ENVIRONMENTAL ASSESSMENT FOR THE MASTER PLAN FOR VETERANS AFFAIRS MEDICAL CENTER WASHINGTON, DC

AMT Project File 109-108.01

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EXECUTIVE SUMMARY

This Environmental Assessment (EA) has been prepared to address the effects of the Veteran Administration Medical Center Washington, District of Columbia (DC VAMC). The EA has been prepared in accordance with the requirements of the National Environmental Policy Act (42 U.S.C. 4321 *et seq.*), the Council on Environmental Quality regulations for implementing the procedural provisions of the National Environmental Policy Act (40 CFR §§ 1500-1508) and National Capital Planning Commission (NCPC).

Need and Purpose of the Proposed Action

The purpose of DC VAMC is to serve the medical needs of US Military Veterans in the metropolitan Washington, DC region through 2029 and beyond. DC VAMC is dedicated to providing high quality, comprehensive health care to Veterans in an environment that fosters trust, respect, commitment, compassion and excellence. The VAMC serves as a major resource for health services, education and research that benefits their patients, their families, the community, the network and the nation.

The need by DC VAMC is to provide the following new and expanded services under the Master Plan:

- Expand patient wards to accommodate single patient rooms
- Community living center for transitional residential treatment care
- Administration space expansion to allow for consolidation and free up space for clinical uses
- Expand operating room facilities and number of operating rooms
- Improve and expand emergency department operational facilities
- Relocate and expand decontamination facilities for emergencies
- Expand existing research facilities
- Improve the quality and efficiency of the steam delivery system with a new central utility plant
- Provide a welcome center for Operation Iraq Freedom and Operation Enduring Freedom Veterans
- Develop an outpatient clinic facility
- Expand inpatient care for overnight patients
- Provide a replacement day care center
- Expand nursing care facilities as a community living center
- Develop a Fisher House on the property
- Develop a domiciliary program and facilities
- Provide structured parking to replace surface parking facilities
- Develop a transit center for mass transit drop-off
- Provide a rehabilitation center
- Provide a wellness center
- Provide a canteen in association with the wellness center and rehabilitation center.

Purpose:
The main purpose of DC VAMC Master Plan is to establish a framework that would guide the placement and design of multiple expansion projects anticipated to take place on the VA campus over the established period of the Master Plan. The design team made every effort to
respond to the existing internal aspects of the campus in order to avoid costly and disruptive relocations and/or reconstructions of existing facilities. At the same time the plan responds to the external aspects of the site, positioning buildings and open space so as to appropriately respond to the surrounding urban fabric.

DC VAMC treats over 50,000 Veterans and has over 500,000 outpatient visits each year. DC VAMC is affiliated with three medical schools and with many other colleges and universities in such areas as pharmacy, rehabilitation medicine, biomedical engineering, dietetics, social work, nursing and medical center management. The medical center has a multi-million dollar research program that supports more than 100 investigators and 300 active research projects. Major research in alcoholism, diabetes, hypertension, cardiovascular disease and spinal cord regeneration is being conducted. The Medical Center building house these activities within 818,140 gross square feet on four floors and a developed basement area.

Proposed Action
The Proposed Action consists of the implementation of a Master Plan that provides for the orderly and comprehensive long-range development of proposed expansions and facility improvements at DC VAMC. The following is the list of projects that would be implemented under the Master Plan. These proposed projects would be internal to the Medical Center existing buildings, attached and expand the footprint of the buildings and be free standing to the buildings. All would be contained within the existing DC VAMC property.

Master Plan Item (Area 1,000 gross sq. ft.)	Employees	Patients
• 4C Inpatient Ward Expansion (1.8)	15	28
• 4E Inpatient Ward Expansion (4.0)	0	38
• CLC Third Floor “K” Wing Expansion (10.2)	4	14
• Four-Storey Administration Building (40.0)	0	0
• OR/ED/Decon Expansion (18.0)	5	20
• Research Building Expansion (16.0)	12	50
• Central Utility Plant (18.0)	22	0
• OIF/OEF Welcome Center (6.1)	7	120
• Outpatient Clinic (350.0)	125	3,000
• Inpatient Expansion (70.0)	20	100
• Day Care Center (To Be Determined)	10	0
• 120-Bed Community Living Center (140.0)	26	120
• Fisher House (16.0)	10	0
• 77 Bed Domiciliary (68.0)	30	140

Master Plan Item (Area 1,000 gross sq. ft.)		Employees	Patients
• Multi-Storey Parking Garages (To Be Determined)		N/A	N/A
• Transit Center (To Be Determined)		N/A	N/A
• Rehabilitation/Wellness Centers, Canteen (60.0)		20	125
Subtotal Plan Expansion Population	(818.1)	360	3,755
Total Population Under Master Plan**	(1,740.1)	2,125	5,946.

*Patient Count does not include visitors or vendors.
**Employees: maximum number of employees at mid-point of a shift
Patients: average patient daily count

An explanation of the need and purpose for each of the facilities is explained herein section A.3 Purpose and Need.

No Action Alternative
Under the no action alternative, the proposed DC VAMC Master Plan development would not be constructed

ENVIRONMENTAL AND SOCIOECONOMIC CONSEQUENCES

The proposed action would involve the Master Plan development to expand the existing Medical Center facilities within the existing US government property in Washington, DC. Table ES-1 presents the alternatives: Proposed Action and No Action, and their potential impacts to the natural and human environments. In summary DC VAMC would be expected to fulfill the Veterans Administration needs for the medical facilities in the DC region. Expected impacts would include the increase in building area on the site, reduction of impervious surfaces, increase of green space areas, reduction in the number of large trees on the site, and improved stormwater management of surface runoff.

Consultation was conducted with the U.S. Fish and Wildlife Service, DC Historic Preservation Office, and DC Department of the Environment. The U.S. Fish and Wildlife Service did not identify a threatened species that might be located in the area of DC VAMC. There are no historical sites at DC VAMC based on an assessment by the DC Historic Preservation Office. There is a possibility of Archeological sites at DC VAMC. A phase I archeological survey is planned to be performed at the site. The DC Department of the Environment Wetlands map does not show the existence of wetlands at the site. Specific projects would have a wetlands survey related to the site disturbance performed. Copies of the correspondence with the agencies are contained in Section E.

The cumulative impacts of the proposed action of DC VAMC Master Plan and the surrounding communities would not be considered significant. The proposed action would not involve impacts to known wetlands, wildlife, historical sites, “Water of the US” or threatened or endanger species.

CONCLUSION

The proposed action's long-term impacts would not prove to be significantly adverse on human environmental resources or socioeconomic conditions at DC VAMC or the surrounding community. Impacts would be incurred from the removal of existing trees and vegetation in the proposed construction areas, but new green space areas would be developed and the amount of impervious surfaces would be reduced. The installation of steam generation facilities and additional emergency electrical generators would discharge air pollutants. The new steam facilities (natural gas fueled) would off-set the presently used Washington Medical Center (WHC) steam facility with more efficient equipment. DC and EPA permits for air pollutant discharge would be obtained.

During the construction period short-term effects would be mitigated for soils sediment and erosion controls. A sediment and erosion control permit would be obtained to comply with the DC and the Environmental Protection Agency's National Pollution Discharge Elimination System, Phase II regulations.

TABLE ES-1: SUMMARY OF IMPACTS

Resource Areas	Proposed Action	No Action Alternative
Physical Biological Natural / Ecological: Soils, Geological Resources, Stormwater Management, Wetlands, "Water of the US", Wildlife Refuge, Endanger Species, Trees 12" trunks and Green Space	Soil erosion controls would be implemented and permitted, classified minor impacts; Geological formation not affected; Stormwater management facilities would be implemented and permitted, classified minor impacts; Wetlands, "Water of the US", Wildlife refuge, and Endangered species are not know to exist at the site; Trees with 12" and larger trunks would be replaced with new trees, classified minor short-term and negligible long-term impacts; Green space areas would be increased throughout property, classified negligible impacts.	No impacts on environment, except: Limited stormwater management; Limited green space retained; Decline of parking lot trees continues.

Urban Systems: Air Quality, Sound Levels, Water Quality and Supply Systems, Energy Requirements, Light Pollution, Solid Waste, Hazardous Materials, and Transportation	Air quality is related to the emergency electrical generators and steam generation facilities, would be permitted, classified moderate impacts; Sound levels, water quality and supply systems, energy requirements and light pollution, classified negligible impacts; Solid waste (biologic and hazardous waste material) and hazardous materials (handling, storage and disposal) permitted, classified moderate impacts; Transportation TMP implemented with parking structures, classified negligible impacts.	No impacts on environment, except: Growth of auto air pollution without TMP.
Social-Cultural and Economic Environment: Community Facilities and Services, Social and Economic Factors, and Environmental Justice	Community facilities and services; and Environmental Justice are not indirectly or directly impacted, classified negligible impacts; Social and Economic Factors are directly impacted positively short- and long-term, classified negligible impacts.	No impacts on cultural and long-term economic environment.
Historic and Aesthetic Values: Historic Significant Structures, Activities and Events; Archeological Artifacts; Aesthetic Appearance	Historic significant structures, activities and events do not exist at the site, negligible impacts; Archeological phase I surveys would be performed before any construction, no know sites on the property, not classified; Aesthetic appearance would be enhanced, would blend with WHC, classified negligible impacts; Viewshed enhanced with buffer of buildings, classified negligible impacts.	No impacts on historical conditions; Viewshed visually impacted.

The relationship of the Master Plan to the NCPC Comprehensive Plan Federal Elements is listed as follows:

- Historic: Viewshed of North Capitol Street would be enhanced through the addition of green space improvements along the east and south sides of the property.
- Transportation: Parking ratio for employee would be set at 4 employees per parking space.
- Transportation: A Transportation Management Program would be implemented to encourage the use of mass transit and alternative means of accessing the Medical Center.
- Open Space: Green spaces at DC VAMC would be expanded.
- Open Space: Trees would be planted to replace and expand the number of trees on the site in the expanded green space.

- Open Space: Reuse of existing buildings in the DC developed area and conserve open spaces would be implemented.
- Light Pollution: Sky glow would be minimized as surface parking area lighting would be removed and parking structures constructed.
- Water Quality: Hazardous materials and chemical would be properly stored and contained as per EPA regulations and registration.
- Water Quality: Sediment controls during construction activities and stormwater management facilities would be implemented.
- Solid Waste Management: Recycling of cardboard and paper would be continued and recycling expansion would be expanded.
- Hazardous Materials Management: Hazardous materials and hazardous medical waste handling, storage, and disposal would be implemented based on EPA regulations.

This completes the summary of the EA Report items.

SECTION A. INTRODUCTION, PURPOSE AND NEED

This Environmental Assessment (EA) has been prepared pursuant to the National Capital Planning Commission (NCPC) Policies and Procedures to provide a basis for determining whether the proposed Master Plan for the Washington DC Veterans Affairs Medical Center (DC VAMC) would result in significant adverse impacts to the environment. If the results of the EA indicate that no significant adverse impacts would occur, the EA would be used as a basis for a Finding of No Significant Impact (FONSI) with regard to fulfilling NEPA requirements.

A.1 BACKGROUND

Located in the nation's capital, the Washington DC Veterans Affairs Medical Center is one of the most visible and dynamic facilities in the VA system. This tertiary care teaching facility provides acute general and specialized services in medicine, surgery, neurology and psychiatry, as well offering nursing home care unit treatment. DC VAMC is located west of North Capitol Street between Michigan Avenue and Irving Street in the District of Columbia.

The medical center's staff provides care to Veterans residing in the District of Columbia and portions of Virginia and Maryland. The Medical Center treats over 50,000 Veterans and has over 500,000 outpatient visits each year. DC VAMC is affiliated with four medical schools and with many other colleges and universities in such areas as pharmacy, rehabilitation medicine, biomedical engineering, dietetics, social work, nursing and medical center management.

The 34.6 acre site is part of a larger medical complex that includes the Washington Medical Center Center, Children’s National Medical Center, and the National Rehabilitation Medical Center (WHC). As indicated in Figure A.5, DC VAMC property is a part of DC Square 3129 that includes the Washington Medical Center Hospitals. Access to DC VAMC complex is from First Street, which is privately owned by DC VAMC and the Washington Hospital Center. First Street, although not a public right-of-way, is maintained by District of Columbia Department of Transportation.

Parking is provided for patients, visitors, employees, students, venders and government vehicles. There are presently 1,868 surface and structured parking spaces at the Medical Center. Paved drives for vehicles and buses are provided to public streets and parking areas.

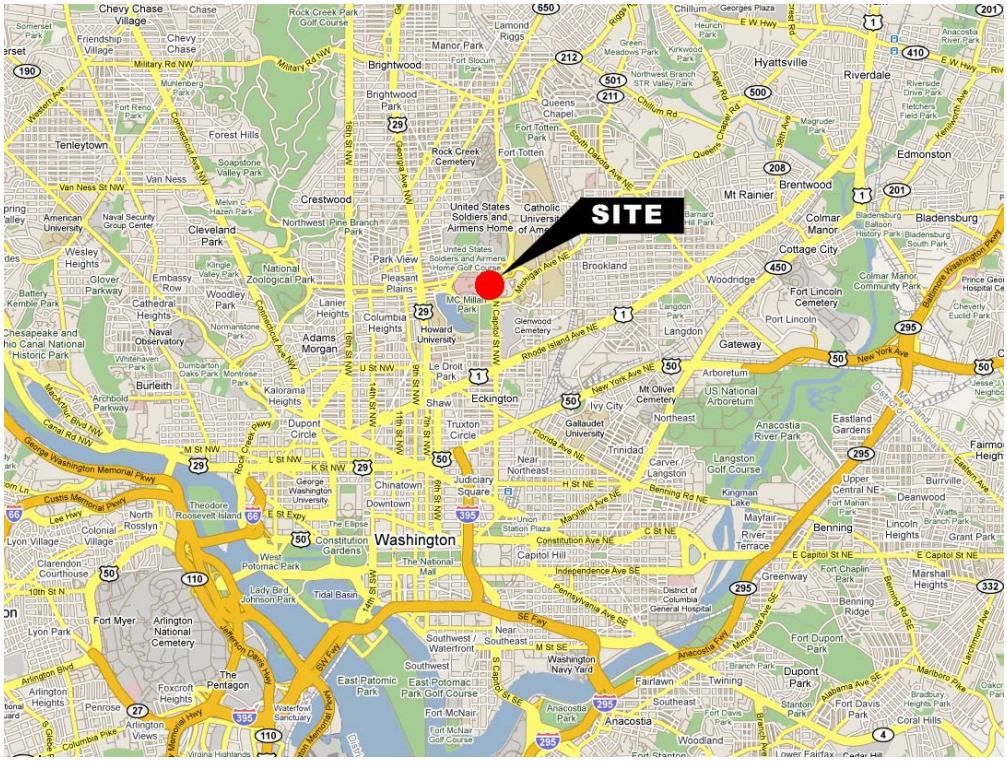


FIGURE A.1 LOCATION MAP

FIGURE A.2 VICINITY MAP

DC VAMC is surrounded by institutional land uses including WHC, Children's National Medical Center, and National Rehabilitation Hospital to the west; US Armed Forces Retirement Home to the north; and Catholic University of America to the northeast. Residential apartment buildings are located to the east, across North Capitol Street. McMillan Park and Reservoir are to the south.

DC VAMC property was part of the Riggs Estate and remained in private ownership until the around 1851 when the US Armed Forces Retirement Home Board of Commissioners purchased the Estate. In 1951 the Board of Commissioners transferred the DC VAMC parcel area to other federal agencies for the purpose of building hospital facilities. Prior to the development of DC VAMC, the property was undeveloped and partially wooded. North Capitol Street ended at the south limit of the Riggs Estate property.

DC VAMC property with the original Medical Center facilities were constructed in the mid-1960's. A variety of additions and modifications have since been made as the Medical Center updated services, operations and equipment. The major modifications that occurred after the original construction include the Community Living Center, addition of a research and development wing, addition of structured parking to the south, and additional surface parking at the North West corner of the site. Various stages of development are indicated in Figures A.4 and A.5.

To continue its mission of providing high quality, comprehensive health care to Veterans, DC VAMC has identified various capital improvement projects including building expansions, utility infrastructure improvements and site improvements. DC VAMC, to plan for its orderly and comprehensive long-range development, and to comply with the National Capital Planning Act of 1952, is preparing a Master Plan that would incorporate the planned and funded expansions which would provide a road map for future development.

DC VAMC is along the axis of the North Capitol Street viewshed. The sensitivity of this location is not to detract form the perception of a landscaped vista to the north away from the Capitol Building. The present Medical Center Buildings located along the north/south axis of the National Capital and is one of the most visible sites along the northerly viewshed. The property is at the one of the higher points in the District of Columbia and adjoins an historic site associated with the District of Columbia water system. The now abandoned water system sand filters date to the early 20th Century along with the associated water storage reservoir, McMillan Reservoir, located south of the property. Any development on the DC VAMC site southern and eastern boundaries needs to be sensitive to the North Capitol Street viewshed.

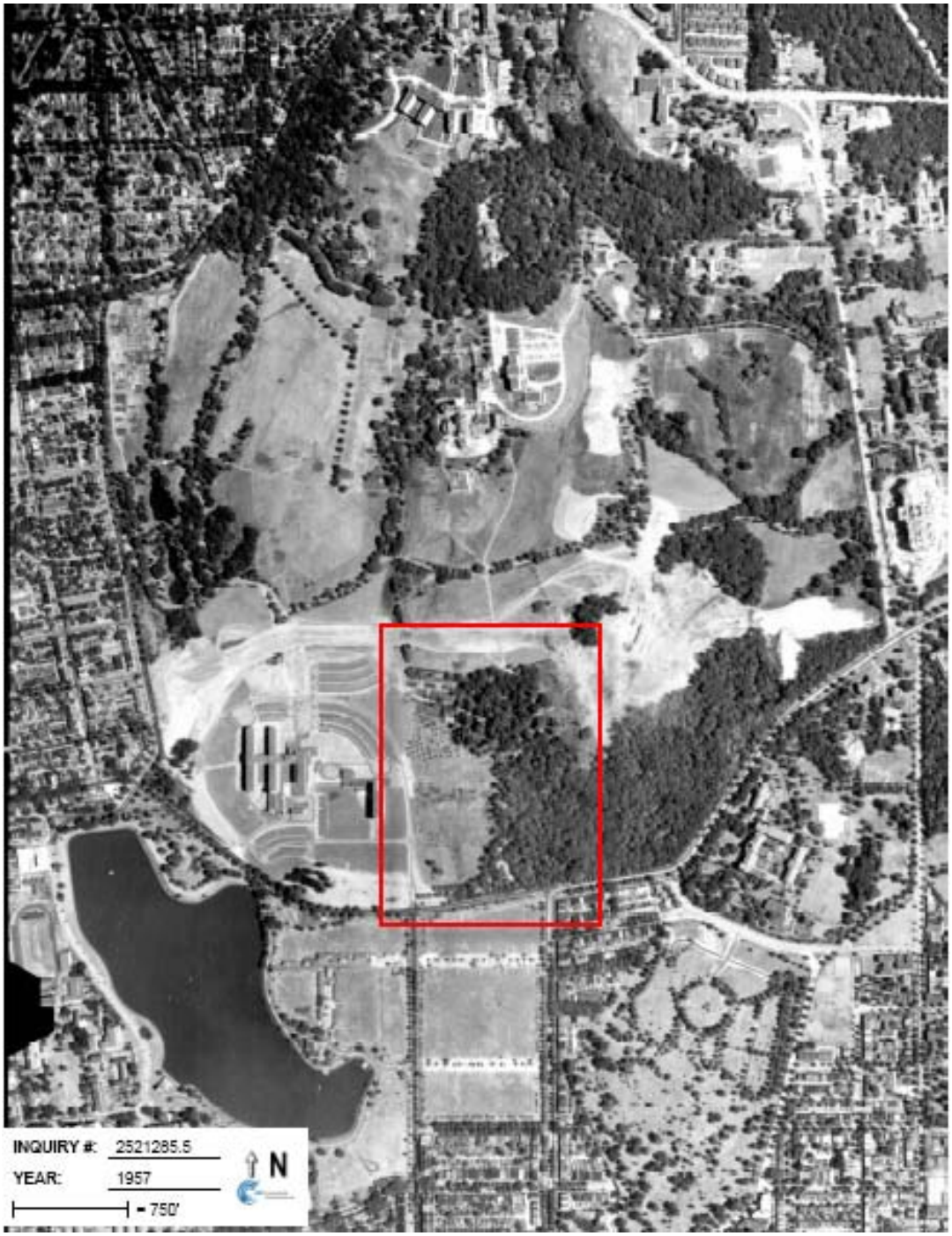


FIGURE A.3 1957 AERIAL PHOTOGRAPH DC VAMC SITE

FIGURE A.4 1980 AERIAL PHOTOGRAPH DC VAMC SITE

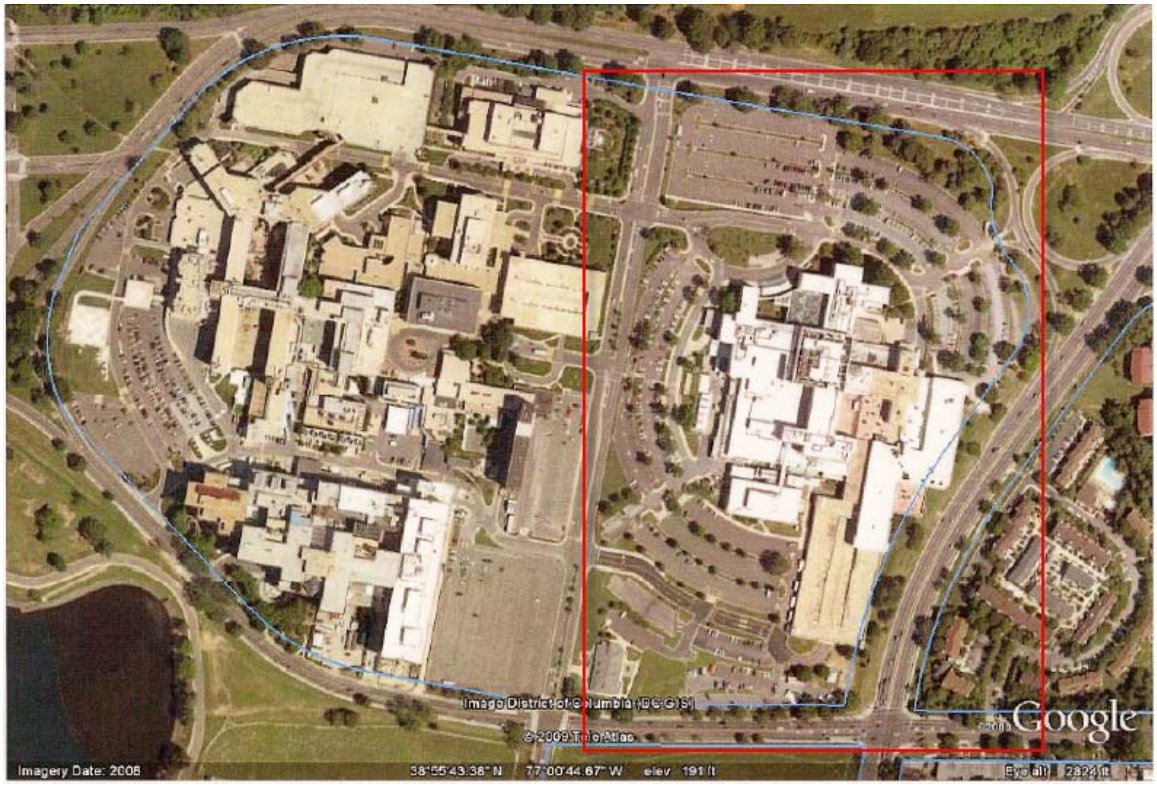


FIGURE A.5 2008 AERIAL PHOTOGRAPH DC VAMC SITE

A.2 SCOPE OF DOCUMENTS

This Environmental Assessment (EA) has been prepared to determine if the proposed action, implementing the Master Plan, effects under National Environmental Policy Act and if the effects are adverse to the human environment. The EA has been prepared pursuant to the National Environmental Policy Act (NEPA) of 1969, Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (40 CFR Parts 1500-1508), National Historic Preservation Act Section 106, and the Environmental and Historic Policies and Procedures (69 FR 41299). This EA has been prepared to provide a basis for determining whether the proposed Master Plan for the Washington DC Veterans Affairs Medical Center (DC VAMC) would result in significant adverse impacts to the environment. The EA is set as a basis for determining if an Environmental Impact Statement is required, or if the action warrants a Finding of No Significant Impact (FONSI) with regard to fulfilling NEPA requirements.

A.3 PURPOSE AND NEED

The National Capital Planning Act of 1952 provides that Federal Agencies advise and consult with the National Capital Planning Commission (NCPC) prior to preparing construction plans for federally funded projects that affect the Comprehensive Plan for the National Capital. The Planning Commission has determined that an approved master plan is required for installations on which more than one principal building, structure or activity is proposed to be located.

Located in the nation's capital, only a short distance from the national historic buildings, DC VAMC is located along the north/south axis of the National Capital and is one of the most visible sites along the northerly viewshed. DC VAMC is located on a medical campus setting with multiple buildings. NCPC's Master Plan submission guidelines require that all Federal campuses in the District of Columbia have a current master plan that includes descriptions and future development for the campus as well as adhere to the Comprehensive Plan for the National Capital Federal Elements. DC VAMC has developed a Master Plan to provide a framework for new development at the DC VAMC site.

As requested by NCPC and for purposes of this environmental assessment the proposed action consists of the implementation of a Master Plan. The Master Plan is a guide for DC VAMC to provide for the orderly and comprehensive long-range development of proposed expansions and facility improvements at DC VAMC.

The mission of DC VAMC is to serve the medical needs of US Military Veterans in the metropolitan Washington, DC Region. DC VAMC is dedicated to providing high quality, comprehensive health care to Veterans in an environment that fosters trust, respect, commitment, compassion and excellence. The VAMC serves as a major resource for health services, education and research that benefits their patients, their families, the community, the network and the nation.

DC VAMC treats over 50,000 Veterans and has over 500,000 outpatient visits each year. DC VAMC is affiliated with three medical schools and with many other colleges and universities in such areas as pharmacy, rehabilitation medicine, biomedical engineering, dietetics, social work, nursing and medical center management. The medical center has a multi-million dollar research program that supports more than 100 investigators and 300 active research projects. Major research in alcoholism, diabetes, hypertension, cardiovascular disease and spinal cord regeneration is being conducted. The Medical Center buildings house these activities within 922,000 gross square feet on four floors and a developed basement area.

The Master Plan discusses expansion and modifications that would be required during the planning period to continue to meet the needs of the Veterans, medical schools, universities and affiliated research programs that they support. The existing maximum number of employees at shift mid-point in 2009 is 1,814 people, and the average patient daily count is 2,191 Veterans. The specific capital improvement projects defined in the Master Plan are as follows with the anticipated maximum number of employees at shift mid-point and average patient daily count:

Master Plan Item (Area 1,000 gross sq. ft.)	Employees	Patients*
• 4C Inpatient Ward Expansion (1.8)	15	28
• 4E Inpatient Ward Expansion (4.0)	0	38
• CLC Third Floor "K" Wing Expansion (10.2)	4	14
• Four-Storey Administration Building (40.0)	0	0
• OR/ED/Decon Expansion (18.0)	5	20
• Research Building Expansion (16.0)	12	50
• Central Utility Plant (18.0)	22	0
• OIF/OEF Welcome Center (6.1)	7	120
• Outpatient Clinic (350.0)	125	3,000
• Inpatient Expansion (70.0)	20	100
• Day Care Center (To Be Determined)	10	0
• 120-Bed Community Living Center (140.0)	26	120
• Fisher House (16.0)	10	0
• 77 Bed Domiciliary (68.0)	30	140
• Multi-Storey Parking Garages (To Be Determined)	N/A	N/A
• Transit Center (To Be Determined)	N/A	N/A
• Rehabilitation/Wellness Centers, Canteen (60.0)	20	125
Subtotal Plan Expansion Population (818.1)	360	3,755
Total Population Under Master Plan** (1,740.1)	2,125	5,946.

*Patient Count does not include visitors or vendors.
**Employees: maximum number of employees at mid-point of a shift
Patients: average patient daily count

The following explains the purpose and need for the Master Plan Projects.

4C Inpatient Ward Expansion and 4E Inpatient Ward Expansion:
The VAMC Washington D.C. was designed and built in 1960s. The 3E patient ward is now used by the Medicine Department. The ward was original designed as a 40-bed open patient ward. Although the ward is now divided into small patient rooms, most of the patient rooms have three beds and don't have private bathroom. Patients have to use public shower rooms and restrooms. Some of existing patient rooms do not have adequate air supply and exhaust. The ward is unable to meet current service needs and the healthcare facility design and construction guidelines.

Multi-bed patient rooms are significantly affecting the satisfaction of patients. Private rooms are preferred by patients and families, which increase satisfaction scores for the inpatient stays. Family members can stay with the patient as long as desired without infringing on the rights / sensitivity issues of other patients lodging in the same room. Privacy issues are also related to patient and care giver communications, private rooms provide a secluded environment to fully discuss patient sensitive issues pertaining to health or social concerns. Lack of private bathrooms are not only creating safety and security issues, but are decreasing the efficiency of healthcare services.

Current patient ward configuration could not meet Medicine patient treatment needs. The Compensated Work Therapy (CWT) Program, and the non-clinical space inside the core patient ward area increase daily management of the unit and would compromise physical training treatment by unintentional interference with the unit's treatment processes.

The need for the wards' expansion is related to insufficient space, combined with increased workload that adversely affects the quality of services. Due to the prevalence of airborne contaminates, patients must be admitted under isolation restrictions until cleared. Expansion of wards' purpose is to provide private rooms that would decrease the need for holding patient placement, when placed on a co-located bed, while the patient screening occurs. This improves patient flow as maximum utilization of all beds is available for peak utilization.

The wards' expansion project's purpose would be to improve patient flow within the acute care setting as it allows all available beds to be utilized without adjustments for roommate matching i.e.: behavioral, additional equipment needs, special adaptations for diagnosis and other patient case specific needs.

The wards' renovations also includes the new patient/family waiting area space that would improve the satisfaction of the patients and their families during the hospitalization, offering them a comfortable area in which to visit. Private rooms would allow the Medical Center to better accommodate any special needs of Veterans of Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF).

CLC Third Floor "K" Wing Expansion:

Community Living Center (CLC) activities require concentrating specialized care at specific areas of the Medical Center. The development of the facility would be made for economic and quality of care reasons. There is no specific location in the Medical Center that offers these types of care to the Veterans. CLC provides a transitional residential treatment program. According to the President's Commission on Care for Returning Wounded Warriors, 60 to 70 percent of active duty and reserve components are satisfied with their rehabilitative care, as are 60 percent of those retired or separated. The vision is to create an environment and a delivery system that lets the OEF/OIF Veterans and their families focus on recuperation, and reduce bureaucracy.

The CLC program would provide a critical link in the restructured processes of care being developed at DC VAMC, along with the planned Poly-trauma Center and the proposed OEF/OIF Welcome Center. More than 3,000 service members have been seriously injured during operations in Iraq and Afghanistan. The Medical Center would be challenged to provide optimal access to healthcare for returning OIF/OEF poly-trauma Veterans. There is currently no program at the Medical Center to accommodate these patient needs with this level of care.

The Low Vision program would place an advanced Outpatient Blind Rehabilitation program at DC VAMC to provide intensive rehabilitation to low vision Veterans. The project is Veterans Administration Central Office (VACO) approved for Washington DC VAMC. This program offers day-long treatment regimens for one week or more, with follow up in the patient’s homes. This approach is to ensure good patient transition of independent functioning and coping skills. The program would fill a treatment gap currently existing for the low vision Veterans of the facility.

The scope of the 3rd floor CLC Comprehensive Nursing and Rehabilitation (CNRC) expansion is to focus on developing a setting where patients learn to live independently while still receiving care as outpatients. The health care would be provided on the unit to the greatest extent possible in the 3rd floor CNRC expanded space. This would help minimize the number of different providers involved in the care. The CNRC brings the treatment to the patients rather than the patients having to go to where the treatment is provided. This improves access to care and helps minimize errors in treatment delivery. CNRC provides opportunities for increased patient and family satisfaction, as they develop a personal relationship with the care providers.

Four-Storey Administration Building:

The VAMC Washington D.C. is significantly deficient in space requirements to meet Administrative current and future workload. By FY 2025, it is projected the Medical Center inpatient care demands would increase as follows: 45% increase in primary care; 30% increase for specialty care, 41% increase for ancillary and diagnostics care, and 80% increase in ambulatory mental health.

Non-patient care and administration services would be relocated in the Administration Building to allow for the expansion of out-patient services. Insufficient space for these

services combined with increased workload, have resulted in using off-site fee basis care for numerous procedures and medical care services. As a result, fee basis medical care costs have nearly doubled from $697, 860 in fiscal year (FY) 2004 to $1,409,643 as of the end of FY 2007. These dollars represent a substantial amount of money the facility would have been able to save if it had the required space to offer this medical care in-house.

The construction of the Administrative Building project would re-allocate for clinical use 40,000 square feet of space currently used by VACO tenants. Several administrative functions including Business Office, Human Resources, Fiscal/Payroll and Acquisitions & Materials Management Service are proposed to move to the Administration Building. This vacated space would allow us to expand Primary Care Clinics and Mental Health Clinics, primarily for Women's Health and Mental Health programs. These programs have been established to accommodate the Veterans from Operation Iraqi Freedom (OIF) / Operation Enduring Freedom (OEF).

These relocations would also provide the Medical Center with a location to create a separate poly-trauma inpatient program unit. The unit would allow us to better accommodate Veterans of OIF/OEF. Currently the two poly-trauma rooms are located in the Comprehensive Nursing and Rehabilitation Care (CNRC) Area. The project to construct this new poly-trauma unit is currently planned for FY08. Constructing the Administration Building would create a permanent home for the Business Office, which would allow the Medical Center to discontinue the leasing temporary facilities while the poly-trauma center is constructed.

Construction of the Administration Building is beneficial to the Veterans served by the Medical Center in many ways including: resolving deficient space gaps, providing the space for several key programs to expand, and save money in off-site fee basis medical care costs and leasing costs.

OR/ED/Decon Expansion:

The workload in the OR to increase over the last ten years, while the complexity of the cases performed have expanded. Another cause for the increase in the number of unique patients to use the services of the OR's in the Medical Center is due to the increase in referral of patients to undergo surgery from Martinsburg VA Medical Center.

Increasing complexity of cases and the change in the surgical treatment paradigm in some specialties, such as vascular surgery, require hybrid open surgical/endovascular procedures. Since these procedures are performed more frequently, a dedicated OR room with fixed imaging capability is required. Therefore, there is an additional need along with increased uses to expand the number of OR's by two, from five to the original seven. One OR would be fitted with fixed imaging equipment.

The OR expansion would also include a procedure room to meet the requirements of bariatric patients. The number of bariatric patients treatment is a growing need within healthcare provisions.

The OR expansion current project adds 3,500 square feet to the existing ED area. Using Space calculator projections, the Emergency Department (ED), with a baseline need of 5,200 square feet in FY 2006, would require 5,850 square feet in FY 2025.

Currently, the ED area is failing to meet the national performance standard for ED's with an average of 33 minutes waiting time from registration to disposition. In FY 2007 greater than 10% of the patients seen in the ED had waits greater than 2 to 6 hours from registration to disposition. Lack of needed space in the area greatly impacted achieving the Medical Center's ability to meet the national performance standard. The flow of patients through the ED is impaired due to inadequate examination areas. The ED expansion would increase patient privacy, improve quality of care and processes of care delivery at the Medical Center and replace the space lost to the OR's expansion.

The Decontamination (DECON) Unit is currently located in the basement level of the Medical Center. DC VAMC's fixed decontamination facility was one of the first established in the VAMC system. However, though years of experience with the facility the Medical Center has been found the unit to have many serious problems, which are listed as follows.

- The DECON Unit below-grade entry requires ambulatory patients to walk stairs to gain entry. This access way is neither ADA compliant nor safe.
- Post DECON Unit corridors are too narrow to effectively triage and care for patients after decontamination.
- DECON Unit narrow corridors prohibit placing all the needed clinical and triage supplies where they are needed at the care-givers side.
- Supply corridors for clean supplies and patient transport equipment follow a tight, circuitous route through storage rooms to the DECON Unit.
- Narrow corridors at the shower room, the DECON Unit exits, force placement of the monitoring station 30 feet inside the cold zone. This arrangement opens opportunities for spreading contamination to the corridor in violation of standard contamination zone control practices.
- DECON Unit lack change areas and lockers for DECON personnel. Personnel must store their clothing, shoes and belongings in the shower room, which would become contaminated under an emergency.
- DECON Unit lacks storage space for DECON supplies and protective equipment. For example, protective equipment cloths, respirators and linens are stored inside of the contamination zone. This making it difficult to operate the DECON Unit for more than one shift.
- Ambulance entry and exit are the same narrow lane as the DECON Unit with a turnaround. This access hampers effective traffic control as it is in the DECON Unit contamination zone. This co-location provides the opportunity for hazardous contamination to enter other parts of the Medical Center.
- Emergency Department staff and clinicians are split into two locations, DECON Unit and the ED, as they are separated and not directly connected.

- Existing air systems have to be taped off with plastic to prohibit the distribution of contaminants, which delays the DECON Unit set-up.

This project addresses these issues by the construction of a new fixed decontamination facility as part of the ED and OR expansion project. Construction of a DECON Unit would solve the problems of the existing decontamination facility, plus providing the following benefits:

- Allowing flow-through ambulance traffic
- Allowing the DECON Unit to feed casualties toward the Emergency Department, where supplies and personnel can be concentrated
- Allowing triage and urgent care provided to the ED and not in an improvised, crowded setting
- Allow Air handling systems designed to provide optimal air flow to prevent entry of contamination
- Provide ample storage, changing, and supply staging space
- Provide easy flow-through route for the entry of supplies
- Provide space for training, ED surge capacity, and “isolated” infected patient reception.

Research Building Expansion:
The Washington DC VAMC have made a major commitment to rebuilding and growing the Medical Center's Research Program over the past four years. As the only VAMC in the nation's capital, the goal is to become a research flagship. This designation would be achieved through a state of the art research center dedicated to the translation of the latest research findings to direct care for US Military Veterans. Currently the Medical Center staff is recognized world research leaders in the following medical areas: infectious diseases, war-related illnesses and injury, development and optimization of electronic health records, cancer molecular biology, lipid’s, and mental illness. The Medical Center plans to build on this solid research foundation by focusing on special emphasis programs and research areas designated as "high priority" to the VA. These areas include: genomic medicine, mental illness, and rehabilitation research (especially spinal cord injury and limb-loss).

The Medical Center intends to become a model medical and research center focused both on new discovery, the immediate implementation of proven state of the art treatments in the care of US Military Veterans, as well as the training of the new generations of clinicians, clinician scientists and basic medical researchers. This proposal would add a 15,000 square feet expansion to the existing 1972 constructed research building. The addition would house state of the art laboratories focused on the genomic medicine initiatives.

Central Utility Plant:
The VA Medical Center is currently purchasing steam from WHC. The Medical Center is paying roughly double what it would take to produce the steam if the Medical Center had

its own steam generation facility. The installation of a new steam boilers in a utility plant on the Medical Center grounds would allow the VA Medical Center to become self-sufficient by producing their own steam. Based on current boiler fuel costs, the cost to produce steam including maintenance and operations costs is roughly half of what the Medical Center is currently paying, which is roughly $25 - $35 per 1,000 lbs of steam. A well-run steam boiler facility can produce steam for roughly $11 - $16 per 1,000 lbs of steam. The Medical Center is currently spending roughly $2.5 million per year purchasing steam. If the cost of steam is reduced by the expected 40 percent through the installing new steam generators, the cost of the utility plant would be covered in eight to ten years.

The VA Medical Center's proposed new utility plant would be built to allow the Medical Center to provide steam back to WHC in a time of emergency. This enhances the DC medical complex's (WHC and DC VAMC) ability to provide a more overall self-sufficient medical campus in a time of emergency.

OIF/OEF Welcome Center:
Since July 2007, more than 3,000 service members have been seriously injured during operations in Iraq and Afghanistan. The Medical Center would be challenged to provide optimal access to health care for returning OEF/OIF Veterans. As a result it is the intent of the welcome center is to construct new space to provide a central location easily accessible and identifiable to Veterans and their families. Families or close friends assist in the recovery of 66 percent of active duty and 54 percent of reserve components service members.

The Medical Center's goal is to provide a restructured coordinated care delivery system for these Veterans and their families. This center would provide information and limited health, and mental health care services to help address the multiple needs of patients and families. The Welcome Center would provide both guidance and directions to a wide range of services within the Medical Center, in partnership with community-based organizations and the surrounding Community Based Outpatient Clinic's.

The Welcome Center would be located accessible on the side of the main public entrance and atrium. The Welcome Center would be adjacent to the surrounding primary care clinics of the Medical Center. This project would provide improved access to care and is focused on the care issues specifically of the OIF and OEF conflicts veteran. However, this center is being designed in such a way as to be functional for Veterans and their families of any conflict.

Outpatient Clinic:
The outpatient clinical needs are expanding and more outpatient approaches to care through medication are increasing. Due to this expanded demand the Medical Center would increase the square footage of the exiting buildings to house an Outpatient Clinic to serve outpatient oriented medical services.

Inpatient Expansion:
Medical inpatient care for overnight stays are increasing based on expanded OR services and the referral of patients from other VAMC facilities for specialty operations. Inpatient VA care for Veterans has evolved from a ward system for seriously ill patients to a private room patient care system. Due to biological infection and physical security concerns of the VA, a private inpatient system has been established. Therefore the existing square footage dedicated to inpatient care would be expanded to meet perceived needs.

Day Care Center:
During the implementation of the Master Plan a parking garage would be located at the site of the existing day care center. To continue to provide this service the Medical Center would integrate the required space into the proposed medical facilities within the expansion of the existing Medical Center Buildings.

120-Bed Community Living Center:
The need for an extended stay nursing type care expansion within the existing Community Living Center is required by expanded demand on the needs of Veterans. This project would add 120 beds to the existing facility.

Fisher House:
The Medical Center proposes a Fisher House be built to assist Veterans' families to stay near the patient during medical care periods. Fisher Houses are given to the U. S. Government as gifts. Military service secretaries and the Secretary of Veterans Affairs are responsible for the operation and maintenance of the homes. The Fisher House™ Foundation, Inc. builds new houses, and assists in the coordination of private support and encourages public support for the homes.

Typically the houses are 5,000 to 16,000 square feet homes. Each house is designed to provide eight to 21 suites. The houses can accommodate 16 to 42 family members. The house features a common kitchen, laundry facilities, dining room and living room with library and toys for children. A Fisher House™ is a temporary residence and is not a treatment facility, hospice or counseling center.

77 Bed Domiciliary:
There is a need for the establishment of a homeless veteran population Domiciliary Residential Rehabilitation Treatment Program (DRRTP) to provide residential and treatment Services for the in the Washington DC VAMC catchments area. According to the January 2004 Metropolitan Washington Council of Governments Survey, it is estimated that there are 14,537 homeless individuals in the Washington DC Metropolitan Area. Veterans constitute 30% of the homeless adult male population in the DC area. The top unmet needs for homeless veterans identified in Washington DC VA Medical Center's community homeless assessment (Community Homeless Assessment Local Education

Networking Group (CHALENG) survey completed on July 13, 2004) are for transitional and permanent housing, employment and substance abuse rehabilitation services. Housing resources have been identified consistently as a top unmet need on CHALENG surveys over the past 10 years. The average number of homeless Veterans at a one day DC VAMC sponsored stand-down for unsheltered homeless Veterans requesting services ranges from 300 to 600.

According to Capital Asset Realignment for Enhanced Services (CARES), there is a market-based demand for 29,878 Domiciliary Bed Days of Care (BDOC) per year for the Washington DC market through FY 2012. Currently, there are no domiciliary beds in Washington DC. The CARES Commission recommended transferring 77 "domiciliary care" beds from the Martinsburg VAMC to Washington DC VAMC. Although homeless, these Veterans desire to stay in the Washington DC Metropolitan Area because of its close proximity to family and friends.

To provide a continuum of care, DC VAMC proposes to co-locating the Compensation Work Therapy (CWT) program within the domiciliary facility to improve access for the residents of the homeless vocational counseling within the confines of their living area. This program would occupy the first floor with domiciliary support functions operating on the upper levels.

Multi-Storey Parking Garages:
The existing parking facilities are not adequate to meet the needs of the Medical Center as discussed in Section B.7, Transportation herein the EA. The Medical Center proposes to expand new facilities on the existing parking areas. Therefore the purpose of the garages is to provide parking for employees, patients, visitors and Medical Center equipment, since there is a need for parking when new facilities are constructed. Due to the size and expected scope of the new facilities and the area of the property, parking structures would be required.

Transit Center:
Expansion of the Medical Center Buildings would require the relocation of the existing entrance and associated drop-off area for multi-vehicle access. The existing drop-off area is a pedestrian entrance, mass transit bus stop and private vehicle access point. The need is to provide a safe place for the entry of patient and visitors and interfacing of pedestrians and vehicles. The purpose of the transit center would be to relocate the mass transit buses and other large vehicles from mixing with the private vehicle drop-off. This approach would reduce congestion and improve the safety of pedestrians entering the Medical Center Buildings.

Rehabilitation/Wellness Centers, Canteen:

Medical Center is in need of a consolidated location for the outpatient rehabilitation and providing educational services for wellness care. The purposed of the Center is to provide a separation of physical rehabilitation away from the ill patient care. The wellness activities relate to follow-up educational programs that occur after surgical procedure are performed and life style changes are required to promote healing. The need and purpose of the canteen facility as part of the rehabilitation/wellness center is to support the rehabilitation center and wellness center activities with eating and cooking facilities. This will help the demonstration of health eating habits and provide a socialization activity space.

SECTION B. EXISTING CONDITIONS BASELINE

This report uses existing conditions of DC VAMC complex as a base line for comparison of environmental effects of the proposed Master Plan development.

The National Environmental Policy Act (NEPA) and the National Capital Planning Commission (NCPC) establish the environmental affects criteria to be considered in an environmental assessment. The NCPC Comprehensive Plan for the National Capital establishes environmental and social policies for Federal agency to follow in operations and development of Federal property. The section of the Comprehensive Plan entitled Federal Elements of the Federal Environment outlines specific policies for air quality, water quality, water supply, land resources and human activities. Based on the policies identified in the Comprehensive Plan, the environmental assessment for DC VAMC Master Plan is to address the following:

- General, Natural / Ecological
- Air Quality
- Sound Levels
- Water Quality and Supply Based Systems
- Energy Requirements (Conservation)
- Solid Waste and Hazardous Materials
- Transportation
- Community Facilities and Services
- Social and Economic
- Historical and Aesthetic Features
- Environmental Justice.

Existing conditions described in this document are based on site visits, analysis by the project team and review of existing documents. Specific NCPC policies applicable to the Master Plan are referenced in the existing conditions as they relate to the following: Historic (viewshed), Transportation (transportation management program (TMP), parking and mass transit use), Open Space (green areas and trees), Light Pollution, Water Quality (SWM and erosion control), and Solid Waste Management (biological and hazardous wastes and recycling).

B.1 General, Natural / Ecological

Location, Viewshed and Zoning

DC VAMC is a federally owned property located in the northwest quadrant of the District of Columbia (Brookland Neighborhood), in the northeastern United States coastal plain, below the fall line. The coordinates of the site are 38.93110 degrees latitude and 77.0103 degrees longitude. Under the DC Real Property description, DC VAMC is located in Sub-Neighborhood C, Ward 5, Triennial Group 3, with a use code of “82-Medical”. The property and the US Armed Forces Retirement Home are shown on the “Zoning Map of the District of Columbia” (July 29, 2003) as GOV, government owned. Properties to the east (the Cloisters Park Place Apartments) and west (WHC and other hospitals) are shown in zone “R-5-A”, Low Density Apartments. The McMillian Reservoir area property south of DC VAMC is shown in zone “R-5-B”, Moderate Density Apartment Houses.

Viewshed of DC VAMC main building from North Capitol Street in the northbound direction is visible from the curve in the North Capitol Street. The two stories of the Community Living Center are directly viewed from the northbound lanes of North Capitol Street.

Site Characteristics: Height and Massing of Buildings

The building characteristics of DC VAMC development consisting of one main building structure with varying height and width additions. The building measures approximately 1,000 feet in the north-south direction and approximately 700 feet in the east-west direction. The height of the building parts vary from one-story to the equivalent of a six-story building (approximately 75 feet) including the penthouse area. The majority of the building is in the range of a one to two-story building, with the four- to approximately six-story parts being on the north end of the building. The prominent east section in the North Capitol Street viewshed is a two-story structure. A small one-story Day Care Center Building (74 feet by 140 feet) is located away from the main building in the southwest corner of the property.

The main building is surrounded by paved parking lots. The northern and northwest paved parking areas are for the visitors/patients. The western and southern parking lots are for the employee and students. Green space with trees is dispersed through out the parking lots and outside the parking lot areas along the property boundary. The entire site is fenced with eight feet chain link fence.

Natural and Environmental Conditions

Local climate is considered moderate with a temperature range of 7 to 98 degrees Fahrenheit (2 years out of 10 years). Precipitation is considered moderate with an average rainfall of 39 inches per year, which includes an average of 18 inches of snowfall. DC is subject to coastal hurricanes and localized strong wind/rain events that disrupt normal operations of infrastructure facilities.

Outside of the FEMA floodplain, Waters of the US, and wetland areas, the natural and environmental conditions at DC VAMC are characterized by upland vegetation. There are no known intermittent streams or springs on the property. The site is not in a coastal zone as defined by the NEPA. There are no wildlife refuges on the site or adjoining the property. No known endangered species are recorded at the site per the US Department of the Interior.

Landscape Site Features

Landscape site features are developed as an enhancement to the operations of the buildings and parking facilities. Parking lot islands are planted with large trees in the oak and maple species that are greater than 12” in diameter. There are large trees in the northeast landscape area, which is used for recreation. Non-structured recreational activities occur in the grass areas under these trees. The trees 12 inches and larger include Oaks (Pin, Red and Willow), Maples (Red and Sugar) and Pines (White and Black). Benches and small picnic tables are also distributed in the recreation area. A play lot associated with the La Petite Academy is also located on the site. The play lot is open and devoid of trees. Buffer planting strips with large trees, street trees and maintained turf are located on the steep slopes along the north, east and south sides of DC streets, outside of the property line and fence.

Soil Conditions

DC VAMC site soil conditions, based on the USDA Natural Resources Conservation Service, National Cooperative Soil Survey for the District of Columbia (September 2006), are classified as 40 percent Chillum-Urban Land Complex (CdB 0 to 8 percent slope & CdC 8 to 15 percent slope) and 60 percent Urban Land. Chillum-Urban Land Complex consists of well drained silt loam (0" to 28" deep) on top of very gravelly sandy loam sub grade soil. The area soils have been altered by grading for development. The water table in this series is usually below a depth of six feet. Bedrock is usually found deeper than five feet. The Chillum-Urban soils erode easily and should be stabilized with pavement or vegetation. Generally the soil is acidic (pH 3.6 to 5.5). The Ub soils are classified as soil areas where more than 80 percent of the surface is covered by pavement and structures.

According to the "Geotechnical Engineering Report VA Domiciliary, Washington Medical Center Center, NW, Washington, DC", August 28, 2008, soil borings in the northeast corner of the property discoved CbB and Ub soils. The soil borings were stopped at a depth of 30 feet and did not encounter rock or a water table. Surface topsoil and pavement range from two to eight inches in depth. Boring log sub-soils, below the surface soils, range from 2.5 to 13.5 feet deep and are classified as "Fill". Fill materials encountered range from wood to concrete fragments together with clay and gravel.

Storm Drainage

Site drainage is collected by surface inlets which are connected to an underground storm drainage sewer system. The runoff flows through the sewers from the building to the north and south off the property. Collected storm drainage flows into the DC storm drainage sewer system. All of the site storm drainage flows into a 60-inch sewer in North Capitol Street. The storm sewer is separated from the sanitary sewer system.

There is one stormwater management facility at the southwest corner of the property east of the La Petite Academy (1 Michigan Avenue, NW). The stormwater management facility only treats the runoff from the La Petite Academy building, parking and other associated impervious surfaces built at the time of the Academy building construction. The rest of the Medical Center's storm drain runoff from impervious surfaces is not treated before leaving the property. This is in compliance with DC regulations as the existing impervious facilities were constructed before the stormwater management regulations were enacted.

NCPC Comprehensive Plan policies establish compliance with the implementation of stormwater management best management practices and sediment control practices. The existing day care area is the only impervious area of the site that treats stormwater runoff. DC VAMC is in compliance with DC stormwater management regulations. Hazardous materials and chemical, and underground storage tanks are properly handled as determined by the EPA permits issued to the Medical Center. Possible contamination of groundwater is not presently anticipated.

B.2 Air Quality

The EPA defines ambient air in 40 CFR Part 50 as "that portion of the atmosphere, external to buildings, to which the general public has access." In compliance with the 1970 Clean Air Act

Amendments, the EPA has developed National Ambient Air Quality Standards (NAAQS) to protect public health (primary) and public welfare (secondary) for the following six materials: carbon monoxide, sulfur dioxide, particles with the diameter less than or equal to a nominal 10 micrometers, ozone, nitrogen dioxide, and lead. A geographic area in which the air pollutant levels meet the primary standard is designated as an "attainment" area, and conversely, an area that has pollutant levels above the established level of concentration is classified as a "non-attainment" area. Each pollutant is measured independently; therefore, the same area may be an "attainment" area for one pollutant and a "non-attainment" for another pollutant concurrently.

DC VAMC is located in the District of Columbia Air Quality Control Area V. Area V is designated as an "attainment" area air pollutant concentrations except for ozone. The current air quality of the Washington DC/Maryland/Virginia region was determined to have an elevated level of ozone with "non-attainment" of US standards: one-hour average 0.12 ppm and eight-hour average 0.075 ppm. To regulate the emission levels resulting from a project, "non-attainment" areas are required to demonstrate compliance with the general conformity guidelines established in 40 CFR Part 93 "Determining Conformity of Federal Actions to State or Federal Implementation Plans".

Ambient air quality is monitored in the District of Columbia and has been recorded since 1985 (Metropolitan Washington Council of Governments (MWCOG), 1984). The closest monitor to the site is located at McMillan Reservoir south of the property. Recorded air pollution from DC VAMC is related to the use of vehicles to access the existing DC VAMC facilities. DC VAMC does not have a fixed source of potential air pollution recorded at the site under normal operations. However, stand-by electrical generators are located around the Medical Center. These diesel fueled generators are only operated to exercise the equipment and for use in emergency conditions.

NCPC Comprehensive Plan policies establish that traffic is the main source of air pollution in the DC area. DC VAMC dedicated to encouraging the use of mass transit and reduction of vehicle trips to the Medical Center. A TMP has not been implemented. Existing emergency generators exhausts are permitted through the DC government and EPA.

B.3 Sound Levels

The Noise Control Act of 1972, 42 USC 4901 et seq. was enacted to establish noise control standards and to regulate noise emissions from commercial products such as transportation and construction equipment.

The standard measurement unit of noise is the decibel (dB), which represents the acoustical energy present and is an indication of the loudness or noise intensity. Noise levels are measured in A-weighted decibels (dBA logarithmic scale), which approximate the sensitivity level of the human ear frequency spectrum. The dBA measurement is used to indicate damage to hearing based on sound levels, and is the basis of Federal noise standards. A 3-dBA increase in noise is equivalent to doubling the sound pressure level, however it is barely perceptible to the human ear. A 5-dBA change in sound is very noticeable. Sound level ranges are illustrated as follows:

- Normal safe levels, soft whisper to conversational speech (30 to 65 dBA)
- Sound levels may affect hearing in some individuals, highway traffic to pneumatic drill & auto horns (75 to 120 dBA)
- Sound levels may cause pain and hearing damage, jet plane or munitions blast (over 140 dBA).

Because noise is more objectionable at certain times, Day-Night Average Sound Levels (Ldn) have been developed. Ldn is a 24-hour average sound level recommendation. This measure is used to determine acceptable noise levels that are standardized by the EPA and the Department of Defense. The Ldn ranges of acceptability have been established as follows:

- Zone I: Acceptable sound level less than 65 dBA Ldn
- Zone II: Normally unacceptable sound levels 65 to 75 dBA Ldn
- Zone III: Unacceptable sound levels 75 dBA Ldn and greater.

DC VAMC operations fixed facilities are not a generator of noise pollution. A noise nanlysis has not been performed for this EA and a past study was not found. Air handling units and other mechanical equipment have noise attenuating equipment that reduces equipment noise to within the Zone I, acceptable sound levels. All noise-sensitive receptors on the land surrounding DC VAMC property, other than the streets, are required to attain Zone 1, acceptable sound levels for noise.

Other sources of noise at DC VAMC are WHC helicopter flights, emergency vehicles, and traffic on adjoining District streets, along with periodic operations of facility maintenance equipment. These associated noise levels are below the Zone II level, typically 40 to 50 dBA during the day and 35 to 45 dBA at night. The noise levels at the perimeter of DC VAMC are similar to the operational noise levels of existing standard low speed city streets.

B.4 Water Supply Based Services

Water Mains

Water supply to and wastewater from DC VAMC is supplied and treated by the District of Columbia Water and Sewer Authority (WASA). Domestic potable and fire protection water is supplied to the Medical Center through a 16-inch water main located at the intersection of Michigan Avenue NW and North Capitol Street, at the southeast property corner. The 16-inch service lateral is routed around the existing buildings and through the parking garage. A 10-inch service lateral connects DC VAMC 16-inch service lateral to the WHC 16-inch service lateral. WHC water service is provided through a 16-inch WASA water main at the intersection of Michigan Avenue and Irving Street NW. A 16-inch WASA water main in Michigan Avenue creates a water distribution system loop interconnecting the mains serving WHC and DC VAMC.

Fire Protection

Fire hydrants for fire protection are located along the length of the 16-inch water lateral around the existing DC VAMC buildings. Each fire hydrant is served with a 6-inch tee and pipe off the 16-inch water service lateral.

Sanitary Sewer
DC VAMC wastewater is collected from the existing building in a 12-inch sanitary lateral sewer. The sanitary lateral sewer is routed from the north end of the buildings along the west side to the southeast corner of the property. The lateral sewer discharges into a WASA 15-inch sanitary sewer main at the intersection of Michigan Avenue NW and North Capitol Street. The WASA sanitary sewer at this location is separated from the storm drainage system.

DC VAMC is in compliance with the water quality policy of having the stormwater and sanitary sewer system separated.

B.5 Energy Requirements (Conservation)

Heating and Cooling
DC VAMC facilities are heated by steam from the WHC central heating plant and cooled by on-site cooling towers and chillers. Hot water is currently provided by water heater tanks, which are being replaced by steam instantaneous heaters. A steam system is also used for disinfection/sterilization of equipment and facilities at the Medical Center. The steam heating system is remotely operated by and located at the WHC. DC VAMC purchases steam from the WHC. There have been concerns by DC VAMC about the dependability of the steam supply during recent undesirable reduced-pressure operations of the steam service. The cooling system is at its capacity to serve the existing facilities. The cooling towers and chillers are located at DC VAMC facilities complex.

DC VAMC is continually upgrading and maintaining equipment to have the most efficient and cost effective operations possible. The conversion from water heater tanks to instantaneous heaters is an example of the energy conservation measures being implemented at the Medical Center. Instantaneous heaters require less energy and water since the water temperature is not maintained at a high temperature level 24 hours a day, as is required for a tank system.

Electrical Service
Electrical service is provided by PEPCO through three 13.2 KV power conductor primary service feeders. Each feeder feeds medium voltage switchgear through at-grade voltage transformers. The switch gear feeds electrical power to three separate substations in the buildings. There is adequate emergency and normal power to the Medical Center facilities. Emergency power does not have the capacity to simultaneously supply power to Life Safety, Critical, Standby and Normal electrical demands. To reach this capacity, the emergency power system requires upgrading to approximately 4 megawatts.

B.6 Solid Waste and Hazardous Materials

Solid wastes generated by the operations of DC VAMC are controlled by separated waste streams. Waste streams are established based on the following categories: hazardous medical wastes, hazardous materials, recyclables and trash. Each waste stream is handled separately and collected in different containers. The solid waste in the hazardous medical waste, hazardous materials and trash waste streams are collected at the loading dock located on the west side of the

building. The waste recycling operations for cardboard (bundling) and clean paper (shredded) are collected at the east building side loading dock. A private company collects each type of waste material at the dock and transports it to the appropriate Federal and State permitted waste disposal facilities. Recyclable material is sent to reclamation facilities for reuse as new products. There are no incinerators on DC VAMC property to handle solid waste.

DC VAMC is registered with the EPA as a handler of hazardous materials and chemical products under #DC7360010402 for the following categories: Facility Index System/Facility Registry System (FINDS), Resource Conservation and Recovery Act – Large Quantity Generator (RCRA-LQG), Hazardous Waste Manifest Data (MANIFEST), Material Licensing Tracking System, radioactive materials (MLTS), and Underground Storage Tanks (UST). DC VAMC facility has been registered in the FINDS as LQG for generation, transport, and storage of large quantities of hazardous waste. Large quantities are classified as over 1,000 kilograms of hazardous waste or 1 kilogram of acutely hazardous waste per month. Hazardous materials vary and are characterized as those that are associated with a hospital and nursing home operations. These items range from batteries and light bulbs to benzene and chloroform. All material generation, storage and handling by the medical facilities operations are recorded and reported to the EPA in compliance with the appropriate regulations. Some of the medical equipment utilizes radioactive materials that are licensed and tracked in compliance with the US Nuclear Regulatory Commission regulations and procedures. UST's are in compliance with the EPA regulations and are registered under #U002110382. The seven UST's are monitored double-walled systems that contain diesel fuel to power emergency electrical generators. Tank sizes range from 1,000 gallons to 30,000 gallons.

NCPC Comprehensive Plan policies require that solid waste and hazardous materials are handled in compliance with EPA regulations. EPA records show that DC VAMC is registered with the EPA for hazardous materials handling and generation and the underground fuel storage tanks are registered and monitored. Recycling of paper and cardboard is presently practiced in compliance with the NCPC policy.

B.7 Transportation

Vehicular Access

Transportation associated with DC VAMC is divided into the following vehicle categories: patients/visitors, delivery trucks, solid waste collection, employees/students, and public transit/shuttle service. Patients and visitors in private vehicles enter the site at the main/public entrance on First Street NW at the northwest corner of the property. There is a one-way two-lane drop-off area loop, which is handicap accessible, at the northwest corner of the main building. From the drop off area the vehicles travel north and south to public open parking lots.

Delivery truck vehicles enter the site from the main entrance and travel to the loading dock on the northeast corner of the building by way of a single lane, two-way drive. The trucks exit the site on the same route. Solid waste pickup vehicles enter the main entrance and travel south on a single lane, two-way drive located on the west side of the building. Hazardous waste and general domestic waste is picked up at the secured loading dock on the west side of the building. The recycled waste materials (cardboard and paper) are picked up on the east side of the building.

These waste collection vehicles use the same entrance as the hazardous materials collection vehicles, but travel on the north side of the building to the east loading dock.

Employees and students enter the site from the First Street entrance and a secondary entrance at the southwest end of the property.

Parking

The employees and students share the uncovered parking lots on the northeast corner, south and west sides of the property. Entry to the lots is separated from the main entrance, patient/visitor parking lots and access drives. A three-story parking garage provides covered parking for employees and students. Traffic access is controlled to open lots and the garage by automatic traffic arms and vehicle barrier bollards.

Based on current staff and patient census data provided by the VA, the daily parking demand is estimated as follows:

	Number People Parking	
	Existing	Proposed Master Plan (2029)
• Inpatients	303	680
• Outpatients	1,807	5,165
• Non Patient and Visitors	366	750
• Vendors	18	40
Total Patient/Visitor	**2,191**	**6,635**
• Employees		
Day Shift	1,411	1,625
2nd Shift	403	464
3rd Shift	201	232
Total	**2,494**	**2,321**
(Peak Used (as measured at the mid-point Between the 3 hour overlap between the Day Shift and the 2nd Shift, also coin-Citing with afternoon visiting hours)	1,814	2089)
• Students	105	175
• Government Vehicles	70	125
Total Employee/Student/Gov. Vehicles	**1,989**	**2,389**
Total Average Parking Demand (Total Patient/Visitor + Total Employee/ Student/Gov. Vehicle)	**4,483**	**9,024**

Based on the 2009 parking assessment, 1,989 employees/students/government vehicles and 2,191 daily patients are on the property on average, for a total main or 1st shift daily Medical Center entry count of 4,180 individuals. Individuals reach the site by way of Metro transit buses, shuttle vans, taxis, and private vehicles. Travel to the site during the 2nd and 3rd shifts via Metro transit buses, shuttle vans, and taxis are significantly lower, as might be expected. Currently, prior to any expansion, there are 1,868 total parking spaces as per the latest count of parking spaces by DC VAMC. Additionally, valet parking service at the building entrance allows for double stacking of parking spaces, which may be used to expand the capacity of the existing parking facilities.

Parking requirements for medical health care facilities in urban settings are assessed by the professional Design Team developing this Master Plan to provide: 3.5 parking spaces for every 1,000 square feet of outpatient facilities, one parking space per inpatient bed, and 2 parking spaces per long term nursing home and transitional patient bed. Therefore the required existing estimated demand is as follows:

- Outpatient Area 600,000 square feet, 2,100 Parking Spaces Required
- Inpatient Beds 303 beds, 303 Parking Spaces
- Long Term Nursing Home and Transitional Patient Beds 120 beds, 240 Parking Spaces

Total Required Parking Spaces for Patients Needs 2,643 Parking Spaces.

Based on these standards which includes patient and staff parking, there is a shortage of 775 parking spaces for patients as the total parking area provided is 1,868 parking spaces.

NCPC has a parking policy that affects the parking at DC VAMC. The Comprehensive Plan sets a parking ration policy of four employees per employee designated parking spaces. DC VAMC present parking policy is not established to meet this policy goal.

Public Transportation

Public transit to the site consists of the following: Metro Bus Routes 80, D8 and H2/4; Local Metro Bus: Metro Access, Metro Shuttle to Red Line Brookland Station and Green Line Fort Totten Station; Baltimore Shuttle from Baltimore VAMC; VA Shuttle Bus to McPherson Square 15th and I Street NW (VA headquarters in DC); Soldier's Home Shuttle; Battle's Transportation Inc.; and Physically Challenged Stretch Van (pick up patients at residences). The bus stop/drop off location is the entrance to the main building at the drop off area. DC VAMC patients and employees are encouraged to use public transit by DC VAMC.

NCPC transportation policies relate to the encouragement of employees and patients to use mass transit and other means of transport that reduce traffic congestion. DC VAMC encourages employees and patients to use available mass transit buses and vans. The Medical Center has not implemented a Transportation Management Program to date.

B.8 Community Facilities & Services

Community facilities and services consist of the WHC, and District of Columbia provided schools, libraries, fire protection, public safety police protection, highway maintenance, community centers, parks and recreational facilities. DC VAMC does not generate a demand on the WHC, community schools, libraries, community centers, parks and recreational facilities. Fire protection is provided by the DC Fire Department. Police and public safety protection on DC VAMC property is provided by the VA security personnel stationed at the Medical Center. Areas outside of the property are patrolled by WHC and National Rehabilitation Security Personnel, and DC Police. Maintenance of the adjoining streets that access the property is provided by the DC Department of Transportation Highway Maintenance Department.

B.9 Social and Economic Factors

DC VAMC is an employment center for the medical service sector. Since the operations of the Medical Facility are Federal, the income from the employee salaries is considered export income for the local economic base of the District. Given the size of the employment base in DC, any change in the VMAC DC employment will not alter regional and local existing socioeconomic conditions. The employment of construction work associated with the Master Plan activities will also not impact the socioeconomics of the area. All socioeconomic factors (unemployment, housing, income, and population) are expected to remain unchanged once the Master Plan is implemented.

B.10 Historical & Aesthetic Features

DC VAMC property was part of the Riggs Estate and remained in private ownership until the around 1851 when the US Armed Forces Retirement Home Board of Commissioners purchased the Estate. In 1951 the Board of Commissioners transferred the DC VAMC parcel area to other federal agencies for the purpose of building hospital facilities. Prior to the development of DC VAMC, the property was undeveloped and partially wooded. North Capitol Street ended at the south limit of the property.

Reference materials and information provided by the VA and information found in the "US Armed Forces Retirement Home Washington, DC Master Plan" (February 2008) are the sources for the history of the DC VAMC property ownership. A deed search or archival investigation of the history of the property has not been performed to the best of the EA preparers' knowledge. Secondary sources were used as a basis for the EA record of the recorded property ownership.

DC VAMC property was transferred to the Federal Government and the original Medical Center facilities were constructed in the mid-1960's. A variety of additions and modifications have since been made as the Medical Center updated services, operations and equipment. The major modifications that occurred after the original construction include the Community Living Center, addition of a research and development wing, addition of structured parking to the south, and additional surface parking at the northwest corner of the site.

DC VAMC is located along the north/south axis of the National Capital and is one of the most visible sites along the northerly view shed. The property is at the one of the high points in the District of Columbia and adjoins an historic site associated with the District of Columbia water

system. The now abandoned sand filters date to the early 20th Century along with the associated water storage reservoir, McMillan Reservoir, located south of the property. DC VAMC property and facilities are of no known archeological or historical significance according to the DC Office of Planning Historical Preservation Office.

DC VAMC is located on a medical campus setting with multiple buildings within the neighborhood of other medical and academic campuses. Due to the property's prominent location on the North Capital Street alignment, the DC VAMC development is significant with respect to the Comprehensive Plan for the National Capital.

NCPC policy for the historic and aesthetic aspects concern the view shed affected by the Master Plan development. Development needs to enhance the buffer of green space and streets to soften the existing massing of structures at the Medical Center. The archeological concerns are unknown at this time and would be covered by a phase 1 assessment of the property.

B.11 Environmental Justice

Operations of DC VAMC have a negligible impact on socioeconomic factors and environmental justice. No disproportionately high and adverse human health or environmental effects are posed to minorities or low-income populations in the DC Edgewood/Brookland neighborhood or in the surrounding communities. Based on a review of 2000 US Census data the percentage of minority population (69.2 percent) in DC is much higher than for Maryland (29.5 percent) and the US (33.0 percent). The residents of DC have a higher percentage of population below the poverty level (20.2 percent) than the State of Maryland (9.2 percent) and the US (12.7 percent). The surrounding neighborhood, outside of institutional uses, is classified as an "emerging neighborhood" by the DC Department of Planning.

These levels of minority population and poverty levels are above the standards set forth in the Council on Environmental Quality's Environmental Justice Guidance. DC VAMC is not expected to significantly impact the environmental health and safety risks that might disproportionately affect children inside the surrounding community of the Medical Center property. Restricted access and security fencing at DC VAMC will ensure that children living outside of the property in the neighborhood will not be able to access the maintenance or construction activities, or any other activities at DC VAMC that might pose a health and safety risk.

FIGURE B.1 SOILS MAP DC VAMC

MAP LEGEND

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

Soils
- Soil Map Units

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
- Gully
- Short Steep Slope
- Other

Political Features
- Cities

Water Features
- Oceans
- Streams and Canals

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

MAP INFORMATION

Map Scale: 1:3,490 if printed on A size (8.5" × 11") sheet.

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

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 18N NAD83

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

Soil Survey Area: District of Columbia
Survey Area Data: Version 5, Sep 14, 2006

Date(s) aerial images were photographed: 6/25/2003

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.

FIGURE B.2 SOILS MAP LEGEND DC VAMC

Map Unit Legend

District of Columbia (DC001)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
BdB	Beltsville silt loam, 0 to 8 percent slopes	3.3	5.2%
BnC	Bourne fine sandy loam, 8 to 15 percent slopes	0.1	0.1%
CcC	Chillum silt loam, 8 to 15 percent slopes	2.8	4.5%
CcD	Chillum silt loam, 15 to 40 percent slopes	0.0	0.1%
CdB	Chillum-Urban land complex, 0 to 8 percent slopes	13.8	22.0%
CdC	Chillum-Urban land complex, 8 to 15 percent slopes	0.8	1.3%
U7	Udorthents, gravelly, smoothed	13.7	21.7%
U10	Udorthents, clayey, smoothed	4.0	6.4%
UA	Udifluvents, sandy	0.1	0.1%
Ub	Urban land	21.6	34.3%
UeB	Urban land-Chillum complex, 0 to 8 percent slopes	2.7	4.4%
Totals for Area of Interest		**62.9**	**100.0%**

TABLE B.1 SOILS TYPE LEGEND DC VAMC

SECTION C THE PROPOSED ACTION AND ALTERNATIVES ASSESSMENTS

C.1 Introduction

This section describes Master Plan elements and evaluates the potential environmental consequences of DC VAMC Master Plan proposed actions and alternatives. NEPA requires federal agencies to minimize adverse effects of their actions by identifying and assessing reasonable alternatives. The NEPA process intends to be useful to decision-makers and the public, emphasize real environmental issues and alternatives, and avoid the presentation of extraneous background data.

As described in Section A, the proposed action is implementation of the Master Plan development involving construction of new facilities outside of the existing Medical Center buildings. The construction will affect the existing parking facilities and require the demolition of a number of existing free standing buildings. The following describes the specific projects that are envisioned by the development associated with implementation of DC VAMC Master Plan. Construction documentation and environmental assessment will be prepared for each development project. The projects described are the same as those listed in Section A.

C.2 Alternatives Selected for Detailed Evaluation

Based on the screening criteria, the following alternatives were reviewed and carried forward for detailed evaluation.

> **Proposed Action:** Implementation of DC VAMC Master Plan to increase the complex capacity to meet the increasing demand.
>
> **No action:** continued use of DC VAMC complex without improvements to meet the increasing demand.

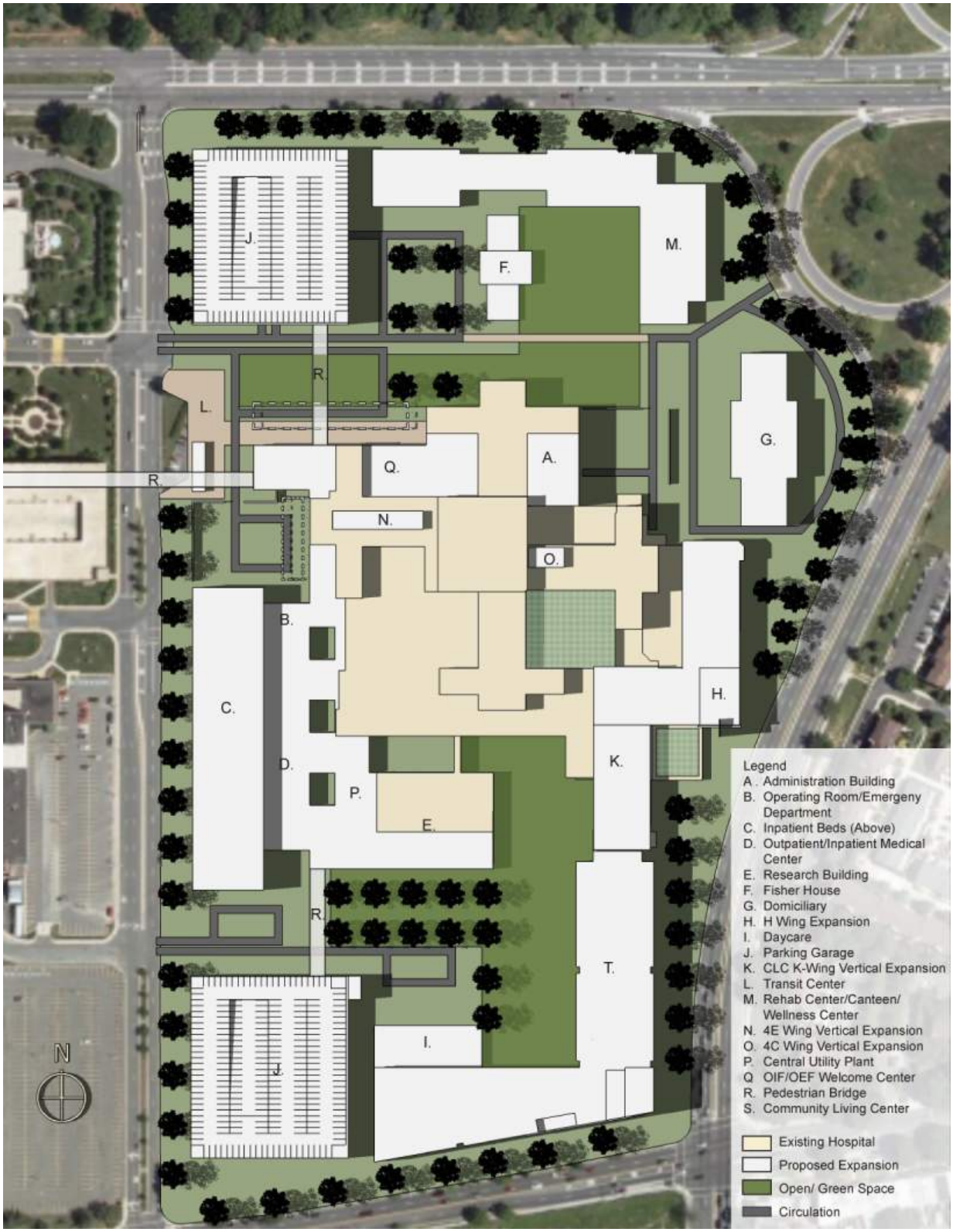


FIGURE C.1 DC VAMC MASTER PLAN DEVELOPMENT

C.2.1 Implementation of DC VAMC Master Plan

The proposed action implements the developments stated in the Master Plan as described in the purpose and need (Section A) for the Master Plan. The Proposed Action consists of the implementation of a Master Plan that provides for the orderly and comprehensive long-range development of proposed expansions and facility improvements at DC VAMC. The Master Plan new facilities will be constructed to maintain and better serve the increasing needs of the US military Veterans, the medical schools, the universities and the research programs that it supports.

Specific Master Plan projects that will be housed in the existing buildings, and which will not have a direct affect on the property and surrounding community environment, are as follows:

- 4C Inpatient Ward Expansion
- 4E Inpatient Ward Expansion
- CLC Third Floor "K" Wing Expansion.

The remainder of the projects as shown in the Master Plan Figure C.1 will be freestanding or adjoining existing buildings. The following is a list of the proposed facilities adjoining and/or partially inside of the existing Medical Center buildings:

- Four-Storey Administration Building – Expansion
- OR/ED/Decon Expansion
- Research Building Expansion
- Central Utility Plant
- OIF/OEF Welcome Center
- Outpatient Clinic
- Inpatient Expansion
- Day Care Center
- 120-Bed Community Living Center.

The following is a list of the proposed freestanding facilities in the master plan:

- Fisher House
- 77 Bed Domiciliary
- Multi-Storey Parking Garages
- Transit Center
- Rehabilitation Center, Canteen and Wellness Center.

Tabulated Program Summary with estimated height and square footage:

Program Summary		
	Building Height	Gross Square Footage
EXISTING FACILITY		
Basement		260,000
1st Floor		275,000
2nd Floor		179,000
3rd Floor		105,000
4th Floor	approx. 75'-4"	103,000
Total Gross Square Footage - Existing		**922,000**
PROPOSED EXPANSION PROJECTS (Through 2020)		
Fisher House	2 Storey	16,000
77 Bed Domiciliary	4 Storey	68,000
Outpatient/Inpatient Medical Center Expansion	3-4 Storey	350,000
Inpatient Beds Expansion	2 Storey	70,000
Community Living Center Expansion (120 Beds)	2 Storey	140,000
CLC K Wing Vertical Expansion	1 Storey	10,240
4E Wing Vertical Expansion	1 Storey	4,000
4C Wing Vertical Expansion	1 Storey	1,800
Operating Room/Emergency Department Expansion	2 Storey	18,000
Central Utility Plant	1-1/2 Storey	18,000
Administration Building Expansion	4 Storey	40,000
OIF/OEF Welcome Center	1 Storey	6,100
Rehab Center/Canteen/Wellness Center	2 Storey	60,000
Research Building Expansion	2 Storey	16,000
Total Gross Square Footage - Expansion Projects		**818,140**
Total Gross Square Footage After Expansion Projects		**1,740,140**
Note: Two new parking garages are not included in table above:		
North Parking Garage	5-6 Stories	360,000 - 500,000
South Parking Garage	7-8 Stories	650,000 - 800,000

TABLE C.1 MASTER PLAN BUILDING SQUARE FOOTAGE

Main Medical Center Buildings Attached Expansion:
The existing DC VAMC buildings cover a gross square footage area of 818,140 gross square feet. With the proposed Master Plan improvements, the total gross square footage for all buildings on DC VAMC property will be expanded to 1,740,140 gross square feet. A majority of the square footage will be an expansion of the existing buildings into existing paved drives, the parking garage, open surface parking, and some green space areas adjoining the existing Medical Center Buildings. The free standing buildings will be located mostly in existing surface parking areas and green space areas.

Since almost all of the existing surface and structured parking facilities will be lost to new and expanded buildings associated with the Master Plan, multi-level parking garages will be constructed on the northwest and southwest corners of the property in order to provide the necessary parking capacity. As a result, the existing day care center and surface parking areas will be demolished.

Main Medical Center Expansion - A major Medical Center expansion zone is established along the western edge of the existing Medical Center. It is expected that expansion along this zone would take place over time and consist of multiple separate projects. The west side of the Medical Center was determined to be the most advantageous zone for clinical expansion due to

its adjacency to major departments. This expansion within the existing building includes the emergency department, surgical department, outpatient clinics, and inpatient units.

A major expansion would require a new main entrance. The entrance would be located along the western façade. In this location it would be visible from both north and southbound traffic along First Street. It would also be conveniently located in-between the proposed parking structures, allowing easy vehicular, approach, drop-off and pedestrian connections to and from both parking structures. A new entrance at this location combined with a new ambulance entrance for the Emergency Drop-off on the north side of the building, would appropriately separate these two entrances, avoiding cross-traffic conflicts.

The western Medical Center expansion would require relocation of the existing electrical gear and generators currently in that zone. A new central utility plant, proposed west of the existing research building accommodates this move.

In addition to the west expansion there are several other additions required around the perimeter of the Medical Center. One is an expansion along the south edge of the research building. The other building expansion is to accommodate administrative space on the north end of the Medical Center. Currently administrative space is scattered throughout the existing Medical Center. A consolidation of these functions into one location will free up space within the building, allowing for expansion of numerous clinical departments.

Community Living Center (CLC) – A major expansion of the community living center has been located south of the existing CLC, along the eastern edge of the Medical Center. This will require the demolition of the existing parking structure. In this location the new CLC has a direct connection back to the existing CLC within the Medical Center. With an L-shaped configuration running parallel to North Capitol Street and Michigan Ave, the building can activate that intersection and is afforded views of the U.S. Capitol in the distance and the McMillan Reservoir immediately to the south. The area immediately west of this new wing is to remain open so as to provide an adequate vehicular approach to the building and to allow for a green courtyard space.

It is also anticipated that the Daycare Center, currently located on the southwest corner of the site will be incorporated into the new Community Living Center building, with its own entrance and associated outdoor space.

Building Independent of Main Medical Center Buildings:
Fisher House, Domiciliary and Rehab/Wellness Center – The Fisher House and Domiciliary locations would be in the northeast corner of the site along with the addition of a rehabilitation/wellness center and canteen. This arrangement groups three buildings of similar scale in an area furthest from the major centers of vehicular traffic. The buildings are organized around a courtyard providing a pedestrian friendly environment. The canteen is located parallel to Irving Street where it can serve to activate that edge of the site.

Parking Structures - Parking would be consolidated into two structures placed at the north and south corners of the west (First St.) edge. Consolidating the majority of parking in this zone would limit the vehicular traffic circulating deeper within the campus. These structures would serve patients, visitors, and staff. Overhead, enclosed pedestrian bridges would connect the parking structures to the Medical Center, allowing convenient and direct access.

Pedestrian Access: Entrances and Walkways

Existing entrances off of First Street will be maintained. The existing employee/student entrance will be expanded to include patients and visitors. The access drives from this entrance will extend through the four-story southwest parking structure, where parking will be provided. Visitors and patients will also enter by the existing main entrance and park in the northwest property corner parking structure (three floors).

Elevated enclosed walkways will be constructed for access from the parking structures to the Medical Center buildings. An elevated enclosed walkway will cross First Street to provide safe pedestrian access from WHC to DC VAMC.

Vehicular Access

Access to DC VAMC from public transit and shuttles will be transferred from the existing drop off area at the Medical Center buildings entrance to a transit center. The Master Plan will require relocation of the public transit and shuttle access, since the entrance will be moved to the west-central side of the Medical Center buildings. For safety and security reasons, the drop off area will be relocated off of First Street in the area of the northwest Medical Center buildings corner. The internal traffic drives and public drop off will be shifted to the west side of the property. The area will be close to First Street separated by a green streetscape space. Separate public access will be provided to the Community Living Center (southeast addition) along the existing alignment of the south Medical Center Buildings drive. Vehicle access to the new free standing buildings in the northeast corner of the property will be by way of the existing internal drive.

Service vehicle access will remain at the same northwest entrance and will generally follow routes presently used. The supply loading dock will remain in the existing location in the Medical Center. The secured waste loading dock will be relocated to the south side of the Medical Center. Access will be by the way of the east access drive route.

Green Space

Green space areas will be increased on DC VAMC property due to the loss of paved surface parking areas and construction of the multi-story parking structures. Green spaces areas will be integrated within the arrangement of free standing buildings, the existing Medical Center buildings, and the property line. Large new green space areas will be created south of the existing Buildings, and west of the new employee/student parking garage and new day care center.

The southern property line green space areas will be created to buffer the building along Michigan Avenue and protect the character of the McMillan historic site to the south. Green spaces will surround the outer edge of the Medical Center buildings expansion through the abandonment of existing paved parking areas. Smaller green space areas will surround the Fisher House, and the Rehabilitation Center, Canteen and Wellness Center. All of the green spaces are anticipated to be used for non-structured recreational activities and building landscape buffer from adjoining uses.

Pervious surfaces generally associated with green spaces will be increased at DC VAMC from approximately 18.8 percent of the property to 33.8 percent of the property. This will be due to the removal of the existing surface paved parking and the construction of multi-story parking garages.

Building Height and Massing

The height and massing of the Master Plan development will be similar to the adjoining development of the WHC and will not exceed the existing top elevation of DC VAMC. The Community Living Center will have the most storied structure of the Medical Center buildings. The above ground structure at the southeast property corner will reach five stories. Due to the existing ground elevation at the lowest surface floor, the top floor of the center will be lower than the central core of the Medical Center, which is six stories high. Building massing along Michigan Avenue will be buffered by green space areas varying in width from 50 feet behind the street curb to approximately 150 feet at First Avenue.

The massing of new structures along First Avenue will be similar in character to the existing west side of First Avenue at the WHC. A green space area and setbacks of the Medical Center structure additions will create a new green space area and streetscape in an existing parking lot.

New structures in the northeast corner of the property along Irving Street and North Capitol Street will be two- and three-story structures. The building massing will be keeping with the character of the projected reconstruction of the North Capitol Street cloverleaf interchange. The proposed gateway development around the intersection of Irving and North Capitol is proposed to be multi-story multi-use structures. The space between the off-site cloverleaf development will be established as green space and service access area.

Utilities

Utilities to serve the Master Plan development are adequate to support the projected development. Water and sewer connections for DC VAMC service will remain at the existing locations. Electrical, communications and gas services will need to be upgraded to support the additional Master Plan development load demands. The utilities have adequate capacity in the area of DC serving DC VAMC. Additional fire and domestic pressure pumps will be required to supplement the existing pumping system under the Master Plan. Service lines will require relocation where they are in conflict with new structures.

Steam service to DC VAMC presently is supplied by WHC. Under the Master Plan the provision of steam service will be changed to a central DC VAMC operated utility plant. The plant will provide steam for heat and sterilization at the main Medical Center building. The

central utilities plant structure will be attached to the existing research building. The free standing buildings will have separate heating and cooling systems. Existing steam service lines will require relocation where they are in conflict with the Master Plan development.

C.2.2 No Action Alternative

The no action alternative is the non-implementation of the proposed improvements as described in section C.2.1. and shown in the Master Plan, Figure C.1. Under this alternative, the mission of DC VAMC to serve the medical needs of US Military Veterans in the metropolitan Washington, DC region will not be met. The VAMC serves as a major resource for health services, education and research that benefits their patients, their families, the community, the network and the nation.

The alternative of no action will require the status quo of existing services to be maintained and technically upgraded within the existing Medical Center Buildings. Projected growth in medical services to US military Veterans personnel may be met at a remote location unknown at this time. The expansion of the medical services under this alternative will most likely be located outside of DC.

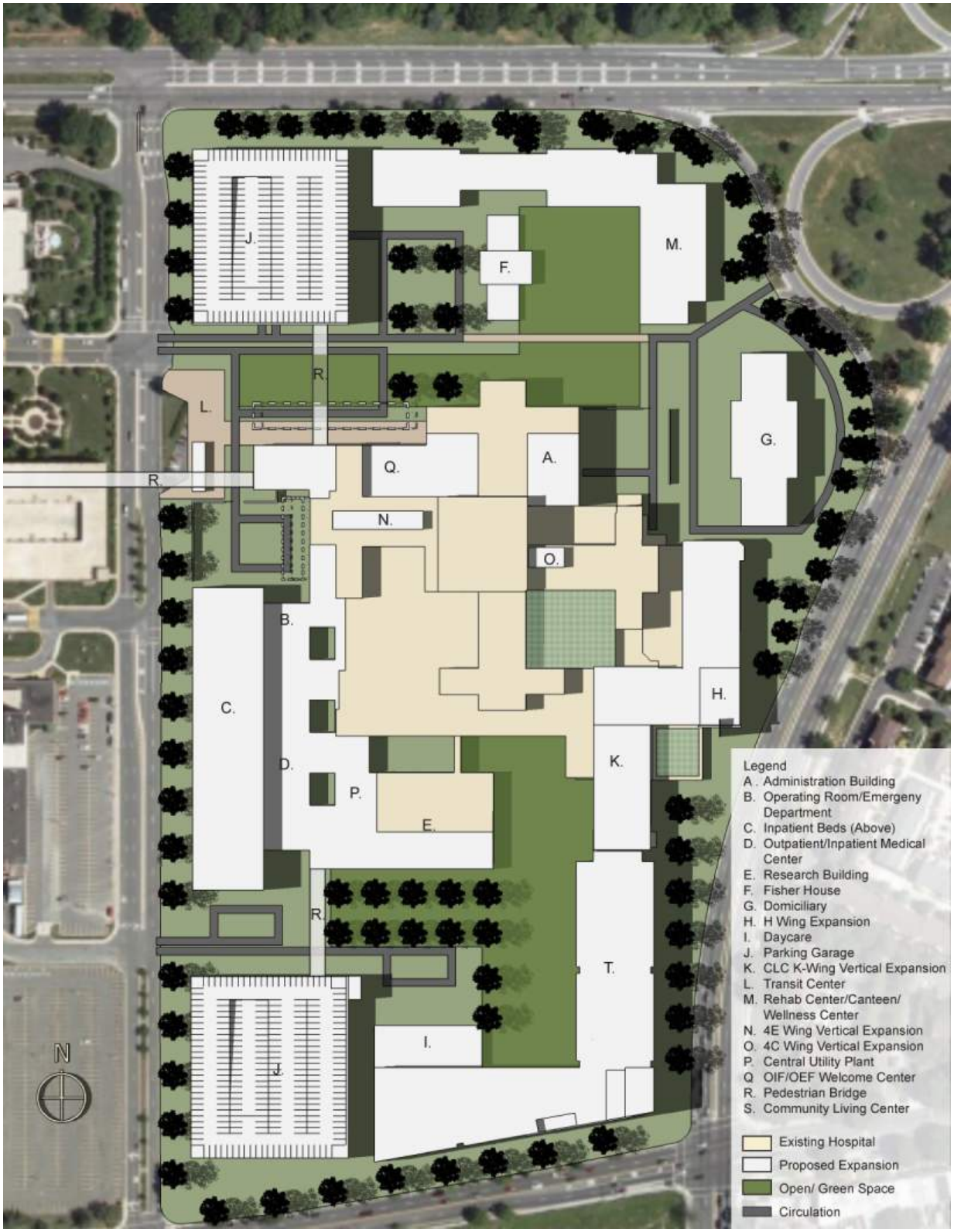


FIGURE C.1 DC VAMC MASTER PLAN DEVELOPMENT

C.3 Effects of Proposed Alternatives

This section evaluates the potential environmental consequences of the Master Plan proposed action and the no action alternative. The proposed action and no action are related to NCPC Comprehensive Plan policies and how they comply with polices.

Potential impacts of the master plan implementation are discussed in this section in terms of direct short- and long-term impacts. Short-term impacts are limited duration activities, such as those that occur during the period of construction. Long-term impacts are activities of a more permanent duration, including those that will last for the estimated life cycle of the action and beyond. Impacts judged to be minimal in significance have been assigned a range to facilitate comparisons among the alternates and items, using the terms negligible, minor and moderate. Negligible is defined as no real measurable adverse impacts. Minor is defined as measurable adverse impacts, but manageable with best management practices. These minor impacts are also required to have a permit and be inspected. Moderate impacts are also defined as measurable adverse impacts, but are to be mitigated and manageable with best management practices. Moderate impacts are required to have a permit, and to be inspected and certified.

C.3.1 Physical Biological Natural / Ecological

Physical and biological aspects of DC VAMC Master Plan were evaluated for the potential environmental consequences of the proposed action. Specific aspects evaluated include soils, geological resources, stormwater management, wetlands, floodplains, “Waters of the US”, wildlife refuges, known endangered species, and green space with 12-inch diameter and larger trunk-trees. The effects of the proposed action and no-action alternatives upon the property and surrounding community are described as follows.

There are no known wetlands, floodplains, “Waters of the US”, wildlife refuges, and known endangered species on DC VAMC property. Since these environmental conditions do not exist on the site the proposed action and no action alternatives will not affect these aspects of the environment and are in compliance with NCPC policies. Therefore these effects are negligible on DC VAMC property and the surrounding community’s environmental condition.

Soils, Storm Drainage, Geological Resources

Proposed Action:
Minor short- and long-term adverse impacts to topography and soils at DC VAMC during the Master Plan development construction, as a result of the proposed action, are expected. No impact to geological resources is expected. Proposed action development is expected to directly affect micro topography and soil as a result of grading, excavation, placement of fill, compaction, mixing, clearing and grubbing. Additional effects could result from erosion and associated sediment where soil is exposed due to removal of the vegetative cover. Under the Master Plan it is understood that geotechnical analyses and designs will be performed on all new

construction projects to assure adequate structural foundations and mitigate any disturbance of the groundwater.

DC VAMC property contains Chillum-Urban Land Complex soils of well drained silt loam topsoil, with gravelly sandy loam subgrade soils. The area soils have been previously altered by grading operations to develop existing parking lots and buildings. The water table depth, based on past records, is estimated to be in excess of 6 feet below the surface. The soils are classified as easily erodible and will need to be contained and protected from storm drainage runoff during construction. The DC Department of Health, Environmental Health Administration, Bureau of Environmental Quality, Watershed Protection Division (WPD) regulates soil disturbance and potential soil erosion. It is anticipated that all soil disturbance at DC VAMC will adhere to DC WPD regulations. Projects that disturb over one acre are required to be in compliance with National Pollution Discharge Elimination System (NPDES) Phase II stormwater permit and filing of a Notice of Intent. The area disturbed for the proposed Master Plan development will be phased over a period of years for the duration of the Master Plan. During each phase, the required permits and regulated safe guards for control of soil erosion and runoff will be met by DC VAMC.

The purpose of the regulations is to contain and control sediment on a short-term basis during construction by preventing to the maximum extent practicable, the soil from leaving the site and affecting the waters of DC. The regulations are also intended to control the quality and quantity of stormwater runoff. Water quality volume, recharge volume and channel protection storage volume sizing criteria are the basis for best stormwater management practices that would be implemented for the proposed action. These practices will be in accordance with the DC Stormwater Management Guidebook, and will address stormwater quality and quantity controls on a long term basis.

Therefore, it is anticipated that the proposed action will have minor short-term adverse impacts to the soils and waters of DC, DC VAMC and the surrounding community. There would also be minor long-term beneficial impacts by the proposed action due to the development of stormwater management facilities and expansion of pervious surfaces at DC VAMC. The amount of pervious surface would increase from 18.8 percent (6.5 acres) to 33.8 percent (11.7 acres) due to the removal of surface parking lots and construction of multi-story parking garages.

This approach is in compliance with NCPC water quality policies. Sediment from the site would be controlled and a sediment and erosion control permit would be obtained for all construction. Stormwater management would be implemented for all new facilities using the best management practices. The stormwater management facilities would be permitted, operated and maintained as required by DC and the EPA.

No-Action Alternative:
Under the no-action alternative, the existing parking lots and buildings, except for the day care center, storm drainage runoff will not be treated before leaving the property. This condition is in compliance with the DC WPD regulations as the facility pre-dates the regulations enactment. Therefore, the continued operation of the existing storm drainage system is considered sub-standard and a possible detriment to the environment. Implementation of the proposed action

will benefit the aquatic environment of DC, DC VAMC and the surrounding community. It is anticipated that the continued operation of the existing storm drainage system will have a long-term minor adverse affect on the environment. There will be no effect on the soils and geological formations of the DC, DC VAMC and the surrounding community.

The short- and long-term effects for the no-action alternative will also be minor adverse impacts as there will be minimal stormwater management at DC VAMC.

Green Space

Proposed Action:
There will be minor short- and long-term impacts to the green space areas and trees with trunks larger then 12-inch diameter at DC VAMC during the Master Plan development. Existing green space areas north of the existing parking and south of Irving Street will be disturbed by Master Plan development. Numerous trees will be removed that date back to the original development of DC VAMC in the 1960's. Other large trees are located with in the parking lot islands that will be removed as part of the Master Plan development.

The proposed action is to create more and larger new green space areas. These new green space areas will be landscaped with new trees and non-structured recreational areas. These areas will be located throughout the Master Plan development. Reductions in the paved surfaces for at-grade parking and construction of parking structures at DC VAMC will provide area for new green space and associated tree plantings. The long term effect is to enlarge and improve the green space environment throughout DC VAMC property. Thus, DC and the surrounding community will benefit from the Master Plan introduction of more pervious surface and landscaping.

Therefore, it is anticipated that the proposed action will have minor short-term adverse impacts to green space of DC, DC VAMC and the surrounding community. There will be negligible long-term adverse impacts to the proposed action by the development of additional green space and the planting of additional trees at DC, DC VAMC and the surrounding community.

This approach is in compliance with NCPC open space policies. The amount of green space at the Medical Center would be increased and additional trees would be planted. Green space along North Capitol Street and the viewshed would be upgraded and additional trees planted to enhance the view to and from the Medical Center, and buffer the Medical Center Buildings from the street. The reuse of existing buildings and the redevelopment of existing paved areas in DC conserves open and green spaces in the Washington Metro Area.

No-Action Alternative:
Under the no-action alternative, the existing parking lot tree plantings and green space remain as they are today. The existing parking lot trees are in a state of decline and some have already been removed. It is anticipated that all the parking lot trees will continue to decline and will be removed.

Therefore the short- and long-term effects are negligible to DC VAMC green space for the no-action alternative. The long-term effects are negligible adverse impacts on green space trees as the number of trees will eventually decline in the parking areas of DC VAMC. The viewshed on North Capitol Street would remain as it presently exists. Medical Center Buildings massing would remain exposed to view on North Capitol Street.

C.3.2 Urban Systems

The urban systems of DC VAMC Master Plan were evaluated for the potential environmental consequences of the proposed action. Specific aspects that were evaluated include the following items:

- Air quality
- Sound levels
- Water quality and supply based systems
- Energy requirements
- Light Pollution
- Solid waste and hazardous materials
- Transportation.

The effects of the proposed action and no-action alternative on the urban systems of the property and surrounding community are described as follows.

Air Quality

Proposed Action:
Short-term air pollution emissions under the proposed action will result from the use of heavy equipment and construction crews traffic during the construction period. Construction emissions will include emissions from operation of construction equipment, construction crew vehicle traffic, painting of new building and structures.

Long-term air pollution emissions under the proposed action are possible due to expanded employee commuter traffic, operation of new steam generation facilities and emergency operation of the stand-by electrical generators during an emergency power outage. Since DC is in attainment for all critical levels of air pollution except ozone, and is in general conformance with guidelines established in 40 CFR Part 93, the determination of conformity of federal actions to state or federal implementation plans is not needed.

The proposed action will increase the patient/visitor and employee/student commuter traffic to a higher level than exists today. The stand-by electrical generators will run on diesel fuel and will only be used during a power outage. The steam generation facilities will run on natural gas with diesel fuel backup. Based on these emissions of air pollutants it is anticipated DC VAMC Master Plan will create higher ozone air emission levels due to increased traffic levels. The other air pollution levels are anticipated to reflect existing operations of DC VAMC.

The transport management program will be implemented under DC VAMC Master Plan to expand the present use of mass transit by patients/visitors and employees/students. It is

anticipated that a major part of the increased traffic to DC VAMC will choose to use mass transit and bicycles due to the growth in transit usage and the implementation of the transportation management program.

The fixed sources of air pollutants at DC VAMC, electrical power generators and steam generation facilities, will be permitted through DC and the EPA (US Environmental Protection Agency). The generators will only be used during emergency situations and during periodic maintenance operations to exercise the motors. The steam generation facilities will supplant the old and less efficient steam generation units presently used at WHC. The new more efficient steam generation units located at DC VAMC will use less energy and will emit fewer pollutants. Steam will be supplied directly to the Medical Center buildings, thus reducing heat losses in the distribution piping system from the WHC central plant.

Therefore it is anticipated that the proposed action will have moderate short- and long-term adverse impacts on the DC, DC VAMC and the surrounding community.

This approach is in compliance with NCPC transportation policies. A Transportation Management Plan would be implemented to encourage mass transit, ride sharing, and bicycle usage to reduce the vehicle traffic volume to the Medical Center. The reduction of traffic volume would help improve the air quality in the area.

No-Action Alternative:
Under the no-action alternative, the existing character of the air quality at DC VAMC and the surrounding community will remain as it currently exists. Without the TMP to encourage transit use and other means of ride sharing the level of traffic volume would increase and therefore contribute to the increase in air pollution. There would be no change in the anticipated impacts to air quality as presently exist.

Sound Levels

Proposed Action:
Under the proposed action, short-term minor noise impacts are anticipated during the construction of the proposed facilities at DC VAMC. Noise impacts associated with normal construction activities are expected. All applicable regulations will be followed and construction activities scheduled to create the least noise disturbance for operational activities at DC VAMC and the surrounding community. Medical Center operations will be affected, but all precautions will be used to reduce and dampen any construction activity noises. This site is not located directly next to a sensitive human noise receptor such as residences or schools as it is separated by wide arterial streets form adjoining properties.

Long-term operations of DC VAMC are not a source of noise, except for when the stand-by electrical generators are operated. These units will be fitted with an exhaust muffler and be housed in a sound dampening structure.

Therefore it is anticipated that the proposed action will have negligible short-term adverse impacts and negligible long-term adverse impacts to DC, DC VAMC and the surrounding community.

No-Action Alternative:
Under the no-action alternative, the proposed DC VAMC Master Plan, the existing character of the noise levels at DC VAMC will remain. There will be no impacts to noise level emitted from DC VAMC.

Water Quality and Supply Based Systems

Proposed Action:
With the proposed action, there will be short-term impacts of construction operations due to the relocation of the water distribution systems that are in the way of Master Plan construction. The construction work will increase the demand for domestic water associated with construction activities and daily cleanup and dust control.

Long-term domestic water demand is anticipated to increase over the existing demand. WASA has sufficient water capacity to supply the required water service volume. Additional pressure pumps to support the existing water pumps will be required. No new water service connections are anticipated. Expansion of the fire protection system and the supply of additional sprinkler systems are anticipated to increase the demand on the existing water system mains. The existing 12-inch water mains are anticipated to be adequate to supply the needed fire protection water supply.

Therefore it is anticipated that the proposed action will have negligible adverse impacts short- and long-term to water supply at DC VAMC.

No-Action Alternative:
Under the no-action alternative, the existing supply and distribution of domestic water and fire protection water at DC VAMC will remain unchanged.

Energy Requirements

Proposed Action:
Under the proposed action, the anticipated short-term impacts of construction operation on the electrical service will be negligible. Temporary short term disruption of service is anticipated during the switch over to the upgraded power service. It is anticipated that this will be a one time event and scheduled with an appropriate time to coincide with DC VAMC operations.

Long-term impacts by the proposed action are also negligible. The proposed action will upgrade the electrical power supply to meet the needs of DC VAMC Master Plan development and install new stand-by electrical power sources and uninterruptible electrical power service. It is anticipated the Potomac Electric Power Company has adequate power to serve DC VAMC electrical needs.

Therefore it is anticipated that the proposed action will have negligible adverse impacts short- and long-term to the electrical power service to DC, DC VAMC and the surrounding community.

No-Action Alternative:
Under the no-action alternative, thee electrical power service at DC VAMC will remain unchanged.

Light Pollution

Proposed Action:
Under the proposed action, the anticipated short-term impacts of construction operations on the site lighting system and light pollution will be negligible. Temporary short term illumination of the night sky during construction is anticipated, for a short time period during construction and scheduled with an appropriate time to coincide with DC VAMC operations.

Long-term impacts are classified as negligible. The proposed action will eliminate surface parking lighting systems and install interior lighting in the parking structures. Master Plan development lighting will be concentrated at building entrances and used to create safe pedestrian walkway lighting and not illuminate large paved areas for parking.

Therefore it is anticipated that the proposed action will have negligible adverse impacts short- and long-term to create a spill over of light pollution in DC, DC VAMC and the surrounding community.

This approach is in compliance with NCPC light pollution policies. The Medical Center would reduce the amount of night glow emitting from the Medical Center by removing the parking lot lighting and building parking structures. All new lighting would be down lights for pedestrian safety and security around the buildings.

No-Action Alternative:
Under the no-action alternative, the existing site lighting system at DC VAMC will remain unchanged.

Solid Waste and Hazardous Materials

Proposed Action:
Under the proposed action, short-term impacts will include solid waste as a by-product of the building demolition and tree clearing associated with the Master Plan development. It is anticipated that the clearing and demolition materials will be salvaged by the construction contractor where possible. All other solid waste materials generated will be removed by the contractor and disposed of off government property by a registered hauler and disposed of at a DC licensed disposal site. Hazardous materials are not anticipated to be generated by the demolition and construction operations.

Long-term solid waste generation, handling and disposal operations of DC VAMC are anticipated to be in-line with those of the existing separate stream of solid waste handling for recycling, domestic waste or trash, medical waste and hazardous waste which were described in section B.6. Hazardous materials are stored, and used at DC VAMC. All federal and DC regulations covering handling, storing and recording of hazardous materials is and will be complied with under the Master Plan. Diesel fuel is anticipated to be stored in aboveground double walled storage tanks at the new emergency electrical generators. These will be used for the operation of the stand-by electrical generators.

Therefore it is anticipated that the proposed action will have moderate adverse impacts short- and long-term to solid waste and hazardous materials handling at DC VAMC.

This approach is in compliance with NCPC water quality, solid waste management and hazardous materials management policies. Water quality of storm drainage would be protected from hazardous chemicals release as the storage, handling and disposal of chemical and hazardous materials is recorded, handled and stored in compliance with DC and EPA regulations. Hazardous biological and chemical waste would be controlled, recorded, stored and disposed of in compliance with EPA and DC regulations. Solid waste materials would be segregated for paper and cardboard materials which would be recycled.

No-Action Alternative:
Under the No-Action alternate the proposed action of DC VAMC Master Plan will not be implemented. The existing methods of solid waste and hazardous material handling at DC VAMC will remain as they exist.

Transportation

Proposed Action:
Under the proposed action, short-term adverse impacts associated with DC VAMC Master Plan will be related to construction activities. Construction equipment and worker vehicles will access the site to perform the development. Construction of the new facilities will be staged over several years and will be schedule to allow for available parking for patients/visitors and employees/students. One of the first anticipated projects is the construction of the parking structures. A more in dept discussion of the parking facilities and projected needs appear in Section B.7, Transportation herein. Traffic volumes for the construction will be off-peak hours and directed away from pedestrian access way. All pedestrian walks will be protected from construction activities.

The site is currently served by three Washington Metropolitan Area Transit Authority (WMATA) metrobus transit routes: 1) 80 (North Capitol Street line), 2) D8 (Hospital Center Line), and 3) H2, 4 (Crosstown Line).

> Route 80 (North Capitol Street) serves North Capitol Street at Michigan Avenue, as well as at nine Metro stations (Farragut North and West, McPherson Square, Metro Center,

Gallery PI-Chinatown, Union Station, New York Avenue/Florida Avenue/Gallaudet University, Brookland-CUA, and Fort Totten).

Route D8 (Hospital Center) provides direct access to DC VAMC from Union Station and Rhode Island Avenue/Brentwood Station.

Route H2, 4 (Crosstown) provides direct access to DC VAMC from Tenleytown-AU, Van Ness-UDC, Cleveland Park, Columbia Heights, and Brookland-CUA Stations.

Metrobus routes D8 and H2, 4 provide direct access into DC VAMC, while 80 provides indirect access at North Capitol Street/Michigan Avenue. Access to Metro is provided via all three bus routes.

Furthermore, a number of shuttle services are available to DC VAMC including:

1) Shuttle service to DC VAMC from Brookland/CUA Metro station
2) Shuttle service to DC VAMC from Columbia Height Metro station
3) Shuttle service between DC VAMC and Baltimore VAMC
4) Shuttle service for Armed Forces Retirement Home
5) Battle's Transportation Inc. Shuttle service
6) DC VAMC shuttle service to McPherson Square (VACO)

The area surrounding the VAMC was originally planned to be significantly revitalized over the next few years, with retail, office, and residential planned developments including the Armed Forces Retirement Home Zone A, the McMillan Sand Filtration site, the Washington Hospital Center Expansion, the Old Engine Company 12 site, as well as various residential developments along North Capitol Street.

After significant research efforts, it was determined that most planned developments are either in very early stages of preliminary design or on-hold at this time; very few developments are approved to be constructed. The following planned/proposed pipeline developments were included in the background analyses:

- The Armed Forces Retirement Home (Zone A) Master Plan development (see Figure 7).
- Catholic University
- MacMillan Mews Site
- Washington Hospital Center Master Plan Expansion
- Michigan Avenue at Irving Street Mixed Use PUD
- St. Paul's College

A preliminary/draft traffic impact study was conducted for the Armed Forces Retirement Home site by Michael Baker Jr, Inc., dated June 2007, in support of the Master Plan study. This site consists of 272-acres consisting of retirement homes for more than 1,400 veterans, as well as health-related facilities, private rooms, banks, chapels, convenience store, post office, dining rooms, golf course, and 24-hour security and staff. The Master Plan being prepared includes

approximately 4.33 million square feet of mixed-use redevelopment including office; retail; residential; hotel; and medical uses, with additional access via North Capitol Street and Irving Street. The study included the trip generation for the re-development, determined based on the *ITE Trip Generation Manual* (6th Ed.) to be 4,489 AM peak hour trips (2,923 in and 1,566 out) and 5,138 PM peak hour trips (1,955 in and 3,183 out), and was distributed on the existing road network based on existing travel patterns. No internal reductions were applied to remain as conservative as possible.

Traffic impacts studies/reports for the Catholic University site, St. Paul's College site and the Michigan Avenue at Irving Street Mixed Use PUD project were collected from various consultants and the site trip generation/assignments were included in the analyses as necessary based on their location.

The TMP would establish specific goals and objectives to ensure the successfulness of the developed TMP for any particular project. These goals and objectives lead to the development of strategies that can be implemented throughout the DC VAMC site to improve transportation operations overall.

The primary goals and objectives that were established for the TMP for the DC VAMC Site under the Master Plan would be:

- Provide more efficient transit service to all users in an attempt to sensibly reduce trips to/from the site.
- Reduce any existing congestion and delays on the nearby roadway network.
- Provide additional benefits to all DC VAMC users.
- Provide safe and efficient pedestrian and bicycle resources throughout the DC VAMC site.
- Manage proposed parking facilities, such as shared-parking programs.

It is important to note that the objective of this TMP would be not necessarily to reduce the single-occupant vehicle trips to a maximum, simply due to the fact that the DC VAMC is a facility who users typically rely on single-occupant vehicles to travel or be dropped off. The objectives of this TMP would be to develop strategies to improve the existing facilities for those who have the means to use them, which would not refer to most veterans using these facilities.

Transit Ridership Strategies: Several WMATA and shuttle buses provide extensive transit access to and from the DC VAMC and no additional shuttle service or metro buses are planned to be added. A Transit Center or hub is planned to be constructed along 1st Street, just south of the existing northern driveway, which would serve the DC VAMC, WHC and other uses in the vicinity. The Transit Center would be a transit hub point for Metro buses, all shuttle services for the medical facilities, Metro connections, etc.

If programs are initiated as recommended, car-or van-pool drop-off and a Kiss & Ride might be integrated into the Transit Center as further feasibility and design plans are developed. No preliminary plans are available at this time.

Ridesharing Strategies: Car- or Van-Pool Programs would be developed internally based on each interested employee's location of residence. Car-pooling would refer to 2-3 people riding in the same vehicle, while van-pooling would refer to 7-8 individuals riding together to and from DC VAMC. An intranet site could be developed by DC VAMC to provide a means of communication for those interested in joining either car- or van-pool programs. To support individuals using both transit and car- or van-pool programs, DC VAMC would have a small number of shared vehicles at employees' disposition for work-related job trips, inability to return home via original mode of transportation, or personal pass-by trips.

Long-term adverse traffic impacts will be related to increased traffic volume on the DC streets and parking volume at DC VAMC from 4,180 vehicles estimated daily traffic demand to 9,125 vehicles estimated daily traffic demand. A transportation management program has been implemented as part of the Master Plan that will integrate the existing mass transit access, shuttle services, ride sharing, car pooling, bicycle access, and pedestrian movements. This program will increase the number of mass transit and ride sharing users, and encourage employees and visitors to ride bicycles to the Medical Center. Parking facilities will be provide for DC VAMC use only and is sized based on the national standards for urban Medical Center service needs.

Therefore it is anticipated that the proposed action will have negligible adverse impacts short- and long-term to transportation and parking at DC VAMC.

This approach is in compliance with NCPC transportation policies. The parking facilities would be accommodated by new parking structures that would assign employee parking at a ratio of one space per four employees (716 spaces total parking for employee/student/government vehicles, 2,365 employee /students (4:1 ratio) & 125 government vehicles (have space for each vehicle)). The total parking structures will serve 2,190 spaces for visitors/patients. A Transportation Management Plan would be implemented to encourage mass transit, ride sharing, and bicycle usage to reduce the vehicle traffic volume to the Medical Center.

No-Action Alternative:
Under the no-action alternative, the existing transportation system and parking at DC VAMC will remain as they exist today.

C.3.3 Social-Cultural and Economic Environment

Social-cultural and economic aspects of DC VAMC Master Plan were evaluated for the potential environmental consequences of the proposed action. Specific aspects relate to community facilities and service, social and economic factors, and environmental justice. The effects of the proposed action and no-action alternative on the property and surrounding community are described as follows.

There is no impact anticipated by DC VAMC, since the community facilities, community services, and environmental justice conditions will not change from the conditions described in sections B.8 and B.11 under either the proposed action or no-action alternative. Therefore the assessment of these effects is eliminated from this environmental assessment as the alternates

have negligible affect on DC VAMC property and the surrounding community environmental condition.

Social and Economic Factors

Proposed Action:
Under the proposed action, there will be a positive short-term impact on social and economic factors. There is no anticipated shortage of materials or manpower in the DC region for construction due to the recession in the region. The phased construction will help the local economy over an extended period of time.

Long-term impacts of the Master Plan will be to add income and jobs to the DC area and help support the local economy. Social aspects of US military Veterans medical needs will be supplied by DC VAMC Master Plan through added medical capacity and utilization of new technology.

Therefore it is anticipated that the proposed action will have negligible adverse impacts short- and long-term to social and economic aspects at DC VAMC.

No-Action Alternate:
Under the no-action alternative, the existing social economic factors at DC VAMC will remain.

C.3.4 Historic and Aesthetic Values

Historic and aesthetic values aspects of DC VAMC Master Plan were evaluated for the potential environmental consequences of the proposed action. Specific aspects relate to historic significant structures, activities and events, archeological artifacts and viewshed aesthetic appearance as part of North Capitol Street corridor. The effects of the proposed action and no-action alternative on the property and surrounding community are described as follows.

Since the existing DC VAMC is not of any historic significance and the aesthetic character of the Master Plan development have not been established, an impact analysis is not required. Archeological artifacts are not known to exist at DC VAMC and the phase I analysis for the possible existence of artifacts will be performed before any development is constructed. Impacts on the archeological history of the site can not be determined at this time. Therefore the assessment of these effects is eliminated from this environmental assessment as the alternatives have negligible affect on DC VAMC property and the surrounding community environmental condition. Once the archeological conditions are determined, an environmental assessment will be performed.

This approach is in compliance with NCPC historic policies. The North Capitol Street viewshed would be improved with the planting of additional trees as buffer for the Medical Center Buildings. Green space along Michigan Avenue would be enhanced to buffer the Medical Center Buildings massing from the McMillan Reservoir and water works historic site. Trees would be planted in the green space to block the view of the buildings, while permitting views

from the site. The DC VAMC part of the veiwshed would be in compliance with other anticipated development along the North Capitol Street corridor.

No-Action Alternative:
Under the No-Action alternate the proposed action of DC VAMC Master Plan will not be implemented. The possible archeological conditions and existing North Capitol Street viewshed would remain as it exists.

SECTION D CONCLUSIONS AND FINDINGS

D.1 Conclusions

The conclusion of the environmental assessment is in the form of a cumulative impact. A cumulative impact is defined as "the impact on the environment which results from the incremental impact of the action when added to past, present, or reasonably foreseeable future actions regardless of what agency (Federal or non-federal) or person undertakes such other actions" (40 C.F.R. § 1508.7). This section goes on to note "such impacts can result from individually minor but collectively significant actions taking place over a period of time." Cumulative impacts associated with implementation of the proposed action would include any impacts from other "actions" that would be incremental to the impacts of constructing DC VAMC Master Plan development.

Proposed Action Alternate:

Need:

The purpose of DC VAMC is to serve the medical needs of US Military Veterans in the metropolitan Washington, DC region through 2029 and beyond. DC VAMC is dedicated to providing high quality, comprehensive health care to Veterans in an environment that fosters trust, respect, commitment, compassion and excellence. The VAMC serves as a major resource for health services, education and research that benefits their patients, their families, the community, the network and the nation.

The need by DC VAMC is to provide the following new and expanded services under the Master Plan:

- Expand patient wards to accommodate single patient rooms
- Community living center for transitional residential treatment care
- Administration space expansion to allow for consolidation and free up space for clinical uses
- Expand operating room facilities and number of operating rooms
- Improve and expand emergency department operational facilities
- Relocate and expand decontamination facilities for emergencies
- Expand existing research facilities
- Improve the quality and efficiency of the steam delivery system with a new central utility plant
- Provide a welcome center for Operation Iraq Freedom and Operation Enduring Freedom Veterans
- Develop an outpatient clinic facility
- Expand inpatient care for overnight patients
- Provide a replacement day care center
- Expand nursing care facilities as a community living center
- Develop a Fisher House on the property

- Develop a domiciliary program and facilities
- Provide structured parking to replace surface parking facilities
- Develop a transit center for mass transit drop-off
- Provide a rehabilitation center
- Provide a wellness center
- Provide a canteen in association with the wellness center and rehabilitation center.

Purpose:
The main purpose of DC VAMC Master Plan is to establish a framework that will guide the placement and design of multiple expansion projects anticipated to take place on the VA campus over the established period of the Master Plan. The design team made every effort to respond to the existing internal aspects of the campus in order to avoid costly and disruptive relocations and/or reconstructions of existing facilities. At the same time the plan responds to the external aspects of the site, positioning buildings and open space so as to appropriately respond to the surrounding urban fabric.

The proposed action would involve the Master Plan development. In summary DC VAMC would be expected to fulfill the Veterans Administration needs for the medical facilities in the DC region. Expected impacts would include the increase in building area on the site, reduction of impervious surfaces, increase of green space areas, reduction in the number of large trees on the site, and improved stormwater management of surface runoff.

Consultation was conducted with the U.S. Fish and Wildlife Service, DC Historic Preservation Office, and DC Department of the Environment. The U.S. Fish and Wildlife Service did not identify a threatened species that might be located in the area of DC VAMC. There are no historical sites at DC VAMC based on the Historic Preservation Office. There is a possibility of Archeological sites at DC VAMC. A phase I archeological survey is planned to be performed at the site. The DC Department of the Environment Wetlands map does not show the existence of wetlands at the site. Specific projects will have a wetlands survey related to the site disturbance performed. Copies of the correspondence with the agencies are contained in Section E.

The cumulative impacts of the proposed action of DC VAMC Master Plan and the surrounding communities would not be considered significant. The proposed action would not involve impacts to known wetlands, wildlife, historical sites, “Water of the US” or threatened or endanger species.

CONCLUSION

The proposed action’s long-term impacts would not prove significantly adverse on human environmental resources or socioeconomic conditions at DC VAMC or the surrounding community. Impacts will be incurred from the removal of existing trees and vegetation in the proposed construction areas, but new green space areas will be developed and the amount of impervious surfaces will be reduced. The installation of

steam generation facilities and additional emergency electrical generators will discharge air pollutants. The new steam facilities (natural gas fueled) will off-set the presently used Washington Medical Center (WHC) steam facility with more efficient equipment. DC and EPA permits for air pollutant discharge will be obtained.

During the construction period short-term effects would be mitigated for soils sediment and erosion controls. A sediment and erosion control permit would be obtained to comply with the DC and the Environmental Protection Agency's National Pollution Discharge Elimination System, Phase II regulations.

The cumulative impacts of the proposed action would not have significant adverse effects on human environmental resources or socioeconomic conditions at DC VAMC, or to areas surrounding the property. The sediment controls during construction and stormwater drainage from impervious surfaces at DC VAMC would be treated by best management practices permitted by the DC WPD. The area of green space would be increased and new trees to replace the removed trees would be planted. Air quality emissions from the additional fixed emergency generators and the steam generation facilities would be permitted and in compliance with the EPA and DC regulations. Additional traffic under the Master Plan will be accommodated by the existing streets, new parking facilities and will be mitigated through the implementation of transportation management program. The other potential adverse impacts assessed in section C were found to have negligible to moderate adverse impacts on the DC, DC VAMC and surrounding community.

Impacts from construction would be short-term in nature and last only as long as the construction activities. Such short-term items such as topography, soils, transportation and biological resources, would form a cumulative impact on DC VAMC environmental area during construction. Appropriate best management practices as regulated and permitted by the US Veterans Administration, DC WPD, DC Environmental Health Administration and the EPA would be implemented and permits issued from these agencies for the proposed action.

The proposed action is anticipated to only be as described and is anticipated at this time to describe reasonably foreseeable future expansion of facilities at DC VAMC. Impacts mentioned through out the EA and above for short- and long-term effects in combination would be anticipated to be minimal and managed through the use of regulated and permitted best management practices. These practices relate to stormwater management permits, sediment and erosion control permits, and air pollution emission permits. With the implementation of the best management practices under each of the permits as described in the EA, any cumulative impacts from past, present and reasonably foreseeable future planning efforts would be minor.

Implementation of the proposed action, implement the Master Plan, would be in compliance with the following NCPC policies:

The relationship of the Master Plan to the NCPC Comprehensive Plan Federal Elements is listed as follows:

- Historic: Viewshed of North Capitol Street is enhances through the addition of green space improvements along the east and south sides of the property
- Transportation: Parking ratio for employee would be set at 4 employees per parking space
- Transportation: A Transportation Management Program would be implemented to encourage the use of mass transit and alternative means of accessing the Medical Center
- Open Space: Green spaces at DC VAMC will be expanded
- Open Space: Trees will be planted to replace and expand the number of trees on the site in the expanded green space
- Open Space: Reuse of existing buildings in the DC developed area and conserve open spaces
- Light Pollution: Sky glow will be minimized as surface parking area lighting will be removed and parking structures constructed
- Water Quality: Hazardous materials and chemical will be properly stored and contained as per EPA regulations and registration
- Water Quality: Sediment controls during construction activities and stormwater management facilities would be implemented
- Solid Waste Management: Recycling of cardboard and paper would be continued and recycling expansion would be expanded
- Hazardous Materials Management: Hazardous materials and hazardous medical waste handling, storage, and disposal would be implemented based on EPA regulations.

No-Action Alternate:
Implementation of the No-Action alternate would avoid new impacts that could interact with the impacts of other past, present or reasonably foreseeable future actions. The No-Action alternate would limited stormwater management, limited green space, continue decline of trees, continue growth of auto air pollution with out TMP, and North Capitol Street veiwshed would not be improved. Therefore, there would be cumulative impacts associated with the No-Action alternate.

D.2 Findings

The finding of the proposed action alternate is the preferred alternate for implementation of DC VAMC Master Plan. A summary of the impacts is given in the Executive Summary in Table ES-1. This alternate would not have any significant adverse effects on human environmental resources or socioeconomic conditions at DC VAMC or the surrounding community. Air pollution emission permits would be obtained from DC and the EPA for the emergency electrical generators and the steam generation facilities. Stormwater management permits would be obtained for new impervious surfaces.

During the construction period short-term effects will be mitigated for soils sediment controls. A sediment and erosion control permit would be obtained to comply with the DC and EPA regulations.

The proposed action alternate is the preferred alternate because it provides the requirements of the proposed facility with minimal impact to human environmental resources, while protecting human health and safety. Therefore the alternate of not expanding and improving DC VAMC facilities and operations under the Master Plan was outweighed and DC VAMC Master Plan is recommended to be constructed as described in the EA.

Since the findings of this Environmental Assessment is that there are no significant adverse impacts to the human environmental resources and protect human health and safety was found. A finding of no significant impacts (FONSI) is recommended.

SECTION E PARTICIPATORY AGENTS

E.1 List of Contacted Agencies

The following agencies were contacted in relation to the development of the data base for the DC VAMC Master Plan Environmental Assessment Report.

DC Department of the Environment
Environmental Health Administration
Bureau of Environmental Quality
Water Quality Division
51 N Street, NE, 5th Floor
Washington, DC 20002

Attention: Ms. Shiela Besse, Associate Director

US Department of the Interior
Environmental Health Administration
Fish and Wildlife Service
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, Maryland 21401

Attention: Mr. John P. Wolflin, Supervisor

Government of the District of Columbia
Office of Planning
Historic Preservation Office
801 North Capital Street, NE
Washington, DC 20002

Attention: Mr. David Maloney, State Historic Preservation Officer

E.2 Copies of Correspondence

The following letters are copies of the correspondence to and from the contacted agencies.

A. Morton Thomas and Associates, Inc.
Consulting Engineers

July 06, 2009

DC Department of the Environment
Environmental Health Administration
Bureau of Environmental Quality
Water Quality Division
51 N Street, NE, 5th Floor
Washington, DC 20002

Attention: Ms. Shiela Besse, Associate Director

Telephone Number: 202 535 2600

Re: **Veterans Affairs Medical Center**
Washington, DC
Master Plan Wetlands Verification
AMT File No. **109-108.001**

Dear Ms. Besse:

In accordance with the requirements of the National Capital Planning Commission (NCPC) and the National Environmental Protection Agency we are preparing a Environmental Assessment of the DC Veterans Affairs Medical Center (DC VAMC) Master Plan. The proposed Master Plan development covers areas outside of the existing building envelop. Existing parking areas will be removed for the construction of new buildings and building additions. The proposed development will affect a majority of the 34-acre Medical Center site. Vicinity and location maps and an aerial photograph showing the property location are attached to this letter.

We have reviewed the Known Wetlands within the District of Columbia Map dated January 2001 (source: Wetlands Conservation Plan dated 1977). The DC VAMC property does not show up as having any wetland areas based on the Wetlands Map. There are no open drainage channels or intermittent streams channels on the site. The property topography is at a high point and drains away from the existing building into the DC storm drainage system. A cursory review of the site vegetation does not shown any indication of wetland vegetation. Recent geotechnical borings in the northeast corner of the property to a depth of 30' did not find any groundwater. Therefore it is assessed that there are no known Waters of the US or wetland areas on the property.

Based on the information available and for purposed of the preparation of the Master Plan it is assessed that no known wetlands areas are present at the DC VAMC property. Please review this approach and assumptions concerning regulatory requirements for the preservation of wetlands. Please let us know if additional information or investigations are needed for the preparation of the Environmental Assessment of the DC VAMC Master Plan as it relates to wetlands and Waters of the US.

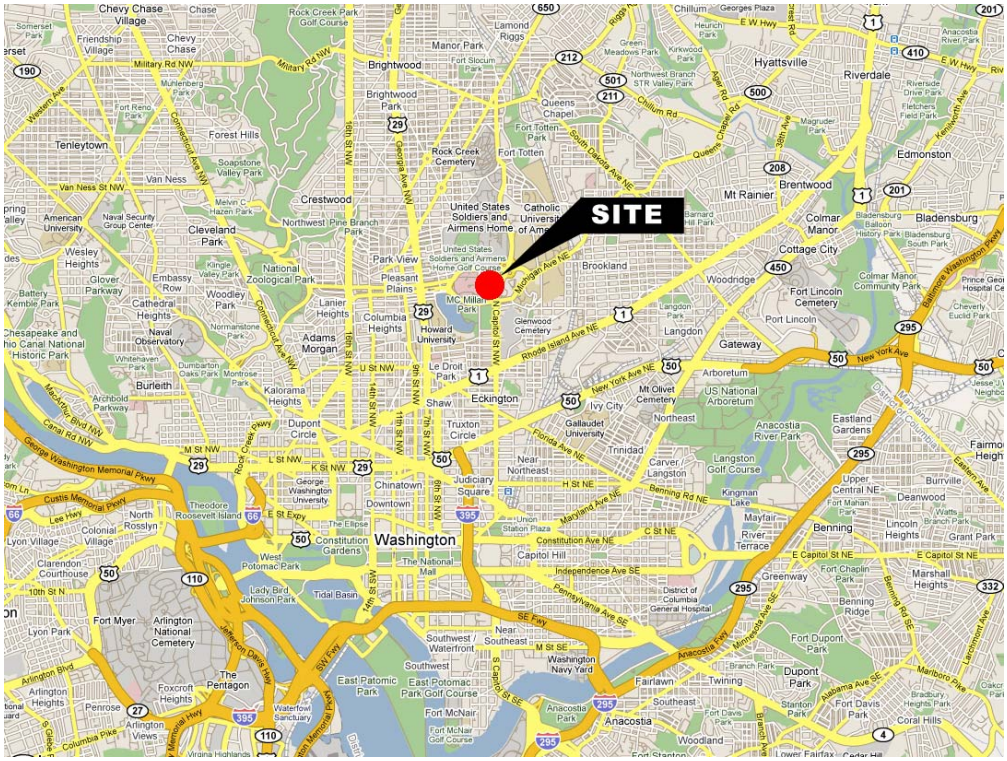
We appreciate your kind assistance in these matters. Please contact me if you have any questions or require additional information, 301 980 5926.

Sincerely,

A. MORTON THOMAS and Associates, Inc.

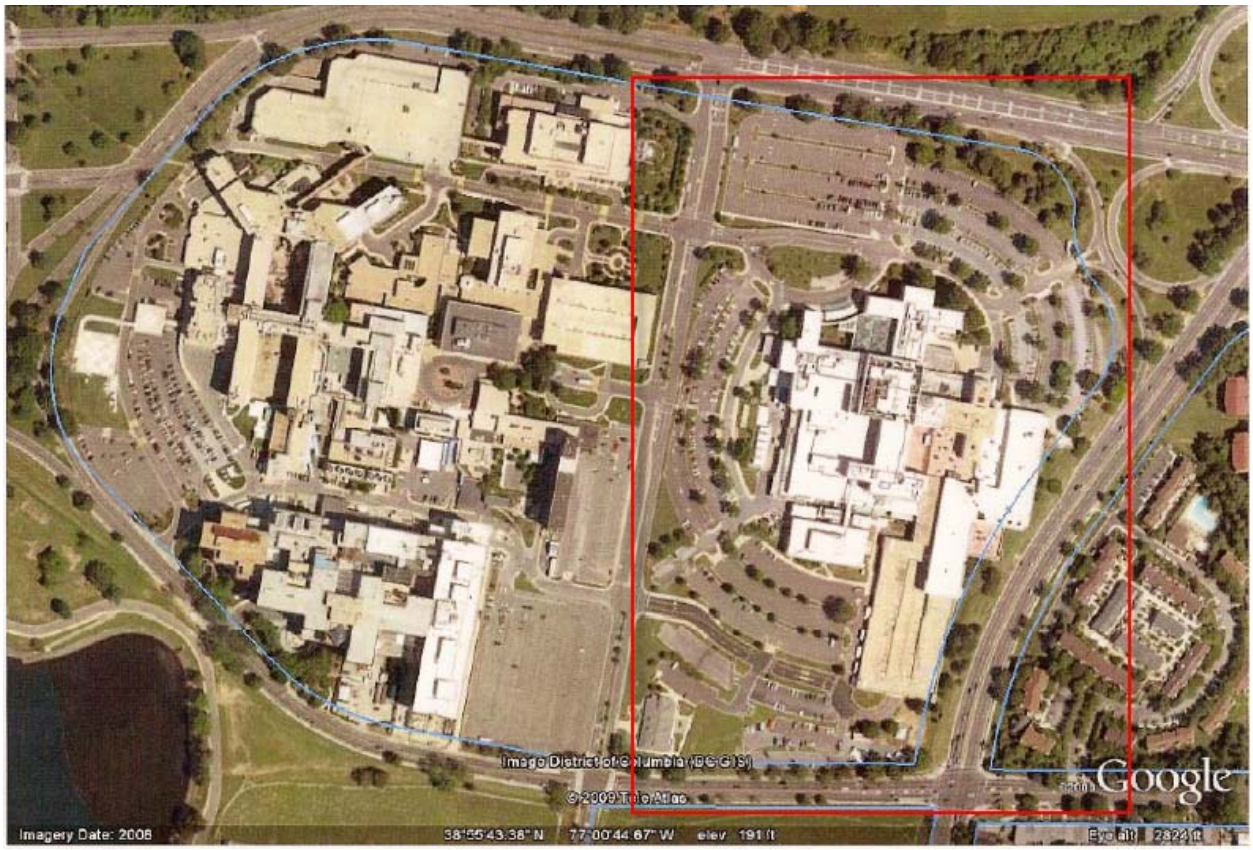
Robert A. Warner, P.E.
Associate

CC: Odeal Scott-Bedford, DC VAMC
Anthony Moore, DC VAMC
Adrian Hagerty, AIA, Ellerbe Becket
Tom Anglim, AIA Ellerbe Becket
Max Kantzer, PE AMT



LOCATION MAP

VICINITY MAP


Google
Imagery Date: 2008
38°55'43.38" N 77°00'44.67" W elev 191 ft
Eye alt 2824 ft

A. Morton Thomas and Associates, Inc.
Consulting Engineers

July 06, 2009

US Department of the Interior
Environmental Health Administration
Fish and Wildlife Service
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, Maryland 21401

Attention: Mr. John P. Wolflin, Supervisor

Re: **Veterans Affairs Medical Center**
Washington, DC
Master Plan Wildlife Verification
AMT File No. **109-108.001**

Dear Mr. Wolflin:

In accordance with the requirements of the National Capital Planning Commission (NCPC) and the National Environmental Protection Agency we are preparing an Environmental Assessment of the DC Veterans Affairs Medical Center (DC VAMC) Master Plan. The proposed Master Plan development covers areas outside of the existing building envelop. Existing parking areas will be removed for the construction of new buildings and building additions. The proposed development will affect a majority of the 34-acre Medical Center site. Vicinity and location maps and an aerial photograph showing the property location are attached to this letter.

The DC VAMC property has been fully developed with parking lots and maintained turf areas. There do not seem to be any wildlife areas within the DC VAMC fenced property.

Based on the information available and for purposed of the preparation of the Master Plan it is assessed that no known wildlife habitat areas are present at the DC VAMC

property. Please review this assumption concerning the property and advise us of records covering any rare, threatened, or endangered species designated by the US Fish and Wildlife Service in the area.

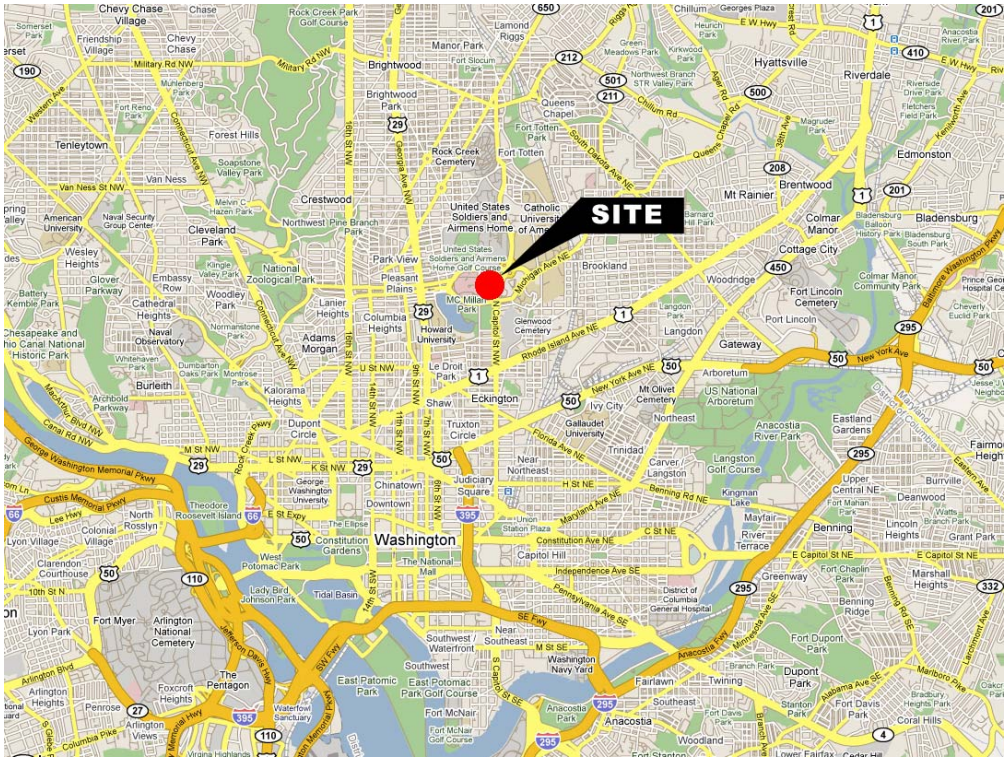
We appreciate your kind assistance in these matters. Please contact me if you have any questions or require additional information, 301 980 5926.

Sincerely,

A. MORTON THOMAS and Associates, Inc.

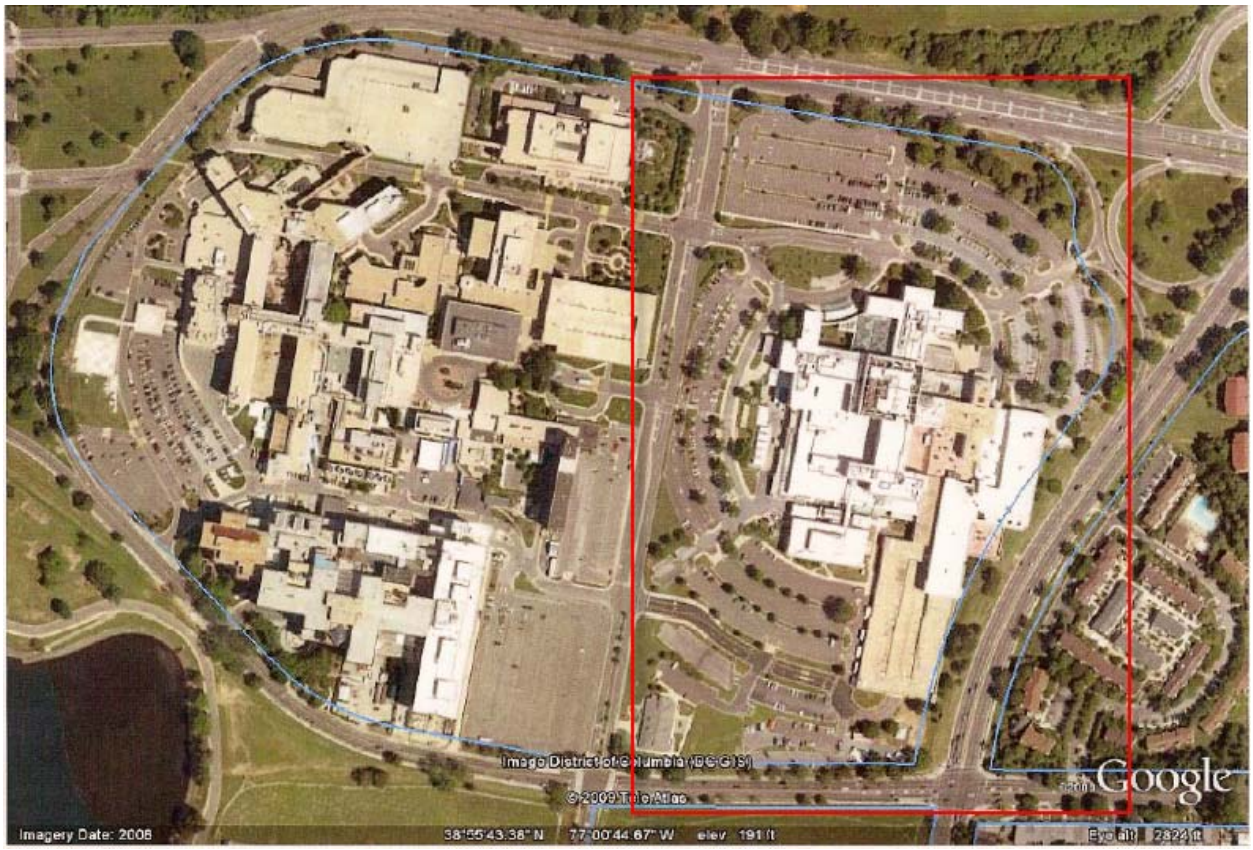
Robert A. Warner, P.E.
Associate

CC: Odeal Scott-Bedford, DC VAMC
Anthony Moore, DC VAMC
Adrian Hagerty, AIA, Ellerbe Becket
Tom Anglim, AIA Ellerbe Becket
Max Kantzer, PE AMT



LOCATION MAP

VICINITY MAP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Eye alt 2824 ft

A. Morton Thomas and Associates, Inc.
Consulting Engineers

July 06, 2009

Government of the District of Columbia
Office of Planning
Historic Preservation Office
801 North Capital Street, NE
Washington, DC 20002

Attention: Mr. David Maloney, State Historic Preservation Officer

Telephone Number: 202 442 8800

Re: **Veterans Affairs Medical Center**
Washington, DC
Master Plan Historic Preservation
Affects Verification
AMT File No. **109-108.001**

Dear Mr. Maloney:

In accordance with the National Capital Planning Commission (NCPC) and National Environmental Protection Agency we are preparing an Environmental Assessment of the DC Veterans Affairs Medical Center (DC VAMC) Master Plan. The proposed Master Plan development covers areas outside of the existing building envelop. Existing parking areas will be removed for the construction of new buildings and building additions. The proposed development will affect a majority of the 34-acre Medical Center site. Vicinity and location maps and an aerial photograph showing the property location are attached to this letter.

We understand that the DC VAMC property and buildings have been assessed by the Historic Preservation Office and are found not to have any historical or archeological significance. It is also understood that the site was thoroughly disturbed during the construction of the existing building in the 1960's. Therefore it is assessed that the Master Plan for development in the existing parking area and adjoining the existing building area would not be of a concern to the Historical Preservation Office.

Based on the information available and for purposed of the preparation of the Master Plan it is understood that no historic buildings, historic context, or known archeological areas are present at the DC VAMC property. Please review these assumptions concerning in the light of regulatory requirements. Please let us know if additional

information or investigations are needed for the preparation of the Environmental Assessment of the DC VAMC Master Plan in relation to the Historic Preservation Office.

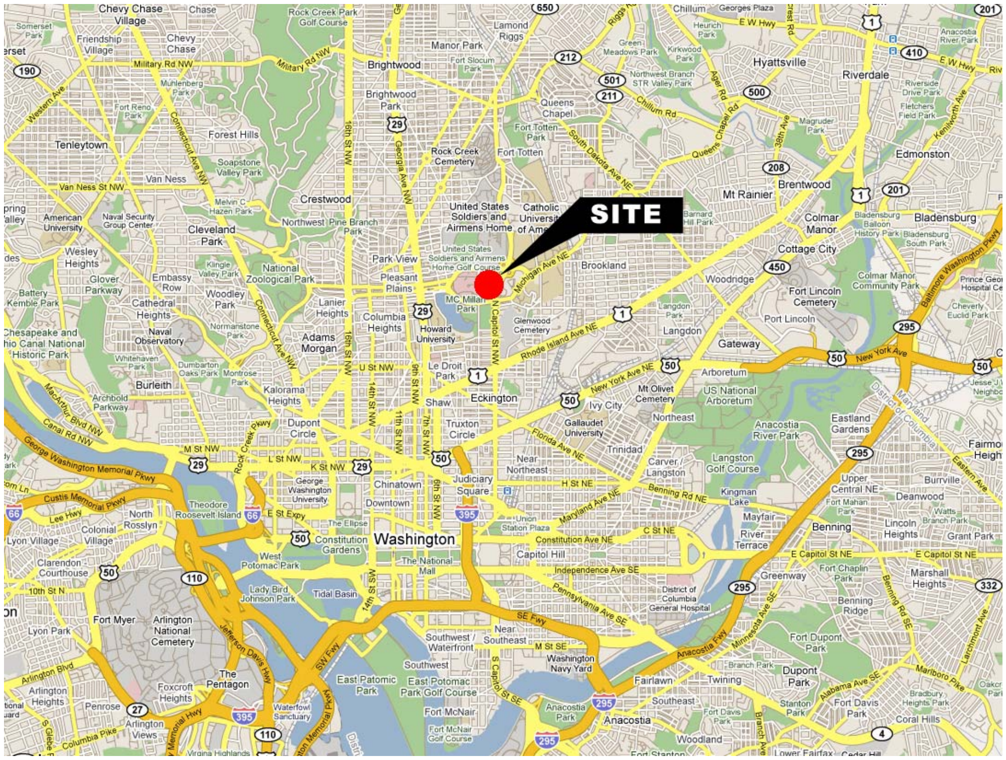
We appreciate your kind assistance in these matters. Please contact me if you have any questions or require additional information, 301 980 5926.

Sincerely,

A. MORTON THOMAS and Associates, Inc.

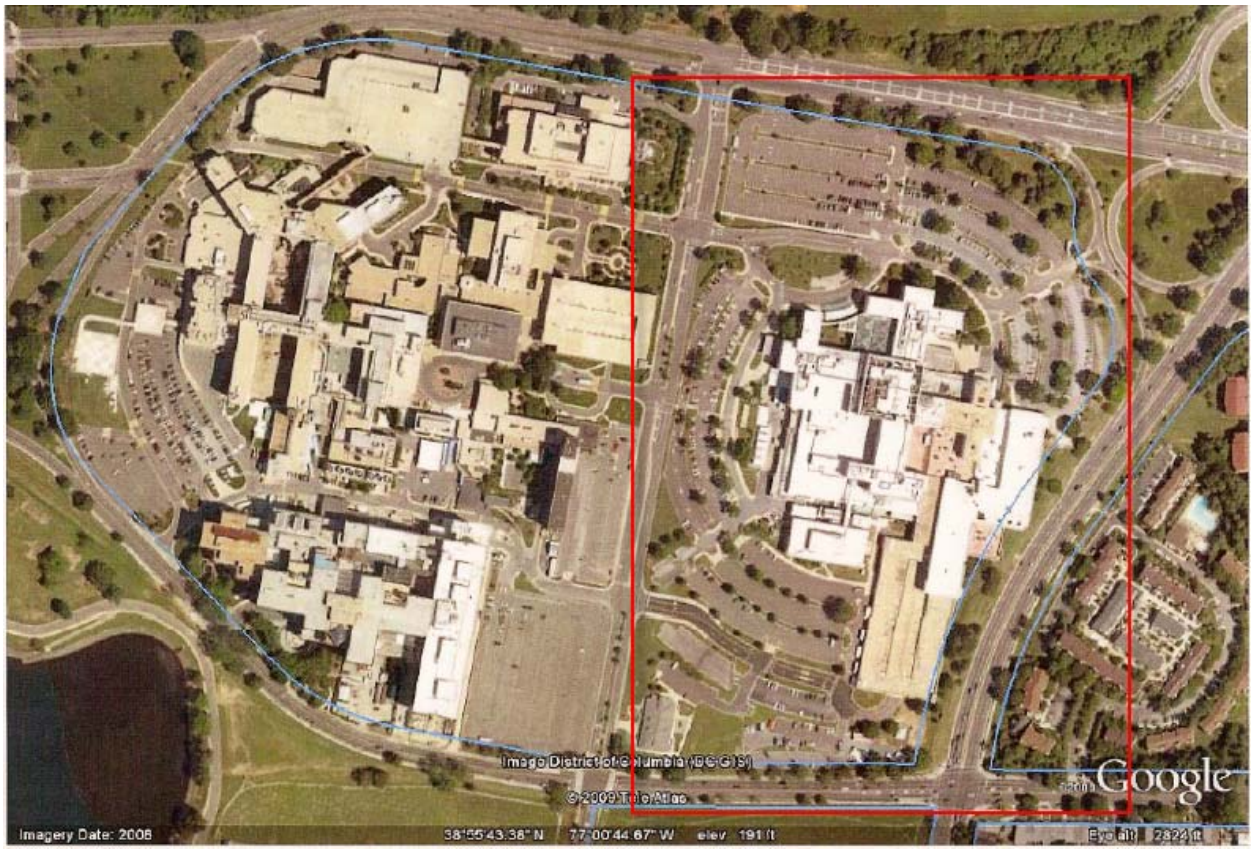
Robert A. Warner, P.E.
Associate

CC: Odeal Scott-Bedford, DC VAMC
Anthony Moore, DC VAMC
Adrian Hagerty, AIA, Ellerbe Becket
Tom Anglim, AIA Ellerbe Becket
Max Kantzer, PE AMT



LOCATION MAP

VICINITY MAP


Google
Imagery Date: 2008
38°55'43.38" N 77°00'44.67" W elev 191 ft
Eye alt 2824 ft

A. Morton Thomas and Associates, Inc.
Consulting Engineers

August 5, 2009

Government of the District of Columbia
District Department of the Environment
Water Quality Division
51 N Street, NE, 5th Floor
Washington, DC 20002

Attention: Ms. Rebecca Diehl,
Environmental Protection Specialist

Telephone Number: 202 535 2648

Re: **Veterans Affairs Medical Center**
Washington, DC
Master Plan Wetlands Verbal Discussion
AMT File No. **109-108.001**

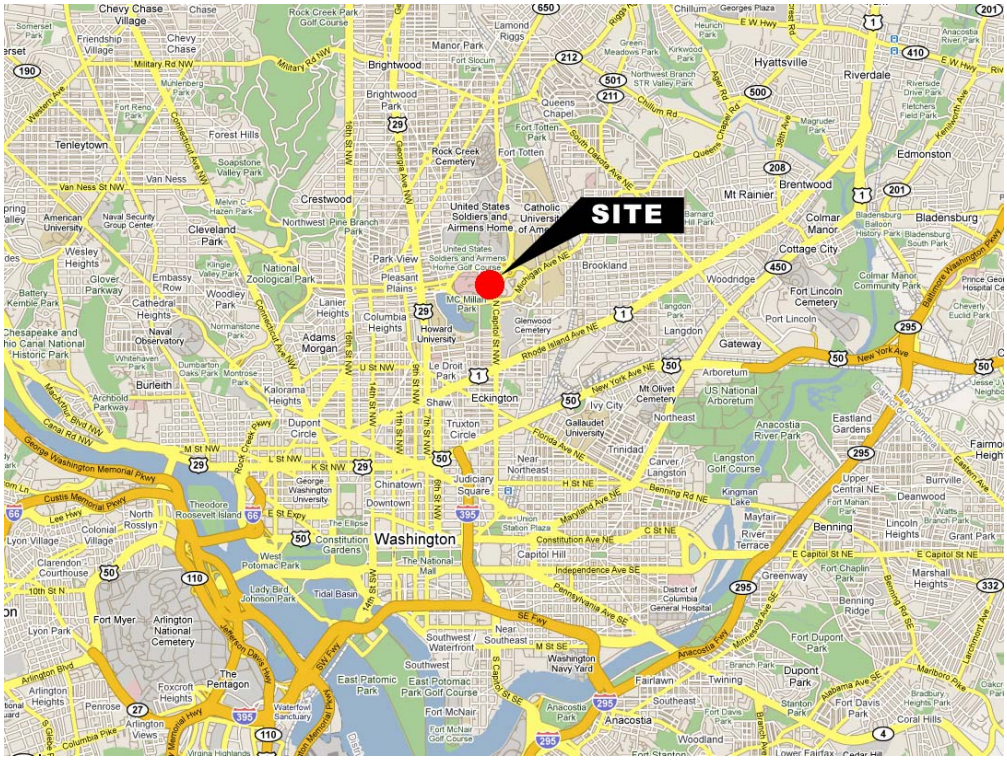
Dear Ms.Diehl:

In accordance with the requirements of the National Capital Planning Commission (NCPC) and the National Environmental Protection Agency we are preparing an Environmental Assessment of the DC Veterans Affairs Medical Center (DC VAMC) Master Plan. The proposed Master Plan describes future land use at the property. No specific construction activity is associated with the Master Plan. We sent a letter to your Office for review of the possibility of wetlands on the DC VAMC property (July 6, 2009). You contacted me and we discussed the wetland designation assessment procedures for permitting specific construction projects at a site (August 3). This letter is to confirm the conclusions reached during this discussion.

Master Plans are not reviewed as part of the wetlands designation and permitting process. We have reviewed the information on located wetlands within the District of Columbia as shown on the "Known Wetlands" Map dated January 2001 (source: Wetlands Conservation Plan dated 1977). The "Known Wetlands" Map does not show the DC VAMC property as having any "known wetland" areas.

Based on the information available and for purposed of the preparation of the Master Plan it is assessed that no "known wetlands" areas are present at the DC VAMC property. Any specific construction projects outside of the existing buildings will require a wetlands survey. An application for a permit to the District Department of the

Environment to confirm the non-existence of any wetlands at the site will be required. Please let us know if you have any concerns with the conclusions reached as related to our conversation and as described herein.



We appreciate your kind assistance in these matters. Please contact me if you have any questions or require additional information, 301 980 5926.

Sincerely,

A. MORTON THOMAS and Associates, Inc.

Robert A. Warner, P.E.
Associate

CC: Odeal Scott-Bedford, DC VAMC
Anthony Moore, DC VAMC
Adrian Hagerty, AIA, Ellerbe Becket

Tom Anglim, AIA Ellerbe Becket
Max Kantzer, PE AM

From: Diehl, Rebecca (DDOE) [rebecca.diehl@dc.gov]
Sent: Wednesday, August 12, 2009 12:55 PM
To: Warner, Robert
Subject: Letter dated August 5, 2009
Hello Bob,

I received your letter about the Master Plan Wetlands Verbal Discussion (AMT File #: 109-108.001). Everything looks as it is supposed to.

Thank you for your work! Please contact me in the future with any projects concerning wetlands.

Have a great day,
Becky

Rebecca Diehl
Environmental Protection Specialist
Government of the District of Columbia
District Department of the Environment
Water Quality Division
51 N Street, NE, 5th Floor
Washington, DC 20002
(202) 535-2648 - Direct
(202) 535-1363 - Fax
www.green.dc.gov

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401
410/573-4575

July 29, 2009

Received
JUL 30 2009
A. Morton Thomas and Associates, Inc.

A. Morton Thomas and Associates, Inc
12750 Twinbrook Parkway
Rockville, MD 20852-1700

RE. Veterans Affairs Medical Center Washington D C. Master Plan Wildlife Verification AMT File 109-108.001

Dear :Robert W. Warner

This responds to your letter, received July 21, 2009, requesting information on the presence of species which are federally listed or proposed for listing as endangered or threatened in the above referenced project area. We have reviewed the information you enclosed and are providing comments in accordance with section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

Except for occasional transient individuals, no proposed or federally listed endangered or threatened species are known to exist within the project impact area. Therefore, no Biological Assessment or further section 7 consultation with the U.S. Fish and Wildlife Service is required. Should project plans change, or should additional information on the distribution of listed or proposed species become available, this determination may be reconsidered.

This response relates only to federally protected threatened or endangered species under our jurisdiction. Limited information is currently available regarding the distribution of other rare species in the District of Columbia. However, the Nature Conservancy and National Park Service (NPS) have initiated an inventory of rare species within the District. For further information on such rare species, you should contact Mary Pfaffko of the National Park Service at (202)-535-1739.

Effective August 8, 2007, under the authority of the Endangered Species Act of 1973, as amended, the U.S. Fish and Wildlife Service (Service) removed (delist) the bald eagle in the lower 48 States of the United States from the Federal List of Endangered and Threatened Wildlife. However, the bald eagle will still be protected by the Bald and Golden Eagle Protection Act, Lacey Act and the Migratory Bird Treaty Act. As a result, starting on August 8, 2007, if your project may cause "disturbance" to the bald eagle, please consult the "National Bald Eagle Management Guidelines" dated May 2007.

If any planned or ongoing activities cannot be conducted in compliance with the National Bald Eagle Management Guidelines (Eagle Management Guidelines), please contact the Chesapeake Bay Ecological Services Field Office at 410-573-4573 for technical assistance. The Eagle Management Guidelines can be found at:
http://www.fws.gov/migratorybirds/issues/BaldEagle/NationalBaldEagleManagementGuidelines.pdf.

In the future, if your project can not avoid disturbance to the bald eagle by complying with the Eagle Management Guidelines, you will be able to apply for a permit that authorizes the take of bald and golden eagles under the Bald and Golden Eagle Protection Act, generally where the take to be authorized is associated with otherwise lawful activities. This proposed permit process will not be available until the Service issues a final rule for the issuance of these take permits under the Bald and Golden Eagle Protection Act.

An additional concern of the Service is wetlands protection. Federal and state partners of the Chesapeake Bay Program have adopted an interim goal of no overall net loss of the Basin's remaining wetlands, and the long term goal of increasing the quality and quantity of the Basin's wetlands resource base. Because of this policy and the functions and values wetlands perform, the Service recommends avoiding wetland impacts. All wetlands within the project area should be identified, and if alterations of wetlands is proposed, the U.S. Army Corps of Engineers, Baltimore District, should be contacted for permit requirements. They can be reached at (410) 962-3670.

We appreciate the opportunity to provide information relative to fish and wildlife issues, and thank you for your interests in these resources. If you have any questions or need further assistance, please contact Devin Ray at (410) 573-4531.

Sincerely,

Leopoldo Miranda
Field Supervisor

SECTION F LIST OF PREPARERS

F.1 Name and Affiliation of Prepares

Primary Consultant:

Ellerbe Becket
1001 G Street, NW, Suite 1000
Washington, DC 20001

Phone Number: (202) 654-9300

Sub Consultant:

A. Morton Thomas and Associates, Incorporated
12750 Twinbrook Parkway
Rockville, Maryland 20852-1700

Phone Number: (301) 881-2545

SECTION G LIST OF AGENCIES, ORGANIZATIONS AND PERSONS RECEIVING COPIES OF EA

National Capital Planning Commission
401 9th Street, NW
Washington, DC 20576

Telephone Number: 202 482 7200
www.ncpc.gov

Washington, DC Veterans Affairs Medical Center
50 Irving Street, NW
Washington, DC 20422

Ms. Odeal Scott-Bedford
Telephone Number: 202 745 8000 X7700
Odeal.scott-bedford@va.gov

VA HOSPITAL CENTER, DC
50 Irving Street, NW
Washington, DC 20010

Inquiry Number: 2521285.2s
June 17, 2009

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

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Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	7
Orphan Summary	42
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting Source Map	A-6
Physical Setting Source Map Findings	A-7
Physical Setting Source Records Searched	A-8

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

50 IRVING STREET, NW
WASHINGTON, DC 20010

COORDINATES

Latitude (North):	38.931100 - 38' 55' 52.0"
Longitude (West):	77.010300 - 77' 0' 37.1"
Universal Tranverse Mercator:	Zone 18
UTM X (Meters):	325743.8
UTM Y (Meters):	4310844.5
Elevation:	192 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	38077-H1 WASHINGTON WEST, DC
Most Recent Revision:	1983
East Map:	38076-H8 WASHINGTON EAST, MD
Most Recent Revision:	1982

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	2005, 2006, 2007
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 7 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
V. A., DEPARTMENT OF 50 IRVING STREET, N.W. WASHINGTON, DC 20422	MLTS	N/A
V. A., DEPARTMENT OF 50 IRVING STREET, N.W. WASHINGTON, DC 20422	MLTS	N/A
VET ADMIN MEDICAL CT 50 IRVING ST. N.W. WASHINGTON, DC 20422	MLTS	N/A

EXECUTIVE SUMMARY

VET ADMIN MEDICAL CT 50 IRVING STREET NW CODE 138E WASHINGTON, DC 20422	FINDS RCRA-LQG MANIFEST	DC7360010402
50 IRVING ST NE RESEARCH BUILDING 50 IRVING ST NE RESEARCH BUILDING PARKING LOT WASHINGTON, DC	ERNS	N/A
VETERANS ADMIN MEDICAL CENTER 50 IRVING ST NW WASHINGTION, DC 20010	UST	N/A
50 IRVING ST NW 50 IRVING ST NW WASHINGTON, DC	HMIRS	N/A
VA MEDICAL CENTER 50 IRVING STREET, NE WASHINGTON, DC 20442	ICIS	N/A
VA MEDICAL CENTER 50 IRVING STREET., NW WASHINGTON, DC	LUST	N/A
VA MEDICAL CENTER 50 IRVING STREET, NE WASHINGTON, DC 20442	FINDS	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
NPL LIENS..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL..... National Priority List Deletions

EXECUTIVE SUMMARY

Federal CERCLIS list

CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System

Federal CERCLIS NFRAP site List

CERC-NFRAP..... CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF..... RCRA - Transporters, Storage and Disposal

Federal RCRA generators list

RCRA-SQG..... RCRA - Small Quantity Generators

Federal Institutional controls / engineering controls registries

US ENG CONTROLS..... Engineering Controls Sites List
US INST CONTROL..... Sites with Institutional Controls

State- and tribal - equivalent CERCLIS

SHWS..... This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

State and tribal landfill and/or solid waste disposal site lists

SWF/LF..... Solid Waste Facility Listing

State and tribal leaking storage tank lists

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

AST..... List of Aboveground Storage Tanks
INDIAN UST..... Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

VCP..... Voluntary Cleanup Program Sites
INDIAN VCP..... Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS..... Brownfields Site Database

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

EXECUTIVE SUMMARY

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations
ODI..... Open Dump Inventory
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL..... Clandestine Drug Labs

Local Land Records

LIENS 2..... CERCLA Lien Information
LUCIS..... Land Use Control Information System

Other Ascertainable Records

DOT OPS..... Incident and Accident Data
DOD..... Department of Defense Sites
CONSENT..... Superfund (CERCLA) Consent Decrees
ROD..... Records Of Decision
UMTRA..... Uranium Mill Tailings Sites
MINES..... Mines Master Index File
TRIS..... Toxic Chemical Release Inventory System
TSCA..... Toxic Substances Control Act
FTTS..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS..... FIFRA/TSCA Tracking System Administrative Case Listing
SSTS..... Section 7 Tracking Systems
PADS..... PCB Activity Database System
RADINFO..... Radiation Information Database
RAATS..... RCRA Administrative Action Tracking System
INDIAN RESERV..... Indian Reservations
SCRD DRYCLEANERS..... State Coalition for Remediation of Drycleaners Listing

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants..... EDR Proprietary Manufactured Gas Plants
EDR Historical Auto Stations.. EDR Proprietary Historic Gas Stations
EDR Historical Cleaners..... EDR Proprietary Historic Dry Cleaners

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 11/12/2008 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
WASHINGTON HOSPITAL CENTER	***110 IRVING STREET, NW***	***W 0 - 1/8 (0.033 mi.)***	***B14***	***26***

RCRA-CESQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-CESQG list, as provided by EDR, and dated 11/12/2008 has revealed that there is 1 RCRA-CESQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MASTER RESEACH INSTITUTE GEORG	108 IRVING STREET, N.W.	W 0 - 1/8 (0.031 mi.)	B13	24

State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Consumer and Regulatory Affairs' District of Columbia LUST Cases list.

A review of the LUST list, as provided by EDR, and dated 04/27/2009 has revealed that there are 5 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
WASH.HOSPITAL CNTR TK #5	110 IRVING STREET, NW	W 0 - 1/8 (0.033 mi.)	B15	33
SOLDIERS/AIRMEN'S HOME	3700 NORTH CAPITOL STRE	N 1/4 - 1/2 (0.401 mi.)	17	38

Lower Elevation	Address	Direction / Distance	Map ID	Page
TRINITY COLLEGE	***125 MICHIGAN AVENUE***	***SE 1/4 - 1/2 (0.365 mi.)***	***16***	***34***
DC PUBLIC SAFETY COMMUNICATION	310 MCMILLAN DR. NW	WSW 1/4 - 1/2 (0.495 mi.)	18	39
DC FD COMMUNICATIONS DIV.	300 MCMILLAN DR., NW	WSW 1/4 - 1/2 (0.496 mi.)	19	39

EXECUTIVE SUMMARY

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Consumer & Regulatory Affairs' D.C. UST Database List.

A review of the UST list, as provided by EDR, and dated 04/27/2009 has revealed that there are 2 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NATIONAL REHABILITATION HOSPIT	102 IRVING ST NW	W 0 - 1/8 (0.027 mi.)	B11	20
WASHINGTON HOSPITAL CENTER	***110 IRVING STREET, NW***	***W 0 - 1/8 (0.033 mi.)***	***B14***	***26***

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

RCRA-NonGen: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA-NonGen list, as provided by EDR, and dated 11/12/2008 has revealed that there is 1 RCRA-NonGen site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MEDLANTIC RESEARCH FOUNDATIO	***108 IRVING ST NW***	***W 0 - 1/8 (0.031 mi.)***	***B12***	***21***

FUDS: The Listing includes locations of Formerly Used Defense Sites Properties where the US Army Corps Of Engineers is actively working or will take necessary cleanup actions.

A review of the FUDS list, as provided by EDR, and dated 12/31/2007 has revealed that there is 1 FUDS site within approximately 1 mile of the target property.

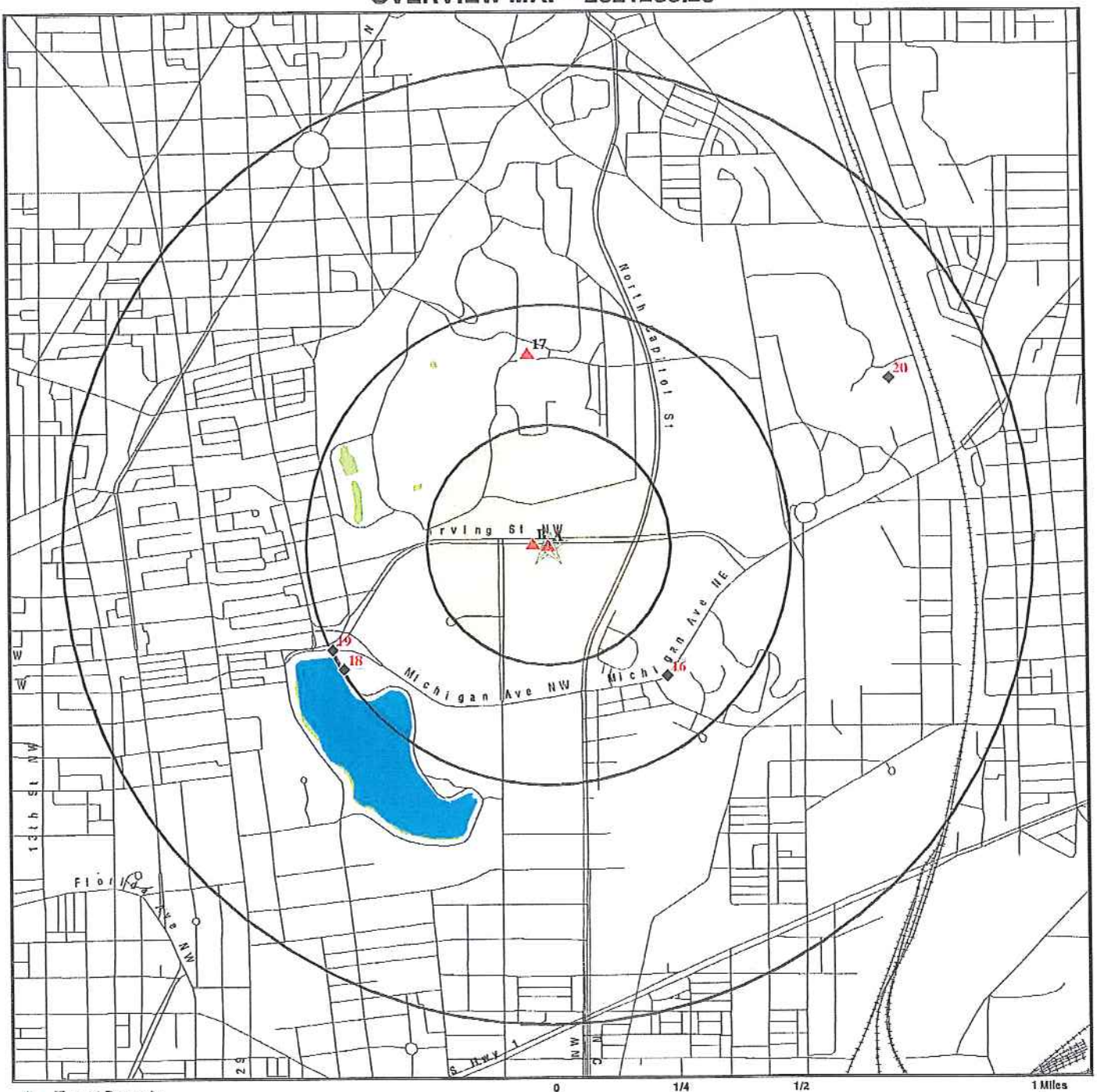
Lower Elevation	Address	Direction / Distance	Map ID	Page
CATHOLIC UNIVERSITY RESEARCH S		ENE 1/2 - 1 (0.785 mi.)	20	39

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
1600 NORTH CAPITAL STREET, NW	BROWNFIELDS
2009 PRESIDENTIAL INAUGURATION NSS	CERCLIS
DC DEICER SPILL	CERC-NFRAP
BORGER MANAGEMENT, INC.	LUST
DC PUBLIC SCHOOLS	LUST
DC PUBLIC LIBRARY	LUST
DC - HCD	LUST
DC PUBLIC SCHOOLS	LUST
DC PUBLIC SCHOOLS	LUST
CZECH EMBASSY	LUST
DC PUBLIC SCHOOLS	LUST
WILLIAM LEE PROPERTY	LUST
DC PUBLIC SCHOOLS	LUST
THE NEW CONVENTION CENTER	LUST
HALLEY GARDENS APTS	LUST
DC VILLAGE	LUST
DC PREPARATORY ACADEMY	UST
LINCOLN J H S	RCRA-CESQG
RABAUT J H S	FINDS, RCRA-CESQG
VA ADMIN. H.Q. BLDG.	ERNS
R BLVD AREA NORTH WEST, DC	ERNS
ON DC SIDE OF NATIONAL AIRPORT / B	ERNS
N.W. DC	ERNS
FIRST AND POTOMAC SOUTH EAST WASHI	ERNS
IN FRONT OF THE KENNEDY CENTER ON	ERNS
901 23RD ST. ON HOSPITAL GROUNDS	ERNS
CHILDREN'S NATIONAL MEDICAL CENTER	MLTS
CHILDREN'S NATIONAL MEDICAL CENTER	MLTS
DC PUBLIC WORKS	MANIFEST
DC SPORTS & ENTERTAINMENT COMMISSI	MANIFEST

OVERVIEW MAP - 2521285.2s



0 1/4 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: VA HOSPITAL CENTER, DC ADDRESS: 50 Irving Street, NW Washington DC 20010 LAT/LONG: 38.9311 / 77.0103	CLIENT: A. Morton Thomas & Associates CONTACT: Bob Warner INQUIRY #: 2521285.2s DATE: June 17, 2009 1:29 pm

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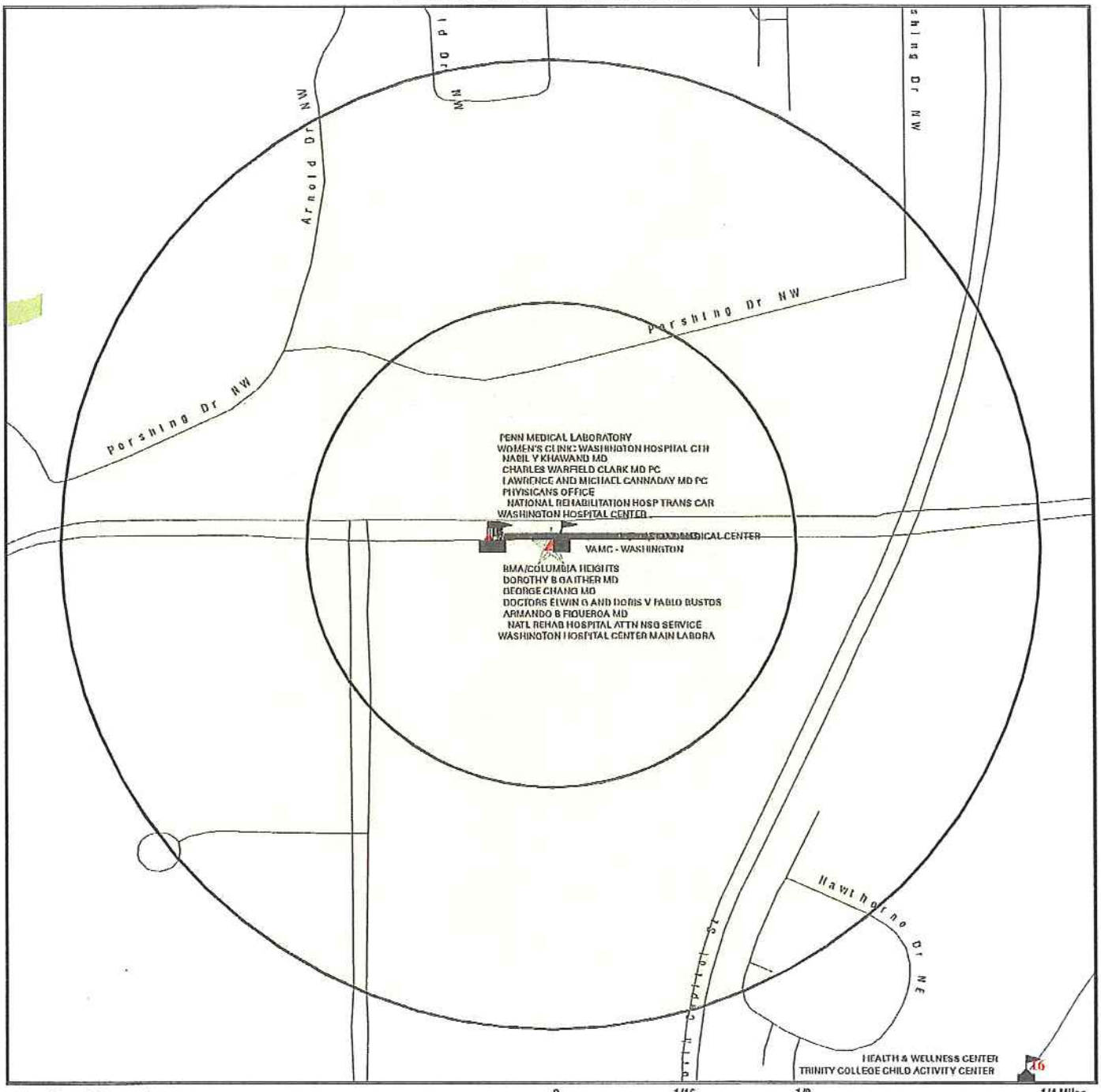
DETAIL MAP - 2521285.2s



0 1/16 1/8 1/4 Miles

- ☆ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: VA HOSPITAL CENTER, DC ADDRESS: 50 Irving Street, NW Washington DC 20010 LAT/LONG: 38.9311 / 77.0103	CLIENT: A. Morton Thomas & Associates CONTACT: Bob Warner INQUIRY #: 2521285.2s DATE: June 17, 2009 1:30 pm

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MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
NPL LIENS		TP	NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL		1.000	0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS		0.500	0	0	0	NR	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP		0.500	0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS		1.000	0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF		0.500	0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	X	0.250	1	0	NR	NR	NR	1
RCRA-SQG		0.250	0	0	NR	NR	NR	0
RCRA-CESQG		0.250	1	0	NR	NR	NR	1
Federal Institutional controls / engineering controls registries								
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
Federal ERNS list								
ERNS	X	TP	NR	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
SHWS		N/A	N/A	N/A	N/A	N/A	N/A	N/A
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF		0.500	0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	X	0.500	1	0	4	NR	NR	5
INDIAN LUST		0.500	0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST	X	0.250	2	0	NR	NR	NR	2
AST		0.250	0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN UST		0.250	0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
VCP		0.500	0	0	0	NR	NR	0
INDIAN VCP		0.500	0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS		0.500	0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
DEBRIS REGION 9		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
INDIAN ODI		0.500	0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL		TP	NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2		TP	NR	NR	NR	NR	NR	0
LUCIS		0.500	0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	X	TP	NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA-NonGen		0.250	1	0	NR	NR	NR	1
DOT OPS		TP	NR	NR	NR	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	1	NR	1
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
HIST FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
ICIS	X	TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS	X	TP	NR	NR	NR	NR	NR	0
RADINFO		TP	NR	NR	NR	NR	NR	0
FINDS	X	TP	NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
RAATS		TP	NR	NR	NR	NR	NR	0
INDIAN RESERV		1.000	0	0	0	0	NR	0
SCRD DRYCLEANERS		0.500	0	0	0	NR	NR	0
EDR PROPRIETARY RECORDS								
EDR Proprietary Records								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0
EDR Historical Auto Stations		0.250	0	0	NR	NR	NR	0
EDR Historical Cleaners		0.250	0	0	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

N/A = This State does not maintain a SHWS list. See the Federal CERCLIS list.

GEOCHECK®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

VA HOSPITAL CENTER, DC
50 IRVING STREET, NW
WASHINGTON, DC 20010

TARGET PROPERTY COORDINATES

Latitude (North):	38.93110 - 38' 55' 52.0"
Longitude (West):	77.0103 - 77' 0' 37.1"
Universal Tranverse Mercator:	Zone 18
UTM X (Meters):	325743.8
UTM Y (Meters):	4310844.5
Elevation:	192 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	38077-H1 WASHINGTON WEST, DC
Most Recent Revision:	1983
East Map:	38076-H8 WASHINGTON EAST, MD
Most Recent Revision:	1982

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

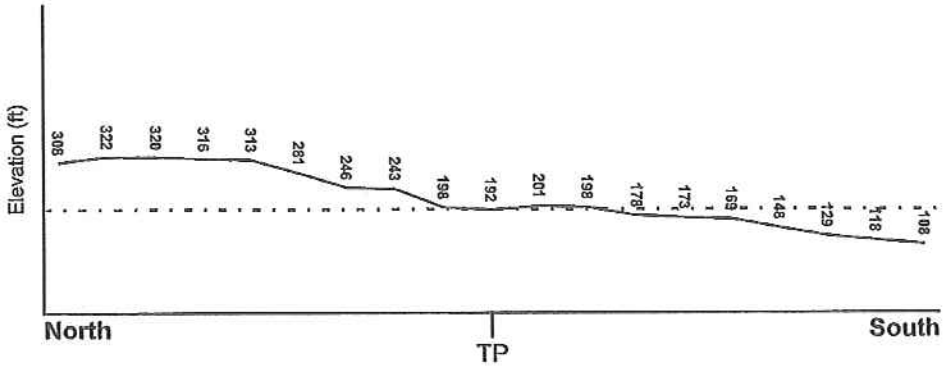
TOPOGRAPHIC INFORMATION

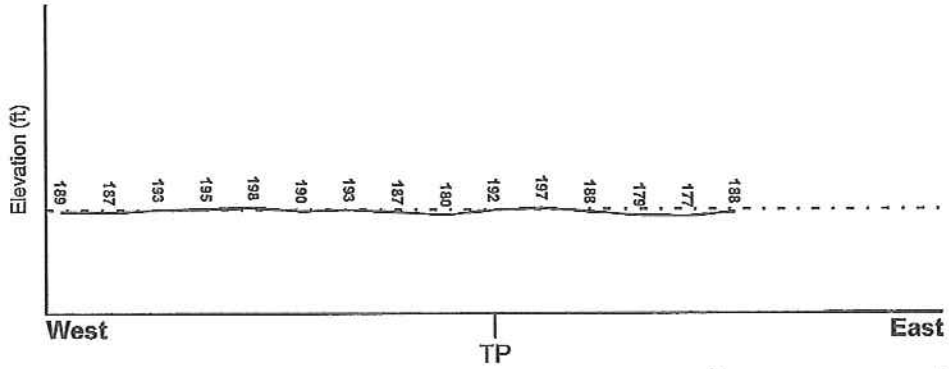
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

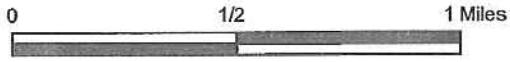
General Topographic Gradient: General South

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 192 ft.



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
WASHINGTON, DC	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property:	1100010020B
Additional Panels in search area:	Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
WASHINGTON WEST	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site-specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Mesozoic
System:	Cretaceous
Series:	Lower Cretaceous
Code:	lK *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

No detail available.

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

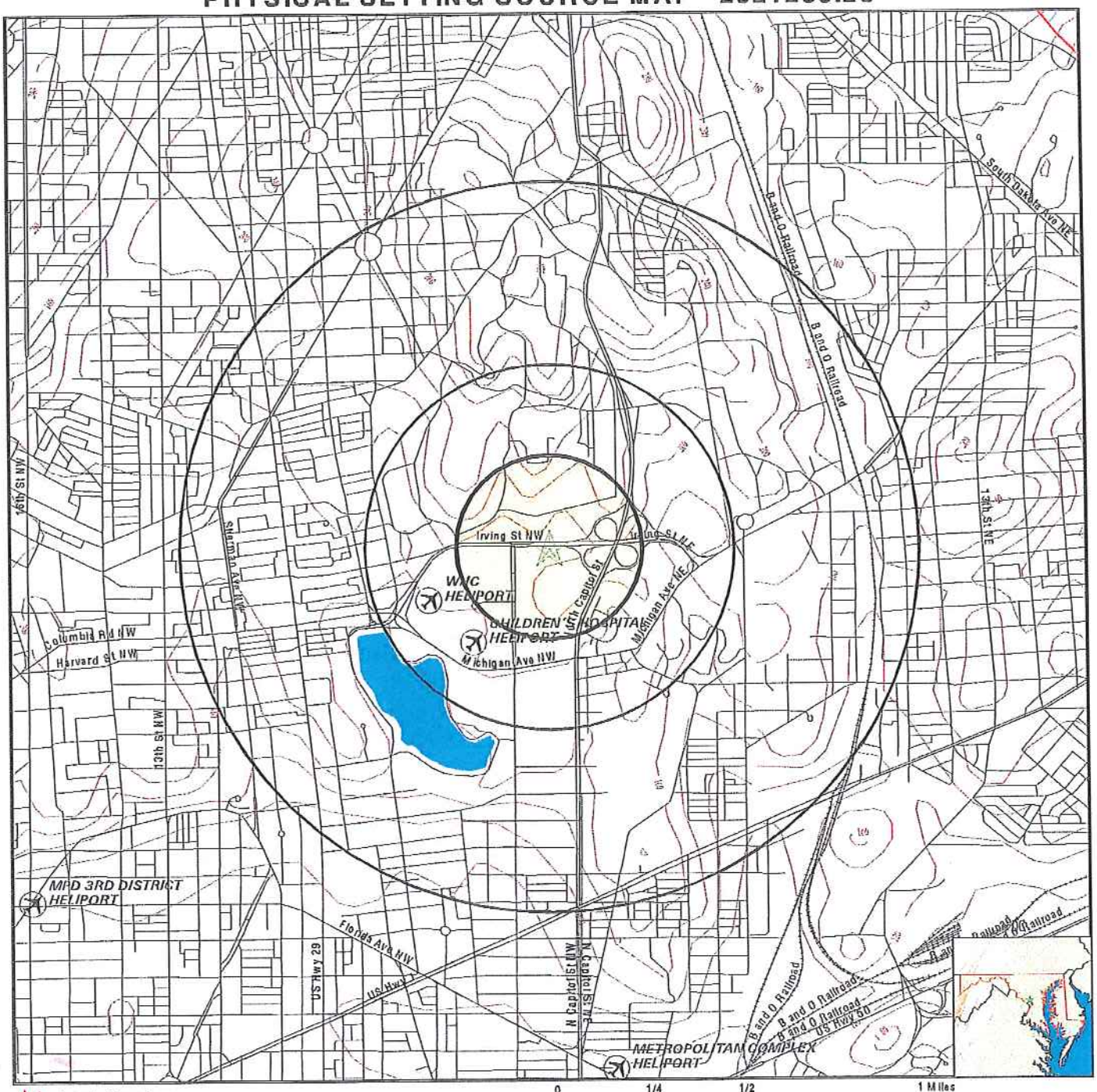
GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

PHYSICAL SETTING SOURCE MAP - 2521285.2s



0 1/4 1/2 1 Miles

- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- (GI) Indeterminate Groundwater Flow at Location
- (GV) Groundwater Flow Varies at Location
- (HD) Closest Hydrogeological Data

SITE NAME: VA HOSPITAL CENTER, DC ADDRESS: 50 Irving Street, NW Washington DC 20010 LAT/LONG: 38.9311 / 77.0103	CLIENT: A. Morton Thomas & Associates CONTACT: Bob Warner INQUIRY #: 2521285.2s DATE: June 17, 2009 1:30 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

EPA Region 3 Statistical Summary Readings for Zip Code: 20010

Number of sites tested: 251.

Maximum Radon Level: 192.0 pCi/L.
Minimum Radon Level: 0.5 pCi/L.

pCi/L <4	pCi/L 4-10	pCi/L 10-20	pCi/L 20-50	pCi/L 50-100	pCi/L >100
234 (93.23%)	14 (5.58%)	1 (0.40%)	1 (0.40%)	0 (0.00%)	1 (0.40%)

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW[R] Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

RADON

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

EPA Region 3 Statistical Summary Readings
Source: Region 3 EPA
Telephone: 215-814-2082
Radon readings for Delaware, D.C., Maryland, Pennsylvania, Virginia and West Virginia.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

STREET AND ADDRESS INFORMATION

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