



**PRELIMINARY SITE ASSESSMENT REPORT
Proposed Roadway Widening Project
Route 286 (Fairfax County Parkway)
VDOT Project Number UPC# 107937
Fairfax County, Virginia**

April 13, 2018

Prepared for:
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Cardno Project No.: VFR074**

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Dear Mr. Butler:

Cardno has completed the attached *Preliminary Site Assessment Report* requested by the **Virginia Department of Transportation (VDOT)** for the proposed roadway widening of Route 286 (Fairfax County Parkway) in Fairfax, (Fairfax County) Virginia. The enclosed report discusses the potential environmental concerns identified for the proposed project. Cardno appreciates the opportunity to assist VDOT on this project. If you have any questions or require additional information, please do not hesitate to call our office.

Sincerely,

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Enclosures

Table of Contents

1	Introduction.....	1
2	Site Setting.....	1
2.1	Site Information	1
2.2	Geologic Site Information	1
2.3	General Hydrology.....	2
2.4	Preliminary Plan Review	2
3	Site Inspection	2
4	Aerial Photographs.....	2
5	Environmental data search	3
5.1	Virginia state databases	4
5.1.1	LUSTS.....	4
5.1.2	USTS.....	4
5.1.3	SOLID WASTE FACILITIES	6
5.1.4	VRP	6
5.1.5	AST	6
5.2	Federal databases.....	6
5.2.1	EMERGENCY RESPONSE NOTIFICATIONS (ERNS)	6
5.2.2	RCRIS GENERATORS (NON TSD)	7
5.2.3	RCRA TSD FACILITIES	7
5.2.4	NPL	7
5.2.5	CERCLIS AND CERCLIS NFRAP	8
6	Evaluation.....	8
7	Conclusions	8
8	Considerations.....	8
9	Limitations.....	8

Appendices

A.....	Vicinity Map
B.....	Site Plans
C.....	Photographs
D.....	EDR Database Report Excerpts

1 Introduction

Cardno performed a *Preliminary Site Assessment* (PSA) study on behalf of the Virginia Department of Transportation (VDOT) for the proposed roadway widening of Route 286 (Fairfax County Parkway) in Fairfax, (Fairfax County) Virginia. The project will involve constructing additional traffic lanes along an approximate 8-miles long corridor of Route 286 from Route 29 (Lee Highway) to Route 123 (Ox Road) (see **Vicinity Map, Appendix A**).

The purpose of this investigation was to identify recognized environmental conditions (RECs) on or near the site that may present a possible environmental risk/liability to VDOT. Identifying environmental concerns prior to final design and construction provides the department with a basis for modifying projects to minimize delays and unexpected costs. The PSA is modelled after most due diligence procedures within the American Society for Testing and Materials (ASTM) *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, Designation E1527-13*. Accordingly, Cardno evaluated potential environmental concerns for the proposed project with a focus on non-residential properties by completing the following tasks:

1. Conducted site inspections of the project site.
2. Reviewed an environmental database search, historical city directories, and historical aerial photographs for the subject corridor.
3. Researched records at the Virginia Department of Environmental Quality (DEQ) including leaking underground storage tank (LUST), registered UST and pollution complaint (PC) files.

2 Site Setting

2.1 Site Information

The project site is located in Fairfax, (Fairfax County) Virginia. The proposed construction of additional travel lanes and the relocation of a walking/biking trail project is located on an approximate 8-miles long section of Route 286, from Route 29 (Lee Highway) to Route 123 (Ox Road) (see the **Vicinity Map, Appendix A**). The site is situated in an area primarily consisting of single-family residential development, with a concentration of commercial development near the north western terminus of the project corridor (see **Figures 1-9, Appendix B**).

2.2 Geologic Site Information

The project corridor is located on the Fairfax, Virginia United States Geologic Survey (USGS) 7.5-minute topographic quadrangle maps, compiled in 1983 and photo revised in 2016 (see **Appendix A**). According to the topographic map, elevations at the subject property range from approximately 300 to 400 feet above mean sea level (msl).

According to the *Geologic Map of Virginia* (Virginia Division of Mineral Resources, 1993), the subject corridor has portions comprised of Mather Gorge Formation, the Piney Branch Complex, and components of the Popes Head Formation. These formations consist of schist, metamorphosed mafic and ultramafic rocks, meta-siltstone, and phyllite.

2.3 General Hydrology

Ground water at the project site belongs to the Piedmont Groundwater Area as referenced from the *Ground Water Map of Virginia* (Virginia Water Control Board Ground Water Program, 1985). In the Piedmont Groundwater Area, ground water supplies are small to moderately available and generally of good quality. The Fairfax County Parkway crosses over Popes Head Creek and Piney Branch. In general, stormwater flow is to the southwest toward to flow into Popes Head Creek and Piney Branch, which join Bull Run approximately 2.3-miles to the southwest.

2.4 Preliminary Plan Review

No design plans were available from VDOT at the time of this study, however a proposed boundary outlining the proposed new lane width limits of the project was provided to Cardno. The project boundary indicated that right-of-way to be acquired, will for the most part be located on the south side of Route 286. Aerials of the proposed project corridor are shown on **Figures 1-9** in **Appendix B**.

3 Site Inspection

Cardno conducted an inspection of the project corridor on February 13, 2018. The inspection included photographing areas of potential concern with a focus on non-residential properties (see **Photographs, Appendix C**).

- The site inspection started at the cellular tower site on Old Arrington Road, near the intersection of Route 286 and Route 123.
- The corridor primarily runs through residential and undeveloped forested areas. Commercial development is greater at the northwest end of the project corridor, at the intersection of Route 28 and Route 29.
- The Fairfax County Parkway Trail runs along a portion of the subject corridor, from the Route 286 and Route 643 intersection.
- The project corridor has multiple intersections and crosses over other local roads, as well a section of rail road.
- A closed landfill is located at the northern terminus of the project corridor, just beyond the Route 286 and Route 29 intersection.

4 Aerial Photographs

To develop a historical perspective for the area, Cardno reviewed historical aerial photographs for the years 1961, 1966, 1983, 1986, 1990, 2002, 2005, 2010, and 2015. The subject property history is as follows:

1961 Aerial Photograph

The 1961 aerial photographs show the subject corridor as a mixture of residential and agricultural development, and sections of undeveloped forested areas. The Fairfax County Parkway has not been constructed. A landfill appears to be located near the northern terminus of the subject corridor.

1966 Aerial Photograph

The 1966 aerial photographs appear similar to the 1961 aerials.

1983 Aerial Photograph

The 1983 aerial photographs appear similar to the 1966 aerials.

1986 Aerial Photograph

The 1986 aerial photographs appear similar to the 1983 aerials.

1990 Aerial Photograph

The 1990 aerial photographs appear similar to the 1986 aerials.

2002 Aerial Photograph

The 2002 aerial photographs show that the Fairfax County Parkway has been constructed. The area appears to be comprised primarily of single-family residential development.

2005 Aerial Photograph

The 2005 aerial photographs appear similar to the 2002 aerials, with greater commercial development in the northern portion of the project corridor.

2010 Aerial Photograph

The 2010 aerial photographs appear similar to the 2005 aerials, with greater commercial development in the northern portion of the project corridor.

2015 Aerial Photograph

The 2015 aerial photograph shows the project corridor and the vicinity similar to current conditions. The corridor appears to run through dingle family-residential areas, with commercial development at the northern terminus near the intersection with Route 29.

5 Environmental data search

Environmental Data Resources, Inc. (EDR) of Milford, Connecticut performed regulatory database searches of the subject corridor. The objective was to review federal, state, and local environmental regulatory databases to identify environmental permits, incidents, complaints, violations, response actions, and remedial activities relative to the proposed road construction project. The searches used the minimum search distances (MSD) for each database following the American Society for Testing and Materials (ASTM) guidelines for Phase I Site Assessments.

Included in the government records search were “mapped” sites, which are located on the maps, provided in the EDR report and a listing of “unmapped” sites. The unmapped sites were identified based upon ZIP code and FIPs (Federal Information Processing) designation, and may lie within the area of interest. Each entry was reviewed to ensure that pertinent regulated and/or reported sites were identified. An excerpt of the EDR report is included in **Appendix D**. The EDR report presents a summary listing of each database searched, the MSD used from the subject properties and the number of mapped and unmapped sites found. The presence of a site on a given database, with the possible exception of

the NPL or LUST, does not document a release, but it does document waste handling, permits, and/or the regulatory status of the facility.

5.1 Virginia state databases

5.1.1 LUSTS

LUST/LAST – Virginia Leaking Petroleum Underground and Aboveground Storage Tank Listing, November 3, 2017 (0.5 mile); This database provides incidents of leaking underground and aboveground storage tanks within the specified search radius as regulated by the DEQ.

Results: The EDR searches identified twenty-eight (28) mapped leaking underground storage tank (LUST) sites with pollution complaints (PC). The pollution complaint number, site name, and DEQ status of the non-residential PCs is provided in **Table 1** below.

TABLE 1

Project Corridor Pollution Complaints

Site Name	Location	DEQ Record Review Status	PC Number
Circle K #270 5885	12730 Shoppes Lane	Case Closed	2000-3328
Mobil #16-K7T	12730 Shoppes Lane	Case Closed	1991-0618
Bethlehem Church	4601 West Ox Road	Case Open	1993-1615
Fairfax Cty F&R Acdmy	4600 West Ox Road	Case Closed	1992-0303
EMTA Facility	4620 West Ox Road	Case Closed	1993-0894
Fairfax Repair Shop	4726 West Ox Road	Case Closed	1999-3413
Amoco 858	12218 Lee Jackson Highway	Case Closed	1995-4187
Fair Oaks Government	12300 Lee Jackson Highway	Case Open	1999-3386
Warner Plumbing Co	12716 Lee Highway	Case Closed	1999-3386
Chevron #122222	11854 Sunrise Valley	Case Closed	1989-0175 1989-1074 1993-4026
Commerce Park 1	11860 Sunrise Valley	Case Closed	1994-0379
American Press Inst	11690 Sunrise Valley	Case Closed	1995-4026
Islamic Saudi Academy	11121 Popes Head Road	Case Closed	1999-3330
Exxon #2-8066	5701 Burke Centre Parkway	Case Closed	1992-1781
Crest Cleaners 25	5725 Burke Center Parkway	Case Closed	1995-4200
FAA Tower	6740 Arrington Road	Case Closed	1996-3011

Based on regulatory status, local hydro- geologic features, and/or distance from the project corridor, none of the non-residential LUST sites appear to represent a REC.

5.1.2 USTS

UST – DEQ Registered Petroleum Underground Storage Tank Listing, November 2, 2017 (0.25 mile); this database provides a listing of all registered active and inactive USTs he vicinity of the subject property.

Results: The EDR searches identified thirty (30) mapped underground storage tank (UST) sites within the MSD. The facility number, site name, and location is provided in **Table 2** below.

TABLE 2
Project Corridor UST Sites

Site Name	Location	UST Status	Facility ID
Sunoco 0658 7984	12730 Shoppes Lane	4 active tanks 1 removed from ground	3023814
Atrium at Fair Lakes	12902 Federal System	Closed in ground	3025689
Fair Lakes Office Bldg	12701 Fair Lakes Circle	Removed from ground	3040318
Exxon R/S 24502	13000 Fair Lakes Shopping Ctr	3 Active tanks	30004966
BJs Wholesale Club	13049 Fair Lakes Shopping Ctr	3 Active tanks	3040516
Bethlehem Church	4601 West Ox Road	Removed from ground	3018725
County Fire and Rescue	4600 West Ox Road	Removed from ground	3024145
Fairfax County Police	4604 West Ox Road	1 active tank Removed from ground	3014441
I-66 Transfer Station	4618 West Ox Road	2 Active tanks 2 removed from ground	3005301
West Ox Maintenance	4620 West Ox Road	4 active tanks 5 removed from ground	3005290
Rose James D	12204 Ruffin Road	Permanently out of use	3011335
AAA Recycling	4319 West Ox Road	1 active tank 1 removed from ground 1 permanent out of use	304645
Sunoco 0505 2386	4647 West Ox Road	3 active tanks	3038596
Underground Cable Co	4643 West Ox Road	Removed from ground	3019305
B&W Excavating	4701 West Ox Road	Permanently out of use	3002677
Fairfax Correctional	4800 West Ox Road	Closed in ground	3015979
Costco Gasoline 204	4725 West Ox Road	4 active tanks	3042564
VDOT Residency Shop	4726 West Ox Road	3 active tanks 8 removed from ground	3019520
Amoco Oil Co 858	12218 Lee Jackson Highway	Removed from ground	3003704
Fair Oaks Police	12300 Lee Jackson Highway	2 active tanks 6 removed from ground	3005292
Warner Plumbing Co	12716 Lee Highway	Removed from ground	3003608
Willow Springs Elem	12460 Braddock Road	Permanently out of use	3025925
Mr. Seederburg	11420 Meath Drive	Permanently out of use	3026865
Pargas Inc	11221 Fairfax Station Pkwy	Removed from ground	3000217
Exxon 28066	5701 Burke Centre Pkwy	3 active tanks 4 removed from ground	3009929
Fairview Fire Station	5600 Burke Centre Pkwy	1 active tank 1 removed from ground	3005345
Fairview Elementary	5815 Ox Road	Permanently out of use	3023937
Virginia Concrete	10900 Clara Barton Drive	1 active tank 1 removed from ground	3019487
Line Maintenance Prop	6000 Freds Oak Road	2 active tanks 4 removed from ground	3005298
Motion Development Co	6401 Little Ox Road	5 removed from ground 1 perm out of use	3004709

Based on regulatory status, local hydro- geologic features, and/or distance from the project corridor, none of these UST facilities appear to represent a REC.

5.1.3 SOLID WASTE FACILITIES

Virginia Solid Waste Licensed Facilities, December 5, 2017 (0.5 mile); This database provides a comprehensive listing of all permitted solid waste landfills and processing facilities within the MSD as regulated by the DEQ-Division of Solid Waste.

Results: According to the EDR report, there are two solid waste facilities within the MSD. The I-66 Transfer station is located north of the northern terminus of the subject corridor. This site is a former landfill which has been located here since at least the early 1960's. This facility is no longer an active landfill, and operates as a transfer station.

5.1.4 VRP

VRP – Virginia Voluntary Remediation Program, July 24, 2017 (0.5 mile); this program allows property owners or responsible parties to voluntarily remediate contaminated land if the property qualifies for the program.

Results: According to the EDR report, there are no VRP sites within the MSD.

5.1.5 AST

VA AST – The Above Ground Storage Tank database, November 2, 2017 (0.25 mile); this database provides a listing of all registered active and inactive ASTs he vicinity of the subject property

Results: According to the EDR report, there are four AST sites (3 active and 1 inactive) within the minimum search distance. A 20,000-gallon diesel AST is located at 4618 West Ox Road at the I-66 Transfer Station. This AST was installed in 2013. There are no records of releases associated with any of the identified AST sites. The facility number, site name, and location is provided in **Table 3** below.

TABLE 3

Project Corridor AST Sites

Site Name	Location	UST Status	Facility ID
Northrop Grumman	12900 Federal System	Active 10,000 gallon Diesel	3040570
I-66 Transfer Station	4618 West Ox Road	Active 20,000 gallon Diesel	3005301
West Ox Maintenance	4620 West Ox Road	Active 1,000 gallon motor oil	3005290
VDOT – Fairfax Residency	4726 West Ox Road	Permanently out of use 10,000 gallon	3019520

5.2 Federal databases

5.2.1 EMERGENCY RESPONSE NOTIFICATIONS (ERNS)

ERNS – Emergency Response Notification System, September 18, 2017 (0.5 mile); ERNS is a national computer database system used to store information concerning the sudden and/or accidental release of hazardous substances, including petroleum, into the environment. The ERNS Reporting System contains preliminary information on specific releases, including the spill location, the substance released, and the responsible party.

Results: According to the EDR report, there are seven (7) ERNS sites in the MSD. However, all 7 sites are located well outside the proposed project corridor.

5.2.2 RCRIS GENERATORS (NON TSD)

RCRA – Large and Small Quantity Generators, September 13, 2017 (0.25 mile); The RCRA Generator/Transporter Report contains information pertaining to the Office of Solid Waste and Emergency Response facilities, which generate EPA regulated hazardous waste. Large quantity generators are facilities that generate more than 1,000 kg of hazardous waste per month or meet other applicable requirements of the Resource Conservation and Recovery Act (RCRA). Small quantity generators are facilities that either generate between 100 and 1,000-kg of EPA regulated hazardous waste per month or meet other applicable requirements of the RCRA.

Results: According to the EDR report, there are 12 RCRIS Generators (non TSD) in the MSD, which include eight (8) small quantity generators and four (4) large quantity generators. This sites are listed below in **Table 4**.

TABLE 4
Project RCRA Generators (Non TSD) Facilities

Site Name	Location	Generator Status
CVS Pharmacy #5467	12734 Shoppes Lane	Large Quantity Generator
Target Store T1341	13047 Fair Lakes Sho	Large Quantity Generator
Costco Wholesale #2	4725 West Ox Road	Large Quantity Generator
CVS Pharmacy #1378	5711 Burke Center Parkway	Large Quantity Generator
Fair Lakes Cleaners	12707 Shoppes Lane	Small Quantity Generator
Mobil Oil Corp SS#K7	12730 Shoppes Lane	Small Quantity Generator
Walmart Supercenter	13059 Fair Lakes Parkway	Small Quantity Generator
AAA Maintenance Inc.	4619 West Ox Road	Small Quantity Generator
West Ox Garage	4960 Alliance Drive	Small Quantity Generator
Home Depot USA, Inc.	12275 Price Club Place	Small Quantity Generator
My Home Shop	12501 Lee Highway	Small Quantity Generator
Burke Center Exxon	5701 Burke Center Parkway	Small Quantity Generator

5.2.3 RCRA TSD FACILITIES

RCRA TSD – Resource Conservation and Recovery Act – Treatment, Storage, and Disposal Facilities, September 13, 2017 (0.5 mile); The RCRA TSD Report contains information pertaining to facilities that either treat, store, or dispose of EPA regulated hazardous waste.

Results: The EDR Report listed no RCRIS TSD sites within the MSD.

5.2.4 NPL

NPL – National Priorities List, May 30, 2017 (1.0 mile); The NPL Report, also known as the Superfund List, is an EPA listing of uncontrolled or abandoned hazardous waste sites. The list is primarily based upon a score, which the site receives from the EPA's Hazardous Ranking System. These sites are targeted for possible long-term remedial action under the Superfund Act of 1980.

Results: The EDR Report listed no NPL sites along the project corridor.

5.2.5 CERCLIS AND CERCLIS NFRAP

CERCLIS – Comprehensive Environmental Response, Compensation and Liability Information System, November 7, 2016 (0.5 mile); The CERCLIS database is a comprehensive listing of known or suspected, uncontrolled or abandoned hazardous waste sites. These sites have either been investigated or are currently under investigation by the U.S. EPA for the release, or threatened release of hazardous substances. Once a site is placed in CERCLIS, it may be subjected to several levels of review and evaluation, and ultimately placed on the National Priorities List. As of February 1995, CERCLIS sites designated “No Further Remedial Action Planned” (NFRAP) have been removed from the CERCLIS database.

Results: The EDR Report listed no CERCLIS and no CERCLIS NFRAP sites within the MSD.

6 Evaluation

This PSA was performed to identify RECs for project corridor as part of the proposed construction of additional travel lanes on the approximate 8-mile section of Route 286 (Fairfax County Parkway) in Fairfax, (Fairfax County) Virginia. Site inspections, records reviews, and historical records reviews were completed to evaluate the potential for environmental concerns that may impact the project.

- Multiple PC numbers associated with LUST sites were identified in the EDR database and through review of requested VA DEQ files. Most of these sites have closed cases and none of these sites are located on properties adjacent to the project corridor.
- A review of historical sources indicated that the project corridor has remained largely unchanged since the early 2000’s, and has primarily been developed with single-family residential structures and agricultural/undeveloped uses.

7 Conclusions

This PSA was performed to identify RECs for the proposed construction of additional travel lanes on the approximate 8-mile section of Route 286 (Fairfax County Parkway) in Fairfax, (Fairfax County) Virginia. Site inspections, records reviews, and historical aerial photography reviews were completed to evaluate the potential for environmental concerns.

No RECs were identified in connection with the subject corridor.

8 Considerations

Based on the PSA findings and conclusions, it appears that VDOT can use normal R/W acquisition and road construction planning for this project. Once final design plans are available, they should be compared to this report, to make sure the conclusions in this report are still accurate.

9 Limitations

The investigation upon which this report is based represents an appropriate level of inquiry to satisfy the requirements as specified by VDOT and included in our work plan/opinion of probable cost. Performance of this study is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs, and this practice recognizes reasonable limits of time and cost. It should be understood that the findings

contained herein represent the current regulatory and operational status of the properties as of the date of the EDR Radius Map Report dated February 8, 2018, and the site inspection on February 13, 2018. Future activities either adjacent to or on the subject properties could result in environmental conditions that do not exist today. This report is intended only for use by VDOT and its agents for the sole purpose of verifying the environmental status of the subject properties. The conclusions of this report are based on the available data and proposed project boundaries dated (June 20, 2013). Should road plans change such as different proposed R/W limits or modified construction details, then the conclusions of this report should be re-evaluated.

Appendices Available for Review upon Request
