulfate) may occur as accessory cements. Most petrocalcic horizons and some calcic horizons are caliche.

California bearing ratio (CBR)

The load-supporting capacity of a soil as compared to that of standard crushed limestone, expressed as a ratio. First standardized in California. A soil having a CBR of 16 supports 16 percent of the load that would be supported by standard crushed limestone, per unit area, with the same degree of distortion.

Canopy

The leafy crown of trees or shrubs. (See Crown.)

Canyon

A long, deep, narrow valley with high, precipitous walls in an area of high local relief.

Capillary water

Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena

A sequence, or “chain,” of soils on a landscape that formed in similar kinds of parent material and under similar climatic conditions but that have different characteristics as a result of differences in relief and drainage.

Cation

An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity

The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Catsteps

See Terracettes.

Cement rock

Shaly limestone used in the manufacture of cement.

Channery soil material

Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

Chemical treatment

Control of unwanted vegetation through the use of chemicals.

Chiseling

Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

Cirque

A steep-walled, semicircular or crescent-shaped, half-bowl-like recess or hollow, commonly situated at the head of a glaciated mountain valley or high on the side of a mountain. It was produced by the erosive activity of a mountain glacier. It commonly contains a small round lake (tarn).

Clay

As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions

See Redoximorphic features.

Clay film

A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Clay spot (map symbol)

A spot where the surface texture is silty clay or clay in areas where the surface layer of the soils in the surrounding map unit is sandy loam, loam, silt loam, or coarser.

Claypan

A dense, compact subsoil layer that contains much more clay than the overlying materials, from which it is separated by a sharply defined boundary. The layer restricts the downward movement of water through the soil. A claypan is commonly hard when dry and plastic and sticky when wet.

Climax plant community

The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Coarse textured soil

Sand or loamy sand.

Cobble (or cobblestone)

A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material

Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

COLE (coefficient of linear extensibility)

See Linear extensibility.

Colluvium

Unconsolidated, unsorted earth material being transported or deposited on side slopes and/or at the base of slopes by mass movement (e.g., direct gravitational action) and by local, unconcentrated runoff.

Complex slope

Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil

A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions

See Redoximorphic features.

Conglomerate

A coarse grained, clastic sedimentary rock composed of rounded or subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.

Conservation cropping system

Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage

A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil

Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the “Soil Survey Manual.”

Contour stripcropping

Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section

The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Coprogenous earth (sedimentary peat)

A type of limnic layer composed predominantly of fecal material derived from aquatic animals.

Corrosion (geomorphology)

A process of erosion whereby rocks and soil are removed or worn away by natural chemical processes, especially by the solvent action of running water, but also by other reactions, such as hydrolysis, hydration, carbonation, and oxidation.

Corrosion (soil survey interpretations)

Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop

A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Crop residue management

Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Cropping system

Growing crops according to a planned system of rotation and management practices.

Cross-slope farming

Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

Crown

The upper part of a tree or shrub, including the living branches and their foliage.

Cryoturbate

A mass of soil or other unconsolidated earthy material moved or disturbed by frost action. It is typically coarser than the underlying material.

Cuesta

An asymmetric ridge capped by resistant rock layers of slight or moderate dip (commonly less than 15 percent slopes); a type of homocline produced by differential erosion of interbedded resistant and weak rocks. A cuesta has a long, gentle slope on one side (dip slope) that roughly parallels the inclined beds; on the other side, it has a relatively short and steep or clifflike slope (scarp) that cuts through the tilted rocks.

Culmination of the mean annual increment (CMAI)

The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave

The walls of excavations tend to cave in or slough.

Decreasers

The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Deferred grazing

Postponing grazing or resting grazing land for a prescribed period.

Delta

A body of alluvium having a surface that is fan shaped and nearly flat; deposited at or near the mouth of a river or stream where it enters a body of relatively quiet water, generally a sea or lake.

Dense layer

A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

Depression, closed (map symbol)

A shallow, saucer-shaped area that is slightly lower on the landscape than the surrounding area and that does not have a natural outlet for surface drainage.

Depth, soil

Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

Desert pavement

A natural, residual concentration or layer of wind-polished, closely packed gravel, boulders, and other rock fragments mantling a desert surface. It forms where wind action and sheetwash have removed all smaller particles or where rock fragments have migrated upward through sediments to the surface. It typically protects the finer grained underlying material from further erosion.

Diatomaceous earth

A geologic deposit of fine, grayish siliceous material composed chiefly or entirely of the remains of diatoms.

Dip slope

A slope of the land surface, roughly determined by and approximately conforming to the dip of the underlying bedrock.

Diversion (or diversion terrace)

A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Divided-slope farming

A form of field stripcropping in which crops are grown in a systematic arrangement of two strips, or bands, across the slope to reduce the hazard of water erosion. One strip is in a close-growing crop that provides protection from erosion, and the other strip is in a crop that provides less protection from erosion. This practice is used where slopes are not long enough to permit a full stripcropping pattern to be used.

Drainage class (natural)

Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained,* and *very poorly drained*. These classes are defined in the “Soil Survey Manual.”

Drainage, surface

Runoff, or surface flow of water, from an area.

Drainageway

A general term for a course or channel along which water moves in draining an area. A term restricted to relatively small, linear depressions that at some time move concentrated water and either do not have a defined channel or have only a small defined channel.

Draw

A small stream valley that generally is shallower and more open than a ravine or gulch and that has a broader bottom. The present stream channel may appear inadequate to have cut the drainageway that it occupies.

Drift

A general term applied to all mineral material (clay, silt, sand, gravel, and boulders) transported by a glacier and deposited directly by or from the ice or transported by running water emanating from a glacier. Drift includes unstratified material (till) that forms moraines and stratified deposits that form outwash plains, eskers, kames, varves, and glaciofluvial sediments. The term is generally applied to Pleistocene glacial deposits in areas that no longer contain glaciers.

Drumlin

A low, smooth, elongated oval hill, mound, or ridge of compact till that has a core of bedrock or drift. It commonly has a blunt nose facing the direction from which the ice approached and a gentler slope tapering in the other direction. The longer axis is parallel to the general direction of glacier flow. Drumlins are products of streamline (laminar) flow of glaciers, which molded the subglacial floor through a combination of erosion and deposition.

Duff

A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

Dune

A low mound, ridge, bank, or hill of loose, windblown granular material (generally sand), either barren and capable of movement from place to place or covered and stabilized with vegetation but retaining its characteristic shape.

Earthy fill

See Mine spoil.

Ecological site

An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other ecological sites in kind and/or proportion of species or in total production.

Eluviation

The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Endosaturation

A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Eolian deposit

Sand-, silt-, or clay-sized clastic material transported and deposited primarily by wind, commonly in the form of a dune or a sheet of sand or loess.

Ephemeral stream

A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Episaturation

A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion

The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (accelerated)

Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Erosion (geologic)

Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion pavement

A surficial lag concentration or layer of gravel and other rock fragments that remains on the soil surface after sheet or rill erosion or wind has removed the finer soil particles and that tends to protect the underlying soil from further erosion.

Erosion surface

A land surface shaped by the action of erosion, especially by running water.

Escarpment

A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Most commonly applied to cliffs produced by differential erosion. Synonym: scarp.

Escarpment, bedrock (map symbol)

A relatively continuous and steep slope or cliff, produced by erosion or faulting, that breaks the general continuity of more gently sloping land surfaces. Exposed material is hard or soft bedrock.

Escarpment, nonbedrock (map symbol)

A relatively continuous and steep slope or cliff, generally produced by erosion but in some places produced by faulting, that breaks the continuity of more gently sloping land surfaces. Exposed earthy material is nonsoil or very shallow soil.

Esker

A long, narrow, sinuous, steep-sided ridge of stratified sand and gravel deposited as the bed of a stream flowing in an ice tunnel within or below the ice (subglacial) or between ice walls on top of the ice of a wasting glacier and left

behind as high ground when the ice melted. Eskers range in length from less than a kilometer to more than 160 kilometers and in height from 3 to 30 meters.

Extrusive rock

Igneous rock derived from deep-seated molten matter (magma) deposited and cooled on the earth's surface.

Fallow

Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Fan remnant

A general term for landforms that are the remaining parts of older fan landforms, such as alluvial fans, that have been either dissected or partially buried.

Fertility, soil

The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Fibric soil material (peat)

The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

Field moisture capacity

The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.

Fill slope

A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

Fine textured soil

Sandy clay, silty clay, or clay.

Firebreak

An area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.

First bottom

An obsolete, informal term loosely applied to the lowest flood-plain steps that are subject to regular flooding.

Flaggy soil material

Material that has, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.

Flagstone

A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.

Flood plain

The nearly level plain that borders a stream and is subject to flooding unless protected artificially.

Flood-plain landforms

A variety of constructional and erosional features produced by stream channel migration and flooding. Examples include backswamps, flood-plain splays, meanders, meander belts, meander scrolls, oxbow lakes, and natural levees.

Flood-plain splay

A fan-shaped deposit or other outspread deposit formed where an overloaded stream breaks through a levee (natural or artificial) and deposits its material (commonly coarse grained) on the flood plain.

Flood-plain step

An essentially flat, terrace-like alluvial surface within a valley that is frequently covered by floodwater from the present stream; any approximately horizontal surface still actively modified by fluvial scour and/or deposition. May occur individually or as a series of steps.

Fluvial

Of or pertaining to rivers or streams; produced by stream or river action.

Foothills

A region of steeply sloping hills that fringes a mountain range or high-plateau escarpment. The hills have relief of as much as 1,000 feet (300 meters).

Footslope

The concave surface at the base of a hillslope. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb

Any herbaceous plant not a grass or a sedge.

Forest cover

All trees and other woody plants (underbrush) covering the ground in a forest.

Forest type

A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

Fragipan

A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.

Genesis, soil

The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Gilgai

Commonly, a succession of microbasins and microknolls in nearly level areas or of microvalleys and microridges parallel with the slope. Typically, the microrelief of clayey soils that shrink and swell considerably with changes in moisture content.

Glaciofluvial deposits

Material moved by glaciers and subsequently sorted and deposited by streams flowing from the melting ice. The deposits are stratified and occur in the form of outwash plains, valley trains, deltas, kames, eskers, and kame terraces.

Glaciolacustrine deposits

Material ranging from fine clay to sand derived from glaciers and deposited in glacial lakes mainly by glacial meltwater. Many deposits are bedded or laminated.

Gleyed soil

Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping

Growing crops in strips that grade toward a protected waterway.

Grassed waterway

A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel

Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravel pit (map symbol)

An open excavation from which soil and underlying material have been removed and used, without crushing, as a source of sand or gravel.

Gravelly soil material

Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Gravelly spot (map symbol)

A spot where the surface layer has more than 35 percent, by volume, rock fragments that are mostly less than 3 inches in diameter in an area that has less than 15 percent rock fragments.

Green manure crop (agronomy)

A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water

Water filling all the unblocked pores of the material below the water table.

Gully (map symbol)

A small, steep-sided channel caused by erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage whereas a rill is of lesser depth and can be smoothed over by ordinary tillage.

Hard bedrock

Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hard to reclaim

Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Hardpan

A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Head slope (geomorphology)

A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

Hemic soil material (mucky peat)

Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

High-residue crops

Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

Hill

A generic term for an elevated area of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline. Slopes are generally more than 15 percent. The distinction between a hill and a mountain is arbitrary and may depend on local usage.

Hillslope

A generic term for the steeper part of a hill between its summit and the drainage line, valley flat, or depression floor at the base of a hill.

Horizon, soil

A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the “Soil Survey Manual.” The major horizons of mineral soil are as follows:

O horizon: An organic layer of fresh and decaying plant residue.

L horizon: A layer of organic and mineral limnic materials, including coprogenous earth (sedimentary peat), diatomaceous earth, and marl.

A horizon: The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon: The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon: The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon: The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon: Soft, consolidated bedrock beneath the soil.

R layer: Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

M layer: A root-limiting subsoil layer consisting of nearly continuous, horizontally oriented, human-manufactured materials.

W layer: A layer of water within or beneath the soil.

Humus

The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups

Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties include depth to a seasonal high water table, the infiltration rate, and depth to a layer that significantly restricts the downward movement of water. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Igneous rock

Rock that was formed by cooling and solidification of magma and that has not been changed appreciably by weathering since its formation. Major varieties include plutonic and volcanic rock (e.g., andesite, basalt, and granite).

Illuviation

The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil

A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Increasers

Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

Infiltration

The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity

The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate

The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate

The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Very low: Less than 0.2
Low: 0.2 to 0.4
Moderately low: 0.4 to 0.75
Moderate: 0.75 to 1.25
Moderately high: 1.25 to 1.75
High: 1.75 to 2.5
Very high: More than 2.5

Interfluve

A landform composed of the relatively undissected upland or ridge between two adjacent valleys containing streams flowing in the same general direction. An elevated area between two drainageways that sheds water to those drainageways.

Interfluve (geomorphology)

A geomorphic component of hills consisting of the uppermost, comparatively level or gently sloping area of a hill; shoulders of backwearing hillslopes can narrow the upland or can merge, resulting in a strongly convex shape.

Intermittent stream

A stream, or reach of a stream, that does not flow year-round but that is commonly dry for 3 or more months out of 12 and whose channel is generally below the local water table. It flows only during wet periods or when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Invaders

On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

Iron depletions

See Redoximorphic features.

Irrigation

Application of water to soils to assist in production of crops. Methods of irrigation are:

Basin: Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Border: Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

Controlled flooding: Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation: Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle): Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow: Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

Sprinkler: Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Subirrigation: Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

Wild flooding: Water, released at high points, is allowed to flow onto an area without controlled distribution.

Kame

A low mound, knob, hummock, or short irregular ridge composed of stratified sand and gravel deposited by a subglacial stream as a fan or delta at the margin of a melting glacier; by a supraglacial stream in a low place or hole on the surface of the glacier; or as a ponded deposit on the surface or at the margin of stagnant ice.

Karst (topography)

A kind of topography that formed in limestone, gypsum, or other soluble rocks by dissolution and that is characterized by closed depressions, sinkholes, caves, and underground drainage.

Knoll

A small, low, rounded hill rising above adjacent landforms.

Ksat

See Saturated hydraulic conductivity.

Lacustrine deposit

Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Lake plain

A nearly level surface marking the floor of an extinct lake filled by well sorted, generally fine textured, stratified deposits, commonly containing varves.

Lake terrace

A narrow shelf, partly cut and partly built, produced along a lakeshore in front of a scarp line of low cliffs and later exposed when the water level falls.

Landfill (map symbol)

An area of accumulated waste products of human habitation, either above or below natural ground level.

Landslide

A general, encompassing term for most types of mass movement landforms and processes involving the downslope transport and outward deposition of soil and rock materials caused by gravitational forces; the movement may or may not involve saturated materials. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

Large stones

Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Lava flow (map symbol)

A solidified, commonly lobate body of rock formed through lateral, surface outpouring of molten lava from a vent or fissure.

Leaching

The removal of soluble material from soil or other material by percolating water.

Levee (map symbol)

An embankment that confines or controls water, especially one built along the banks of a river to prevent overflow onto lowlands.

Linear extensibility

Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at $^{1}/_{3}$- or $^{1}/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

Liquid limit

The moisture content at which the soil passes from a plastic to a liquid state.

Loam

Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Loess

Material transported and deposited by wind and consisting dominantly of silt-sized particles.

Low strength

The soil is not strong enough to support loads.

Low-residue crops

Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Marl

An earthy, unconsolidated deposit consisting chiefly of calcium carbonate mixed with clay in approximately equal proportions; formed primarily under freshwater lacustrine conditions but also formed in more saline environments.

Marsh or swamp (map symbol)

A water-saturated, very poorly drained area that is intermittently or permanently covered by water. Sedges, cattails, and rushes are the dominant vegetation in marshes, and trees or shrubs are the dominant vegetation in swamps. Not used in map units where the named soils are poorly drained or very poorly drained.

Mass movement

A generic term for the dislodgment and downslope transport of soil and rock material as a unit under direct gravitational stress.

Masses

See Redoximorphic features.

Meander belt

The zone within which migration of a meandering channel occurs; the flood-plain area included between two imaginary lines drawn tangential to the outer bends of active channel loops.

Meander scar

A crescent-shaped, concave or linear mark on the face of a bluff or valley wall, produced by the lateral erosion of a meandering stream that impinged upon and undercut the bluff.

Meander scroll

One of a series of long, parallel, close-fitting, crescent-shaped ridges and troughs formed along the inner bank of a stream meander as the channel migrated laterally down-valley and toward the outer bank.

Mechanical treatment

Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil

Very fine sandy loam, loam, silt loam, or silt.

Mesa

A broad, nearly flat topped and commonly isolated landmass bounded by steep slopes or precipitous cliffs and capped by layers of resistant, nearly horizontal rocky material. The summit width is characteristically greater than the height of the bounding escarpments.

Metamorphic rock

Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement at depth in the earth’s crust. Nearly all such rocks are crystalline.

Mine or quarry (map symbol)

An open excavation from which soil and underlying material have been removed and in which bedrock is exposed. Also denotes surface openings to underground mines.

Mine spoil

An accumulation of displaced earthy material, rock, or other waste material removed during mining or excavation. Also called earthy fill.

Mineral soil

Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage

Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area

A kind of map unit that has little or no natural soil and supports little or no vegetation.

Miscellaneous water (map symbol)

Small, constructed bodies of water that are used for industrial, sanitary, or mining applications and that contain water most of the year.

Moderately coarse textured soil

Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil

Clay loam, sandy clay loam, or silty clay loam.

Mollic epipedon

A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Moraine

In terms of glacial geology, a mound, ridge, or other topographically distinct accumulation of unsorted, unstratified drift, predominantly till, deposited primarily by the direct action of glacial ice in a variety of landforms. Also, a general term for a landform composed mainly of till (except for kame moraines, which are composed mainly of stratified outwash) that has been deposited by a glacier. Some types of moraines are disintegration, end, ground, kame, lateral, recessional, and terminal.

Morphology, soil

The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil

Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium,* from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse,* more than 15 millimeters (about 0.6 inch).

Mountain

A generic term for an elevated area of the land surface, rising more than 1,000 feet (300 meters) above surrounding lowlands, commonly of restricted summit area (relative to a plateau) and generally having steep sides. A mountain can

occur as a single, isolated mass or in a group forming a chain or range. Mountains are formed primarily by tectonic activity and/or volcanic action but can also be formed by differential erosion.

Muck

Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

Mucky peat

See Hemic soil material.

Mudstone

A blocky or massive, fine grained sedimentary rock in which the proportions of clay and silt are approximately equal. Also, a general term for such material as clay, silt, claystone, siltstone, shale, and argillite and that should be used only when the amounts of clay and silt are not known or cannot be precisely identified.

Munsell notation

A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Natric horizon

A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.

Neutral soil

A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules

See Redoximorphic features.

Nose slope (geomorphology)

A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent. Nose slopes consist dominantly of colluvium and slope-wash sediments (for example, slope alluvium).

Nutrient, plant

Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter

Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low: Less than 0.5 percent
Low: 0.5 to 1.0 percent
Moderately low: 1.0 to 2.0 percent
Moderate: 2.0 to 4.0 percent
High: 4.0 to 8.0 percent
Very high: More than 8.0 percent

Outwash

Stratified and sorted sediments (chiefly sand and gravel) removed or “washed out” from a glacier by meltwater streams and deposited in front of or beyond the end moraine or the margin of a glacier. The coarser material is deposited nearer to the ice.

Outwash plain

An extensive lowland area of coarse textured glaciofluvial material. An outwash plain is commonly smooth; where pitted, it generally is low in relief.

Paleoterrace

An erosional remnant of a terrace that retains the surface form and alluvial deposits of its origin but was not emplaced by, and commonly does not grade to, a present-day stream or drainage network.

Pan

A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.

Parent material

The unconsolidated organic and mineral material in which soil forms.

Peat

Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

Ped

An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedisediment

A layer of sediment, eroded from the shoulder and backslope of an erosional slope, that lies on and is being (or was) transported across a gently sloping erosional surface at the foot of a receding hill or mountain slope.

Pedon

The smallest volume that can be called “a soil.” A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation

The movement of water through the soil.

Perennial water (map symbol)

Small, natural or constructed lakes, ponds, or pits that contain water most of the year.

Permafrost

Ground, soil, or rock that remains at or below 0 degrees C for at least 2 years. It is defined on the basis of temperature and is not necessarily frozen.

pH value

A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Phase, soil

A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

Piping

Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Pitting

Pits caused by melting around ice. They form on the soil after plant cover is removed.

Plastic limit

The moisture content at which a soil changes from semisolid to plastic.

Plasticity index

The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plateau (geomorphology)

A comparatively flat area of great extent and elevation; specifically, an extensive land region that is considerably elevated (more than 100 meters) above the adjacent lower lying terrain, is commonly limited on at least one side by an abrupt descent, and has a flat or nearly level surface. A comparatively large part of a plateau surface is near summit level.

Playa

The generally dry and nearly level lake plain that occupies the lowest parts of closed depressions, such as those on intermontane basin floors. Temporary flooding occurs primarily in response to precipitation and runoff. Playa deposits are fine grained and may or may not have a high water table and saline conditions.

Plinthite

The sesquioxide-rich, humus-poor, highly weathered mixture of clay with quartz and other diluents. It commonly appears as red mottles, usually in platy, polygonal, or reticulate patterns. Plinthite changes irreversibly to an ironstone hardpan or to irregular aggregates on repeated wetting and drying, especially if it is exposed also to heat from the sun. In a moist soil, plinthite can be cut with a spade. It is a form of laterite.

Plowpan

A compacted layer formed in the soil directly below the plowed layer.

Ponding

Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded

Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Pore linings

See Redoximorphic features.

Potential native plant community

See Climax plant community.

Potential rooting depth (effective rooting depth)

Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning

Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil

The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil

A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use

Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and

promotes the accumulation of litter and mulch necessary to conserve soil and water.

Rangeland

Land on which the potential natural vegetation is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundras, and areas that support certain forb and shrub communities.

Reaction, soil

A measure of acidity or alkalinity of a soil, expressed as pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid: Less than 3.5
Extremely acid: 3.5 to 4.4
Very strongly acid: 4.5 to 5.0
Strongly acid: 5.1 to 5.5
Moderately acid: 5.6 to 6.0
Slightly acid: 6.1 to 6.5
Neutral: 6.6 to 7.3
Slightly alkaline: 7.4 to 7.8
Moderately alkaline: 7.9 to 8.4
Strongly alkaline: 8.5 to 9.0
Very strongly alkaline: 9.1 and higher

Red beds

Sedimentary strata that are mainly red and are made up largely of sandstone and shale.

Redoximorphic concentrations

See Redoximorphic features.

Redoximorphic depletions

See Redoximorphic features.

Redoximorphic features

Redoximorphic features are associated with wetness and result from alternating periods of reduction and oxidation of iron and manganese compounds in the soil. Reduction occurs during saturation with water, and oxidation occurs when the soil is not saturated. Characteristic color patterns are created by these processes. The reduced iron and manganese ions may be removed from a soil if vertical or lateral fluxes of water occur, in which case there is no iron or manganese precipitation in that soil. Wherever the iron and manganese are oxidized and precipitated, they form either soft masses or hard concretions or nodules. Movement of iron and manganese as a result of redoximorphic processes in a soil may result in redoximorphic features that are defined as follows:

1. Redoximorphic concentrations.—These are zones of apparent accumulation of iron-manganese oxides, including:
   A. Nodules and concretions, which are cemented bodies that can be removed from the soil intact. Concretions are distinguished from nodules on the basis of internal organization. A concretion typically has concentric layers that are visible to the naked eye. Nodules do not have visible organized internal structure; *and*
   B. Masses, which are noncemented concentrations of substances within the soil matrix; *and*
   C. Pore linings, i.e., zones of accumulation along pores that may be either coatings on pore surfaces or impregnations from the matrix adjacent to the pores.
2. Redoximorphic depletions.—These are zones of low chroma (chromas less than those in the matrix) where either iron-manganese oxides alone or both iron-manganese oxides and clay have been stripped out, including:
   A. Iron depletions, i.e., zones that contain low amounts of iron and manganese oxides but have a clay content similar to that of the adjacent matrix; *and*
   B. Clay depletions, i.e., zones that contain low amounts of iron, manganese, and clay (often referred to as silt coatings or skeletans).
3. Reduced matrix.—This is a soil matrix that has low chroma *in situ* but undergoes a change in hue or chroma within 30 minutes after the soil material has been exposed to air.

Reduced matrix

See Redoximorphic features.

Regolith

All unconsolidated earth materials above the solid bedrock. It includes material weathered in place from all kinds of bedrock and alluvial, glacial, eolian, lacustrine, and pyroclastic deposits.

Relief

The relative difference in elevation between the upland summits and the lowlands or valleys of a given region.

Residuum (residual soil material)

Unconsolidated, weathered or partly weathered mineral material that accumulated as bedrock disintegrated in place.

Rill

A very small, steep-sided channel resulting from erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. A rill generally is not an obstacle to wheeled vehicles and is shallow enough to be smoothed over by ordinary tillage.

Riser

The vertical or steep side slope (e.g., escarpment) of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural, steplike landforms, such as successive stream terraces.

Road cut

A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments

Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Rock outcrop (map symbol)

An exposure of bedrock at the surface of the earth. Not used where the named soils of the surrounding map unit are shallow over bedrock or where “Rock outcrop” is a named component of the map unit.

Root zone

The part of the soil that can be penetrated by plant roots.

Runoff

The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Saline soil

A soil containing soluble salts in an amount that impairs growth of plants. A saline soil does not contain excess exchangeable sodium.

Saline spot (map symbol)

An area where the surface layer has an electrical conductivity of 8 mmhos/cm more than the surface layer of the named soils in the surrounding map unit. The surface layer of the surrounding soils has an electrical conductivity of 2 mmhos/cm or less.

Sand

As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone

Sedimentary rock containing dominantly sand-sized particles.

Sandy spot (map symbol)

A spot where the surface layer is loamy fine sand or coarser in areas where the surface layer of the named soils in the surrounding map unit is very fine sandy loam or finer.

Sapric soil material (muck)

The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

Saturated hydraulic conductivity (Ksat)

The ease with which pores of a saturated soil transmit water. Formally, the proportionality coefficient that expresses the relationship of the rate of water movement to hydraulic gradient in Darcy's Law, a law that describes the rate of water movement through porous media. Commonly abbreviated as "Ksat." Terms describing saturated hydraulic conductivity are:

Very high: 100 or more micrometers per second (14.17 or more inches per hour)

High: 10 to 100 micrometers per second (1.417 to 14.17 inches per hour)

Moderately high: 1 to 10 micrometers per second (0.1417 inch to 1.417 inches per hour)

Moderately low: 0.1 to 1 micrometer per second (0.01417 to 0.1417 inch per hour)

Low: 0.01 to 0.1 micrometer per second (0.001417 to 0.01417 inch per hour)

Very low: Less than 0.01 micrometer per second (less than 0.001417 inch per hour).

To convert inches per hour to micrometers per second, multiply inches per hour by 7.0572. To convert micrometers per second to inches per hour, multiply micrometers per second by 0.1417.

Saturation

Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Scarification

The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.

Sedimentary rock

A consolidated deposit of clastic particles, chemical precipitates, or organic remains accumulated at or near the surface of the earth under normal low temperature and pressure conditions. Sedimentary rocks include consolidated equivalents of alluvium, colluvium, drift, and eolian, lacustrine, and marine deposits. Examples are sandstone, siltstone, mudstone, claystone, shale, conglomerate, limestone, dolomite, and coal.

Sequum

A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

Series, soil

A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Severely eroded spot (map symbol)

An area where, on the average, 75 percent or more of the original surface layer has been lost because of accelerated erosion. Not used in map units in which “severely eroded,” “very severely eroded,” or “gullied” is part of the map unit name.

Shale

Sedimentary rock that formed by the hardening of a deposit of clay, silty clay, or silty clay loam and that has a tendency to split into thin layers.

Sheet erosion

The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Short, steep slope (map symbol)

A narrow area of soil having slopes that are at least two slope classes steeper than the slope class of the surrounding map unit.

Shoulder

The convex, erosional surface near the top of a hillslope. A shoulder is a transition from summit to backslope.

Shrink-swell

The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Shrub-coppice dune

A small, streamlined dune that forms around brush and clump vegetation.

Side slope (geomorphology)

A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel. Side slopes are dominantly colluvium and slope-wash sediments.

Silica

A combination of silicon and oxygen. The mineral form is called quartz.

Silica-sesquioxide ratio

The ratio of the number of molecules of silica to the number of molecules of alumina and iron oxide. The more highly weathered soils or their clay fractions in warm-temperate, humid regions, and especially those in the tropics, generally have a low ratio.

Silt

As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Siltstone

An indurated silt having the texture and composition of shale but lacking its fine lamination or fissility; a massive mudstone in which silt predominates over clay.

Similar soils

Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Sinkhole (map symbol)

A closed, circular or elliptical depression, commonly funnel shaped, characterized by subsurface drainage and formed either by dissolution of the surface of underlying bedrock (e.g., limestone, gypsum, or salt) or by collapse of underlying caves within bedrock. Complexes of sinkholes in carbonate-rock terrain are the main components of karst topography.

Site index

A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

Slickensides (pedogenic)

Grooved, striated, and/or glossy (shiny) slip faces on structural peds, such as wedges; produced by shrink-swell processes, most commonly in soils that have a high content of expansive clays.

Slide or slip (map symbol)

A prominent landform scar or ridge caused by fairly recent mass movement or descent of earthy material resulting from failure of earth or rock under shear stress along one or several surfaces.

Slope

The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance.

Slope alluvium

Sediment gradually transported down the slopes of mountains or hills primarily by nonchannel alluvial processes (i.e., slope-wash processes) and characterized by particle sorting. Lateral particle sorting is evident on long slopes. In a profile sequence, sediments may be distinguished by differences in size and/or specific gravity of rock fragments and may be separated by stone lines. Burnished peds and sorting of rounded or subrounded pebbles or cobbles distinguish these materials from unsorted colluvial deposits.

Slow refill

The slow filling of ponds, resulting from restricted water transmission in the soil.

Slow water movement

Restricted downward movement of water through the soil. See Saturated hydraulic conductivity.

Sodic (alkali) soil

A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Sodic spot (map symbol)

An area where the surface layer has a sodium adsorption ratio that is at least 10 more than that of the surface layer of the named soils in the surrounding map unit. The surface layer of the surrounding soils has a sodium adsorption ratio of 5 or less.

Sodicity

The degree to which a soil is affected by exchangeable sodium. Sodicity is expressed as a sodium adsorption ratio (SAR) of a saturation extract, or the ratio of Na^{+} to $Ca^{++} + Mg^{++}$. The degrees of sodicity and their respective ratios are:

Slight: Less than 13:1
Moderate: 13-30:1
Strong: More than 30:1

Sodium adsorption ratio (SAR)

A measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration.

Soft bedrock

Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil

A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief and by the passage of time.

Soil separates

Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand: 2.0 to 1.0
Coarse sand: 1.0 to 0.5
Medium sand: 0.5 to 0.25
Fine sand: 0.25 to 0.10
Very fine sand: 0.10 to 0.05
Silt: 0.05 to 0.002
Clay: Less than 0.002

Solum

The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Spoil area (map symbol)

A pile of earthy materials, either smoothed or uneven, resulting from human activity.

Stone line

In a vertical cross section, a line formed by scattered fragments or a discrete layer of angular and subangular rock fragments (commonly a gravel- or cobble-sized lag concentration) that formerly was draped across a topographic surface and was later buried by additional sediments. A stone line generally caps material that was subject to weathering, soil formation, and erosion before burial. Many stone lines seem to be buried erosion pavements, originally formed by sheet and rill erosion across the land surface.

Stones

Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony

Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Stony spot (map symbol)

A spot where 0.01 to 0.1 percent of the soil surface is covered by rock fragments that are more than 10 inches in diameter in areas where the surrounding soil has no surface stones.

Strath terrace

A type of stream terrace; formed as an erosional surface cut on bedrock and thinly mantled with stream deposits (alluvium).

Stream terrace

One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel, originally formed near the level of the stream; represents the remnants of an abandoned flood plain, stream bed, or valley floor produced during a former state of fluvial erosion or deposition.

Stripcropping

Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil

The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are:

Platy: Flat and laminated

Prismatic: Vertically elongated and having flat tops

Columnar: Vertically elongated and having rounded tops

Angular blocky: Having faces that intersect at sharp angles (planes)

Subangular blocky: Having subrounded and planar faces (no sharp angles)

Granular: Small structural units with curved or very irregular faces

Structureless soil horizons are defined as follows:

Single grained: Entirely noncoherent (each grain by itself), as in loose sand

Massive: Occurring as a coherent mass

Stubble mulch

Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsoil

Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling

Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum

The part of the soil below the solum.

Subsurface layer

Any surface soil horizon (A, E, AB, or EB) below the surface layer.

Summer fallow

The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.

Summit

The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

Surface layer

The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”

Surface soil

The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Talus

Rock fragments of any size or shape (commonly coarse and angular) derived from and lying at the base of a cliff or very steep rock slope. The accumulated mass of such loose broken rock formed chiefly by falling, rolling, or sliding.

Taxadjuncts

Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

Terminal moraine

An end moraine that marks the farthest advance of a glacier. It typically has the form of a massive arcuate or concentric ridge, or complex of ridges, and is underlain by till and other types of drift.

Terrace (conservation)

An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field

generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geomorphology)

A steplike surface, bordering a valley floor or shoreline, that represents the former position of a flood plain, lake, or seashore. The term is usually applied both to the relatively flat summit surface (tread) that was cut or built by stream or wave action and to the steeper descending slope (scarp or riser) that has graded to a lower base level of erosion.

Terracettes

Small, irregular steplike forms on steep hillslopes, especially in pasture, formed by creep or erosion of surficial materials that may be induced or enhanced by trampling of livestock, such as sheep or cattle.

Texture, soil

The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying “coarse,” “fine,” or “very fine.”

Thin layer

Otherwise suitable soil material that is too thin for the specified use.

Till

Dominantly unsorted and nonstratified drift, generally unconsolidated and deposited directly by a glacier without subsequent reworking by meltwater, and consisting of a heterogeneous mixture of clay, silt, sand, gravel, stones, and boulders; rock fragments of various lithologies are embedded within a finer matrix that can range from clay to sandy loam.

Till plain

An extensive area of level to gently undulating soils underlain predominantly by till and bounded at the distal end by subordinate recessional or end moraines.

Tilth, soil

The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toeslope

The gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

Topsoil

The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Trace elements

Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Tread

The flat to gently sloping, topmost, laterally extensive slope of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural steplike landforms, such as successive stream terraces.

Tuff

A generic term for any consolidated or cemented deposit that is 50 percent or more volcanic ash.

Upland

An informal, general term for the higher ground of a region, in contrast with a low-lying adjacent area, such as a valley or plain, or for land at a higher elevation than the flood plain or low stream terrace; land above the footslope zone of the hillslope continuum.

Valley fill

The unconsolidated sediment deposited by any agent (water, wind, ice, or mass wasting) so as to fill or partly fill a valley.

Variegation

Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Varve

A sedimentary layer or a lamina or sequence of laminae deposited in a body of still water within a year. Specifically, a thin pair of graded glaciolacustrine layers seasonally deposited, usually by meltwater streams, in a glacial lake or other body of still water in front of a glacier.

Very stony spot (map symbol)

A spot where 0.1 to 3.0 percent of the soil surface is covered by rock fragments that are more than 10 inches in diameter in areas where the surface of the surrounding soil is covered by less than 0.01 percent stones.

Water bars

Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Weathering

All physical disintegration, chemical decomposition, and biologically induced changes in rocks or other deposits at or near the earth's surface by atmospheric or biologic agents or by circulating surface waters but involving essentially no transport of the altered material.

Well graded

Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wet spot (map symbol)

A somewhat poorly drained to very poorly drained area that is at least two drainage classes wetter than the named soils in the surrounding map unit.

Wilting point (or permanent wilting point)

The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow

The uprooting and tipping over of trees by the wind.

Connecticut Department of
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March 29, 2021

Ms. Carrie Hess
TTL Associates, Inc.
44265 Plymouth Oaks Blvd.
Plymouth, Michigan 48170

Dear Ms. Hess,

The Connecticut Department of Energy and Environmental Protection is sending this letter in response to a National Environmental Policy Act scoping request for US Department of Veterans Affairs proposed parking garage located at 950 Campbell Avenue, West Haven.

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

Natural Diversity Database
The location slated for a parking garage is currently a developed parking lot. It is unlikely DEEP has any significant concerns regarding potential impacts to the natural environment. The Natural Diversity Data Base, maintained by DEEP's Wildlife Division, contains no records of extant populations of Federally listed endangered or threatened species or species listed by the State, pursuant to section 26-306 of the CGS, as endangered, threatened or special concern in this location. An application for Natural Diversity Database should be submitted just to verify that there will be no impact to area state or federally listed species. The applicant must submit a *Request for Natural Diversity Data Base (NDDB) State Listed Species Review Form* (DEEP-APP-007) and all required attachments, including maps, to the NDDB for further review. Additional information concerning NDDB reviews and the request form may be found on-line at NDDB Requests.

Stormwater management
Parking garages where the roof parking level is exposed to rain must separate their drainage into two separate systems. Roof drainage is considered stormwater runoff and may be regulated under the DEEP stormwater discharge program. For new garages, roof drainage must discharge through a system that retains and infiltrates the runoff from the first inch of rain prior to any discharge to a storm sewer system or waters of the state. If the garage is on a site with existing development that covers the site with over 40% impervious surface, the roof drainage system need only retain and infiltrate the runoff from the first ½ inch of rain. Specific requirements for post-construction stormwater management can be found in the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities.

Drainage from the remaining interior levels of the garage must not discharge to a storm sewer system and must instead discharge to an oil/water separator that connects to a sanitary sewer system. These interior drains will mostly collect concentrated drippage from vehicles and, because it is undiluted by rain, will have much more concentrated levels of pollutants not appropriate for a storm sewer system.

If a garage discharges all drainage to a combined sewer system for which there are no plans to perform storm sewer separation work, these discharges are exempt from the DEEP stormwater permit program, which covers only discharges to surface waters and specifically exempts discharges to a sanitary or combined sewer.

The construction stormwater general permit dictates separate compliance procedures for Locally Approvable projects and Locally Exempt projects (as defined in the permit). Locally Exempt construction projects disturbing over 1 acre must submit a registration form and Stormwater Pollution Control Plan (SWPCP) to DEEP. Locally Approvable construction projects with a total disturbed area of one to five acres are not required to register with DEEP 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 to DEEP. This registration shall include a certification by a 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. The SWPCP for Locally Approvable projects is not required to be submitted to DEEP unless requested. For further information, contact the division at 860-424-3018. A copy of the general permit as well as registration information may be accessed at: www.ct.gov/deep/stormwater.

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.

Air Emissions

The Air Bureau recommends that 20% of all parking spaces in the project design be made ready to accept Level 2 electric vehicle charging stations and that half of these parking spaces actually be equipped with Level 2 electric vehicle charging stations. Connecticut and seven other states are obligated, under the multi-state zero emission vehicle (ZEV) memorandum of understanding (MOU), to collectively put 3.3 million

ZEVs on our roadways by 2025. Connecticut's share of this target is approximately 150,000 ZEVs. Connecticut is further committed to reduce GHG emissions by 80% below 2001 levels by 2050 (and a mid-term target of 45% below 2001 levels by 2030), and must also reduce smog-forming motor vehicle pollution in order to meet the federal Clean Air Act's health based ozone standards. To meet these requirements, Connecticut must continue efforts to support the transition to transportation electrification by requiring the installation of electric vehicle (EV) charging infrastructure to support the growing EV market. EV sales in the US have nearly quadrupled since 2012, with an increase of 81% from 2017 to 2018 alone and are projected to continue to increase.

DEEP typically recommends the use of newer off-road construction equipment that meets the latest EPA or California Air Resources Board (CARB) standards. If that 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.

Linda Brunza

Linda Brunza
Environmental Analyst
Office of Planning and Program Development
Office of the Commissioner

Connecticut Department of
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April 28, 2021

Carrie Hess
TTL Associates, Inc (on behalf of VA)
44265 Plymouht Oaks Boulevard
Plymouth MI 48170
chess@ttlassoc.com

Project: New Parking Garage at the West Haven VA Medical Center, 950 Campbell Ave, West Haven, CT
NDDB Determination No.: 202104952

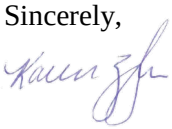
Dear Ms. Hess,

I have reviewed Natural Diversity Database (NDDB) maps and files regarding the area of work provided for the proposed construction of a parking garage on the site of an existing parking lot at the West Haven VA Medical Center, 950 Campbell Avenue in West Haven, Connecticut. I do not anticipate negative impacts to State-listed species (RCSA Sec. 26-306) resulting from your proposed activity at the site based upon the information contained within the NDDB. The result of this review does not preclude the possibility that listed species may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits. This determination is good for two years. Please re-submit a new NDDB Request for Review if the scope of work changes or if work has not begun on this project by April 28, 2023.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey, cooperating units of DEEP, landowners, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the NDDB should not be substitutes for on-site surveys necessary for a thorough environmental impact assessment. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the database as it becomes available.

Please contact me if you have further questions at (860) 424-3378, or karen.zyko@ct.gov . Thank you for consulting the Natural Diversity Database.

Sincerely,



Karen Zyko
Environmental Analyst

Department of Economic and Community Development

State Historic Preservation Office

July 23, 2021

Mr. Joseph Simonetta
US Department of Veterans Affairs
950 Campbell Avenue
West Haven, CT 06516

Subject: Proposed Parking Garage
West Haven Veterans Administration Hospital
950 Campbell Avenue
West Haven, CT
ENV-22-0059

Dear Mr. Simonetta:

The State Historic Preservation Office has reviewed the information submitted for the above-named property pursuant to the provisions of the Section 106 of the National Historic Preservation Act and the Connecticut Environmental Policy Act.

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 as an example of a Third Generation Hospital used by 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 tuberculosis facilities, and landscape architect Beatrix Farrand. The Subject Property, an approximately one acre sized, asphalt paved parking lot, does not contribute to the significance of the hospital district.

The proposed scope of work includes construction of a new, 4 ½ story parking garage, within existing disturbed soils, to be located in the western portion of the campus, adjacent to the main entrance of Building 2.

The scope of work as described above will not diminish the integrity of the district. Based on the information submitted, the undertaking will constitute no adverse effects to historic resources. Should the scope of work change, this office should be contacted for additional consultation.

Department of Economic and Community Development

State Historic Preservation Office

The State Historic Preservation Office appreciates the opportunity to review and comment upon this project. These comments are provided in accordance with the Connecticut Environmental Policy Act and 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,

Jonathan Kinney
Deputy State Historic Preservation Officer

Carrie Hess

From: William Kane <wkane@westhaven-ct.gov>
Sent: Wednesday, March 10, 2021 8:06 PM
To: Carrie Hess
Cc: Cathy Conniff
Subject: RE: NEPA Scoping Letter for a Proposed Parking Garage at the West Haven VA Medical Center

Importance: High

Carrie Hess, TTL Associates,

A tour of the proposed garage was made Tuesday March 9th and based on the location the site will not impact any wetland or watercourse areas. The proposed garage area is not within the surface and groundwater resources, including streams, wetlands, floodplains, open water features, The closest wetland is approximately 950 feet south of the proposed build. The proposed garage would not impact any wetland or waterway area. This agency does not know of any Federally or state listed threatened or endangered species, or any species proposed for such listing, or critical habitat for such species that may occur within a one-mile radius around the proposed site. The available state and federal maps do not show any listed threatened or endangered species. The proposed build will not based on current West Haven Wetland regulations impact any Parks, nature preserves, conservation areas, designated wild or scenic rivers, migratory bird habitats or special wildlife areas.

The above does not imply other regulations or City of West Haven zoning regulations can be bypassed. Zoning requirement may impact the build and further contact with the zoning officials is required.

I have copied C Conniff City of West Haven Zoning official who can supply additional guidance on zoning regulations.

Please do not hesitate to contact me if any additional questions can be answered or I'm needed at any meeting on the proposed garage build.

William Kane
Chairman & Commissioner

Inland Wetland Watercourse Agency
City of West Haven Connecticut.

From: Carrie Hess [chess@ttlassoc.com]
Sent: Thursday, March 04, 2021 12:41 PM
To: William Kane
Subject: NEPA Scoping Letter for a Proposed Parking Garage at the West Haven VA Medical Center

Hello Mr. William Kane,

Please find the attached request for scoping information for a NEPA Environmental Assessment for a proposed parking garage at the West Have VA Medical Center located at 950 Campbell Avenue in West Haven, New Haven County, Connecticut.

Thank you!

Carrie Hess
Geologist
TTL Associates, Inc.
1915 North 12th Street | Toledo, OH 43604-5305 | ttlassoc.com
Direct: (419) 214-5048 | | Fax: (419) 214-5049

APPENDIX B

NATIVE AMERICAN TRIBE CORRESPONDENCE

VA | U.S. Department of Veterans Affairs
Veterans Health Administration
Connecticut Healthcare System

950 Campbell Avenue
West Haven, CT 06516

May 26, 2021

Mohegan Indian Tribe of Connecticut
Mr. James Quinn, THPO
13 Crow Hill Road
Uncasville, Connecticut 06382

SUBJECT: Proposed Parking Garage VA Connecticut Healthcare System West Haven Campus

Dear Mr. Quinn:

The US Department of Veterans Affairs (VA) is conducting an environmental impact analysis of the proposed construction and operation of a new four and one half-level parking garage at the VA Connecticut Healthcare System, West Haven Campus (West Haven VAMC), located at 950 Campbell Avenue in West Haven, New Haven County, Connecticut.

The proposed parking garage would be constructed in an existing, approximately one acre, asphalt-paved West Haven VAMC parking lot located near the main patient entrance of the hospital. The proposed garage would be a two-bay, approximately 124 feet by 272 feet structure with three and one-half elevated levels and would be designed to accommodate potential future horizontal expansion of one full bay width to the east. The proposed parking garage would provide a net gain of approximately 254 parking spaces for the West Haven VAMC campus, which is currently operating at a significant parking deficit. The locations of the West Haven VAMC campus and the proposed parking garage site are shown in Attachments 1a, 1b, and 1c.

Based on a review of historical aerial photographs and topographic maps, the proposed parking garage site was unimproved land in the early 1900s, unimproved grassy or agricultural land from at least 1934 to at least 1940, disturbed land associated with the construction of the main hospital buildings in 1951, occupied by a baseball diamond and tennis courts in 1963, unimproved grassy land in 1966, and has been occupied by a paved parking lot associated with the West Haven VAMC since at least 1972.

To the best of our knowledge, the proposed parking garage development would have no effects on Native American graves or cultural items, historic properties, or archaeological, historic, or scientific data. If you or members of your Tribe are aware of cultural properties that may be affected by the parking garage development, please provide this information to VA for review or you may contact me at the number/email below to coordinate further discussions. VA will follow all appropriate federal confidentiality requirements.

Thank you for your commitment to historic resources and ongoing support of Veterans. If you have any questions about this project, please contact Jospeh Simonetta at (203) 500-2186, or by email at joseph.simonetta2@va.gov.

Sincerely,

Alfred A. Montoya 139504
Digitally signed by Alfred A. Montoya 139504
Date: 2021.05.26 15:08:06 -04'00'

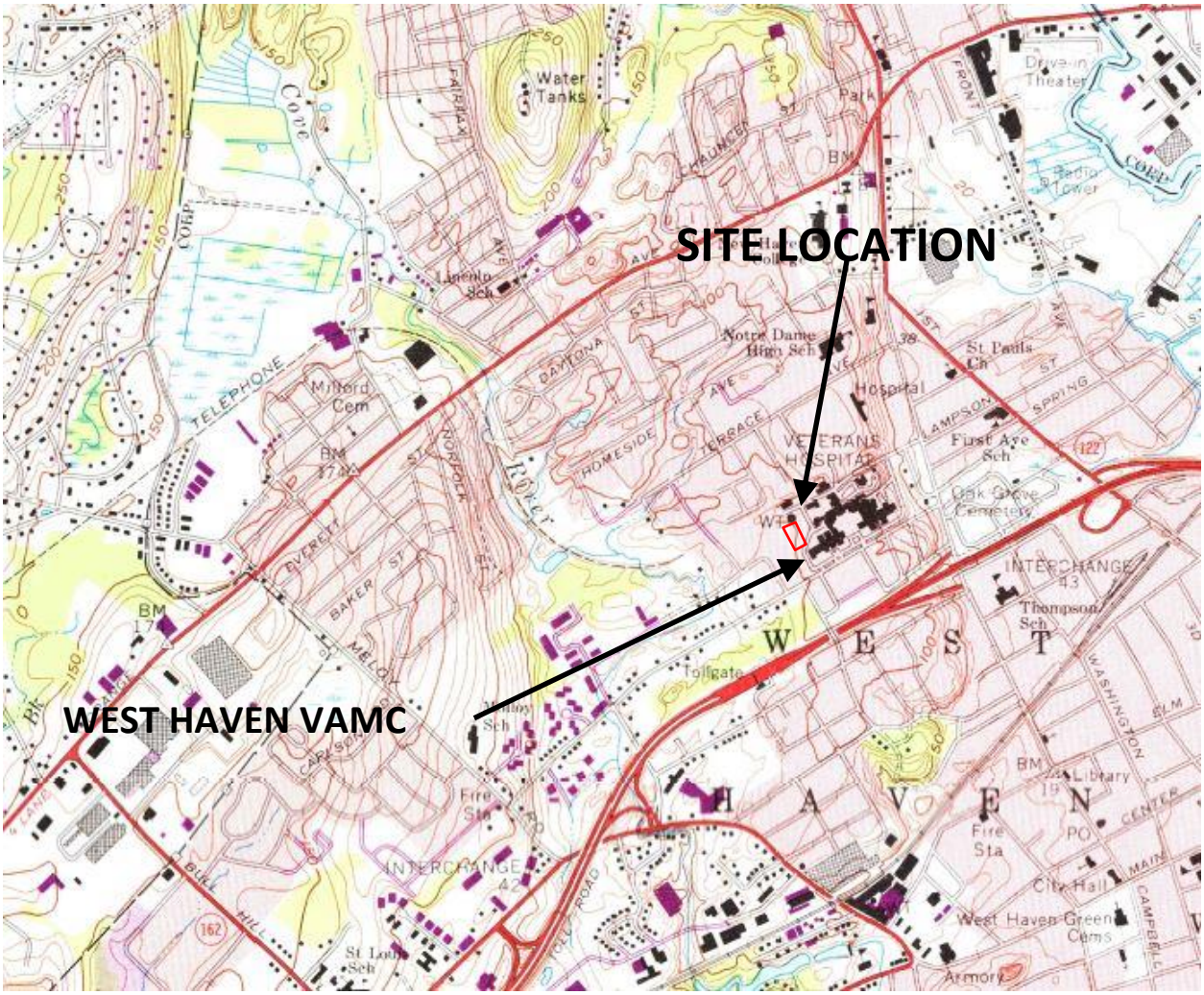
Alfred A. Montoya Jr., MHA, FACHE
Medical Center Director
VA Connecticut Healthcare System

Attachment 1a: Proposed Parking Lot Site Location Map (Topographic Map)
Attachment 1b: Proposed Parking Lot Site Location Map (Street Map)
Attachment 1c: Proposed Parking Lot Location Map (2019 Aerial Map)
Attachment 2: List of Tribes Consulted

ATTACHMENTS 1A THROUGH 1C
SITE LOCATION MAPS

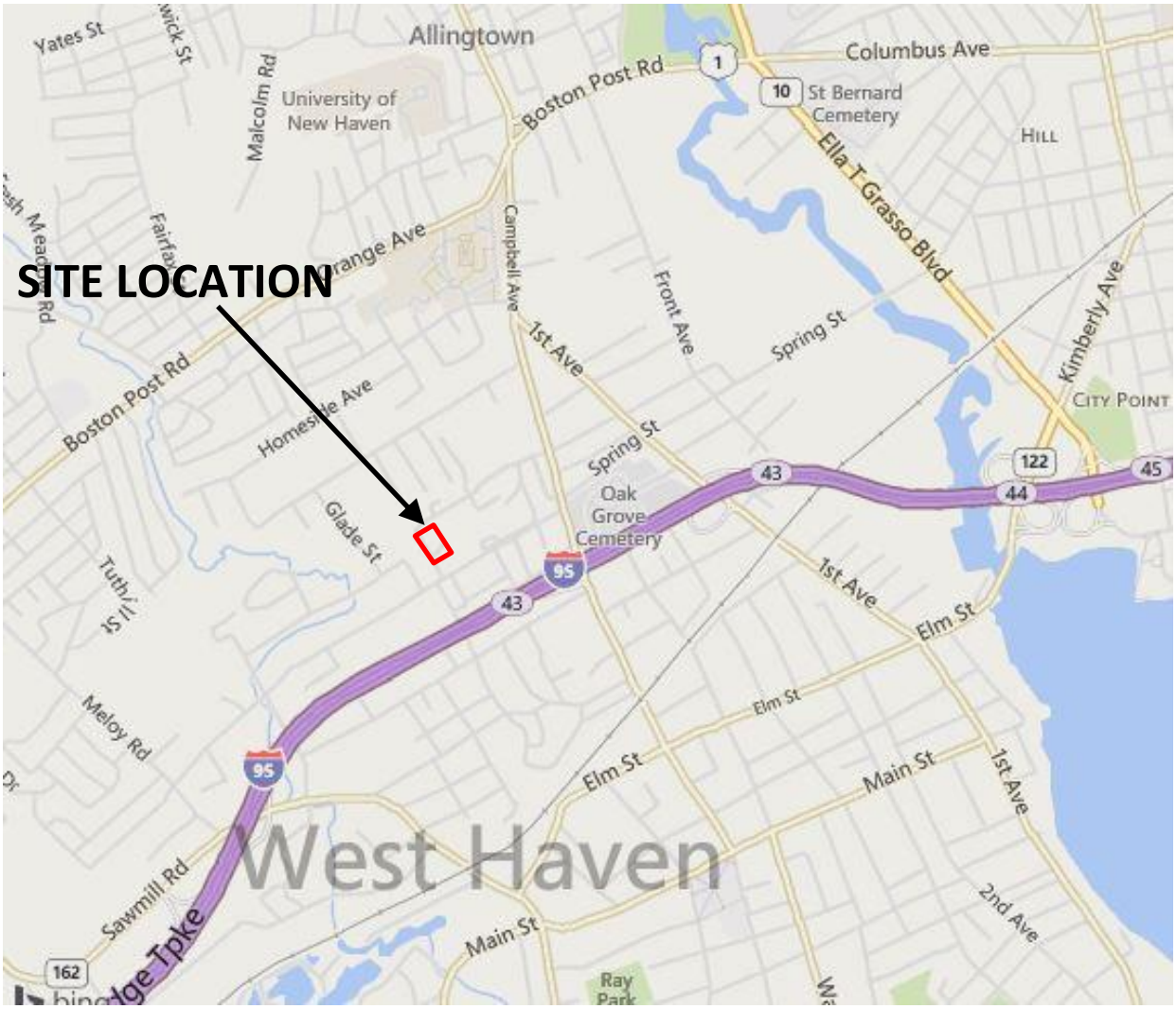
ATTACHMENT 1A

SITE LOCATION MAP (TOPOGRAPHIC MAP)
Proposed Parking Garage
VA Connecticut Healthcare System, West Haven Campus
West Haven, Connecticut



ATTACHMENT 1B

SITE LOCATION MAP (STREET MAP)
Proposed Parking Garage
VA Connecticut Healthcare System, West Haven Campus
West Haven, Connecticut



ATTACHMENT 1C

SITE LOCATION MAP (2019 AERIAL MAP)
Proposed Parking Garage
VA Connecticut Healthcare System, West Haven Campus
West Haven, Connecticut

Attachment 2
List of Tribes Consulted
U.S. Department of Veterans Affairs
Proposed Parking Garage
VA Connecticut Healthcare System, West Haven Campus
West Haven, Connecticut

Delaware Tribe of Indians
Dr. Brice Obermeyer, Historic Preservation
1 Kellog Circle
Emporia, Kansas 66801
bobermeyer@delawaretribe.org

Mohegan Indian Tribe of Connecticut
Mr. James Quinn, THPO
13 Crow Hill Road
Uncasville, Connecticut 06382
jquinn@moheganmail.com

Mashantucket Pequot Indian Tribe
Ms. Marissa Turnbull, THPO
110 Pequot Trail
Mashantucket, Connecticut 06338
mturnbull@mptn-nsn.gov

Narragansett Indian Tribe
Mr. John Brown, Tribal Preservation Officer
P.O. Box 463
Charleston, Rhode Island 02813
tashtesook@aol.com

Carrie Hess

From: Brice Obermeyer <bobermeyer@delawaretribe.org>
Sent: Monday, June 14, 2021 3:25 PM
To: Carrie Hess; Eastern Historic Preservation
Subject: Fwd: Section 106 Consultation for the Proposed Parking Garage at the West Haven VA Medical Center Campus, West Haven, CT
Attachments: West Haven VAMC Parking Garage Scoping Delaware Tribe.pdf; West Haven VAMC Parking Garage NAC Scoping Attachments.pdf

Hi Carrie,

I am forwarding this project information to Susan Bachor in our Eastern Office. Susan handles all reviews for CT and will be the point of contact for this and all future projects.

Brice Obermeyer
Delaware Tribe Historic Preservation Office
Roosevelt Hall, Rm 212
1 Kellog Drive
Emporia, KS 66801

From: Carrie Hess <chess@ttlassoc.com>
To: "bobermeyer@delawaretribe.org" <bobermeyer@delawaretribe.org>
Cc: "joseph.simonetta2@va.gov" <joseph.simonetta2@va.gov>
Sent: 6/8/2021 2:49 PM
Subject: Section 106 Consultation for the Proposed Parking Garage at the West Haven VA Medical Center Campus, West Haven, CT

Dear Dr. Obermeyer,

Please find the attached consultation letter and associated attachments for a Proposed Parking Garage at the West Haven VA Medical Center campus.

Please direct your responses to Joseph Simonetta at (203) 500-2186, or by email at joseph.simonetta2@va.gov.

Thank you!

Carrie Hess
Geologist
TTL Associates, Inc.
1915 North 12th Street | Toledo, OH 43604-5305 | ttlassoc.com
Direct: (419) 214-5048 | | Fax: (419) 214-5049

Carrie Hess

From: James Quinn <jquinn@moheganmail.com>
Sent: Thursday, June 10, 2021 9:56 AM
To: Carrie Hess
Cc: joseph.simonetta2@va.gov
Subject: Re: Section 106 Consultation for the Proposed Parking Garage at the West Haven VA Medical Center Campus, West Haven, CT

Hello Ms. Hess & Mr. Simonetta,
I have reviewed the information you provided regarding the above referenced project. The Mohegan THPO does not have any concerns with the project as it is proposed. However, please do contact us immediately upon any inadvertent discoveries. Thank you for the opportunity to review this project.
Regards,
James

From: Carrie Hess <chess@ttlassoc.com>
Sent: Tuesday, June 8, 2021 3:50 PM**To:** James Quinn <jquinn@moheganmail.com>
Cc: joseph.simonetta2@va.gov <joseph.simonetta2@va.gov>
Subject: Section 106 Consultation for the Proposed Parking Garage at the West Haven VA Medical Center Campus, West Haven, CT

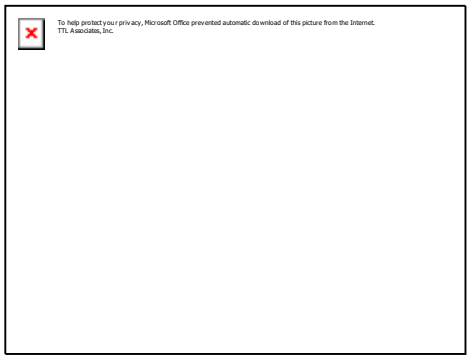
Dear Mr. Quinn,

Please find the attached consultation letter and associated attachments for a Proposed Parking Garage at the West Haven VA Medical Center campus.

Please direct your responses to Joseph Simonetta at (203) 500-2186, or by email at joseph.simonetta2@va.gov.

Thank you!

Carrie Hess
Geologist
TTL Associates, Inc.
1915 North 12th Street | Toledo, OH 43604-5305 | ttlassoc.com
Direct: (419) 214-5048 | | Fax: (419) 214-5049



APPENDIX C

PHOTOGRAPH LOGS

SITE PHOTOGRAPHS

Photo #1: Looking southwest across the southern portion of the site.

Photo #2: Looking west across the central portion of the site.

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

Photo #4: Looking southwest across the main entrance traffic circle.

Photo #5: Looking northwest across the site.

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

SITE PHOTOGRAPHS

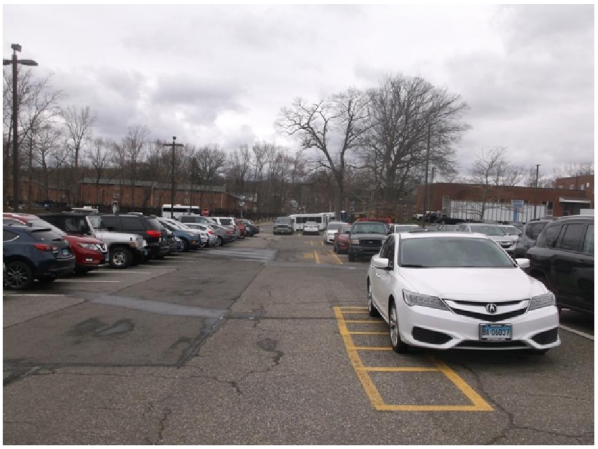


Photo #7: Looking north across the western portion of the site.

Photo #8: Looking northeast across the southern portion of the site.

Photo #9: Looking northeast across the northern portion of the site.

Photo #10: Looking southeast across the eastern portion of the site.

Photo #11: Northeasterly adjoining Building 21 (left), unlabeled garage building (center), and Building 3 (right-center) beyond the main entrance drive.

Photo #12: Southeasterly adjoining Building 2 (Main Hospital) beyond the main entrance drive.

SITE PHOTOGRAPHS

Photo #13: Southeast adjoining new construction (extension of Building 2) beyond the main entrance drive.

Photo #14: Southwest adjoining Ring Road with parking and a multi-family apartment complex beyond.

Photo #15: West adjoining surface parking lot beyond Ring Road.

Photo #16: North adjoining Building 24 beyond Ring Road.

Photo #17: North adjoining Building 22 beyond Ring Road.

Photo #18: Northeast adjoining Building 21 beyond the main entrance drive.

APPENDIX D

ENVIRONMENTAL DATA

U.S. Fish and Wildlife Service

National Wetlands Inventory

Wetlands

February 22, 2021

Wetlands

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

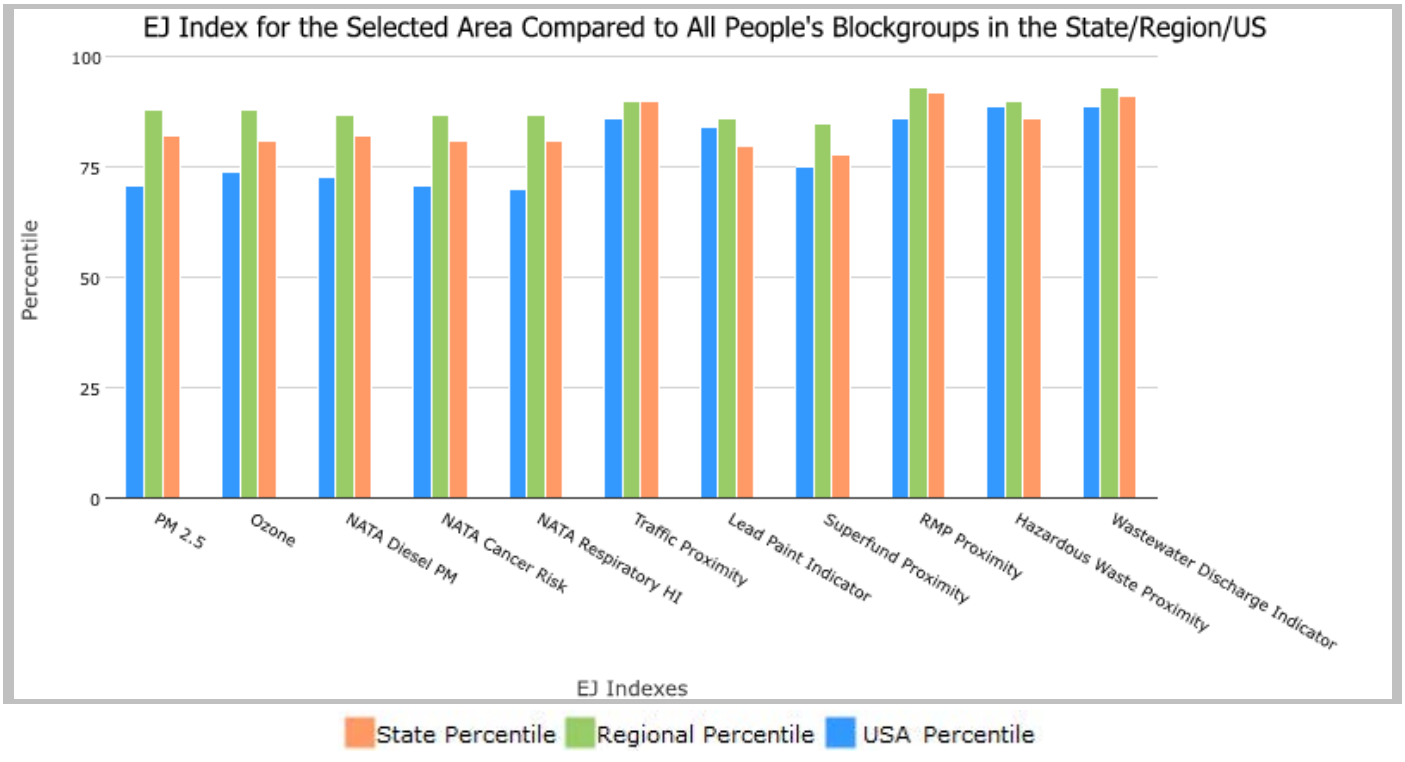
EJSCREEN Report (Version 2020)

1 mile Ring Centered at 41.282410,-72.962453, CONNECTICUT, EPA Region 1

Approximate Population: 20,788

Input Area (sq. miles): 3.14

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	82	88	71
EJ Index for Ozone	81	88	74
EJ Index for NATA* Diesel PM	82	87	73
EJ Index for NATA* Air Toxics Cancer Risk	81	87	71
EJ Index for NATA* Respiratory Hazard Index	81	87	70
EJ Index for Traffic Proximity and Volume	90	90	86
EJ Index for Lead Paint Indicator	80	86	84
EJ Index for Superfund Proximity	78	85	75
EJ Index for RMP Proximity	92	93	86
EJ Index for Hazardous Waste Proximity	86	90	89
EJ Index for Wastewater Discharge Indicator	91	93	89



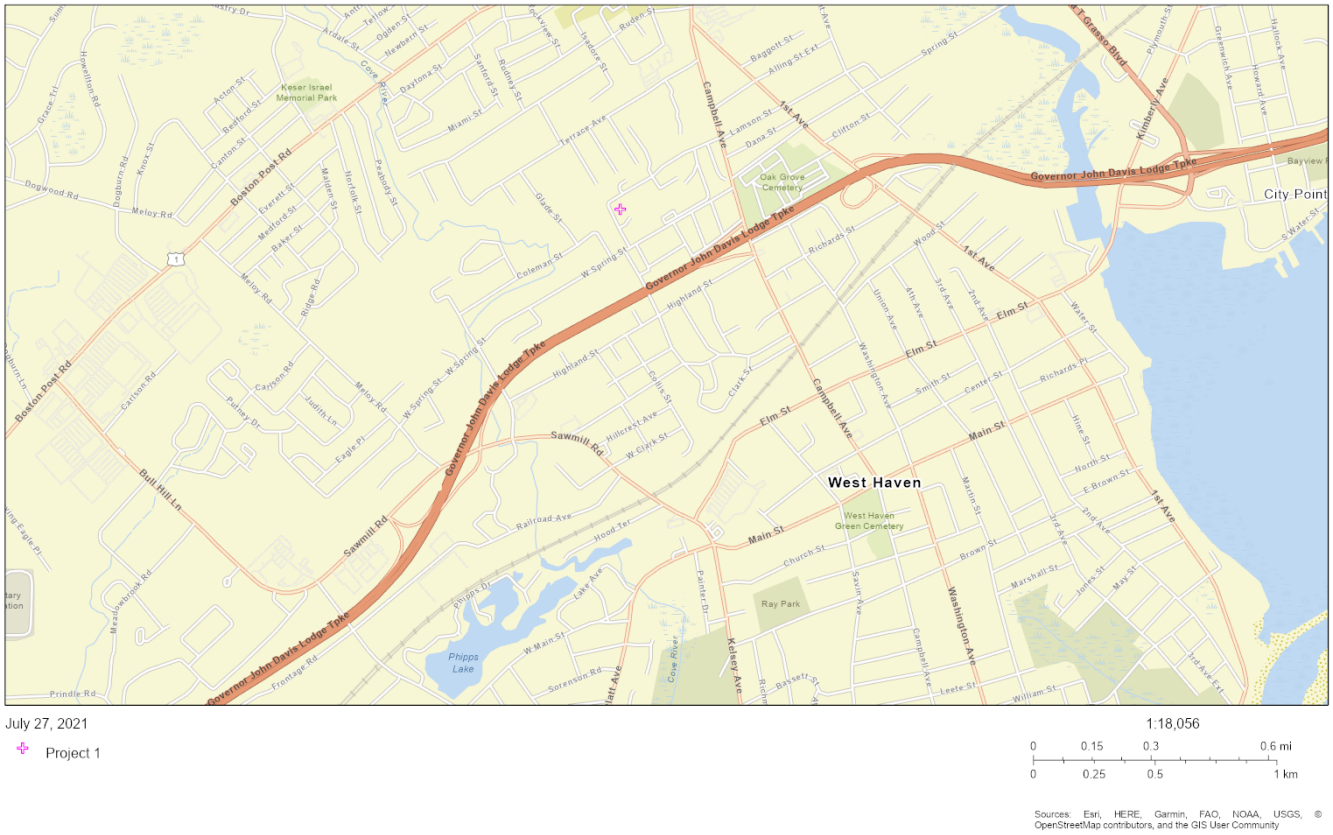
This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective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

EJSCREEN Report (Version 2020)

1 mile Ring Centered at 41.282410,-72.962453, CONNECTICUT, EPA Region 1

Approximate Population: 20,788

Input Area (sq. miles): 3.14



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	2

EJSCREEN Report (Version 2020)

1 mile Ring Centered at 41.282410,-72.962453, CONNECTICUT, EPA Region 1

Approximate Population: 20,788

Input Area (sq. miles): 3.14

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	6.66	6.47	67	6.14	81	8.55	10
Ozone (ppb)	43.5	42.5	76	39.5	94	42.9	56
NATA* Diesel PM (µg/m^3)	0.418	0.331	76	0.345	70-80th	0.478	50-60th
NATA* Cancer Risk (lifetime risk per million)	25	25	53	25	50-60th	32	<50th
NATA* Respiratory Hazard Index	0.32	0.31	59	0.31	60-70th	0.44	<50th
Traffic Proximity and Volume (daily traffic count/distance to road)	1500	590	89	930	83	750	87
Lead Paint Indicator (% Pre-1960 Housing)	0.48	0.44	58	0.44	57	0.28	76
Superfund Proximity (site count/km distance)	0.063	0.14	30	0.15	32	0.13	51
RMP Proximity (facility count/km distance)	1.7	0.53	95	0.58	90	0.74	88
Hazardous Waste Proximity (facility count/km distance)	8.4	3.3	92	4.1	89	5	91
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	0.004	0.033	75	0.7	79	9.4	74
Demographic Indicators							
Demographic Index	51%	28%	81	24%	87	36%	74
People of Color Population	64%	32%	81	24%	88	39%	75
Low Income Population	39%	23%	80	24%	80	33%	66
Linguistically Isolated Population	10%	5%	82	5%	84	4%	84
Population With Less Than High School Education	16%	10%	80	9%	81	13%	70
Population Under 5 years of age	5%	5%	58	5%	59	6%	46
Population over 64 years of age	10%	16%	20	17%	20	15%	28

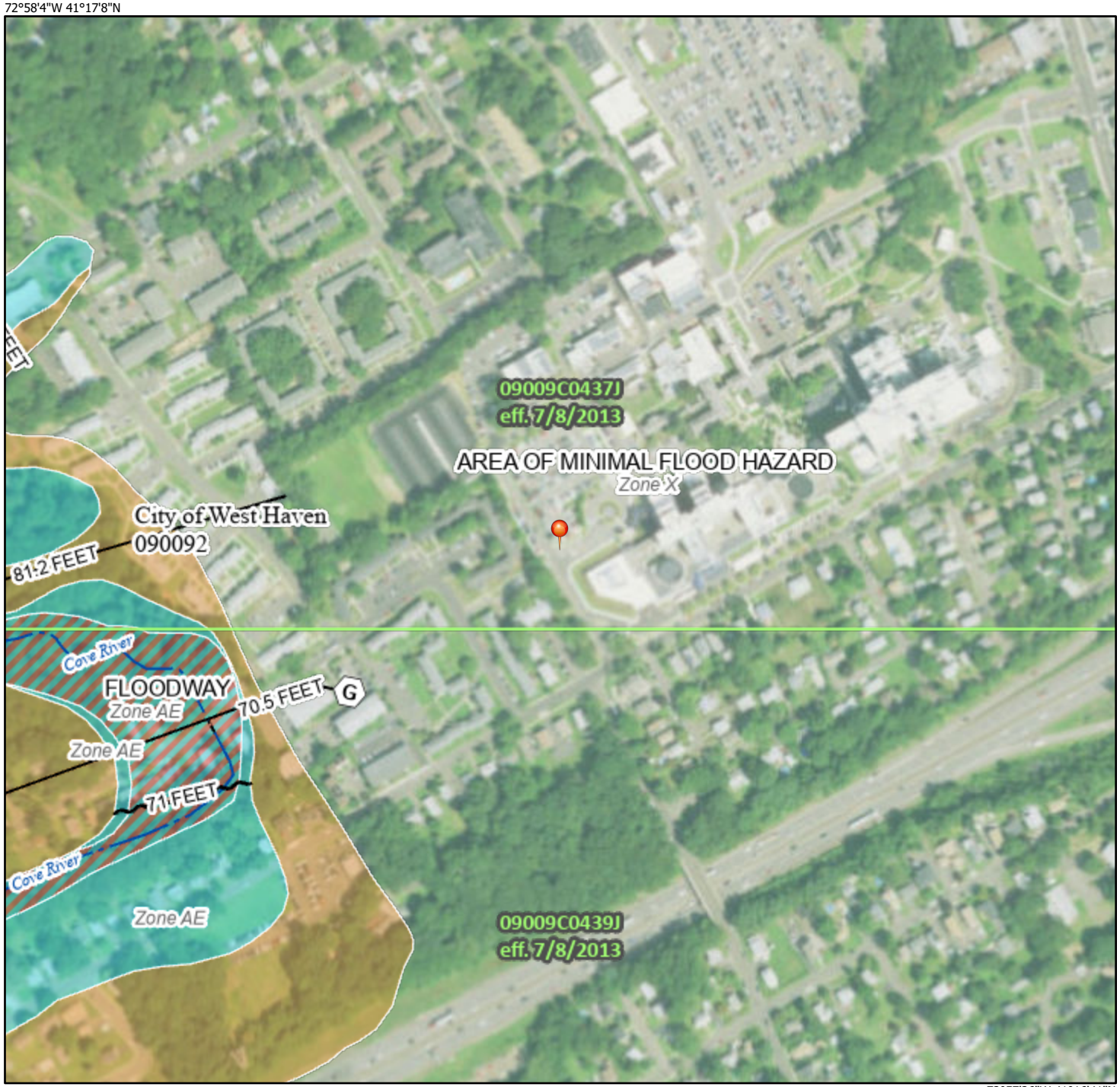
* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates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

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

National Flood Hazard Layer FIRMette

FEMA

72°58'4"W 41°17'8"N



72°57'26"W 41°16'41"N

Feet

0 250 500 1,000 1,500 2,000

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 2/21/2021 at 7:07 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
http://www.fws.gov/newengland

In Reply Refer To: July 27, 2021
Consultation Code: 05E1NE00-2021-SLI-1464
Event Code: 05E1NE00-2021-E-12862
Project Name: Proposed West Haven VAMC Parking Garage

Subject: Updated list of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2021-SLI-1464
Event Code: 05E1NE00-2021-E-12862
Project Name: Proposed West Haven VAMC Parking Garage
Project Type: DEVELOPMENT
Project Description: Proposed four and a half story parking garage in an existing parking lot on the West Haven VAMC campus.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@41.282355800000005,-72.96251864328306,14z

Counties: New Haven County, Connecticut

Endangered Species Act Species

There is a total of 0 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

APPENDIX E

PUBLIC NOTICES AND COMMENTS

HEARST | CONNECTICUT MEDIA GROUP

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

TTL ASSOCIATES, INC.
1915 North 12th Street

TOLEDO OH 43604

AFFIDAVIT OF PUBLICATION

STATE OF CONNECTICUT
COUNTY OF FAIRFIELD

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 18th Day of January, A.D. 2022.

_____
Notary Public

My commission expires on

Melinda S. Kelly
Notary Public, State of Connecticut
My Commission Expires 12/31/2025

NOTICE OF AVAILABILITY
DRAFT ENVIRONMENTAL ASSESSMENT
U.S. DEPARTMENT OF VETERANS AFFAIRS
Proposed VA Connecticut Healthcare System
West Haven Campus
Parking Garage
950 Campbell Avenue
West Haven, Connecticut

The U.S. Department of Veterans Affairs (VA) announces the availability of a Draft Environmental Assessment (DEA) for public review and comment. The Draft EA evaluates the potential environmental effects of the proposed construction and operation of a new four and one-half story parking garage in the western portion of the West Haven VA Medical Center (VAMC) campus. The parking garage would be constructed in an existing VAMC parking lot, near the main patient entrance to the hospital.

VA prepared the Draft EA in accordance with the National Environmental Policy Act and regulations implementing the Act. Comments will be addressed in the Final EA, after which VA intends to issue a Finding of No Significant Impact. The public comment period ends on February 14, 2022.

The Draft EA is available for review at the West Haven Public Library, located at 300 Elm Street in West Haven, Connecticut, and on the West Haven VAMC website at: https://www.va.gov/connecticut-health-care/news-releases/west-haven-campus-parking-garage-environment-assessment/

Please email comments by February 14, 2022, to Joseph Simonetta (joseph.simonetta2@va.gov). If you have any questions or are unable to submit your comments by email, please contact Mr. Simonetta at (203) 500-2186.

PO Number

Ad Caption
NOTICE OF AVAILABILITY DR/

Publication
New Haven Register

Ad Number
0002680579-01

Publication Schedule
1/15/2022, 1/16/2022, 1/17/2022

PUBLIC NOTICES

CITY OF ANSONIA
LEGAL NOTICE

A certified list of Republican party-endorsed candidates for the City of Ansonia for election as members of the Town Committee from the seven wards is on file in my office at 253 Main Street, Ansonia, CT and copies are available for public distribution.

The number of Town Committee members to be elected, under party rules, and the number of names of candidates included in the certificate from each ward is as follows:

WARD	NUMBER TO BE ELECTED	NUMBER CERTIFIED
1	4	8
2	4	8
3	4	8
4	4	8
5	4	8
6	4	8
7	12	16

A primary will be held on March 1, 2022 in each of the above political subdivisions in which candidacies numbering at least 20% of the number of Town Committee members to be elected by such party in such political subdivision are filed in accordance with Section 9-382 to 9-450, inclusive, of the General Statutes by persons other than party-endorsed candidates not later than 4:00 p.m. of January 26, 2022, provided the number of such candidacies, plus the number of endorsed candidates for such political subdivision exceeds the number of Town committee members to be elected. If the number of opposing candidacies filed is reduced to less than 20% in any subdivision, no primary will be held.) Petition forms, instructions, and information concerning the procedure for filing opposing candidacies, may be obtained from David Pepicelli, Republican Registrar of Voters, 253 Main Street, Ansonia, CT 06401.

Elizabeth S. Lynch, Ansonia Town & City Clerk

CITY OF ANSONIA
LEGAL NOTICE

A certified list of Democratic party-endorsed candidates for the City of Ansonia for election as members of the Town Committee from the seven wards is on file in my office at 253 Main Street, Ansonia, CT and copies are available for public distribution.

The number of Town Committee members to be elected, under party rules, and the number of names of candidates included in the certificate from each ward is as follows:

WARD	NUMBER TO BE ELECTED	NUMBER CERTIFIED
1	16	16
2	16	16
3	16	16
4	16	16
5	16	16
6	16	16
7	16	16

A primary will be held on March 1, 2022 in each of the above political subdivisions in which candidacies numbering at least 20% of the number of Town Committee members to be elected by such party in such political subdivision are filed in accordance with Section 9-382 to 9-450, inclusive, of the General Statutes by persons other than party-endorsed candidates not later than 4:00 p.m. of January 26, 2022, provided the number of such candidacies, plus the number of endorsed candidates for such political subdivision, exceeds the number of Town committee members to be elected. If the number of opposing candidacies filed is reduced to less than 20% in any subdivision, no primary will be held.) Petition forms, instructions, and information concerning the procedure for filing opposing candidacies, may be obtained from Thomas Mattos, Ansonia Registrar of Voters, 253 Main Street, Ansonia, CT 06401.

Elizabeth S. Lynch, Ansonia Town & City Clerk

Notice of Intent to Request a Release of Funds

Date of Publication: January 19, 2022
City of New Haven, 165 Church Street, New Haven, CT, 06510, 203-946-6379

On or about January 24, 2022 the City of New Haven will submit a request to the U.S. Department of Housing and Urban Development for the release of Community Development Block Grant Funds under Title I of the Housing and Community Development Act of 1974, as amended. The activities proposed are categorically excluded under HUD regulations at 24 CFR Part 58 from National Environmental Policy Act (NEPA) requirements. This exclusion does not pertain to other program requirements, including those relating to historic preservation, floodplains, wetlands, air quality and other authorities set forth in the Regulations. When reviewed under the 1966 National Historic Preservation Act, particularly Sections 106 and 110, the following categorically excluded activity was determined to have No Adverse Effect upon the historic structure it is planned for.

165-169 Ivy Street – Funds will be used for the rehabilitation of 165-169 Ivy Street, an existing 3 family building. The structure is a contributing resource to the National Register of Historic Place, listed Winchester Repeating Arms Historic District Boundary Increase (NRIS 13000869). The proposed scope includes interior and exterior renovation and will maintain the 3 unit density. The scope of work was reviewed by the State Historic Preservation Office and given a No Adverse Effect determination.

An Environmental Review Record (ERR) that documents the environmental determinations for this project is on file in the City Plan Department, City Hall, 165 Church St., and is available for public examination and copying. Any questions or requests to review the full Environmental Review Record should be directed to Jaime Stein, Planner, New Haven City Plan Department jstein@newhavenct.gov (203) 946-6379.

PUBLIC COMMENTS

Any individual, group, or agency may submit written comments on the ERR to the Office of Mayor Justin Elicker, City Hall, 165 Church Street, New Haven, Connecticut 06510. All comments received by January 23, 2022 will be considered by the City of New Haven prior to authorizing submission of a request for release of funds.

ENVIRONMENTAL CERTIFICATION

The City of New Haven is certifying to HUD that the City of New Haven and Certifying Officer, Justin Elicker, in his official capacity as Mayor, consents to accept the jurisdiction of the Federal courts if an action is brought to enforce responsibilities in relation to the environmental review process and that State responsibilities have been satisfied. HUD's approval of the certification satisfies its responsibilities under NEPA and related laws and authorities and allows the City of New Haven to use Program funds.

OBJECTIONS TO RELEASE OF FUNDS

HUD will accept objections to its release of funds and the City of New Haven's certification for a period of fifteen days following the anticipated submission date or its actual receipt of the request (whichever is later) only if they are on one of the following bases: (a) the certification was not executed by the Certifying Officer of the City of New Haven; (b) the City has omitted a step or failed to make a decision or finding required by HUD regulations at 24 CFR part 58; (c) the grant recipient or other participants in the development process have committed funds, incurred costs or undertaken activities not authorized by 24 CFR Part 58 before approval of a release of funds by HUD; or (d) another Federal agency acting pursuant to 40 CFR Part 1504 has submitted a written finding that the project is unsatisfactory from the standpoint of environmental quality. Objections must be prepared and submitted in accordance with the required procedures (24 CFR Part 58, Sec. 58.76) and shall be addressed to HUD in care of Alanna Kebel, Field Office Director, U.S. Department of Housing and Urban Development, 10 Church St., 10th Floor, Hartford, Connecticut 06103-7220. Objections to the release of funds on bases other than those stated above will not be considered by HUD. Potential objectors should contact HUD to verify the actual last day of the objection period.

Justin Elicker, Mayor

PUBLIC NOTICES

Notice of Intent to Request a Release of Funds

Date of Publication: January 19, 2022
City of New Haven, 165 Church Street, New Haven, CT, 06510, 203-946-6379

On or about January 24, 2022 the City of New Haven will submit a request to the U.S. Department of Housing and Urban Development for the release of Community Development Block Grant Funds under Title I of the Housing and Community Development Act of 1974, as amended. The activities proposed are categorically excluded under HUD regulations at 24 CFR Part 58 from National Environmental Policy Act (NEPA) requirements. This exclusion does not pertain to other program requirements, including those relating to historic preservation, floodplains, wetlands, air quality and other authorities set forth in the Regulations. When reviewed under the 1966 National Historic Preservation Act, particularly Sections 106 and 110, the following categorically excluded activity was determined to have No Adverse Effect upon the historic structure it is planned for.

1395 Chapel Street – The State Oral Health Association of America is looking to use CDBG funds to complete interior and exterior rehabilitation. The structure is a contributing resource to the National Register of Historic Places – listed Dwight Street Historic District (NRIS03001231). The scope of work was reviewed by the State Historic Preservation Office and given a No Adverse Effect determination.

An Environmental Review Record (ERR) that documents the environmental determinations for this project is on file in the City Plan Department, City Hall, 165 Church St., and is available for public examination and copying. Any questions or requests to review the full Environmental Review Record should be directed to Jaime Stein, Planner, New Haven City Plan Department jstein@newhavenct.gov (203) 946-6379.

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Justin Elicker, Mayor

NOTICE OF AVAILABILITY
DRAFT ENVIRONMENTAL ASSESSMENT
U.S. DEPARTMENT OF VETERANS AFFAIRS
Proposed VA Connecticut Healthcare System
West Haven Campus
Parking Garage
950 Campbell Avenue
West Haven, Connecticut

The U.S. Department of Veterans Affairs (VA) announces the availability of a Draft Environmental Assessment (DEA) for public review and comment. The Draft EA evaluates the potential environmental effects of the proposed construction and operation of a new four and one-half story parking garage on the western portion of the West Haven VA Medical Center (VAMC) campus. The parking garage would be constructed on an existing VAMC parking lot, near the main patient entrance to the hospital. VA proposed the Draft EA in accordance with the National Environmental Policy Act and regulations implementing the Act. Comments will be addressed in the Final EA, after which VA intends to issue a Finding of No Significant Impact, if the public comment period ends on February 12, 2022.

The Draft EA is available for review at the West Haven Public Library, located at 300 Elm Street in West Haven, Connecticut, and the West Haven VAMC Website (https://www.va.gov/connecticut-health-care/news-releases/va-connecticut-seeking-public-comment-on-environmental-assessment).

Please email comments by February 14, 2022, to Joseph Simonetta (joseph.simonetta2@va.gov). If you have any questions or are unable to submit your comments by email, please contact Mr. Simonetta at (203) 500-2186.

NEW HAVEN BOARD OF ZONING APPEALS-NOTICE OF DECISIONS
Jan. 11, 2022

Approved: 21-06-V, 269 Cherry Street. Variances to allow for a front yard of 19 where 27ft is required, a side yard of 8ft where 6ft is required, a building wall height of 30ft where 2ft is permitted, and a maximum building lot coverage of 46% where 30% is permitted for an addition to an existing structure. Zone: RM-2. Owner: Gold Spring School. Applicant: Kyle Stanley. 21-08-V, 1259 York Street. Variance to allow a package permit to be located approximately 1,000ft away from another establishment with a package permit where 1,500ft is required. Zone: BD-1. Owner: Crown Court Apartments LLC. Applicant: James Sagarlat.

HOME FIRE PREPAREDNESS:
FIRE ESCAPE PLANNING

The most effective way to protect yourself and your home from fire is to identify and remove fire hazards. Eighty-five percent of home fire deaths occur in homes with no working smoke alarms. During a home fire, working smoke alarms and a fire escape plan that has been practiced regularly can save lives.

If a fire occurs in your home, GET OUT, STAY OUT and CALL for help.

Install smoke alarms on every level of your home, inside bedrooms and outside sleeping areas. Test them every month and replace the batteries at least once a year.

Talk with all household members about a fire escape plan and practice the plan twice a year.

- ☐ Ensure that all household members know two ways to escape from every room of your home.
- ☐ Go to your outside meeting place and then call for help.
- ☐ If door is open or hot to the touch, use your second way out. Never open door that is hot to the touch.
- ☐ If smoke, heat or flames block your exit routes, stay in the room with doors closed. Place a wet towel under the door and call the fire department or 9-1-1. Open a window and wave a brightly colored cloth or flashlight to signal for help.
- ☐ Practice escaping from your home at least twice a year and at different times of the day. Practice waking up to smoke alarms, low crawling and meeting outside. Make sure everyone knows how to call 9-1-1.
- ☐ Teach household members to STOP, DROP and ROLL if their clothes should catch on fire.

American Red Cross

For more information on disaster and emergency preparedness, visit RedCross.org

SOUTHERN CT JOBS CLASSIFIED MARKETPLACE

To place an ad: 203-850-6628 • email: [illegible]
New Haven Register | Middletown Press | Torrington Register Citizen
HEARST CONNECTICUT MEDIA GROUP

PUBLIC NOTICES

CITY OF NEW HAVEN, CONNECTICUT - REQUEST FOR PROPOSAL

595 and 599 George Street Project (Build Only)
RFP #2022-01-1430
Intent to Response due date: February 14, 2022 at 5:00 PM EST
RFP due date: Tuesday February 22, 2022 at 11:00 AM EST.
Mandatory Pre-Bid Meeting, January 31, 2022 at 10 AM, EST, Location - job site

The City of New Haven is an affirmative action/equal opportunity employer. Minority/women's business enterprises are encouraged to apply.
RFP can be downloaded at [illegible]
Michael V. Fumiatti
Purchasing Agent

360 MANAGEMENT GROUP COMPANY

Request for Proposals
Tax Credit Compliance

360 Management Group Co. is currently seeking proposals for tax credit compliance. A complete copy of the requirement may be obtained from 360 Management's Vendor Collaboration Portal [illegible] beginning on Monday, January 10, 2022 at 3:00PM.

CITY OF NEW HAVEN, CONNECTICUT - REQUEST FOR PROPOSAL

Executive Search: Police Chief
RFP #2022-01-1427
Intent to Response due date: January 28, 2022 at 5:00 PM EST
RFP due date: Tuesday February 1, 2022 at 11:00 AM EST

RFP can be downloaded at [illegible]
Michael V. Fumiatti
Purchasing Agent

HAMDEN LEGAL NOTICE

A certified list of Republican party-endorsed candidates for the Town of Hamden for election as Members of the Town Committee from the 1st, 2nd, 4th, 7th, 8th and 9th districts are on file in my office at 2750 Dixwell Avenue and copies are available for public distribution.

The number of Town Committee members to be elected, under party rules, and the number of names of candidates included in the certificate from each political subdivision specified, is as follows:

NUMBER TO BE ELECTED	NUMBER CERTIFIED	POLITICAL SUBDIVISION
5	5	1st District
5	2	2nd District
5	None	3rd District
5	2	4th District
6	None	5th District
6	None	6th District
5	3	7th District
5	4	8th District
6	4	9th District

A primary will be held March 1, 2022, in each of the above political subdivisions in which candidacies numbering at least 25% of the number of Town Committee members to be elected by such party in such political subdivision are filed in accordance with §9-382 to 9-450, inclusive, of the General Statutes by persons other than party-endorsed candidates not later than 4:00 p.m. on January 26, 2022, provided the number of such candidacies, plus the number of endorsed candidates for such political subdivision, exceeds the number of town committee members to be elected. (If the number of opposing candidacies filed is reduced to less than such 25% in any subdivision, no primary will be held.) Petition forms, instructions, and information concerning the procedure for filing opposing candidacies, may be obtained from Anthony V. Esposito, Republican Registrar of Voters, 2750 Dixwell Avenue, CT.

Kathryn Mickens
Town Clerk
Hamden, CT

HAMDEN LEGAL NOTICE

A certified list of Democrat party-endorsed candidates for the Town of Hamden for election as Members of the Town Committee from the 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th and 9th districts are on file in my office at 2750 Dixwell Avenue and copies are available for public distribution.

The number of Town Committee members to be elected, under party rules, and the number of names of candidates included in the certificate from each political subdivision specified, is as follows:

NUMBER TO BE ELECTED	NUMBER CERTIFIED	POLITICAL SUBDIVISION
7	7	1st District
7	7	2nd District
7	7	3rd District
7	7	4th District
7	7	5th District
7	7	6th District
7	7	7th District
7	7	8th District
7	7	9th District

A primary will be held March 1, 2022, in each of the above political subdivisions in which candidacies numbering at least 25% of the number of Town Committee members to be elected by such party in such political subdivision are filed in accordance with §9-382 to 9-450, inclusive, of the General Statutes by persons other than party-endorsed candidates not later than 4:00 p.m. on January 26, 2022, provided the number of such candidacies, plus the number of endorsed candidates for such political subdivision, exceeds the number of town committee members to be elected. (If the number of opposing candidacies filed is reduced to less than such 25% in any subdivision, no primary will be held.) Petition forms, instructions, and information concerning the procedure for filing opposing candidacies, may be obtained from Rose V. Marione, Democrat Registrar of Voters, 2750 Dixwell Avenue, CT.

Kathryn Mickens
Town Clerk
Hamden, CT

FORECLOSURE NOTICE

LEGAL NOTICE FORECLOSURE AUCTION SALE

Docket No.
NNH-CV-20-6106022-S

Velocity Commercial Capital, LLC vs. 105 Butler, LLC, Et Al
105-107 Butler Street, Hamden, CT
Two Family Home
Date of Sale: Saturday, January 22, 2022 at Noon

Francis J. Doherty, Committee
203-397-9092

See Foreclosure Sales at www.jud.ct.gov for more detailed information

PUBLIC NOTICES

LEGAL NOTICE

INVITATION TO BID: PARKSIDE VILLAGE I, BRANFORD, CT

LEGAL NOTICE INVITATION TO BID PARKSIDE VILLAGE I, BRANFORD, CT. Montagno Construction, Inc., a prequalified and invited GC bidder for Parkside Village I LLC, is requesting sub-contractor bids for the Parkside Village I, Branford, CT. The project is new construction of 67 units multifamily housing (4-stories, 76,000 sf) and subsequent demolition of existing units onsite. The project is Tax Exempt, Prevailing Wage, and subject to State of Connecticut Set-Aside and Contract Compliance Requirements. Bids will be received until Friday, January 21 at 10 am. All bids and questions should be submitted in writing to Andrew Pasquini apasquini@montagno.com (or fax 203-757-6316). Documents can be viewed via this link: [illegible] or at our office 75 Progress Lane, Waterbury, CT. Montagno Construction, Inc. (203-597-9014) is an Affirmative Action / Equal Opportunity Employer. S/M/W/DBE's, Veteran-owned, Section 3 & DAS Certified subcontractors are encouraged to participate.

LEGAL NOTICE FORECLOSURE AUCTION SALE

DOCKET NO.	NNH-CV19-6110583S
CASE NAME:	Charter Servicing Company, LLC v. Paramount Construction Development, LLC, Et Al.,
PROPERTY ADDRESS:	4307 Washington Avenue Rear West Haven, CT 06516
PROPERTY TYPE:	Vacant Land
DATE OF SALE:	January 22, 2022
COMMITTEE NAME:	Anthony R. Dechello
COMMITTEE PHONE:	203-234-2225

SEE FORECLOSURE SALES AT www.jud.ct.gov FOR MORE DETAILED INFORMATION.

LEGAL NOTICE FORECLOSURE AUCTION SALE

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SEE FORECLOSURE SALES AT www.jud.ct.gov FOR MORE DETAILED INFORMATION.

NOTICE OF AVAILABILITY

DRAFT ENVIRONMENTAL ASSESSMENT
U.S. DEPARTMENT OF VETERANS AFFAIRS
Proposed VA Connecticut Healthcare System
West Haven Campus
Parking Garage
950 Campbell Avenue
West Haven, Connecticut

The U.S. Department of Veterans Affairs (VA) announces the availability of a Draft Environmental Assessment (DEA) for public review and comment. The Draft EA evaluates the potential environmental effects of the proposed construction and operation of a new four and one-half story parking garage in the western portion of the West Haven VA Medical Center (VAMC) campus. The parking garage would be constructed in an existing VAMC parking lot, near the main patient entrance to the hospital. VA prepared the Draft EA in accordance with the National Environmental Policy Act and regulations implementing the Act. Comments will be addressed in the Final EA, after which VA intends to issue a Finding of No Significant Impact. The public comment period ends on February 14, 2022.
The Draft EA is available for review at the West Haven Public Library, located at 300 Elm Street in West Haven, Connecticut, and on the West Haven VAMC website at: https://www.va.gov/connecticut-health-care/news-releases/west-haven-campus-parking-garage-environmental-assessment/
Please email comments by February 14, 2022, to Joseph Simonetta joseph.simonetta@va.gov. If you have any questions or are unable to submit your comments by email, please contact Mr. Simonetta at (203) 600-2188.

FORECLOSURE NOTICE

FORECLOSURE LEGAL NOTICE

FORECLOSURE AUCTION SALE

DOCKET NO:
NNI-CV20-6105502-S

CASE NAME:
TOWN OF BRANFORD v. CURBOW, VIRGINIA Et Al

PROPERTY ADDRESS:
30 HARBOUR VILLAGE, BRANFORD, CT

PROPERTY TYPE:
RESIDENTIAL

DATE OF SALE:
JANUARY 22, 2022

COMMITTEE NAME:
WILLIAM L. MAROHN

COMMITTEE PHONE:
203-777-6000

SEE FORECLOSURE SALES AT www.jud.ct.gov FOR MORE DETAILED INFORMATION.

FORECLOSURE NOTICE

LEGAL NOTICE FORECLOSURE AUCTION SALE

DOCKET NO. NNH-CV-21-6115505S
Case Name:
LIBERTY BANK
V.
COREY JOHNSON SR, ET AL
PROPERTY ADDRESS
235B JOHNSON ROAD AKA 241 JOHNSON ROAD, HAMDEN, CT 06518
PROPERTY TYPE: RESIDENTIAL- SINGLE FAMILY
DATE OF SALE: JANUARY 22, 2022
COMMITTEE NAME: WILLIAM V. GAMBARDELLA
TEL: 475-227-4300
SEE FORECLOSURE SALES AT WWW.JUD.CT.GOV FOR MORE DETAILED INFORMATION.

WANTED TO BUY

WANTED TO BUY!!!

POCKET BOOKS, PURSES AND HANDBAGS WANTED! We pay top dollar for name brand designer handbags, pocket books and purses by Coach, Prada, Louis Vuitton, Dooney & Bourke, Chanel, Fendi, Gucci and many others. Why consign and wait for the money? We buy outright and pay cash!! Call the Antiques Depot for free evaluation. (860)358-0121

WATCHES WANTED!

Top dollar paid for vintage wrist watches and pocket watches, Rolex, Cartier, Omega, Breitling, Patek Phillippe, Movado, and Chronographs, etc. Please call Gary at The Antiques Depot for a free appraisal 860-358-0121

WE BUY MILITARY ITEMS

Top dollar paid for knives, swords, bayonets, flasks, helmets, uniforms, badges & any other military items. Civil War, Revolutionary War, World War I and World War II. Please call Gary at The Antiques Depot 860-358-0121 for Free Evaluations. Honest Reliable Transactions, Serving Shoreline for over 25 years.

GENERAL HELP WANTED

Kitchen Help / Cook Expediter / Counter Help full time
Apply in person at [illegible] 2 Broadway, North Haven.
203 234 -2221

Vertrax, Inc. in New Haven, CT is seeking a Software Developer to analyze design, develop and implement applications using JAVA, AGL, AWS, Docker, GIT, LINUX and Jenkins. Resumes to [illegible]

ANNOUNCEMENTS

BANKRUPTCY LAW
Attorney
Walter Wagoner
203-484-0144

WANTED TO BUY

LOOK
ACQUIRING ALL
Antiques, Coins, Vintage Electronics, Audio, HAM radio, Musical Instruments, Jewelry, Watches, Art, Military, Sports Memorabilia, Toys + More!
1 Item or Entire Estates -
Call 860-707-0360

[illegible] BASEBALL, Buying Sports cards & memorabilia. 203[illegible]

WE BUY ANTIQUES
Cash paid for antique & quality used furn. Old paintings, glassware, china, musical & military items, Clocks, sterling silver, decorative items, etc. 1 piece or entire estate. Free in-house appraisal. Please call Gary at The Antiques Depot 860-358-0121.

DOMESTIC ANIMALS

BABY PARROTS- Conures, Cockatiels, Love Birds, Parrotlets, Tame & Cuddly. 203-824-1717

Rehoming my [illegible] puppy. He is friendly, updated on shots. $1000 Call for details 203-360-4271.

ROOMS FOR RENT

BRANFORD- PRIVATE suite, includes bedroom, den, and full bath. Lovely private deck off bedroom. Own parking space, Shared kitchen. Laundry room in basement. Single person preferred. Close to town, Beaches, Highways. Avail. Immediately. $976 a mo. plus util.
Call Louise at 203-481-2909.

APARTMENTS FOR RENT

NEW HAVEN-3RD FLOOR - 1541 Whitney Ave. 2BR spacious apt, [illegible] floors, utilities & heat incl, [illegible] & welcome. 203-464-9825

NEW HAVEN! 609 Quinnipiac Ave. 1 BD, 1st Fl., CSP, new carpet, cabinets, kitchen, credit & background check & application fee. $1000/mo & 2 mo security + util. 203-640-2103

VEHICLES FOR SALE

[illegible] CADILLAC SEDAN DEVILLE- [illegible]
203-[illegible] or 203-[illegible]

VEHICLES FOR SALE

JUNK CARS WANTED-
Title or no Title, CASH PAID ON SPOT, 203-507-7756

VEHICLES WANTED

CASH PAID FOR ANY TOYOTA, OTHER MAKES
Running or not, crashed ok, will take other makes/models, free pick up, call any time (203)600-4431

DUMP RUNS

JUNK REMOVAL & MORE
Any Junk Removed
1 Item to Entire Contents
Houses, Attics, Garages, Basements, Shed, Deck, Furniture, Appliances, Estates & Commercial

NOW BOOKING
SPRING CLEAN UP
Leaves, Branches, Brush, etc.

Licensed & Insured
FREE ESTIMATES
mention this ad for 10% off
Prices Starting at $40.00
203-535-9817

HEATING OIL

FORBES PREMIUM FUEL
Will beat any price!
Call for price: 203-468-2727

LIBRETTI & SON FUEL
203-468-8328
Senior & Veteran Discount
HOD370

★★★
$ ONLY OIL $
Call For Today's Lowest Price
203-457-0220
$ Accept Credit Cards $
HOD #477

Caution:
Carbon Monoxide Kills
[illegible]
American Red Cross
[illegible]

SUDOKU!

TODAY'S PUZZLE
Difficulty Level: **HARD**

6								
4	7					6		
		8		3	9			
8	5				2			6
		4		8		5		
1			7				8	9
			5	2		3		
		3					5	2
								4

Fill the grid so that every row, column, and 3x3 box contains the digits 1 through 9.

The solution to today's puzzle will appear in tomorrow's publication.

YESTERDAY'S SOLUTION

7	3	5	6	8	1	9	2	4
4	2	6	7	5	9	8	3	1
8	1	9	3	4	2	7	5	6
2	7	8	4	9	5	1	6	3
6	5	4	1	7	3	2	9	8
1	9	3	8	2	6	4	7	5
5	4	1	2	3	7	6	8	9
3	8	2	9	6	4	5	1	7
9	6	7	5	1	8	3	4	2

PROBATE NOTICES

NOTICE TO CREDITORS

ESTATE OF Josephine L. Derbacher (21-1416)

The Hon. Clifton E. Graves, Jr., Judge of the Court of Probate, District of New Haven Probate Court, by decree dated January 5, 2022, ordered that all claims must be presented to the fiduciary at the address below. Failure to promptly present any such claim may result in the loss of rights to recover on such claim. Felicia Iagrossi,

Deputy Chief Clerk

The fiduciary is:

Karl R. Derbacher, III, -AND- Robert A. Derbacher, C/O: NICOLE MARIE CAMPOREALE (attorney for Robert A. Derbacher and Karl R. Derbacher, III), WILEY ETTER DOYON, LLC, 97 WASHINGTON AVE, SUITE 2, NORTH HAVEN, CT 06473.

PUBLIC NOTICES

LEGAL NOTICE

INVITATION TO BID: PARKSIDE VILLAGE I, BRANFORD, CT

LEGAL NOTICE INVITATION TO BID PARKSIDE VILLAGE I, BRANFORD, CT. Montagno Construction, Inc., a prequalified and invited GC bidder for Parkside Village I LLC, is requesting sub-contractor bids for the Parkside Village I, Branford, CT. The project is new construction of 67 units multifamily housing (4-stories, 76,000 sf) and subsequent demolition of existing units onsite. The project is Tax Exempt, Prevailing Wage, and subject to State of Connecticut Set-Aside and Contract Compliance Requirements. Bids will be received until Friday, January 28 at 10 am. All bids and questions should be submitted in writing to Andrew Pasquini apasquini@montagno.com [illegible] 203-757-6310). Documents can be viewed via this link: [illegible] or at our office 75 Progress Lane, Waterbury, CT. Montagno Construction, Inc. (203-597-9014) is an Affirmative Action / Equal Opportunity Employer, S/M/WBE's, Veteran-owned, Section 3 & DAS Certified subcontractors are encouraged to participate.

NOTICE OF AVAILABILITY

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U.S. DEPARTMENT OF VETERANS AFFAIRS
Proposed VA Connecticut Healthcare System
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Parking Garage
950 Campbell Avenue
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Please email comments by February 14, 2022, to Joseph Simonetta (joseph.simonetta2@va.gov). If you have any questions or are unable to submit your comments by email, please contact Mr. Simonetta at (203) 500-2186.

PUBLIC NOTICES

Notice of Tentative Determination to Approve
Structures, Dredging & Fill
Applicant: City of Milford
Application No. 202100318-SDF
City/Town: Milford

The Department of Energy and Environmental Protection ("DEEP") hereby gives notice that a tentative determination has been reached to approve the following application submitted under Section 22a-361 of the Connecticut General Statutes ("CGS") for a permit and under Section 401 of the Federal Clean Water Act, as amended, for a Water Quality Certificate to conduct work waterward of the coastal jurisdiction line in tidal, coastal or navigable waters of the state for public infrastructure.

The Commissioner also gives notice that a hearing may be held on this application if a written request via electronic mail as specified below is received from the applicant, or if the Commissioner determines that the public interest will best be served thereby. The Commissioner shall also hold a hearing pursuant to CGS Section 22a-361(b) on receipt of a petition signed by twenty-five or more persons.

Applicant's Name and Address: City of Milford, 70 West River Street, Milford, CT 06460

Contact: Greg Pidluski, [illegible], 203-783-3261

Site Location: End of Morehouse Avenue

PROPOSED ACTIVITY
The proposed activity includes constructing a stormwater outfall and will affect coastal resources.

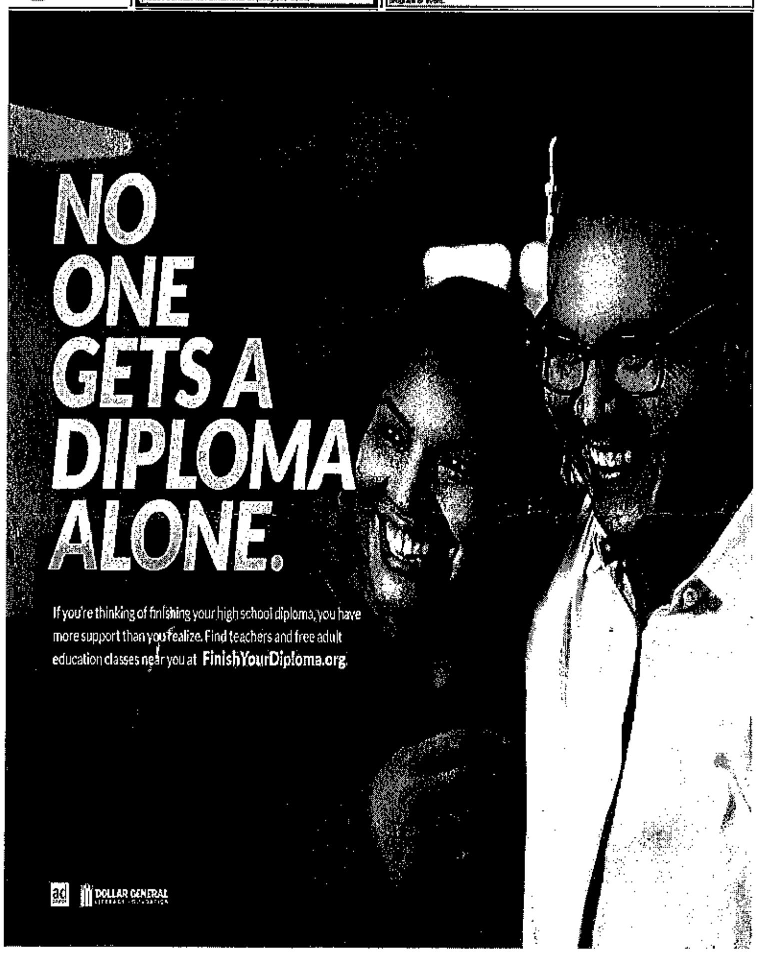
INFORMATION REQUESTS/PUBLIC COMMENT
Interested persons may obtain a copy of the application from the above contacts or by sending a request for an electronic copy to DEEP at [illegible]. Due to the ongoing COVID-19 emergency, the DEEP office located at 79 Elm Street, Hartford, is closed to the public until further notice. All interested parties are invited to express their views on the tentative determination concerning this application. Comments regarding this application may be submitted via electronic mail to [illegible] no later than thirty (30) days from the publication date of this notice.

PETITIONS FOR HEARING
Petitions for a hearing shall be submitted within thirty (30) days from the date of publication of this public notice and should include the application number(s) noted above and also identify a contact person to receive notifications. Petitions should also identify a person who is authorized to engage in discussions regarding the application and, if resolution is reached, withdraw the petition. In order to facilitate the filing of requests for hearing during the COVID-19 emergency and consistent with the DEEP's Temporary Directive, the Office of Adjudications will accept electronically-filed petitions in addition to petitions submitted by mail. Petitions with required signatures may be filed by email to [illegible] or mailed to the DEEP Office of Adjudications, 79 Elm Street, Hartford, CT 06106. Within thirty (30) days of their filing, original petitions that were filed electronically must also be mailed to the Office at the above-noted address. If the original petition exists only in electronic format or signatures were produced using a computer or typewriter, the petition must be submitted with a statement bearing the wet-ink signature of the petitioner that the petition is only available in that format and has been submitted to satisfy the requirement that an original petition be filed. If a hearing is held, timely notice of such hearing will be published in a newspaper of general circulation and posted on the DEEP website at [illegible]. Additional information can be found at [illegible].

Publication Date: January 17, 2022

Approved By: Brian P. Thompson, Director
Land & Water Resources Division
Bureau of Water Protection and Land Reuse

ADA PUBLICATION STATEMENT
DEEP is an Affirmative Action/Equal Opportunity Employer that is committed to complying with the requirements of the Americans with Disabilities Act. Please contact [illegible] if you are seeking a communication aid or service, have limited proficiency in English, or require some other accommodation. If you wish to file an ADA or Title VI discrimination complaint, you may submit your complaint to DEEP Office of Diversity and Equity at 860-418-5910 or [illegible]. In order to facilitate efforts to provide an accommodation, please request all accommodations as soon as possible following notice of any agency hearing, meeting, program or event.



Carrie Hess

From: Timmermann, Timothy <Timmermann.Timothy@epa.gov>
Sent: Tuesday, February 15, 2022 10:37 AM
To: joseph.simonetta2@va.gov
Cc: Carrie Hess; Timmermann, Timothy; Wintrob, Paul
Subject: Veterans Affairs Connecticut Healthcare System Parking Garage, West Haven Campus Environmental Assessment

Mr. Simonetta:

Thank you for the opportunity to review the Environmental Assessment for the Veterans Affairs Connecticut Healthcare System Parking Garage project. We appreciate your work to address our scoping comments and have no comments on the Environmental Assessment.

Regards,

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: Carrie Hess <chess@ttlassoc.com>
Sent: Friday, January 14, 2022 10:02 AM
To: Timmermann, Timothy <Timmermann.Timothy@epa.gov>
Cc: Simonetta, Joseph <Joseph.Simonetta2@va.gov>
Subject: RE: Veterans Affairs Connecticut Healthcare System Parking Garage, West Haven Campus Scoping Comment

Hi Mr. Timmermann,

Thank you for your input on the scoping process for this project. Attached is the Draft EA in response to your request to review it when it became available. Public comments are due by February 14, 2022 to Joseph Simonetta (joseph.simonetta2@va.gov).

Thank you!

Carrie Hess
Geologist
TTL Associates, Inc.
Direct: (419) 214-5048

From: Timmermann, Timothy <Timmermann.Timothy@epa.gov>
Sent: Tuesday, April 6, 2021 3:59 PM
To: Carrie Hess <chess@ttlassoc.com>
Cc: Timmermann, Timothy <Timmermann.Timothy@epa.gov>; Wintrob, Paul <Wintrob.Paul@epa.gov>
Subject: Veterans Affairs Connecticut Healthcare System Parking Garage, West Haven Campus Scoping Comment

Dear Ms. Hess:

As you work to prepare the Environmental Assessment (EA) for the Veterans Affairs Connecticut Healthcare System Parking Garage (West Haven Campus) 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)EXIT, 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