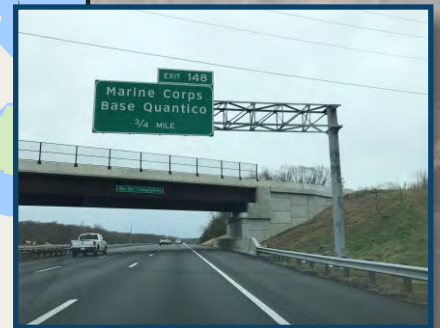
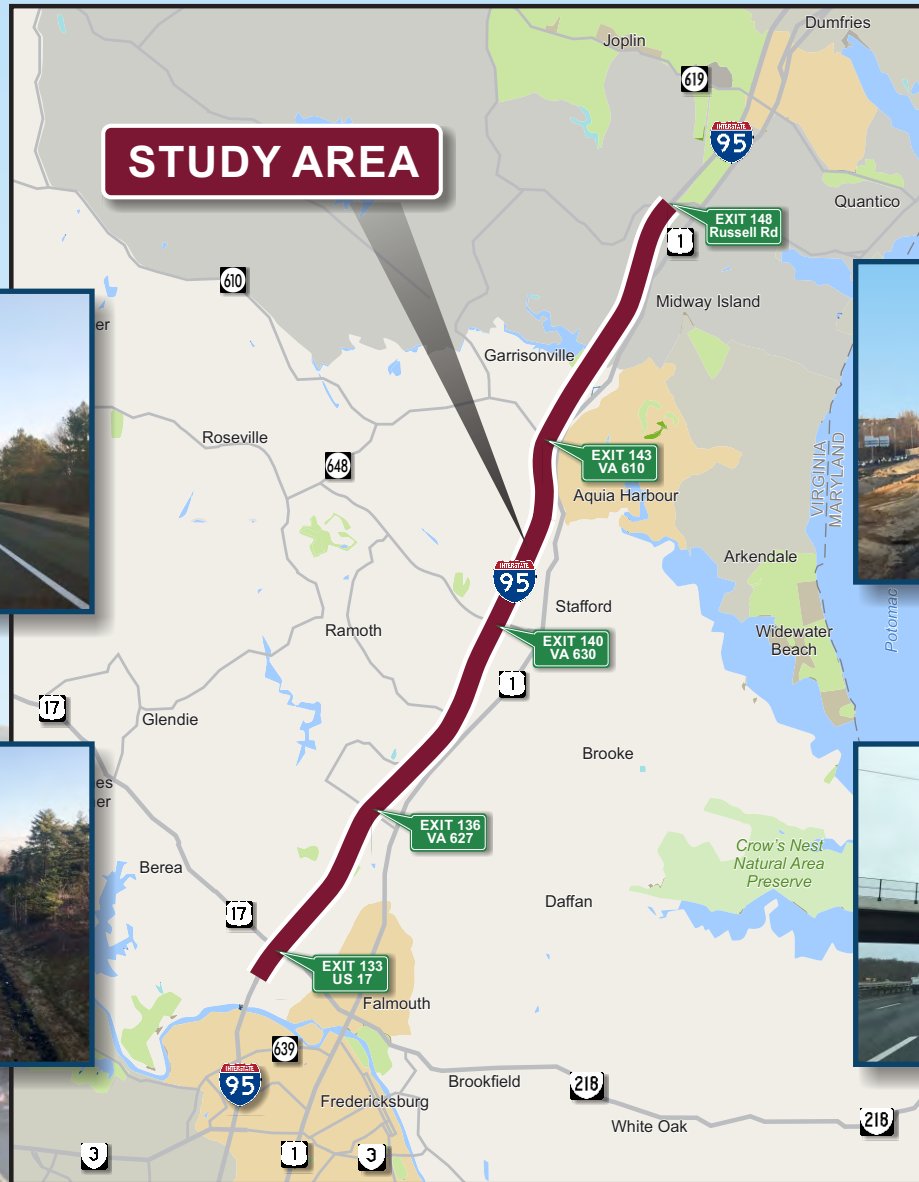


HAZARDOUS MATERIALS TECHNICAL REPORT



HAZARDOUS MATERIALS TECHNICAL REPORT

INTERSTATE 95 EXPRESS LANES FREDERICKSBURG EXTENSION STUDY



Prepared in support of the Revised Environmental Assessment

VDOT Project Number: 0095-969-739

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LIST OF ACRONYMS

| | |
|--------|---|
| ACRES | Assessment, Cleanup, and Redevelopment Exchange System |
| AST | Above-ground Storage Tanks |
| ASTM | American Society for Testing and Materials |
| CEQ | Council on Environmental Quality |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act of 1980 |
| COC | Contaminants of Concern |
| DEQ | Department of Environmental Quality |
| EA | Environmental Assessment |
| EDR | Environmental Data Resources, Inc. |
| FEMA | Federal Emergency Management Agency |
| FHWA | US Federal Highway Administration |
| FIFRA | Federal Insecticide, Fungicide, and Rodenticide Act |
| FONSI | Finding of No Significant Impact |
| HMA | Hazard Materials Assessment |
| HOT | High-Occupancy Toll |
| LOD | Limits of Disturbance |
| NEPA | National Environmental Policy Act |
| NRCS | National Resources Conservation Service |
| PECs | Potential Environmental Concerns |
| RCRA | Resource Conservation and Recovery Act |
| TSCA | Toxic Substances Control Act |
| USDA | United States Department of Agriculture |
| USEPA | United States Environmental Protection Agency |
| USFWS | United States Fisheries and Wildlife Service |
| UST | Underground Storage Tank |
| VCP | Voluntary Cleanup Program |
| VDOT | Virginia Department of Transportation |
| VEGIS | Virginia Environmental Geographic Information System |
| VPDES | Virginia Pollutant Discharge Elimination System |
| VRP | Vehicle Routing Problem |

EXECUTIVE SUMMARY

Rummel, Klepper & Kahl, LLP (RK&K), on behalf of the Virginia Department of Transportation (VDOT), and in cooperation with the Federal Highway Administration (FHWA), performed this Hazardous Materials Assessment (HMA) for the Interstate 95 (I-95) Express Lanes Fredericksburg Extension Study located in Prince William County and Stafford County, Virginia. The investigation area included potential sites of concern within a 0.5-mile radius of the approximately 15-mile corridor.

The assessment included a review of publicly available environmental records and site reconnaissance for locations of environmental concern identified along the Fredericksburg Extension Study improvement corridor. The assessment identified potential sites of concern based on a database search of regulatory files for facilities that may have generated, used, stored, released, or disposed of contaminated or hazardous materials that could be considered Potential Environmental Conditions (PECs) and warrant additional study to determine potential impacts related to construction along the improvement corridor. Each identified site was assessed for its potential hazardous-material risk to the study area based on the nature of the contamination, topographic location relative to the study area, proximity to the proposed project limits of disturbance (LOD), current or historical site activities, and the potential for contaminants or hazardous materials associated with these activities to impact the project construction.

Eight properties were identified as a high priority, while an additional 13 parcels were listed as moderate priority for additional investigation work due to the risk of potential contaminant or hazardous material impacts associated with proposed construction activities along the highway improvement corridor. The sites of concern and potential contaminant risks are listed in detail in **Table 5-1**. For those locations where subsurface disturbance may intersect soils or groundwater potentially impacted by the identified sites, or where full or partial property takes are projected, additional sampling investigations are recommended and modified material handling is anticipated.

1. INTRODUCTION

1.1 PROJECT DESCRIPTION

The Virginia Department of Transportation (VDOT), in coordination with the Federal Highway Administration (FHWA) as the lead federal agency, is preparing a Revised Environmental Assessment (Revised EA) for the Interstate 95 (I-95) HOT Lanes Project, for which a Finding of No Significant Impact (FONSI) was issued by FHWA in 2011. The Revised EA, which is being completed for the I-95 Express Lanes Fredericksburg Extension Study (or the “Fredericksburg Extension Study”), presents improvements identified in a portion of the 2011 FONSI-selected Alternative, from the I-95 / US 17 North interchange at Warrenton Road (Exit 133) to south of the I-95 / Russell Road interchange (Exit 148). The Revised EA also includes new access points along this portion of the 2011 FONSI-selected Alternative. As part of the current study, environmental resources along the corridor were updated according to the latest available data and information.

The purpose of this technical report is the evaluation of current and historical contamination or hazardous materials concerns throughout the proposed highway improvement corridor that could potentially impact construction activities. The assessment included a review of readily accessible records concerning properties within a defined study area around the site and a site reconnaissance of the corridor sites of potential environmental concern. The assessment was performed in accordance with the requirements of the Council on Environmental Quality (CEQ) regulation Section 1508.9, Environmental Assessment, as required by the National Environmental Policy Act (NEPA). Information in this report, described below, will support discussions presented in the Revised EA.

- Section 1 provides an overview of the study and outlines the methods used to assess contaminants and hazards associated with sites of concern along the study corridor.
- Section 2 provides an overview of the corridor physical setting and existing conditions.
- Section 3 evaluates historical regulatory database information and identifies potential sites of concern.
- Section 4 reviews information collected during the site reconnaissance.
- Section 5 relates the potential risks regarding hazardous materials and contaminants for the build alternative.

1.1.1 Purpose and Need

The purpose of the Fredericksburg Extension Study is to:

- Reduce daily congestion and accommodate travel demands more efficiently. Existing traffic volumes exceed available highway capacity, and the forecasts prepared using the regional travel demand models show continuing traffic growth in the corridor, with much of the Fredericksburg region’s workforce continuing to commute north.
- Provide higher reliability of travel times. People place a high value on reaching their destinations in a timely manner, and in recent years, I-95 has become so congested that the existing I-95 facilities cannot provide reliable travel times during the peak periods.
- Expand travel choices by increasing the attractiveness and utility of ridesharing and transit usage while also providing an option for single-occupant vehicles to bypass congested conditions.

1.1.2 Alternatives

The proposed Build Alternative and the No-Build Alternative are under consideration. The proposed limits of the Build Alternative and areas identified for access improvements are shown on **Figure 1-1**. Additional information on the alternatives is included in the *Fredericksburg Extension Study Alternatives Technical Report* (VDOT, 2017b), and in the Revised EA (VDOT, 2017a).

No-Build Alternative

Under the No-Build Alternative, the Express Lanes would not be extended beyond the southern terminus of the Southern Extension project, which is currently under construction south of VA 610 / Garrisonville Road (Exit 143). There would be no change to existing access points, and I-95 would remain in its present configuration. VDOT would continue maintenance and repairs of the existing roadway, as needed, with no substantial changes to current capacity or management activities. The No-Build Alternative was not identified as the Preferred Alternative in the 2011 EA and subsequent FONSI, but is retained as a baseline for comparison in this technical report.

Build Alternative

The Build Alternative would extend two reversible Express Lanes in the median of I-95 from the vicinity of the I-95 / US 17 North Interchange at Warrenton Road (Exit 133) to south of the I-95 / VA 610 Interchange at Garrisonville Road (Exit 143) to tie into the Southern Extension Project. It would also provide Express Lane access in the vicinity of the I-95 / US 17 North Interchange at Warrenton Road (Exit 133), the I-95 / VA 630 Interchange at Courthouse Road (Exit 140), and the I-95 / Russell Road Interchange (Exit 148). The Build Alternative is consistent with the 2011 FONSI-selected alternative.

1.2 METHODOLOGY

For the purposes of the contaminated and hazardous materials priority analysis, the study area for detailed evaluation is defined as with a 0.5-mile radius of the I-95 right-of-way.

Due to the generally flat topography within the proposed project area and lack of deep foundation requirements, only shallow cut and fill excavation is anticipated for the improvement corridor. Based on the topography and proximity to major surface water bodies, groundwater in the area is anticipated to be shallow.

The following criteria are provided as general guidance for the determination of the low, moderate and high priority rankings along the preferred alternative corridors selected for assessment as part of the environmental investigation:

Not Included:

- Site has no history of contamination or spills; and
- Site is down or cross gradient and >500 ft from the alignment.

Low Priority:

- Site has no history of contamination or spills; and
- MDE cases are closed with good information on cleanup; and
- Site is down or cross gradient and >250 ft but <500 ft from the alignment
- Site is a low quantity generator; or
- Site has single heating oil or <550-gallon historical or operable UST; or
- Site has undergone significant redevelopment as a non-petroleum/hazardous waste handling site.

Moderate Priority:

- Site has history of contamination, dumping and/or spills; and
- MDE cases are closed with insufficient information regarding resolution; and
- Site is >500 ft upgradient of the alignment; or
- Site is down or cross gradient and >100 ft but <250 ft from the alignment; or
- Site is only listed as historical dry cleaner or gasoline/auto station; or
- Site is a large quantity generator; or
- Site has multiple historical or operable USTs; or
- Hazardous waste disposal or storage onsite; or
- Violation notices.

High Priority:

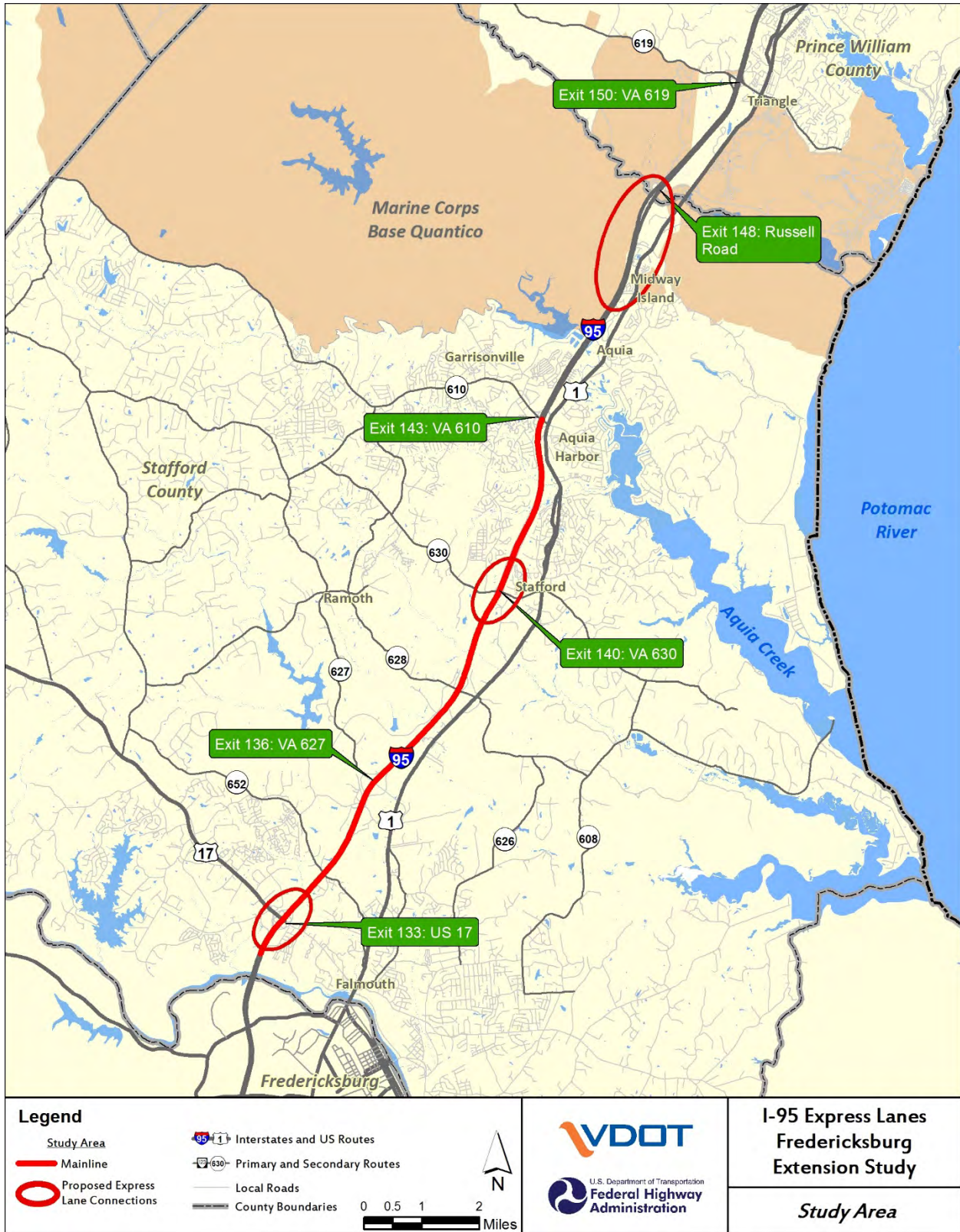
- Site has history of contamination, dumping and/or spills; and
- MDE cases are open; and
- Site is <500 ft upgradient of the alignment; or
- Site is down or cross gradient and <100 ft from the alignment; or
- Site has multiple historical or operable USTs with violations or releases; or
- VCP or Superfund site.

1.3 DATABASE REVIEW

Both federal and state environmental databases were reviewed for potential concerns up to 0.5 mile from the proposed highway improvements corridor. Investigational activities included searches of:

- An Environmental Data Resources, Inc. (EDR) Corridor Report of publicly-listed facilities of environmental significance;
- The United States Environmental Protection Agency (USEPA) internet-based databases, Envirofacts and NEPAassist listings for:
 - Superfund sites;
 - Brownfields;
 - Assessment, Cleanup, and Redevelopment Exchange System (ACRES) sites;
 - Hazardous waste operators and generators;
 - Toxic compound releases/transfers; and
 - Resource Conservation and Recovery Act (RCRA) corrective action sites.
- The Virginia Department of Environmental Quality (DEQ) internet-based database, Virginia Environmental Geographic Information Systems (VEGIS) listings for:
 - Petroleum releases;
 - Petroleum facilities;
 - Virginia Pollutant Discharge Elimination System (VPDES) sites;
 - RCRA Corrective Action sites; and
 - Solid waste facilities.

Figure 1-1: Study Area



1.4 SIGNIFICANT ASSUMPTIONS

This technical report was prepared using information obtained from and/or provided by the following sources:

- Regulatory database searches;
- Visual inspection of the corridor;
- Available published information; and
- Local and state government officials.

For purposes of this report, the information obtained through the listed methods is assumed valid and accurate as provided. The data was not verified for the completeness or accuracy of the information provided by others. Changes at the subject site over time, the manifestation of latent conditions, or changes to existing codes and regulations could alter the conclusions and recommendations of this report. If additional information becomes available that impacts these conclusions and recommendations, a review of the updated data, information, and modifications to the conclusions of the report may be necessary. The development of the Revised EA and associated technical reports is based upon preliminary planning-level design.

1.5 LIMITATION AND EXCEPTIONS

Based upon the scope of services, the HMA did not include subsurface or other invasive assessments, business environmental risk evaluations, or other services not identified. Information obtained for the HMA was received from sources that were believed to be reliable; nonetheless, the authenticity or reliability of these sources cannot be warranted.

Including the limitations inherent in various sections of the NEPA Assessment protocol, the completeness and accuracy of this HMA report is specifically limited by the following:

- The interiors of any structures on the investigated properties were not inspected;
- All site reconnaissance was performed from public rights-of-way; and
- Interviews with personnel knowledgeable of the site conditions or site history were not performed.

2. SITE DESCRIPTION AND PHYSICAL SETTING

2.1 LOCATION AND LEGAL DESCRIPTION

The study area consists of lands within 0.5-mile radius surrounding the proposed corridor centerline along portions of the I-95 corridor in Stafford County and Prince William County, Virginia.

The area around the corridor is lightly urbanized with residential and business/retail development, particularly centered around the Stafford Marketplace, Towne Center at Aquia, and Carter's Crossing shopping centers. The northern portion of the corridor, consisting of two sections north of Aquia Creek to the interchange with Russell Road, are part of a right-of-way passing through part of the Marine Corps Base Quantico (MCB Quantico). Adjacent and nearby land uses also include former and/or existing petroleum facilities and dry cleaners.

2.2 PHYSICAL SETTING

The study area is located in the transition zone between the northern and southern climates of the United States. In this zone, average winter temperatures range from 20 to 40 degrees Fahrenheit (°F), and average summer temperatures range from the low 60s to the upper 80s (°F). October usually brings the first frost, and the last freezing temperatures occur during April.

Average annual precipitation is 43 inches, with the majority of rainfall occurring during the summer months when low-pressure systems move up the East Coast of the United States. Snowfall in the area averages 15 inches per year. The prevailing winds in the area come from the southwest during the summer and the northwest during the winter, but in the immediate vicinity of the corridor, the winds typically come from the north/northwest.

2.2.1 Topography

Stafford and Prince William counties are in an area of rolling topography, rather deeply incised by the major drainage patterns flowing toward the Potomac River to the east. In areas of softer geologic formations, this has given rise to long, rather narrow ridges with steep-sided slopes. A wide area of level river terraces occurs along the Rappahannock River from the Falmouth area. Surface elevations in the counties range from less than 20 feet along the Potomac River in the east to about 470 feet in northwestern Stafford County. Generally, the land surface slopes gently to the southeast at an average of 20 feet to the mile. The drainage pattern is, in general, dendritic, but irregularly branched. The general fluvial cycle is in a stage of late youth or early maturity. Most upland areas are well drained, with drainage ranging to excessive on the steeper slopes.

2.2.2 Geology

The corridor lies astride the Fall Line, with the western section on the Piedmont Plateau and the eastern section on the Atlantic Coastal Plain. The Fall Line, a northeast trendline roughly paralleling I-95, is the physiographic boundary separating the Piedmont to the west from the Atlantic Coastal Plain to the east. The Piedmont is a physiographic province that forms the foothills of the Appalachian Mountains. The province is characterized by gently rolling topography, deeply weathered bedrock, and a relative paucity of solid outcrop. Rocks are strongly weathered in the Piedmont's humid climate and bedrock is generally buried under a thick blanket (six to 65 feet) of saprolite. The Atlantic Coastal Plain consists of a wedge of unconsolidated sediments containing lenticular deposits of inter-bedded sand, silt, clay and gravel of non-marine, fluvial origin. Foliated metamorphic and igneous rocks of Precambrian and early Paleozoic strata dip to the southeast from the Fall Line at an approximate two percent slope. Unconsolidated and poorly consolidated sediments of the Coastal Plain thicken eastward to more than 650 feet thick at the Potomac River. There is little evidence of structural disturbance (i.e., no important folds, faults, or joint systems) in the vicinity of the corridor. The area is located in Seismic Zone I, which is a zone of low seismic activity.

2.2.3 Soils

According to the USDA Web Soil Survey (see **Appendix A**), soils within the proposed project corridor are composed of a mix of cut/fill, alluvium and sandy loams, intermingled with portions of the Caroline-Sassafras complex. The US Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) describe the soils of Prince William County (USDA, 1989) and Stafford County (1974) as follows:

Urban Land or Cut-and-Fill Land

The soil directly under the corridor is mapped as Urban Land or Cut-and-Fill Land. These lands occur in industrial and residential areas. Most areas are on uplands, but some are on terraces and floodplains. Urban structures and works obscure the land, and identification of the soils is not practical. In many places,

the activities of man have completely destroyed the original soil profile, but in many scattered areas the soils remain intact.

Alluvial Land

Alluvial land, sandy and gravelly, is along larger drainageways and streams in the Coastal Plain. The soil in this land type is on terraces and floodplains and consists of coarse-textured alluvium that is nearly level to sloping. In a few places, steep breaks are between these areas and areas of surrounding soils. Texture is quite variable and in places, changes within short distances, both vertically and horizontally. Very little silt or clay is present. The sand in this unit ranges from fine grained to coarse grained. Gravel content ranges from a low percentage to more than 80 percent, by volume.

Aura Series

Aura soils have a grayish-brown, gravelly, fine sandy loam surface layer and a strong-brown to yellowish-red gravelly sandy clay loam subsoil. These soils are deep, well-drained, and moderately permeable. They are low in organic-matter content and natural fertility, and they are strongly acidic.

Caroline Series

Caroline soils have a brown, fine, sandy loam surface layer and a yellowish-red and strong-brown heavy clay loam or clay subsoil. These soils are deep and well-drained. Permeability is moderately slow. They are low in natural fertility and organic-matter content, and they are very strongly acidic.

Sassafras Series

The Sassafras series consists of deep, well-drained, nearly level to steep soils. These soils are formed in sandy and loamy Coastal Plain sediment. The areas of Sassafras soils are used for farming, as home sites, and for subdivision developments. In a representative profile, the plow layer is a dark brown, fine sandy loam about nine inches thick. The subsoil is about 29 inches thick. The upper five inches is brown, friable, fine sandy loam. The next 18 inches is brown, friable, sandy clay loam. The lower six inches is strong-brown, very friable, loamy fine sand. The substratum begins at a depth of 38 inches and extends to a depth of 112 inches or more. It is light yellowish-brown and strong-brown fine sand and loamy fine sand.

Watt Series

Watt soils are moderately deep, moderately steep, and somewhat excessively drained. Typically, the surface layer is a very dark grayish-brown, channery silt loam. The subsurface layer is a dark grayish-brown, channery silt loam to black and very dark gray, extremely channery silt loam. They have low organic matter content and natural fertility, and they are extremely acidic to strongly acidic.

Wickham Series

The Wickham series consists of deep, well-drained, nearly level to sloping soils. These soils formed in loamy alluvium mostly on the terraces along the Rappahannock River. The Wickham soils are used mainly for farming. In a representative profile, the plow layer is dark-brown, fine sandy loam, about eight inches thick. The subsoil is about 35 inches thick. The upper six inches is reddish-brown, friable, fine sandy loam. The next 20 inches is reddish-brown, firm clay loam. The lower nine inches is reddish-brown, firm sandy clay loam. The substratum begins at a depth of 43 inches and extends to a depth of 90 inches or more. It is made up of layers of sand and gravel. Wickham soils have a medium-acidic to strongly-acidic subsoil.

2.3 SITE AND VICINITY GENERAL CHARACTERISTICS

I-95 within the study area is a northeast-to-southwest interstate artery passing through mixed residential, retail, and rural areas. The northern portion of the proposed improvement corridor passes through Marine Corps Base Quantico. It crosses mainly Atlantic coastal highlands and several streams. The corridor improvement areas are divided into three sections of I-95:

- Section 1: A 0.5-mile section, immediately south of the interchange with Russell Road at Exit 148 in Stafford, VA. The section is entirely within the median between the northbound and southbound I-95 lanes and includes a bridge over the Chopawamsic Creek. The area north of Chopawamsic Creek is in Prince William County (approximately 200 yards), while the remainder of the section is located in Stafford County.
- Section 2: A 0.9-mile section, south of the overpass over VA 637 / Telegraph Road, and north of Aquia Creek, in Stafford, VA. The section consists of areas within the median between the northbound and southbound lanes, and portions of the northbound lanes.
- Section 3: An 11.9-mile section from the southern terminus of the current Express Lanes, south of the bridge over the Aquia Creek at Smith Lake Park, Stafford, VA, to a point on the highway between the I-95 / US 17 N Interchange at Warrenton Road (Exit 133) and the Rappahannock River in Fredericksburg, Virginia. The section consists of a mix of areas in the median, the northbound lanes, the southbound lanes, and roadside border areas on both sides of I-95. This section also includes the roadway running approximately 280 yards to the east along VA 630 / Courthouse Road.

3. RECORDS REVIEW

3.1 STANDARD ENVIRONMENTAL RECORD SOURCES

The results of the federal and state regulatory database listing review for contaminated and hazardous waste handling, storage, disposal, or release sites within 0.5 mile of the proposed corridor were compiled and evaluated for potential impact on project construction. Based on the available information, sites are ranked as Potential Environmental Concerns (PECs) from low to high priority using the following prioritization criteria:

Not Included:

- Site is > 0.5 mile from the alignment; or
- Site has no history of contamination or spills; and
- Site is down or cross-gradient and > 500 feet from the alignment.

Low Priority:

- Site has no history of contamination or spills; and
- VDEQ cases are closed with good information on cleanup; and
- Site is down or cross-gradient and > 250 feet but < 500 feet from the alignment; or
- Site is a low quantity generator; or
- Site has single heating oil or < 550-gallon historical or operable UST installed after 1980 with no history of release.

Moderate Priority:

- Site has history of contamination, dumping and/or spills; and
- VDEQ cases are closed with insufficient information regarding resolution; and
- Site is > 500 feet up-gradient of the alignment; or
- Site is down or cross-gradient and > 100 feet but < 250 feet from the alignment; or
- Site is only listed as a historical dry cleaner or gasoline/auto station; or
- Site is a large quantity generator; or
- Site has multiple historical or operable USTs; or
- Hazardous waste disposal or storage onsite; or
- Violation notices.

High Priority:

- Site has history of contamination, dumping and/or spills; and
- VDEQ cases are open; and
- Site is < 500 feet up gradient of the alignment; or
- Site is down or cross gradient and < 100 feet from the alignment; or
- Site has multiple historical or operable underground storage tanks (USTs); or
- Voluntary Cleanup Program (VCP) or Superfund site.

Using these criteria, sites of concern are detailed in the following tables and the locations of these sites are depicted in **Appendix B in Figure 2, Sheet 1 through Figure 2, Sheet 8**. The EDR corridor report is included as **Appendix C**.

3.1.1 Regulatory Databases

Federal and state environmental databases and records were reviewed in an effort to evaluate potential environmental incidents impacting the subject property and identify properties with environmental liabilities in the vicinity of the site. The federal and state regulatory databases have been researched and reported in accordance with the search radii specified by the American Society for Testing and Materials (ASTM), Standard E 1527-13. A detailed summary of the federal and state database search is presented below.

Standard and additional regulatory databases reviewed included:

Table 3-1: Databases with Identified Search Results

| Database | Description |
|--------------|---|
| NY MANIFEST | Hazardous waste manifest information |
| PA MANIFEST | Hazardous waste manifest information |
| RCRA-SQG | RCRA – Small Quantity Generator |
| RCRA NON GEN | RCRA – Non-Generators |
| FINDS | The Facility Index System |
| ECHO | Enforcement and Compliance History Online |
| VA LUST | The Virginia Leaking Underground Storage Tank database |
| VA LTANKS | The Virginia Leaking Tanks database |
| VA UST | The Virginia-registered Underground Storage Tank database |
| VA AST | The Virginia-registered Aboveground Storage Tank database |
| VA AIRS | A listing of permitted Airs facilities |
| VA TIER 2 | Facilities that store or manufacture hazardous materials |

| Database | Description |
|---------------|--|
| VA SPILLS | The Pollution Response Program database of air, water, and waste-pollution incidents |
| EDR Hist Auto | Business directory search for potential historical gas and service station sites |
| SEMS-ARCHIVE | Superfund Enterprise Management System Archive |

Table 3-2: Databases with No Identified Search Results

| Database | Description |
|--|---|
| <i>Databases with no identified search results, Federal:</i> | |
| RCRA-LQG | Resource Conservation and Recovery Act – Large Quantity Generators |
| RCRA-CESQG | RCRA – Conditionally Exempt Small Quantity Generators |
| ERNS | Emergency Response Notification System |
| ICIS | Integrated Compliance Information System |
| MLTS | Material Licensing Tracking System |
| US AIRS | Aerometric Information Retrieval System Facility Subsystem |
| NPL | National Priority List |
| Proposed NPL | Proposed National Priority List Sites |
| Delisted NPL | National Priority List Deletions |
| NPL LIENS | Federal Superfund Liens |
| SEMS | Superfund Enterprise Management System |
| LIENS 2 | CERCLA Lien Information |
| CORRACTS | Corrective Action Report |
| RCRA-TSDF | RCRA – Treatment, Storage, and Disposal |
| US ENG CONTROLS | Engineering Controls Sites List |
| US INST CONTROL | Sites with Institutional Controls |
| HMIRS | Hazardous Materials Information Reporting System |
| DOT OPS | Incident and Accident Data |
| US CDL | National Clandestine Laboratory Register |
| US BROWNFIELDS | A Listing of Brownfields Sites |
| DOD | Department of Defense Sites |
| FUDS | Formerly Used Defense Sites |
| LUCIS | Land Use Control Information System |
| CONSENT | Superfund (CERCLA) Consent Decrees |
| ROD | Record of Decision |
| UMTRA | Uranium Mill Tailings Sites |
| ODI | Open Dump Inventory |
| DEBRIS REGION 9 | Torres Martinez Reservation Illegal Dump Site Locations |
| US MINES | Mines Master Index File |
| TRIS | Toxic Chemical Release Inventory System |
| TSCA | Toxic Substances Control Act |
| FEETTS | FIFRA/TSCA Tracking System – FIFRA (Federal Insecticide, Fungicide & Rodenticide Act) / TSCA (Toxic Substances Control Act) |
| HIST FEETTS | 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 |

| Database | Description |
|--|---|
| RMP | Risk Management Plans |
| COAL ASH EPA | Coal Combustion Residues Surface Impoundments List |
| LEAD SMELTERS | Lead Smelter Sites |
| FEDERAL FACILITY | Federal Facility Site Information listing |
| FEMA UST | Underground Storage Tank Listing |
| FUELS PROGRAM | EPA Fuels Program Registered Listing |
| DOCKET HWC | Hazardous Waste Compliance Docket Listing |
| UXO | Unexploded Ordnance Sites |
| FUSRAP | Formerly Utilized Sites Remedial Action Program |
| COAL ASH DOE | Steam-Electric Plant Operation Data |
| 2020 COR ACTION | 2020 Corrective Action Program List |
| PRP | Potentially Responsible Parties |
| US FIN ASSUR | Financial Assurance Information |
| PCB TRANSFORMER | PCB Transformer Registration Database |
| US HIST CDL | Delisted National Clandestine Laboratory Register |
| SCRD DRYCLEANERS | State Coalition for Remediation of Drycleaners Listing |
| IHS OPEN DUMPS | Open Dumps on Indian Land |
| ABANDONED MINES | Abandoned Mines |
| <i>Databases with no identified search results, State/Tribe:</i> | |
| VA SWF/LF | An inventory of solid waste disposal facilities or landfills |
| VA ENG CONTROLS | State Engineering Controls Sites List |
| NJ MANIFEST | Hazardous waste manifest information |
| VA VCP | The Virginia Voluntary Remediation Program database |
| VA DRYCLEANERS | EDR listing of registered drycleaners |
| VA SHWS | This state does not maintain a SHWS list; see the Federal CERCLIS list and Federal NPL list |
| VA UIC | Underground Injection Control Wells |
| VA INST CONTROLS | Voluntary Remediation Program Database |
| VA BROWNFIELDS | Brownfields Site Specific Assessments |
| VA ENF | Enforcement Actions Data |
| VA NPDES | Comprehensive Environmental Data System |
| VA COAL ASH | Coal Ash Disposal Sites |
| INDIAN RESERV | Indian Reservations |
| INDIAN ODI | Report on the Status of Open Dumps on Indian Lands |
| INDIAN LUST | Leaking Underground Storage Tanks on Indian Lands |
| INDIAN UST | Underground Storage Tanks on Indian Lands |
| INDIAN VCP | Voluntary Cleanup Priority Listing on Indian Lands |
| <i>Databases with no identified search results, EDR Proprietary:</i> | |
| EDR MGP | EDR Proprietary Manufactured Gas Plants |
| EDR Hist Cleaner | EDR Exclusive Historic Dry Cleaners |
| VA RGA LF | Recovered Government Archive Solid Waste Facilities List |
| VA RGA LUST | Recovered Government Archive Leaking Underground Storage Tank |

3.1.2 Site PECs

Based on a review of the database listings from **Table 3-1**, 44 sites were identified that had records of hazardous-material concern within 0.5 mile of the corridor. No PECs associated with the corridor parcels were noted.

3.1.3 Upgradient Property PECs

The following 16 sites are up-gradient of the corridor:

Table 3-3: Up-gradient Property PECs

| Map No. | Address | Site Listing | Records of Concern | Hazmat Ranking |
|---------|------------------------|--|---|----------------|
| 10 | 14 Simpson Road | Days Inn Motel | VA LUST, VA LTANKS | Moderate |
| 11 | 535 Warrenton Road | Shell | VA LTANKS, VA UST | Moderate |
| 13 | 53 Stanstead Road | Servicetown Truck Plaza | VA LTANKS | Moderate |
| 14 | 534 Warrenton Road | Wawa/BP/Citgo | VA LTANKS, VA LUST | High |
| 15 | 554/546 Warrenton Road | Exxon | VA LUST, VA LTANKS | High |
| 16 | 56 McLane Drive | Southland Distribution Center | VA LTANKS | Moderate |
| 17 | 40 Transfleet Drive | Stafford County Schools Central Garage | VA LTANKS, VA UST, VA AST | Moderate |
| 20 | 101 Centreport Parkway | unused | VA AST | Moderate |
| 28 | 1118 Courthouse Road | Texaco/Mobil | VA LTANKS, VA UST, VA LUST, VA SPILLS | High |
| 29 | 1115 Courthouse Road | Texaco/Citgo/Mobil | VA LTANKS, VA UST, VA LUST, VA SPILLS | High |
| 30 | 1056 Courthouse Road | Shell | VA LTANKS, VA UST, VA LUST | High |
| 31 | 1049 Courthouse Road | Exxon | VA LUST, VA LTANKS, VA UST, EDR Hist Auto | High |
| 37 | 95 Garrisonville Road | Rosner Toyota | VA AST | Moderate |
| 38 | 105 Garrisonville Road | Wawa Food Market | VA UST, RCRA-SQG, PA MANIFEST | Moderate |
| 39 | 171 Garrisonville Road | 7-Eleven Store | VA LUST, VA TIER 2, VA LTANKS, VA UST | High |
| 43 | 1 Cliff Circle | Residences | VA LTANKS | Low |

3.1.4 Downgradient Property PECs

The following 28 sites are downgradient of the corridor:

Table 3-4: Down-gradient Property PECs

| Map No. | Address | Site Listing | Records of Concern | Hazmat Ranking |
|---------|---------------------------------------|--|---|----------------|
| 1 | 200 Musselman Road | Residence | VA LTANKS | Low |
| 2 | 1007 Thomas Lane | VDOT - Falmouth Area | VA LTANKS, VA UST, VA TIER 2, RCRA-SQG, PA MANIFEST | Low |
| 3 | 355 Warrenton Road | Amoco | VA LTANKS, VA LUST | Low |
| 4 | 375 Warrenton Road | Exxon | VA LTANKS, VA LUST | Moderate |
| 5 | 600 Interstate Business Park | Virginia Dynamics | VA LTANKS, VA LUST | Low |
| 6 | 41 RV Parkway | Quicks Bus Facility | VA LTANKS, VA SPILLS | Low |
| 7 | 364 Warrenton Road | Former Raceway 971 | VA LTANKS, VA SPILLS | Low |
| 8 | 372 Warrenton Road | Gulf | VA LTANKS, VA UST | Low |
| 9 | 400 Warrenton Road | Motel 6 | VA LTANKS, VA UST | Low |
| 18 | 1080 Jefferson Davis Highway | Potomac Point Geriatric Care | VA LTANKS, VA LUST, VA SPILLS | Low |
| 21 | 14 Utah Place | QFN | VA LTANKS, VA UST | Low |
| 22 | 1489 Jefferson Davis Highway | M&M Auto Parts Inc. | VA UST, RCRA NonGen, ECHO | Moderate |
| 23 | 70 State Shop Road | VDOT | VA LTANKS | Low |
| 24 | 164 Wyche Road | VDOT | VA LTANKS | Low |
| 25 | 109 Wyche Road | Virginia Paving | VA LTANKS, VA LUST | Low |
| 26 | 50 Florida Rock Drive (32 Wyche Road) | Cardinal Concrete Co/Virginia Concrete | VA LTANKS, VA TIER 2, VA UST, VA AST | Low |
| 27 | 50 Wyche Road | Delta Frangible Ammunition | SEMS-ARCHIVE | Low |
| 35 | 2807 Jefferson Davis Highway | Shell | VA LTANKS, VA UST | Low |
| 36 | 2842 Jefferson Davis Highway | Exxon | VA LTANKS, VA UST, RCRA NonGen | Low |
| 41 | 2983 Jefferson Davis Highway | Shell/Fast Mart | VA LTANKS, VA LUST, VA SPILLS | Low |
| 42 | 2998 Jefferson Davis Highway | 7-Eleven | VA UST | Low |
| 47 | 3799 Jefferson Davis Highway | Aquia Motors, Inc. | VA LTANKS | Low |

| Map No. | Address | Site Listing | Records of Concern | Hazmat Ranking |
|---------|------------------------------|------------------------------------|--|----------------|
| 48 | 38 Clearview Lane | Abandoned | VA LTANKS, VA LUST | Low |
| 49 | 3854 Jefferson Davis Highway | Boswell's Used Auto Parts & Towing | VA LTANKS | Low |
| 50 | 3869 Jefferson Davis Highway | Virginia Gold | VA LTANKS, VA LUST | Low |
| 52 | 3931 Jefferson Davis Highway | J F Fink, Inc. | VA UST, RCRA NonGen, ECHO, NY MANIFEST | Low |
| 53 | 4022 Jefferson Davis Highway | Hilldrups Moving and Storage | VA LTANKS, VA UST | Low |
| 54 | 4011 Jefferson Davis Highway | Hilldrups Moving and Storage | VA LTANKS | Low |

3.2 SUPPLEMENTAL ENVIRONMENTAL RECORD SOURCES

3.2.1 Federal Records

A review of the EPA online database (Envirofacts) yielded five sites within 0.5 mile of the corridor with environmental records, in addition to those listed in the previous EDR report. The database was updated on February 23, 2017 at the time of the review.

Table 3-5: Envirofacts Records

| Map No. | Address | Site Listing | Records of Concern | Hazmat Ranking |
|---------|------------------------------|----------------------------------|--------------------|----------------|
| 34 | 72 Austin Park Drive | Wawa Food Market | RCRAInfo – CESQG | Low |
| 40 | 20 Prosperity Lane | Zipmart 96 | RCRAInfo – SQG | Moderate |
| 44 | 3225 Jefferson Davis Highway | Aquia Auto Parts, Inc. | RCRAInfo – CESQG | Low |
| 45 | 3237 Jefferson Davis Highway | Aquia Auto Repair, Inc. | RCRAInfo - CESQG | Low |
| 46 | 360 Doc Stone Road | Smith Lake Water Treatment Plant | RCRAInfo | None |

A review of the EPA online database NEPAassist yielded no sites within 0.5 mile of the corridor with environmental records, except those previously listed in the EDR and Envirofacts databases.

3.2.2 State Records

A review of the VDEQ online database (VEGIS) yielded 36 sites within 0.5 mile of the corridor with environmental records, and within the following databases: Petroleum Releases, Registered Tank Facilities, VPDES, Vehicle Routing Problem (VRP) Sites, Large Quantity Generators, and Small Quantity Generators. All of these records were previously listed in the EDR database.

3.3 PHYSICAL SETTING SOURCES

Soil maps were obtained from the on-line Web Soil Survey (WSS) by the USDA NRCS. Descriptions of the soils are listed in *Soil Survey, Stafford and King George Counties Virginia*, issued in February 1974, and *Soil Survey of Prince William County, Virginia*, issued in August 1989 by the USDA, Soil Conservation Service (see **Appendix A**).

3.4 HISTORICAL USE INFORMATION FOR THE SITE

Aerial photographs were obtained by EDR for the vicinity of the subject area for the years: 1937, 1953-54, 1960, 1963, 1970, 1971, 1977, 1979, 1980, 1988, 1994, 2003, 2009, 2012, and 2014. The aerial photographs covered the I-95 corridor from the interchange US 17 N / Warrenton Road to the interchange with VA 610 / Garrisonville Road. Aerial maps are included as **Appendix D**).

EDR performed a search for Sanborn Fire Insurance Maps of the project area. Sanborn maps of the area were not available for any time period.

4. SITE RECONNAISSANCE

4.1 METHODOLOGY AND LIMITING CONDITIONS

Site reconnaissance was performed to verify current site conditions and identify potential environmental conditions, such as the existence of USTs, above-ground storage tanks (ASTs), 55-gallon drums, dumping piles, transformers, fuel dispensers, liquid pooling, and stressed vegetation. The site reconnaissance was conducted on February 8 and 9, 2017. Observations were planned for all properties previously identified in the EDR search. Additional observations were identified and recorded in the field. Only external visual observations of the properties were made. Buildings were not entered and onsite personnel were not interviewed during the reconnaissance.

4.2 GENERAL SITE SETTING

The site reconnaissance was conducted on mostly sunny, cool days, with temperatures above freezing, with rain and snow arriving late. Access to the properties was limited by perimeter fences, gates, and other security measures. Photographs were taken at all planned properties, from publicly accessible areas and included as **Appendix E**.

4.3 EXTERIOR OBSERVATIONS

The following sites were observed from publicly accessible areas, with PECs noted:

Table 4-1: Planned Reconnaissance

| Map No. | Address | Occupant | Observed RECs |
|---------|--------------------------------|-----------------------------------|---|
| 1 | 200 Musselman Road | Homer Stroud residence | None |
| 2 | 1007 Thomas Lane | VDOT - Falmouth Area Headquarters | None |
| 3 | 355 Warrenton Road | Former Amoco | None |
| 4 | 375 Warrenton Road | Exxon | Fuel USTs, three unmarked, unsecured 55-gallon drums |
| 5 | 600 E Interstate Business Park | Virginia Dynamics | None |
| 6 | 41 RV Parkway | Quicks Bus Facility | Unsecured 55-gallon drum |

| Map No. | Address | Occupant | Observed RECs |
|----------------|--|--|---|
| 7 | 364 Warrenton Road | Former Raceway 971 | Disconnected fuel dispensers, site is abandoned |
| 8 | 372 Warrenton Road | Gulf | None, site is replaced by tire store and service center |
| 9 | 400 Warrenton Street | Motel 6 | Soil stockpile, site is undeveloped |
| 10 | 14 Simpson Road | Days Inn Motel | None |
| 11 | 535 Warrenton Road | Shell | Fuel USTs |
| 13 | 24 S Gateway Road (53 Stanstead Road) | Servicetown Truck Plaza | None, site removed and replaced by restaurant |
| 14 | 9 S Gateway Drive (534 Warrenton Road) | Wawa/BP/Citgo | Fuel USTs |
| 15 | 554/546 Warrenton Road | Shell/Exxon | Fuel USTs |
| 16 | 56 McLane Drive | Southland Distribution Center | None, no access to site |
| 17 | 40 Transfleet Drive (37 Enon Road) | Stafford County Schools Central Garage | Fuel AST |
| 18 | 1080 Jefferson Davis Highway | Potomac Point Geriatric Care | None, abandoned |
| 20 | 101 Centreport Parkway | Capital Textile Service Inc. | None, undeveloped |
| 21 | 14 Utah Place | QFN | Fuel dispensers |
| 22 | 1489 Jefferson Davis Highway | M&M Auto Parts Inc. | None, no access to site |
| 23 | 70 State Shop Road | VDOT | Fuel dispensers |
| 24 | 164 Wyche Road | VDOT | Fuel ASTs and dispensers |
| 25 | 109 Wyche Road | General Paving/Virginia Paving Company | None, no access to site |
| 26 | 32 Wyche Road | Cardinal Concrete Co/Virginia Concrete | None, no access to site |
| 27 | 50 Wyche Road | Delta Frangible Ammunition | Electrical transformer in poor condition |
| 28 | 1118 Courthouse Road | Texaco/Mobil | None, abandoned |
| 29 | 1115 Courthouse Road | Texaco/Citgo/Mobil | None, abandoned |
| 30 | 1056 Courthouse Road | Shell | Fuel USTs |
| 31 | 1049 Courthouse Road | Exxon | Fuel USTs |
| 35 | 2807 Jefferson Davis Highway | Shell | None |
| 36 | 2842 Jefferson Davis Highway | Exxon | Fuel USTs |
| 37 | 95 Garrisonville Road | Rosner Toyota | Fuel USTs |

| Map No. | Address | Occupant | Observed RECs |
|---------|--|--|----------------------|
| 38 | 105 Garrisonville Road | Wawa Food Market | Fuel USTs |
| 39 | 171 Garrisonville Road | 7-Eleven Store | Fuel USTs |
| 41 | 2983 Jefferson Davis Highway | Shell/Fast Mart | Fuel USTs |
| 42 | 2998 Jefferson Davis Highway | 7-Eleven | Fuel USTs |
| 43 | 1 Cliff Circle (23, 29 Crater Lane; 32 Renee Road; 17, 64 Susan Street) | Raymond E MacMurry, Clifford Sturgill, Moran Dilian Dilena, Gustavo Garnada, Mary Davis residences | None |
| 47 | 3799 Jefferson Davis Highway | Aquia Motors, Inc. | None |
| 48 | 2 (38) Clearview Lane | Abandoned | None |
| 49 | 3854 Jefferson Davis Highway | Boswell's Used Auto Parts & Towing | None |
| 50 | 3869 Jefferson Davis Highway | Virginia Gold | None |
| 52 | 3931 Jefferson Davis Highway | J F Fink, Inc. | None |
| 53 | 4022 Jefferson Davis Highway | Hilldrup Moving and Storage | Fuel USTs, Fuel ASTs |
| 54 | 4011 Jefferson Davis Highway | Hilldrup Moving and Storage | None |

The properties discovered during the supplemental environmental record search were not part of the site reconnaissance and were not observed. Photographs of the sites are shown in **Appendix E**.

4.4 ADDITIONAL RECONNAISSANCE

The following six sites were observed from publicly-accessible areas. They are new sites noted in the field as having Recognized Environmental Concerns, even though they were not listed in the reviewed public records.

Table 4-2: Additional Reconnaissance

| Map No. | Address | Occupant | PECs | Hazmat Ranking |
|---------|------------------------------|------------------------|--|----------------|
| 12 | 50 South Gateway Drive | Blue Beacon Truck Wash | Surface water discharge | Moderate |
| 19 | 1280 Jefferson Davis Highway | Liberty Gas | Fuel USTs, one unmarked, unsecured 55-gallon drum, surface water discharge from wash bay | Moderate |
| 32 | 2142 Jefferson Davis Highway | Fast Mart | Fuel USTs | Low |
| 33 | 2143 Jefferson Davis Highway | 7-Eleven | Fuel USTs | Low |
| 51 | 3884 Jefferson Davis Highway | Gulf | Fuel USTs | Low |

| Map No. | Address | Occupant | PECs | Hazmat Ranking |
|---------|-------------------|---|----------|----------------|
| 55 | 14742 Joplin Road | Marine Corps Combat Development Command | Landfill | High |

5. SUMMARY AND CONCLUSIONS

5.1 POTENTIAL ENVIRONMENTAL CONCERNS

Based on an evaluation of the regulatory database review and site reconnaissance, potential environmental concerns were identified in the vicinity of the study area. The sites were given priority rankings based on the criteria outlined in **Section 3.1**. The rankings provide a priority-based evaluation of sites with the potential for impacts related to contaminants or hazardous materials during excavation or significant subsurface construction in close proximity to the study area. The evaluation is based on a desktop evaluation of governmental records and site reconnaissance that identifies potential contaminant impacts associated with each site. Sites of potential environmental concerns are presented in **Appendix B, Figures 2-Sheet 1** through **2- Sheet 8**.

5.2 RECOMMENDATIONS

Due to a history of release, incomplete remediation records, ongoing remediation activity and/or locations adjacent to the I-95 corridor segments, the following sites are identified as representing a high or moderate potential for environmental impacts should corridor improvement construction proceed in the vicinity of the identified property. Risk priorities relative to the proposed alignment are based on a predefined set of criteria for comparing the potential hazard associated with a contaminant of concern identified at a site versus the potential for impacting construction of the improvement corridor. For the listed sites, a site-specific Phase I and/or Phase II environmental site assessment (ESA) is recommended to define whether specific impacts to the proposed construction design exists.

Table 5-1: Sites of Potential Environmental Concern

| Map No. | Address | Site Listing | Noted Hazmat Concern | Risk Priority |
|---------|------------------------|-------------------------|--|---------------|
| 4 | 375 Warrenton Road | Exxon | VA LTANKS, VA LUST | Moderate |
| 10 | 14 Simpson Road | Days Inn Motel | VA LUST, VA LTANKS | Moderate |
| 11 | 535 Warrenton Road | Shell | VA LTANKS, VA UST | Moderate |
| 12 | 50 South Gateway Drive | Blue Beacon Truck Wash | Surface water discharge | Moderate |
| 13 | 53 Stanstead Road | Servicetown Truck Plaza | VA LTANKS | Moderate |
| 14 | 534 Warrenton Road | Wawa/BP/Citgo | Two records of tanks at a fuel station, with a closed case of leaking USTs | High |
| 15 | 554/546 Warrenton Road | Exxon | One record of tanks at a fuel station, with a closed case of leaking USTs | High |

| Map No. | Address | Site Listing | Noted Hazmat Concern | Risk Priority |
|---------|------------------------------|--|--|---------------|
| 16 | 56 McLane Drive | Southland Distribution Center | VA LTANKS | Moderate |
| 17 | 40 Transfleet Drive | Stafford County Schools Central Garage | VA LTANKS, VA UST, VA AST | Moderate |
| 18 | 1280 Jefferson Davis Highway | Liberty Gas | Fuel USTs, one unmarked, unsecured 55-gallon drum, surface water discharge from wash bay | Moderate |
| 20 | 101 Centreport Parkway | Vacant | VA AST | Moderate |
| 22 | 1489 Jefferson Davis Highway | M&M Auto Parts Inc. | VA UST, RCRA NonGen, ECHO | Moderate |
| 28 | 1118 Courthouse Road | Texaco/Mobil | Two records of 10,000-gallon gasoline tanks at a fuel station, with a closed case of leaking USTs and recorded surface spill | High |
| 29 | 1115 Courthouse Road | Texaco/Citgo/Mobil | One record of a 6,000-gallon gasoline tank at a fuel station, with a closed case of leaking USTs and recorded large spill of diesel fuel, requiring soil excavation | High |
| 30 | 1056 Courthouse Road | Shell | Two records of a 12,000-gallon and an 8,000-gallon gasoline tanks at a fuel station, with a closed case of leaking USTs | High |
| 31 | 1049 Courthouse Road | Exxon | Two records of two 10,000-gallon gasoline; two 8,000-gallon diesel fuel; one 8,000-gallon gasoline; one 4,000-gallon gasoline and one 1,000-gallon used oil tanks at a fuel station; with two closed cases of leaking USTs | High |
| 37 | 95 Garrisonville Road | Rosner Toyota | VA AST | Moderate |
| 38 | 105 Garrisonville Road | Wawa Food Market | VA UST, RCRA-SQG, PA MANIFEST | Moderate |

| Map No. | Address | Site Listing | Noted Hazmat Concern | Risk Priority |
|---------|------------------------|---|--|---------------|
| 39 | 171 Garrisonville Road | 7-Eleven Store | Three records of a 12,000-gallon; two 10,000-gallon; and a 4,000-gallon gasoline tank and a 10,000-gallon kerosene tank at a fuel station; with two closed cases of leaking USTs; and a record of regulated hazardous waste production | High |
| 40 | 20 Prosperity Lane | Zipmart 96 | RCRAInfo – SQG | Moderate |
| 55 | 14742 Joplin Road | Marine Corps Combat Development Command | Record of the recently closed landfill that operated from 1971 to 1983, receiving waste paints and solvents; landfill leachate was observed leaking from the southern portion of the landfill and found to contain various organic compounds | High |

Although the 21 properties listed above represent an increased risk of potential contamination impact that could migrate from the sites and into the project corridor, for those locations where subsurface disturbance may intersect soils or groundwater potentially impacted by the identified sites, or where full or partial property takes are anticipated, additional assessment and/or sampling investigations are recommended.

6. REFERENCES

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