

Appendix A

MOA between U.S. Army and VDOT for Route 1 Improvements



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR
9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

IMNE-BEL-ZA

August 18, 2010

Agreement No. _____

Memorandum of Agreement

between the

Department of the Army

and the

Commonwealth of Virginia
Department of Transportation

for

Construction of Roadway Improvements at the Intersections of Pohick Road
and Barta Road, with Richmond Highway/Route 1

and

Construction of a New Five-Lane Bridge on Gunston Road
Over Richmond Highway/Route 1

and

Construction of the Route 1 Widening Project

THIS MEMORANDUM OF AGREEMENT (Agreement) is made as of the date of the final signature below by and between the following parties: the United States of America, acting by and through the Department of the Army (Army), and the Commonwealth of Virginia (Commonwealth), acting by and through the Virginia Department of Transportation (VDOT).

RECITALS

WHEREAS, pursuant to the Base Closure and Realignment Act of 1990, Public Law 101-510, as amended, and certain approved recommendations of the BRAC Commission, approximately 19,300 military and civilian personnel will relocate to Fort Belvoir on or before September 15, 2011, including 8,500 to Fort Belvoir North Area, 6,400 to Mark Center, 1,000 to Rivanna Station, and 3,400 to Main Post who would use the Route 1 Corridor; and

WHEREAS, pursuant to authority granted in Public Law PL 101-510 the Army proposes to construct roadway improvements at the intersections of Pohick Road and Belvoir Road with Richmond Highway/Route 1 (Route 1) on Fort Belvoir, as part of Phase 1 of the Roads, Utilities and Security Improvements project needed to support implementation of the BRAC 2005 approved recommendations for realignment of Fort Belvoir (Phase 1 Improvements); and

“LEADERS IN EXCELLENCE”

WHEREAS, pursuant to authority granted in Public Law 101-510 as amended, the Army proposes to construct a new five-lane bridge on Gunston Road over Route 1 to replace the existing two-lane bridge on Gunston Road on Fort Belvoir, as part of Phase 2 of the Roads, Utilities and Security Improvements project needed to support implementation of the BRAC 2005 approved recommendations for realignment of Fort Belvoir (Phase 2 Improvements); and

WHEREAS, the United States, through the Secretary of the Army, has granted an easement, DACA-31-DA-49-80-ENG-4381, to the Commonwealth of Virginia for the construction, operation and maintenance of a public road known as Richmond Highway, US Route 1 (Route 1) over, across, in and upon lands of the United States between Fairfax County Parkway and Woodlawn Road, being a portion of Fort Belvoir, Virginia; and

WHEREAS, the Army has granted eight supplemental easements (collectively, easements) for additional public roadway improvements since the original easement was granted; and

WHEREAS, Route 1 is currently a four-lane roadway within the existing 80' easement, DACA-31-DA-49-80-ENG-4381 and supplemental easements thereto; and

WHEREAS, the Fairfax County Comprehensive Plan includes a plan for widening Route 1 and provisions for a transit system through Fort Belvoir and associated improvements (Route 1 Widening Project); and

WHEREAS, VDOT and Fairfax County propose that Route 1 be widened between the Fairfax County Parkway and Mount Vernon Memorial Highway/Mulligan Road, and Route 1 Widening Project is currently under design by Fairfax County; and

WHEREAS, VDOT is the authority responsible for approval and permitting of the construction of said widening, and any reference to VDOT performing design herein is intended to include other agencies or consultants involved in the design or design-build of the project.

WHEREAS, the parties, in a meeting on May 20, 2009, agreed to a base typical section for the widening of Route 1 in conjunction with the Phase 2 Improvements that included revisions to the proposed Fairfax County Comprehensive Plan of a 176 foot right-of-way, to a maximum easement width of 148 feet over Route 1 (per attached Appendix B); and

WHEREAS, The parties agree the 148' easement may be expanded upon agreement by the parties, once detailed design plans are developed for the Route 1 widening, to provide for utility relocation, storm water management facilities, turn lanes, traffic signalization, temporary construction, slopes, replacement railroad/transit bridge over U.S. 1, maintenance of traffic during construction and other ancillary improvements; and

WHEREAS, VDOT will submit project plans developed by VDOT or others to Fort Belvoir for review and comment at interim design stages (e.g. 30%, 60%, 90%) to facilitate cooperative development of design and easement requirements; and

WHEREAS, an easement that includes the Route 1 Widening Project may not be granted to VDOT until environmental studies, NEPA analysis, and National Historic Preservation Act (NHPA) analysis are completed for the proposed action, which requires design plans from Fairfax County, the Federal Highway Administration (FHWA) or VDOT; and

WHEREAS, environmental studies, NEPA analysis, and NHPA analysis will be completed by VDOT or FHWA as the principal agency with Fort Belvoir as a cooperating agency; and

WHEREAS, the design for Route 1 Widening Project is currently under development and NEPA analysis has not yet been initiated; and

WHEREAS, the parties have agreed that it is preferable to vacate a portion of the existing easements in favor of a single easement that will encompass a portion of the existing easement, the proposed Phase 1 and Phase 2 Improvements, and Route 1 Widening Project improvements; and

WHEREAS, construction of Phase 1 and Phase 2 Improvements by the Army requires that VDOT issue permits for construction of the Phase 1 and Phase 2 Improvements; and

WHEREAS, VDOT cannot issue permits on land not owned or controlled by VDOT by fee simple ownership or easement, or addressed in a Memorandum of Agreement (Agreement); and

WHEREAS, the Parties' continued participation in this Agreement is contingent on completion of the Route 1 Widening Project, and the Parties will continue to participate in this Agreement unless and until the County and VDOT decline to construct Route 1 Widening Project for whatever reason, in which case easements for the Phase 1 and Phase 2 improvements will be granted by separate agreement; and

WHEREAS, Army reserves the right to maintain existing access to Army property in construction areas covered in the easements for the Route 1 Widening Project; and

WHEREAS, the Parties agree to cooperate to ensure the timely consideration of VDOT's request for an easement through Fort Belvoir required for construction, operation and maintenance of the aforesaid Route 1 Widening Project, whether existing or proposed, and timely review of plans for the Route 1 Widening Project; and

WHEREAS, the Parties agree to cooperate to ensure timely consideration of the Army's requests for land use permits and timely review of plans for the Phase 1 and Phase 2 Improvements projects to ensure completion schedules will not be impacted;

WHEREAS, the Army is authorized to enter into this Agreement pursuant to the authority contained in 10 U.S.C. Section 3001, et seq., and is the agency with administrative jurisdiction, custody, and control over Fort Belvoir; and

WHEREAS, the Commonwealth Transportation Commissioner, acting pursuant to the decision of the Commonwealth Transportation Board, is authorized to enter into this Agreement pursuant to the authority contained in Sections 33.1-12 and 33.1-13 of the Code of Virginia, 1950 as amended, and VDOT is the state agency with administrative oversight, maintenance and jurisdictional authority for Richmond Highway, Route 1,

NOW, THEREFORE, for and in consideration of the mutual covenants and agreements contained herein, the Parties agree as follows:

ARTICLE I. SCOPE OF WORK

A. The Army agrees:

1. At the request of VDOT, to grant a Base Easement to VDOT for the construction, operation and maintenance of Route 1, 148 feet in width, to accommodate both the Route 1 Widening project, consistent with the typical section for the Route 1 Widening project agreed to by the Parties at the March 20, 2009 meeting and attached hereto as Appendix A, and the Phase 1 and Phase 2 improvements consistent with the approved plans for said improvements (hereinafter referred to as the "Base Easement");

2. At the request of VDOT, to grant easements in addition to the Base Easement as mutually agreed to by the parties to accommodate utility relocation, storm water management facilities, turn lanes, traffic signalization, temporary construction, slopes, replacement railroad/transit bridge over U.S. 1, maintenance of traffic during construction and other ancillary improvements upon a demonstration by VDOT that said improvements cannot reasonably, from a financial standpoint, or practicably be accommodated or maintained within the 148-foot easement;

3. To identify known archaeological sites within or adjacent to the Base Easement and to provide available information to facilitate completion of both a NHPA and a NEPA analysis by the Route 1 Widening project;

4. To negotiate mutually acceptable locations and types of storm water management facilities which would minimize surface impacts, reduce right of way impacts, and minimize construction and maintenance impacts and costs;

5. To negotiate with Woodlawn Baptist Church to provide access to Church property through Fort Belvoir property and to evaluate relocation of the ballfield as necessary to provide such access to Church property;

6. To accept standard turn lanes in lieu of ramps to Belvoir Road, as may be necessary to accommodate moving the proposed alignment to the south to avoid encroachment on Fremont Field (formerly the P-2 fields);

7. To vacate a portion of the existing easements in favor of a single easement that will encompass a portion of the existing easements, the proposed Phase 1 and Phase 2 Improvements, and the Route 1 Widening Project.

8. To request authorization from VDOT for use of airspace over the easements granted to VDOT pursuant to this Agreement, whether such use is by the Army or any other public or private entity, only to the extent that such use will not interfere with the construction, operation or maintenance of the transportation facilities, right of way, and improvements contemplated under this Agreement or anticipated future transportation needs, and otherwise complies with 23 CFR Part 710 Subpart D and all other FHWA, Federal Aviation Administration (FAA), and Davison Army Airfield (DAA) requirements.

9. Upon request by VDOT and/or FHWA, to provide copies of any environmental studies, investigations, aerial photographs, or other information in its possession which pertain to the property to be outgranted by easement (easement property) to VDOT and/or FHWA for the design, construction,

operation and maintenance of the Route 1 Widening Project. Upon request, to grant access to the easement property necessary for VDOT's or FHWA's performance of environmental due diligence for the Route 1 Widening Project. Upon notification by VDOT and/or FHWA of the presence of munitions and explosives of concern (MEC), petroleum or hazardous substances on the easement property, Army will perform environmental response action as required under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and other applicable Federal, state and local laws and regulations.

B. VDOT agrees:

1. To act in good faith to minimize, to the extent practicable as mutually agreed to by the parties, the amount of land required in addition to the Base Easement, for utility relocation, storm water management facilities, turn lanes, traffic signalization, temporary construction, slopes, replacement railroad/transit bridge over U.S. 1, maintenance of traffic during construction, and other ancillary improvements

2. To plan for construction sequencing in order to minimize the need for easements outside the Base Easement.

3. To negotiate mutually acceptable locations and types of storm water management facilities which would minimize surface impacts, reduce right of way impacts, and minimize construction and maintenance costs and impacts;

4. To the extent practicable as determined by VDOT, negotiate with utility providers for authorization to relocate all overhead utility relocations to one side of the roadway alignment;

5. To negotiate improvements within the easement, including signage, lighting, landscaping and fencing, consistent with Army, Fort Belvoir, and VDOT design standards, the ownership and maintenance of which will be determined prior to VDOT approval of the final design plans for Route 1;

6. To the extent practicable as mutually agreed to by the parties, consider the use of retaining walls to avoid impacts on Army property or facilities;

7. To the extent practicable as mutually agreed to by the parties, design the Route 1 Widening Project so as to minimize or avoid impacts to identified environmentally sensitive areas, Army community resources, and historic and archaeological resources, on or within Fort Belvoir,

8. To design future replacement of the existing railroad transit corridor bridge with a bridge consistent with the Real Property Master Plan Digest, Fort Belvoir Virginia, dated December 2009 which requires "Conversion of the abandoned railway into a transit corridor - either as BRT or light-rail system to connect to Franconia-Springfield Metrorail Station and VRE stations." At the time of design, VDOT will coordinate with Fort Belvoir to determine if more recent Master Plan information is available, and shall use the latest Fort Belvoir-adopted plan to design the bridge.

9. To invite the National Trust for Historic Preservation to represent Woodlawn National Historic Landmark as a stakeholder in the design process for the Route 1 Widening Project.

10. To pay with future Route 1 Widening project funds the administrative costs of vacation of a portion of the existing easements and granting of a single easement that will encompass a portion of the existing easements, the proposed Phase 1 and Phase 2 Improvements, and the Route 1 Widening Project. This provision shall not relieve the Army of its responsibility to fund the administrative costs of granting and recording easements in conjunction with the proposed Phase 1 and Phase 2 Improvements prior to granting an easement for the future widening of Route 1.

11. To grant land use permits in a timely manner, as appropriate to ensure completion of construction by the Army of Phase 1 and Phase 2 Improvements on schedule provided said permit applications and permits meet VDOT requirements.

ARTICLE II. TERM OF AGREEMENT

This Agreement will terminate upon any of the following: (1) Upon completion of the Phase 1 and Phase 2 improvements and a decision by VDOT not to construct the future Route 1 Widening improvements for any reason, in which case individual easements for Phase 1 and Phase 2 improvements will be granted by separate agreement, or (2) a mutual decision to terminate evidenced by a writing signed by both parties.

ARTICLE III. KEY OFFICIALS AND CONTACTS

Designated points of contact for the coordination of this project are:

- A. For the Army: Bill L. Sanders, Director of Public Works
9430 Jackson Loop, Suite 107
Fort Belvoir, Virginia 22060-6107
- B. For VDOT: Tom Fahrney, Commonwealth BRAC Coordinator
14685 Avion Parkway
Chantilly, Virginia 20151

ARTICLE IV. GENERAL TERMS AND CONDITIONS

A. This Agreement contains the entire Agreement and understanding of the Parties, and may not be amended, modified, or discharged nor may any of its terms be waived except by an instrument in writing signed by the Parties.

B. The failure of a Party to insist in any instance upon strict performance of any of the terms, conditions, or covenants contained, referenced, or incorporated into this Agreement shall not be construed as a waiver or a relinquishment of the Party's rights to the future performance of such terms, conditions, or covenants.

C. If any term or provision of this Agreement or the application thereof to any person or circumstance shall, to any extent, be invalid or unenforceable, the remainder of this Agreement, or the application of such term or provision to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected thereby, and each such term and

provision of the Agreement shall be valid and be enforced to the fullest extent permitted by applicable law.

D. This Agreement has been drafted jointly by the Parties hereto. As a result, the language used in this Agreement shall be deemed to be the language chosen by the Parties to express their mutual intent and no rule of strict construction shall be applied against either Party.

E. Nothing in this Agreement shall be construed as limiting or affecting the legal authorities of the parties, or as requiring the Parties to perform beyond their respective authorities. Nothing in this Agreement shall be deemed to bind either Party to expend funds in excess of available appropriations.

F. This Agreement is assignable; however, no transfer or assignment of this Agreement, or any part thereof or interest therein, directly or indirectly, voluntarily or involuntarily, shall be made unless such transfer or assignment is first approved in writing by the Parties.

G. The Parties shall not discriminate in the selection of employees or participants for any employment or other activities undertaken pursuant to this Agreement on the grounds of race, creed, color, sex, or national origin, and shall observe all of the provisions of Titles VI and VII of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. Section 2000(d) *et seq.*). The Parties shall take positive action to ensure that all applicants for employment or participation in any activities pursuant to this Agreement shall be employed or involved without regard to race, creed, color, sex, or national origin.

H. No member of, or Delegate to, or Resident Commissioner in Congress shall be admitted to any share or part of this Agreement, or to any benefits that may arise therefrom, unless the share or part or benefit is for the general benefit of a corporation or company.

I. The Parties will abide by the provisions of 18 U.S.C. Section 1913 (Lobbying with Appropriated Monies).

J. Contracts entered into by any Federal agency pursuant to this Agreement are subject to all laws governing federal procurement and to all regulations and rules promulgated thereunder, whether now in force or hereafter enacted or promulgated, except as specified in this Agreement.

K. The Parties accept full responsibility for any property damage, injury, or death caused by the acts or omissions of their respective employees, acting within the scope of their employment, or their contractors' scope of work, to the extent allowed by law. All claims shall be processed pursuant to applicable governing law.

L. Nothing in this Agreement shall be construed as in any way impairing the general powers of either of the Parties of supervision, regulation, and control of its property under such applicable laws, regulations, and rules.

ARTICLE V: FUNDING LIMITATIONS

The obligations of the Army to expend, pay, or reimburse any funds under this Agreement are subject to the availability of appropriated funds, and nothing

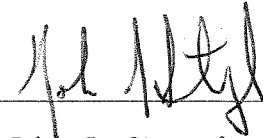
in this Agreement shall be interpreted to require obligations or payments by the Army in violation of the Antideficiency Act, 31 U.S.C. Section 1341, or other applicable fiscal laws.

IN WITNESS WHEREOF, the Parties have executed this Agreement, as verified by their signature below.

UNITED STATES OF AMERICA
DEPARTMENT OF THE ARMY

COMMONWEALTH OF VIRGINIA

By: _____

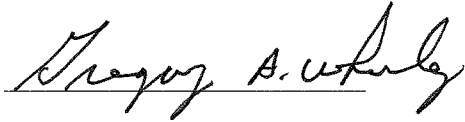


John J. Strycula
Colonel, US Army
Commanding

Date: _____

26 Aug 2010

By: _____



Date: _____

7/20/10

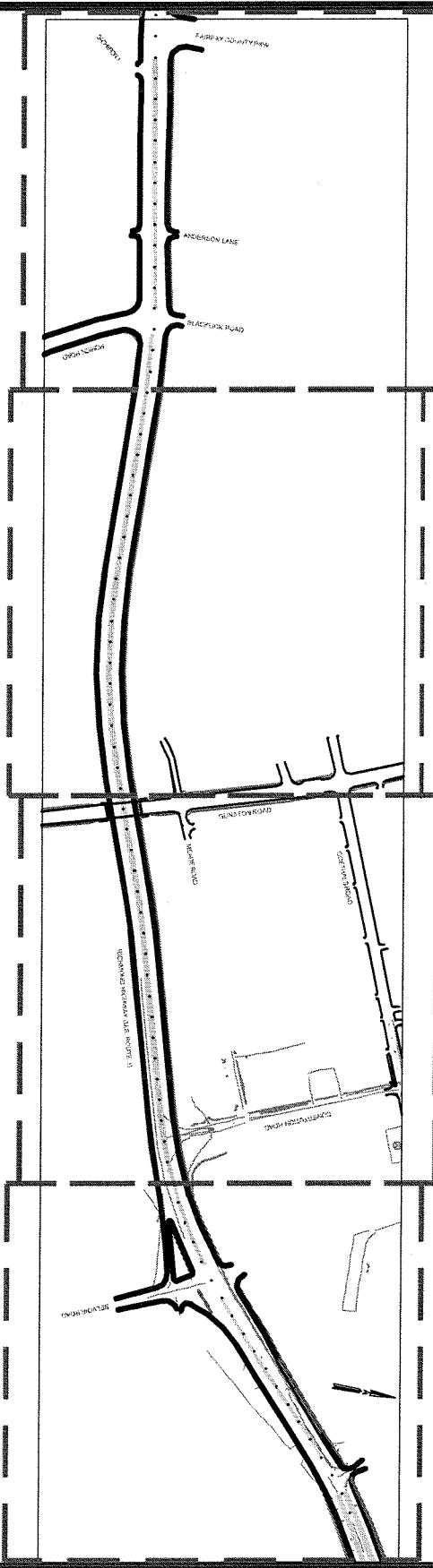
**RICHMOND HIGHWAY (U.S. ROUTE 1)
 FUTURE 8 LANES WITH 18' MEDIANS-SHOULDER SECTION
 (ROW WIDTH: 148 FEET)**


A-1

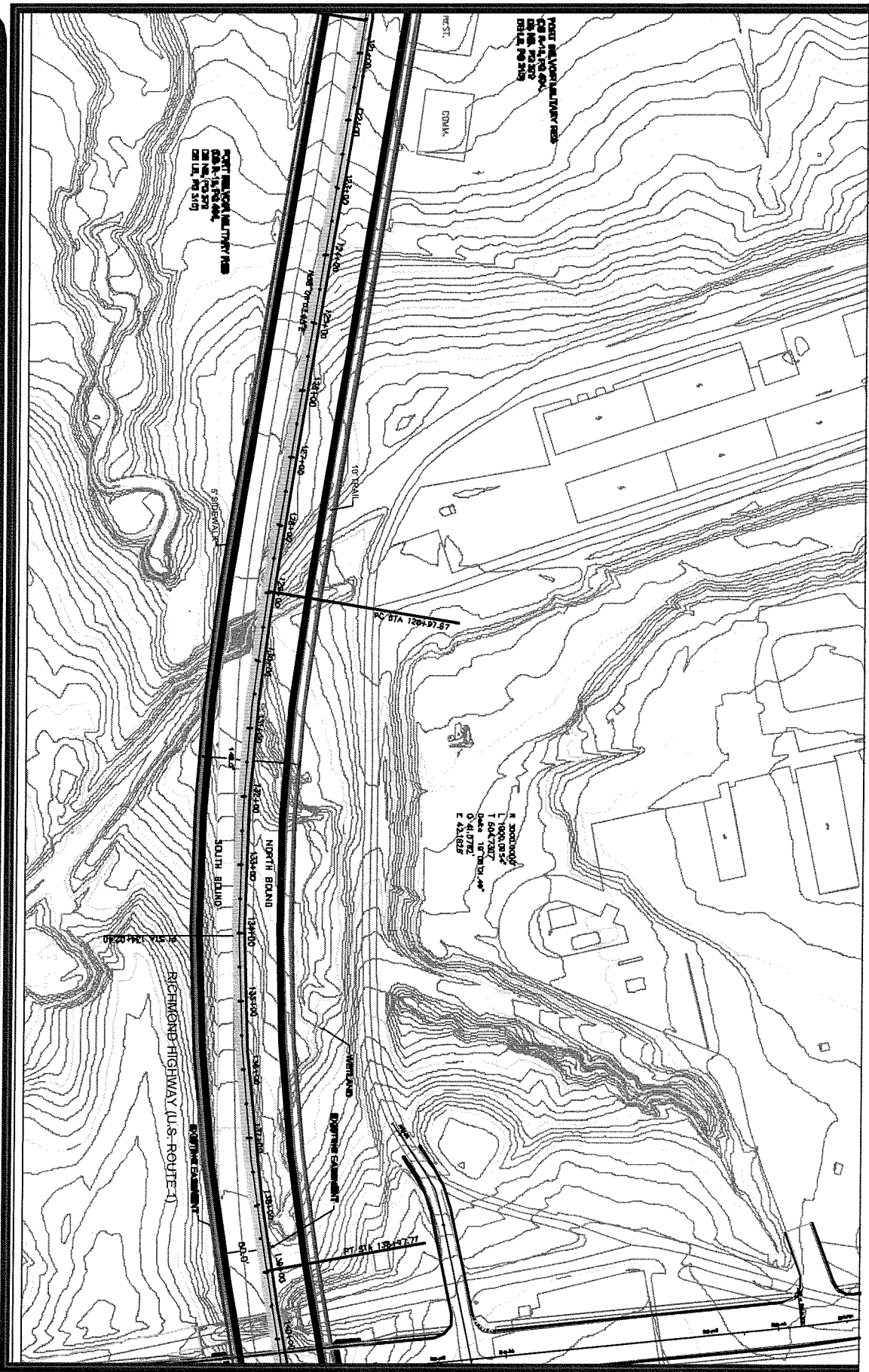
A-2

A-3

A-4



REVISION:	DESIGNED BY:	DATE: 1/11/2010	EXHIBIT A	 1100 NORTH GLEBE ROAD SUITE 500 ARLINGTON, VIRGINIA 22201 TEL (571) 218-1000 FAX (571) 218-1000
	DRAWN BY:	DRAWING No.		
	CHECKED BY:	SCALE: 1" = 500'		



REVISION:

DESIGNED BY:

DATE: 1/11/2010

DRAWN BY:

DRAWING No.

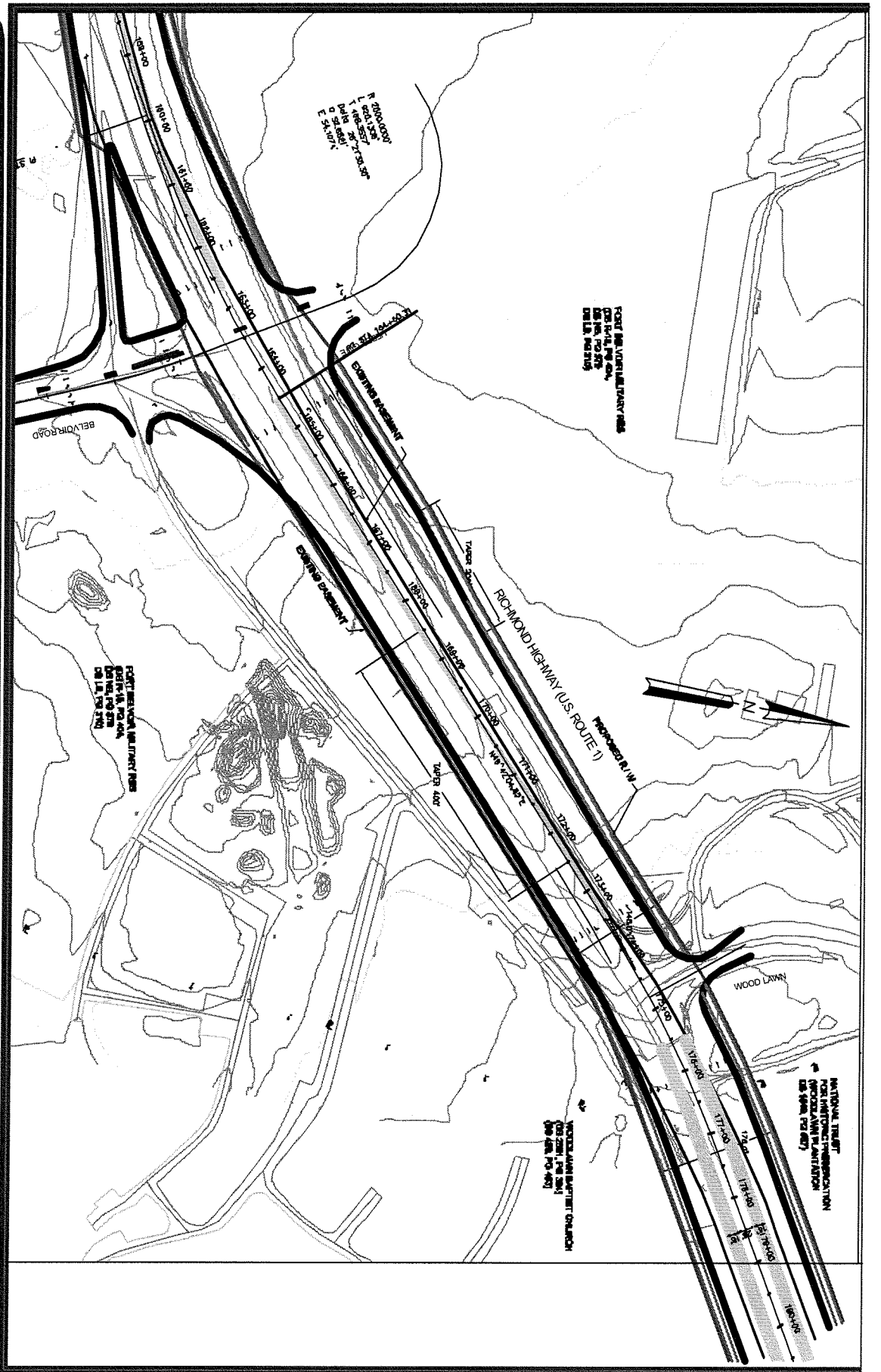
CHECKED BY:

SCALE: 1" = 200'

A-2



1100 NORTH GLEBE ROAD SUITE 500
 ARLINGTON, VIRGINIA 22201
 TEL (571) 218-1800
 FAX (571) 218-1800



REVISION:

DESIGNED BY:

DATE: 1/11/2010

DRAWN BY:

DRAWING NO.

CHECKED BY:

SCALE: 1" = 200'

A-4



1100 NORTH CLEBE ROAD SUITE 500
 ARLINGTON, VIRGINIA 22201
 TEL (571) 218-1000
 FAX (571) 218-1800

Appendix B

Options for Stormwater Management Pond near Mt Vernon Memorial Hwy

LEGEND:

-  Proposed Road Design
-  Proposed Landscape Median
-  Proposed Bridge
-  Proposed 148' ROW, Wider at Turn Lanes
-  Proposed Construction Limits
-  Proposed Construction Easements
-  Existing Streams, Creeks, Waterways
-  Existing RPA
-  Wildlife Refuge

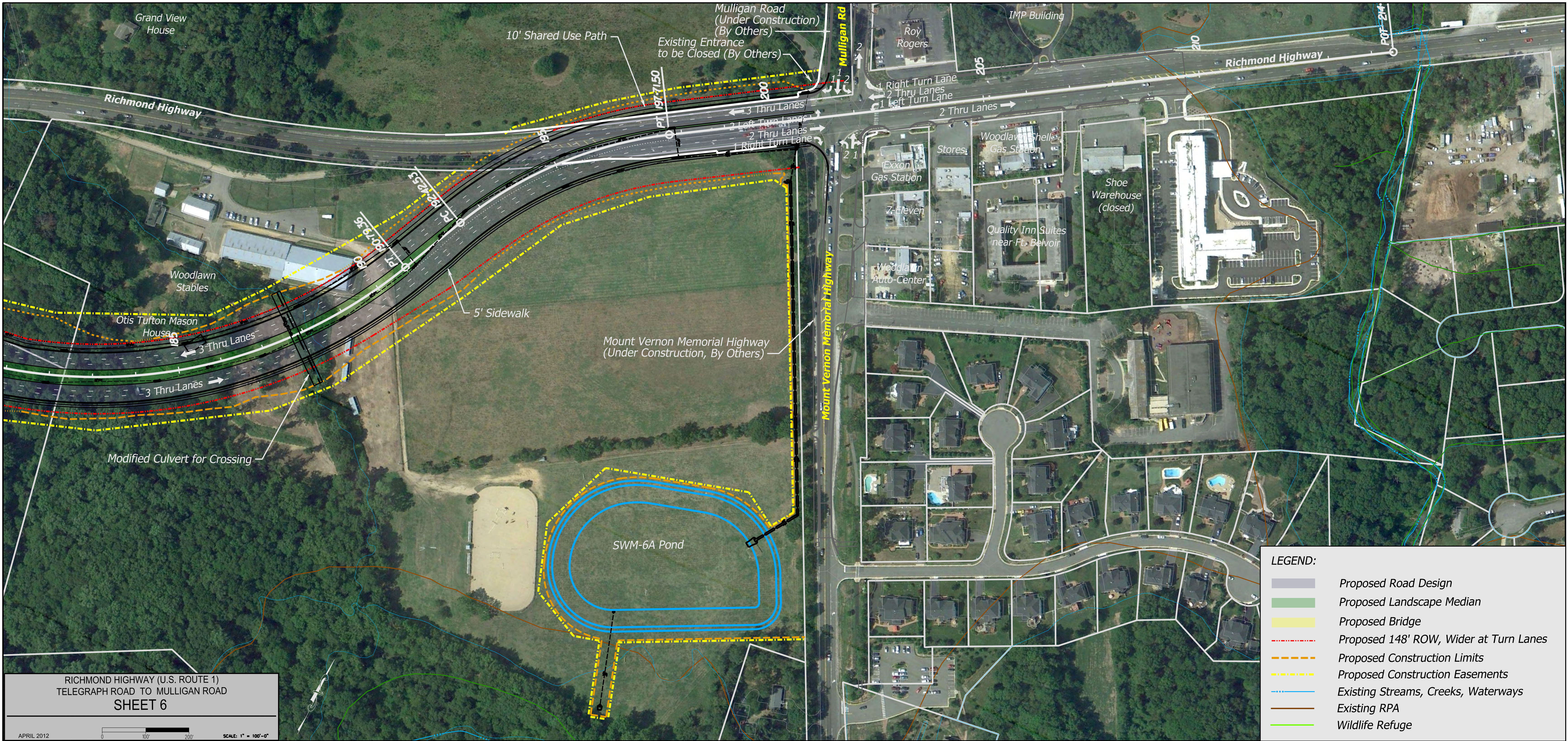


RICHMOND HIGHWAY (U.S. ROUTE 1)
TELEGRAPH ROAD TO MULLIGAN ROAD
SHEET 6

MARCH 2012



SCALE: 1" = 100'-0"



RICHMOND HIGHWAY (U.S. ROUTE 1)
 TELEGRAPH ROAD TO MULLIGAN ROAD
SHEET 6

APRIL 2012

0 100' 200'

SCALE: 1" = 100'-0"

- LEGEND:**
- Proposed Road Design
 - Proposed Landscape Median
 - Proposed Bridge
 - Proposed 148' ROW, Wider at Turn Lanes
 - Proposed Construction Limits
 - Proposed Construction Easements
 - Existing Streams, Creeks, Waterways
 - Existing RPA
 - Wildlife Refuge

Appendix C
Section 4(f) Evaluation

DRAFT SECTION 4(f) EVALUATION
Route 1 Improvements at Fort Belvoir
Fairfax County
From: Telegraph Road (Route 611)
To: Mount Vernon Memorial Highway (Route 235)
U.S. Department of Transportation
Federal Highway Administration
Eastern Federal Lands Highway Division

June 1, 2012

Introduction

This Section 4(f) Evaluation by the Federal Highway Administration (FHWA) addresses the application of Section 4(f) of the U.S. Department of Transportation Act of 1966, as amended, to proposed improvements to U.S. Route 1 through Fort Belvoir. Section 4(f) refers to Section 4(f) of the U.S. Department of Transportation Act of 1966, as amended, and as codified at Title 49, United States Code, Section 303, and at Title 23, United States Code, Section 138. Specifically, Section 4(f) states that the Secretary of Transportation (as delegated to FHWA under Title 49, Code of Federal Regulations, Section 1.48(b)(1)) may approve the use of publicly owned land of a publicly owned park, recreation area, wildlife and waterfowl refuge of national, state, or local significance, or land of a historic site¹ of national, state, or local significance only if a determination is made that:

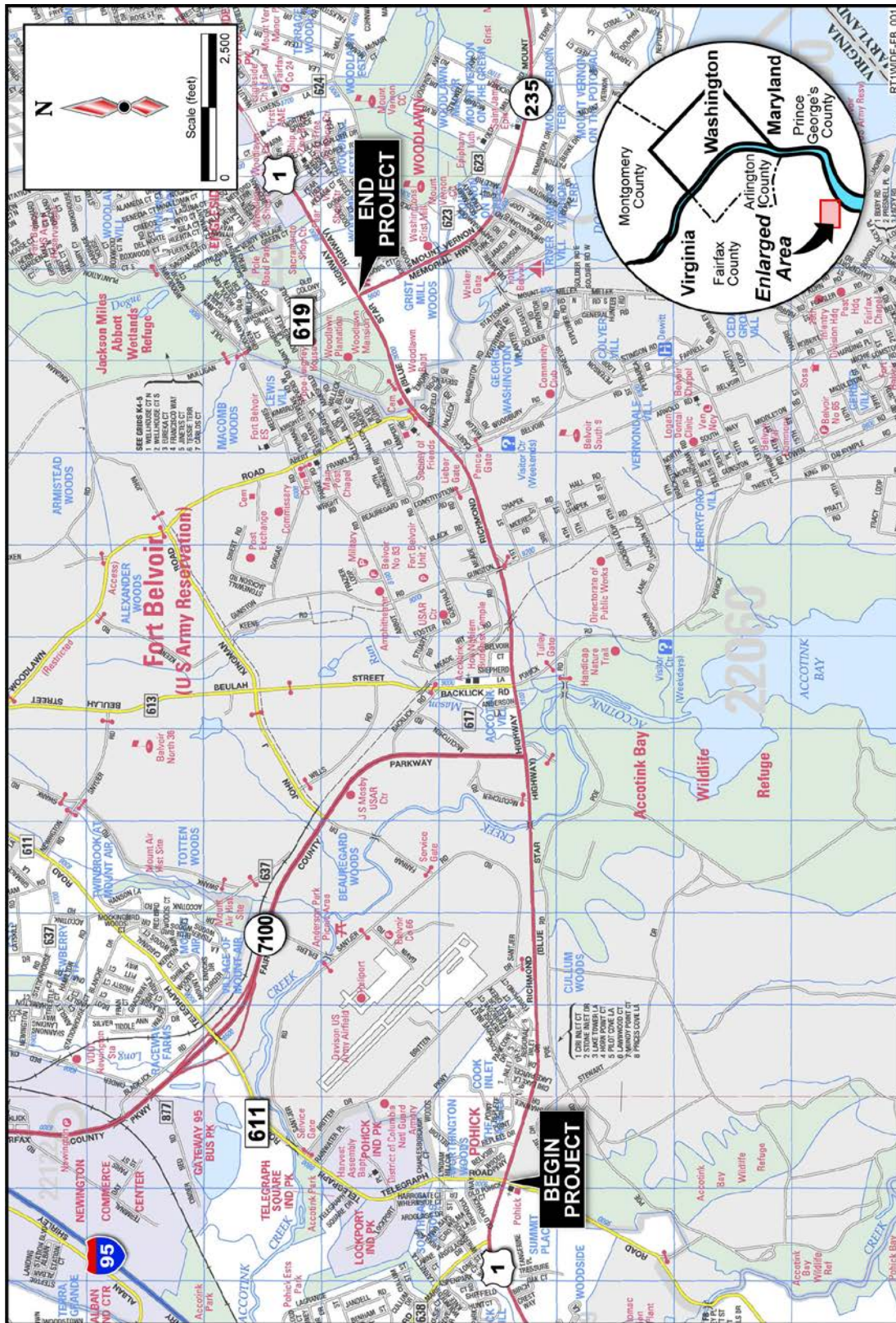
- a) There is no feasible and prudent alternative to the use of the land from the property; and
- b) The action includes all possible planning to minimize harm to the property resulting from such use.

Further regulatory guidance for actions under Section 4(f) appears at Title 23, Code of Federal Regulations, Section 774.

I. Description of the Proposed Action

FHWA's Eastern Federal Lands Highway Division, in cooperation with Fairfax County, U.S. Army Garrison Fort Belvoir, and the Virginia Department of Transportation (VDOT), is conducting studies to address deficiencies in the 3.4-mile-long section of U.S. Route 1 (Route 1) between Telegraph Road (Route 611) and Mount Vernon Memorial Highway (Route 235) in Fairfax County, Virginia. **Figure 1** shows the location of the proposed project.

¹ "Historic site" means "...any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register [of Historic Places]." 23 CFR 774.17. This definition is identical to the definition of "historic property," as defined at 36 CFR 800.16(l)(1) in the Advisory Council on Historic Preservation's regulations implementing the National Historic Preservation Act (16 U.S.C. 470). Section 4(f) does not apply to archaeological sites on or eligible for inclusion in the National Register of Historic Places if FHWA "concludes that the archeological resource is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place." 23 CFR 774.13(b)(1).



Source: ADC Map

Figure 1. Project Location

This section summarizes the Purpose and Need, both of which are described in more detail in Section 1 of the Environmental Assessment. Additional information regarding the alternatives can be found in Section 2 of the Environmental Assessment.

I.A. Project Purpose and Need

The purpose of the project is to expand roadway capacity to accommodate travel demand, facilitate access to medical and other facilities on Fort Belvoir, implement facilities for pedestrian and bicycle travel, and provide space for future transit services pursuant to Fairfax County's Comprehensive Plan.

Route 1 serves as an integral transportation facility in northern Virginia. In the study area, Route 1 provides access to Fort Belvoir, residential and commercial developments, and numerous intersecting roads. This segment of Route 1, from Telegraph Road to Mount Vernon Memorial Highway, is unable to accommodate current and forecasted traffic demand due to inadequate capacity. Physical and geometric deficiencies of the existing roadway are also present. The existing geometry of the road is deficient due to narrow lanes and short turn lanes. The insufficient pedestrian and bicycle access and lack of shoulders also create safety concerns.

Route 1 provides direct access to Fort Belvoir via Pohick Road (Tulley Gate) and Belvoir Road (Pence Gate). Commercial (Accotink Village) and residential developments (Accotink Village, Worthington Woods, The Fairfax, Inlet Cove), the Accotink Bay Wildlife Refuge, Woodlawn Baptist Church, Woodlawn Plantation/Pope-Leighey House, and Woodlawn Stables also are accessed from Route 1 within the study area.

Route 1 provides indirect access via intersecting roads to other developments and roadways in the area as well. Route 1 is the principal north-south route for local traffic in eastern Fairfax County for shopping and other general-purpose trips, and it serves as a major commuter route and an alternate route for nearby I-95. Existing Route 1 within the project limits is a four-lane undivided highway with a posted speed limit of 45 to 50 miles per hour (mph).

Given that Route 1 is a north-south commuter route serving through trips and is the gateway to Fort Belvoir, congestion is prevalent within this section of Route 1 during the weekday peak periods and oftentimes during other times of the day as well, primarily between the Fairfax County Parkway and Belvoir Road. Other leading deficiencies include lack of pedestrian/bicycle access and crosswalks at intersections.

Daily travel demand on Route 1 is expected to increase by the year 2040 along with increasing population and economic activity in the corridor. The existing capacity of Route 1 will continue to be inadequate to serve the expected demand if no action is taken.

While the Environmental Assessment for proposed improvements to meet these needs was underway, a proposal was submitted by Fairfax County to the U.S. Office of Economic Adjustment (OEA) within the Department of Defense to receive award funds that are being granted by OEA to improve patient access to military medical facilities constructed as a result of the 2005 BRAC realignments. Submitted in November 2011, the proposal was selected to receive \$180 million to address congestions, improve access to the recently opened Belvoir Community Hospital, and to accommodate the increase in traffic resulted from BRAC-related growth. The grant's conditions are consistent with and support the project's purpose and need.

I.B Alternatives

a) **Alternative A, No-Build Alternative:** Under the No-Build Alternative, Route 1 would remain in its existing configuration (i.e., four lanes undivided). Regular maintenance would be performed to preserve the structural integrity of the pavement and the existing bridges. It is assumed that only other transportation projects currently listed in the Constrained Long Range Plan for construction would be in place by the design year.

b) **Alternative B, Build Alternative:** Alternative B would entail reconstructing Route 1 to provide six through travel lanes between Telegraph Road and Mount Vernon Memorial Highway. All intersections with other streets would remain at-grade and appropriate turn lanes would be provided. A section of the alignment at the east end of the project would be shifted southward to new location in the vicinity of the Woodlawn Historic District.

Attachment 2 shows preliminary design plans for this alternative. In the northbound direction, from south to north, the conceptual design plans call for:

- Modifying the northbound approach to Telegraph Road to include a third left-turn lane. The roadway would be widened to the north, and the existing Route 1 curb-line that abuts the historic Pohick Church property would remain unchanged.
- Constructing improvements to Telegraph Road to accommodate the turning movements.
- Constructing three lanes from Telegraph Road to Cook Inlet Drive, with a left-turn lane at that intersection. Note that northbound access to Belvoir Woods Parkway and Inlet Cove Drive would be prohibited, as it is today.
- Constructing three lanes from Cook Inlet Drive to Fairfax County Parkway, with two left-turn lanes at Fairfax County Parkway.
- Constructing three lanes from Fairfax County Parkway to Pohick/Backlick Roads, with a left-turn lane and two right-turn lanes at the Pohick/Backlick intersection (full length auxiliary lanes from Fairfax County Parkway to Pohick Road).
- Constructing three lanes from Pohick Road to Belvoir Road, with two left-turn lanes (to the new Lieber Gate ACP) and one right-turn lane at the Belvoir Road intersection.
- Constructing three lanes from Belvoir Road to Woodlawn Road along the Southern Bypass Alignment, with a left-turn lane at the Woodlawn Road intersection (existing Woodlawn Road would be extended to connect with the realigned Route 1 roadway, just to the west of Woodlawn Baptist Church).
- Constructing three lanes from Woodlawn Road to Mount Vernon Memorial Highway / Mulligan Road with two left-turn lanes and the rightmost of the three through lanes a “Right Lane Must Turn Right” lane, with only two lanes continuing through the intersection.

In the southbound direction, from north to south, the conceptual design plans for Route 1 call for:

- Constructing three lanes from Mount Vernon Memorial Highway / Mulligan Road to Woodlawn Road along the Southern Bypass Alignment, with a right-turn lane at Woodlawn Road.
- Constructing three lanes from Woodlawn Road to Belvoir Road, with two left-turn lanes and a right-turn lane.
- Constructing three lanes from Belvoir Road to Pohick/Backlick Roads, with a left-turn lane and a right-turn lane at Pohick/Backlick Roads.
- Constructing three lanes from Pohick/Backlick Roads to Fairfax County Parkway with two right-turn lanes, one of which is a full-length auxiliary lane and the other a turn bay,

and a left-turn bay to allow U-turns to northbound Route 1.

- Constructing three lanes from Fairfax County Parkway to Cook Inlet Drive, with a right-turn lane.
- Constructing three lanes from Cook Inlet Drive to Inlet Cove Drive, with a right-turn lane.
- Constructing three lanes from Inlet Cove Drive to Telegraph Road, with one left-turn lane and one right-turn lane at Telegraph Road. A separate right-turn bay is not provided to Belvoir Woods Parkway in the current plans (under existing conditions, a separate right-turn lane does exist; this lane was removed to accommodate the widening of Route 1).

c) **Alternative C, Build Alternative:** This alternative would be similar to Alternative B, except for at the following three locations (see **Attachment 3**):

- At the Telegraph Road intersection where Alternative B proposes triple left-turn lanes to accommodate the northbound Route 1 to northbound Telegraph Road traffic, this alternative proposes a grade-separated flyover to accommodate this movement.
- At the Fairfax County Parkway intersection where Alternative B proposes triple left-turn lanes to accommodate the southbound Fairfax County Parkway to northbound Route 1 traffic, this alternative proposes a grade-separated flyover to accommodate this movement.
- North of Belvoir Road, where Alternative B diverts from Route 1 along the “Southern Bypass” Alignment, this alternative would instead continue along the current Route 1 alignment.

d) **Other Alternatives Considered:** Additional information regarding other alternatives considered but dismissed from further consideration can be found in Section 2 of the Environmental Assessment.

II. Applicability of Section 4(f)

Section 4(f) resources were identified along the Route 1 corridor within the project area, as shown in **Figure 2**.

There are no publicly owned public parks or recreation areas that would be impacted by the project.

There are two wildlife refuge or refuge-like properties that would be impacted by the project:

- **Accotink Bay Wildlife Refuge** – The refuge is located along the south side of Route 1 between Old Colchester Road and Pohick Road on the U.S. Army’s Fort Belvoir in Fairfax County, Virginia. The Refuge encompasses approximately 1,315 acres, most of it centered about Accotink Bay and Accotink Creek, and some of it along Pohick Creek and Pohick Bay. The U.S. Army Garrison, Fort Belvoir, considers the Refuge to be permanently preserved and not available for development.
- **Fort Belvoir Forest and Wildlife Corridor** – The Corridor was established by Fort Belvoir in 1993 as a mitigation commitment to offset the ecological impacts of habitat fragmentation caused by several major construction projects on Fort Belvoir. The Corridor is approximately 15 miles long with a minimum width of 250 meters. The Corridor protects a wildlife habitat and migratory corridor, while also maintaining a continuous area of natural forest habitat between Jackson Miles Abbott Wetland Refuge (JMAWR) and the Accotink Bay Wildlife Refuge (ABWR).

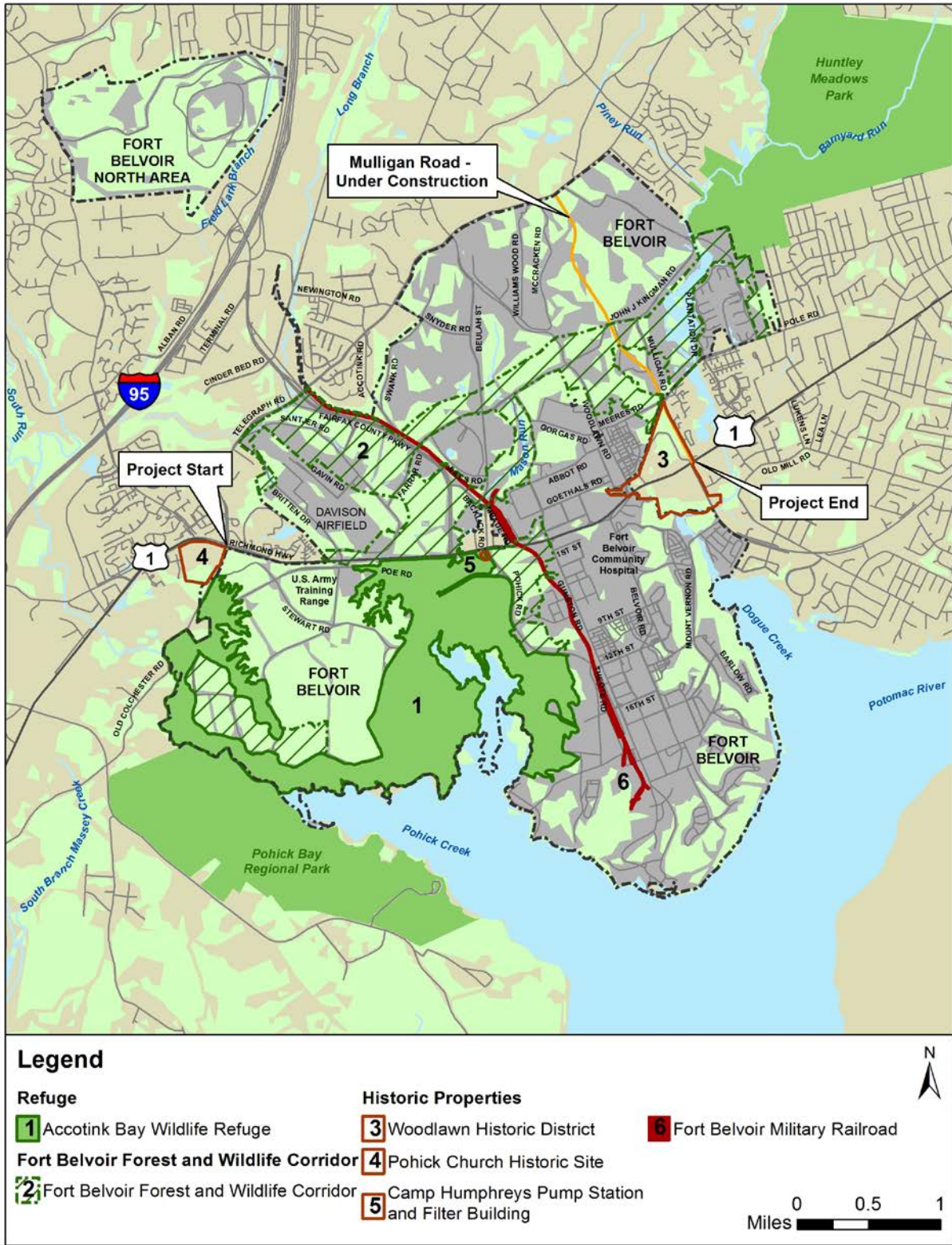


Figure 2. Environmental Resources in Project Area

Comprehensive historic property identification surveys of architectural and archaeological resources have been conducted along and near the project corridor. There are two historic sites that would be impacted by the project:

- **Fort Belvoir Military Railroad** (including the existing bridge over Route 1) – Use of land from this linear property within Fort Belvoir would be required to implement the project. The use under either Alternative A or B would include removal of the existing bridge (which is individually eligible for the National Register of Historic Places (NRHP) as well as being part of the multi-component NRHP-eligible Military Railroad), regrading of embankments at the bridge abutments, and incorporation of a part of the Railroad site into a permanent easement for project right-of-way.
- **Woodlawn Historic District** – This NRHP-eligible historic district straddles Route 1 and encompasses Woodlawn Plantation, the Woodlawn Quaker Meeting House, and George Washington’s Gristmill (all three of which are individually listed on the NRHP), and the Woodlawn Baptist Church parcel. The Woodlawn Plantation parcel on the north side of Route 1 also is a designated National Historic Landmark (NHL). Any widening of existing Route 1 through the District, as in Alternative C, would require use of land from either or both of the north and south parcels. Alternative B would relocate the alignment to the south, thereby minimizing encroachment on the NHL portion of the property.

Accordingly, Accotink Bay Wildlife Refuge, Fort Belvoir Forest and Wildlife Corridor, Fort Belvoir Military Railroad, and Woodlawn Historic District meet the criteria for protection under Section 4(f) and would be “used” by the Alternatives B or C and are therefore addressed in this Section 4(f) Evaluation (see **Figure 3** for boundaries of these properties with respect to limits of construction of Alternative B).

II.A. Accotink Bay Wildlife Refuge

- a) **Description of Accotink Bay Wildlife Refuge:** As shown in Figures 2 and 3, Accotink Bay Wildlife Refuge is located south of Route 1 between Old Colchester Road and Pohick Road on the U.S. Army’s Fort Belvoir in Fairfax County, Virginia. The Refuge encompasses approximately 1,315 acres, most of it centered about Accotink Bay and Accotink Creek, and some of it along Pohick Creek and Pohick Bay. The U.S. Army Garrison, Fort Belvoir, considers the Refuge to be permanently preserved and not available for development. The Refuge is open to the public dawn to dusk, seven days a week; however, temporary vehicle passes are required for visitors not affiliated with the Department of Defense.
- b) **Features and Functions:**
1. **Figure 4** shows the relationship of Alternative B to the Wildlife Refuge. Alternative C would be identical at that location. The preliminary plans in Attachment 2 show the location on aerial photo-base mapping.
 2. The Accotink Bay Wildlife Refuge encompasses approximately 1,315 acres.

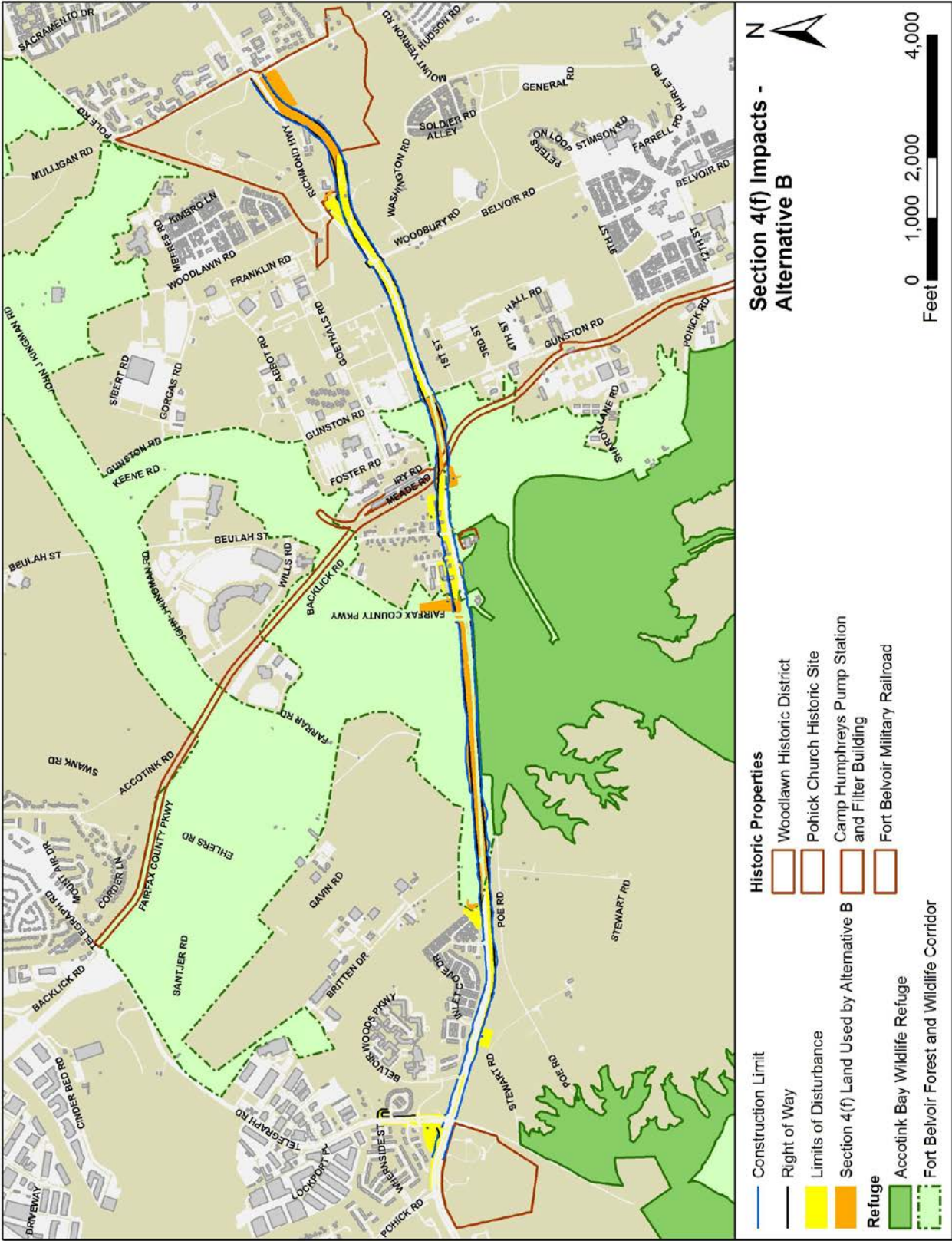


Figure 3. Section 4(f) Impacts – Alternative B

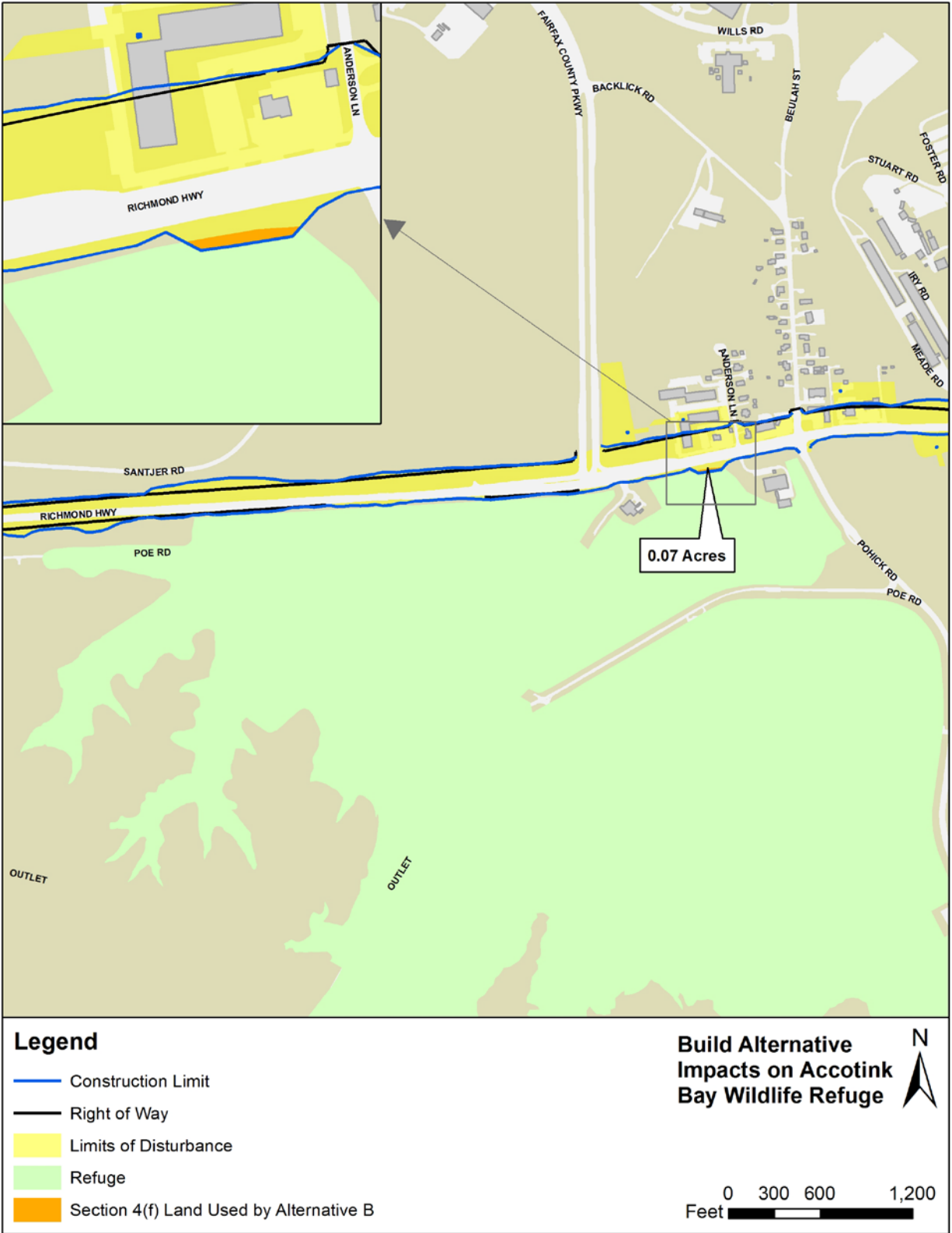


Figure 4. Accotink Bay Wildlife Refuge

3. The U.S. Army owns the land.²
4. The Refuge provides opportunities for fishing, hiking, and wildlife observation by both military personnel and civilians, including school groups. Interpretive programs are offered during the regular season (April through October). Organized school, civic, and professional groups may reserve dates for interpretive talks and outdoor classroom activities anytime during the year. Existing facilities include more than 9 miles of hiking trails, boardwalks in marshes, and observation points. An informational kiosk adjacent to the parking lot offers trail maps, a bird list, and a guide to interpretive programs. The Environmental Education Center, opened in 2000, provides information regarding the Refuge complex and the Fort's natural resources through displays, videos, and brochures. The center is open seasonally, April through October, five days a week.
5. The Refuge is accessed through Tulley Gate on Pohick Road from Route 1.
6. There are similarly used properties in the vicinity of the project. Fairfax County's Pohick Bay Regional Park is located on the south side of Pohick Creek and Pohick Bay. Mason Neck State Park and Mason Neck National Wildlife Refuge are located to the south of Pohick Bay Regional Park. The Occoquan Bay National Wildlife Refuge lies on western shores of Belmont Bay and Occoquan Bay. The Jackson Miles Abbot Wetland Refuge is on Fort Belvoir lands northeast of the Accotink Bay Refuge. Fairfax County's Huntley Meadows Park, consisting largely of wetland areas, lies northeast of and adjacent to the Jackson Miles Abbott Wetland Refuge. The Fort Belvoir Wildlife Corridor connects Accotink Bay Wildlife Refuge with Jackson Miles Abbot Wetland Refuge.
7. The deed for the property does not contain clauses affecting ownership.
8. An unusual feature of the Refuge is that it also functions as an active range for military training. Further, due to past military training activities, portions of the land may contain unexploded ordnance or other hazardous materials. If this land is used for highway purposes, unexploded ordnance clearance activities would have to be undertaken. Finally, portions of the land were formerly operated as a landfill for waste disposal.

II.B. Fort Belvoir Forest and Wildlife Corridor

- a) **Description of the Forest and Wildlife Corridor:** The Corridor³ was established by Fort Belvoir in 1993 as a mitigation commitment to offset the ecological impacts of habitat fragmentation caused by several major construction projects on Fort Belvoir. The Corridor is approximately 15 miles long with a minimum width of 250 meters. The Corridor protects a wildlife habitat and migratory corridor, while also maintaining a continuous area of natural forest habitat between Jackson Miles Abbott Wetland Refuge (JMAWR) and the Accotink Bay Wildlife Refuge (ABWR). The Corridor is not open to the public except as authorized by Fort Belvoir. Figure 2 illustrates the Corridor boundaries.

The Corridor includes a wide range of wetlands, riparian forest buffers, habitat for the state-listed wood turtle and several high priority breeding species listed with the Partners in

² The land is owned by the United States of America and is under the jurisdiction of the Department of the Army.

³ See Fort Belvoir's Integrated Natural Resources Management Plan for a more detailed description of the Forest and Wildlife Corridor and its development.

Flight (PIF) program, and waterways for passage of, and spawning habitats for, anadromous fish. The Corridor connects with off-post forested areas of wildlife habitat, notably the Huntley Meadows Park (a 1,425 acre natural area), and allows animal movement between the larger forested areas, thus maintaining a diverse gene pool and helping ensure species survival.

Fort Belvoir has designated the Corridor as a Special Management Area (along with ABWR and JMAWR) recognizing the existence and importance of these sensitive natural resource areas on-Post; and using the land designations to protect those areas from impact by development and mission activities. Over time, the boundaries of these areas have expanded. As noted in the Fort's Integrated Natural Resources Management Plan, the primary goal for the Fort in managing these natural areas is conservation. These areas are used for environmental education, scientific research and study, low-intensity recreation, and low-intensity military training and testing, as long as the access and use are compatible with resource conservation.

b) Features and Functions:

1. **Figure 5** shows the relationship of Alternative B to the Corridor. Alternative C would be identical at that location.
2. The boundaries of the Corridor encompass approximately 742 acres. The land that makes up the Corridor is located within the boundaries of Fort Belvoir and the Humphreys Engineer Center (HEC). The U.S. Army owns the land.⁴
3. Institutional military, residential, and transportation land uses occur primarily at the boundaries of the Corridor. The Corridor is largely undeveloped and forested. Bow hunting for deer only is allowed within the Corridor by permit.
4. The Corridor serves habitat functions within the study area including: habitat for the state-listed wood turtle and habitat for the Partners in Flight (PIF) priority bird species.
5. Both the Fairfax County Parkway and Route 1 traverse the Corridor. Mulligan Road, currently under construction, also crosses the Corridor.
6. Wildlife crossings have been constructed for both Fairfax County Parkway and Route 1. Another wildlife crossing will be constructed as part of the Mulligan Road project. The wildlife crossings allow the Corridor to maintain a continuous link between the JMAWR and Huntley Meadows Park and the ABWR on the Potomac River.
7. Both Beulah Street and Woodlawn Road traverse the Corridor on the North Post of Fort Belvoir; however, these streets are closed to the general public.
8. Certain facilities of the post are located within the Corridor, including utilities, and a solid waste management unit (landfill).

II.C. Fort Belvoir Military Railroad

- a) Description of the Fort Belvoir Military Railroad:** Fort Belvoir Military Railroad (FBMRR) track bed extends roughly five miles across U.S. Army Garrison Fort Belvoir, as shown in Figure 2. The bed begins to the north of the installation in Newington at the original site of Accotink Station, where it previously connected with the Richmond-Fredericksburg & Potomac Railroad (RF&P). From the station site, the track bed continues south running closely adjacent to the Fairfax County Parkway, originally State Route 617. The bed proceeds south to the north of Accotink Village where the line crosses Beulah Street by the use of a concrete bridge (Facility No. 2298). Then, 0.4 miles later the track bed passes

⁴ The land is owned by the United States of America and is under the jurisdiction of the Department of the Army.

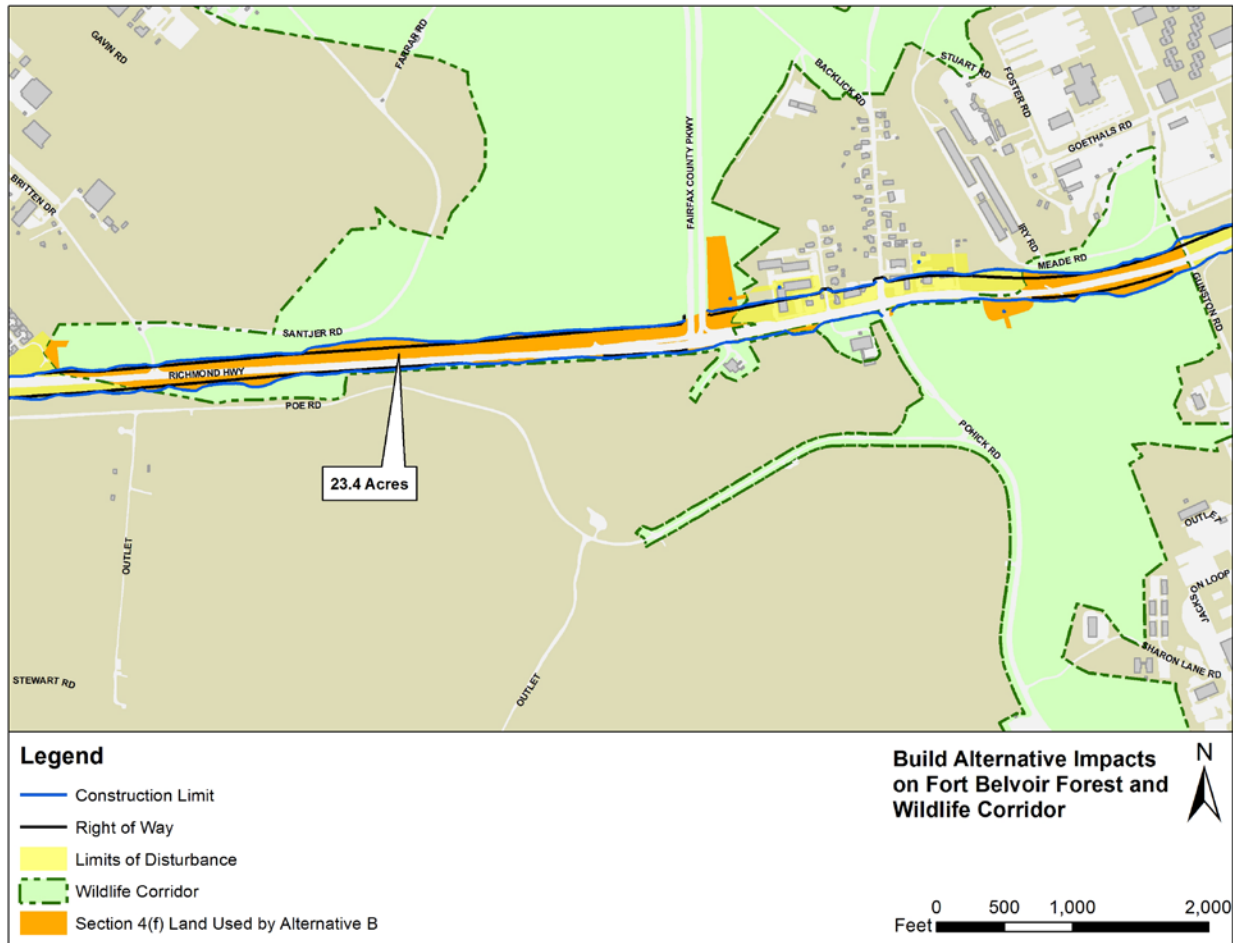


Figure 5. Fort Belvoir Forest and Wildlife Corridor

above Route 1 via a concrete and steel bridge (Facility No. 1433). The bed maintains its southerly route as it travels parallel with Gunston Road, passing through the installation's warehouse/industrial district. The final stretch of the track bed terminates south of 23rd Street within the Engineer Research and Development Laboratories (ERDL), now known as the 300 Area.

In addition to the main track bed, the FBMRR included various supplementary track bed sections. These auxiliary sections included spurs, which were used to support maintenance buildings and coal trestles; industrial sidings used for stabling, storing, loading, and unloading cars; and passing sidings that allowed trains travelling in opposite directions to pass. The railroad enlisted the use of numerous spurs across the entire length of the track bed. Three of these spurs, spanning between 500 and 1000 ft of track bed, were designed specifically to support coal trestles. Additional spurs provided access for loading and unloading to specific installation service buildings and to maintenance and support facilities that serviced the railroad directly. Examples of these include a locomotive repair building, engine storage shed, laundry facility, bakery, and warehouses. Rail spurs also were utilized to support research facilities within the ERDL that focused on testing railroad lines, cars, and engines.

The railroad included three sidings; the largest of these utilized approximately two miles of additional track and bed to support the installation's warehouse district, located between 12th and 21st Street. Roughly 1000 feet long, the Accotink siding, located between Farrar Road and Beulah Street, provided space for temporary storage of rail cars, and served as a passing siding when necessary. The Troop siding, located between Beulah Street and Route 1, functioned as a loading and unloading area for soldiers and equipment for the Engineer Replacement and Training Center (ETRC). The siding consisted of roughly 2500 feet of track and bed and functioned as both an industrial siding and a passing siding.

The FBMRR track bed consists of three major elements: the right-of-way, the remnants of the railroad's permanent way, and the track foundation. The track right-of-way is defined as the narrow strip of cleared land that is designated specifically for the operation and maintenance of the railroad. The FBMRR right-of-way is owned directly by the installation and has not been granted via an easement. The permanent way consists of the pairs of steel rails, wooden railroad ties and the ballast in which the ties are embedded. The bottom portion of the ballast track bed is called the track foundation, which is in turn supported by a prepared earthworks formation called the sub-grade that is sloped slightly for drainage.

The right-of-way for the FBMRR still exists, but because the line was discontinued in 1990, scattered vegetation and downed trees now obstruct the track bed in many locations. In other locations, the right-of-way has been repurposed to provide a corridor for electrical lines and other utilities. Many of the steel rails and wooden railroad ties for FBMRR have been removed, with only a few portions of the original permanent way remaining intact. The ballast and track foundation remain mostly intact, with some portions having been demolished for road and parking lot construction spurred by new development and a stronger reliance upon the automobile. This is particularly apparent in the warehouse district, where almost all of the track bed associated with the primary line and the industrial siding has been covered by asphalt to provide vehicle access to the warehouses. Additionally, several of the spurs used for both coal trestles and other facilities have been demolished for new construction with only trace sections and foundations of the trestles remaining.

b) Features and Functions:

1. **Figure 6** shows the relationship of the Fort Belvoir Military Railroad to the project (Alternatives B and C are identical at this location).
2. The construction of the Fort Belvoir railroad began in 1918 as two separate spur tracks allowing the military base to connect to existing steam and electric rail lines, providing access into Washington, DC. The military railroad was designed to branch off the existing Richmond-Fredericksburg and Potomac Railroad (RF&P). Owned and operated by the Army, the Fort Belvoir railroad connected to the RF&P line in Newington, at Long Branch Station (known by the military as Accotink Station).
3. A major construction campaign took place at Fort Belvoir during the 1940s because of World War II. To help support this new construction campaign, the rail system was upgraded at this time, and Fort Belvoir began numerous construction projects using the latest technology in engineering. The upgrading process included the demolition of three 1918 wood trestles, followed by their reconstruction into three new engineered bridges (Facility Nos. 1433, 2298, and 2486).

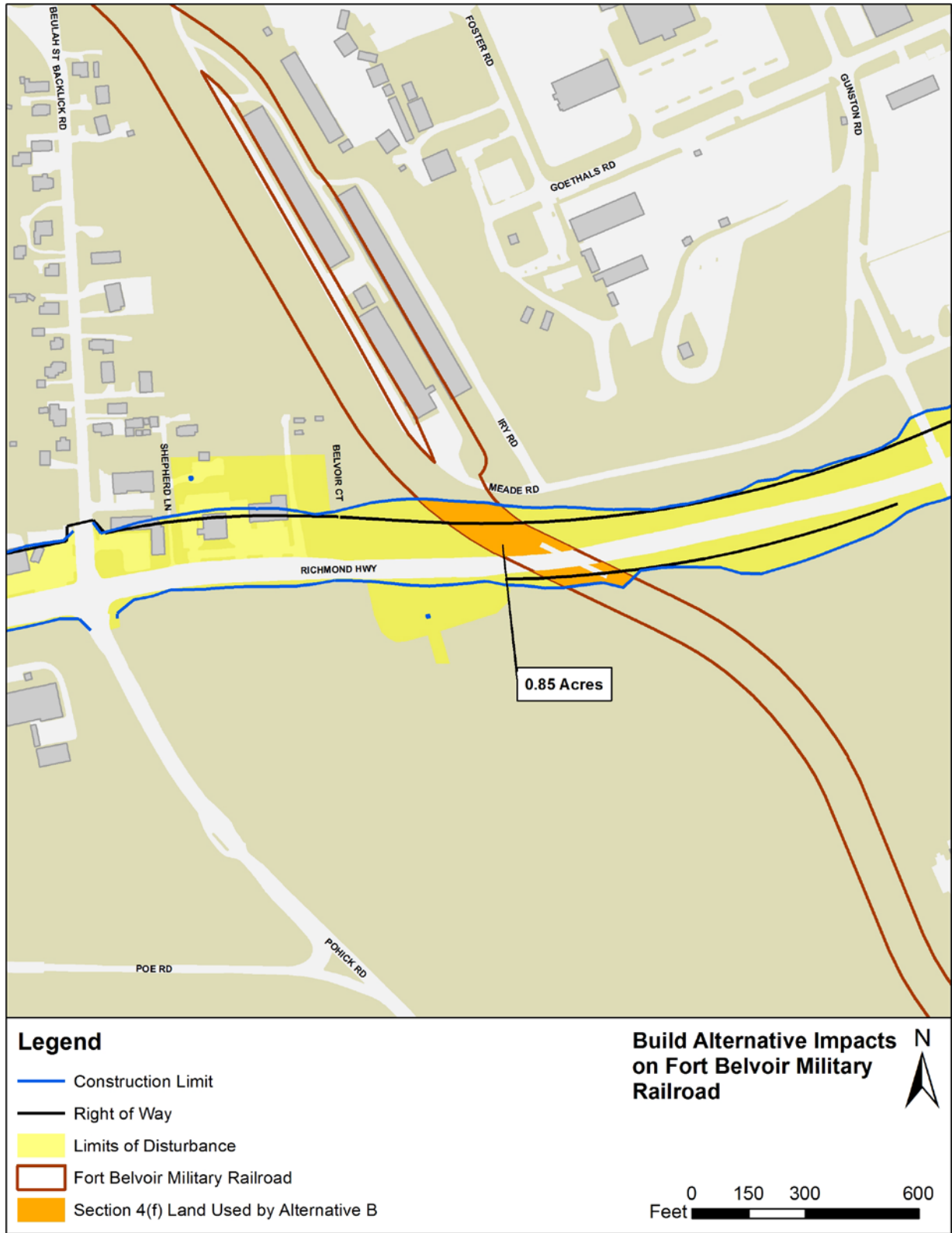


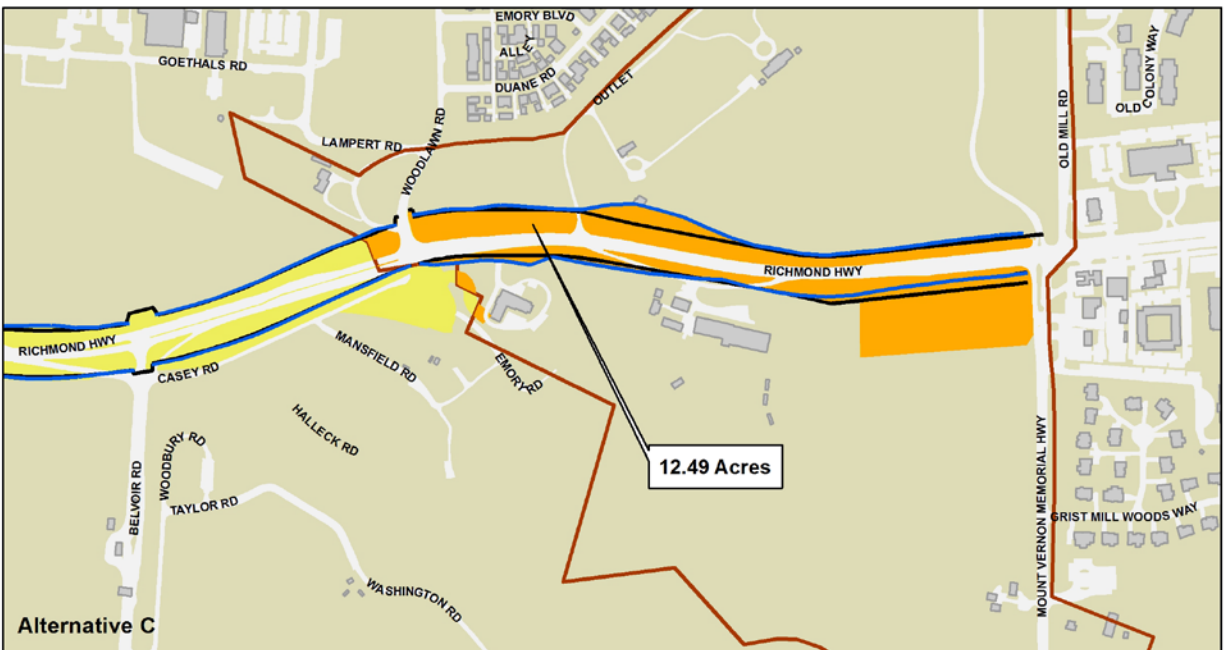
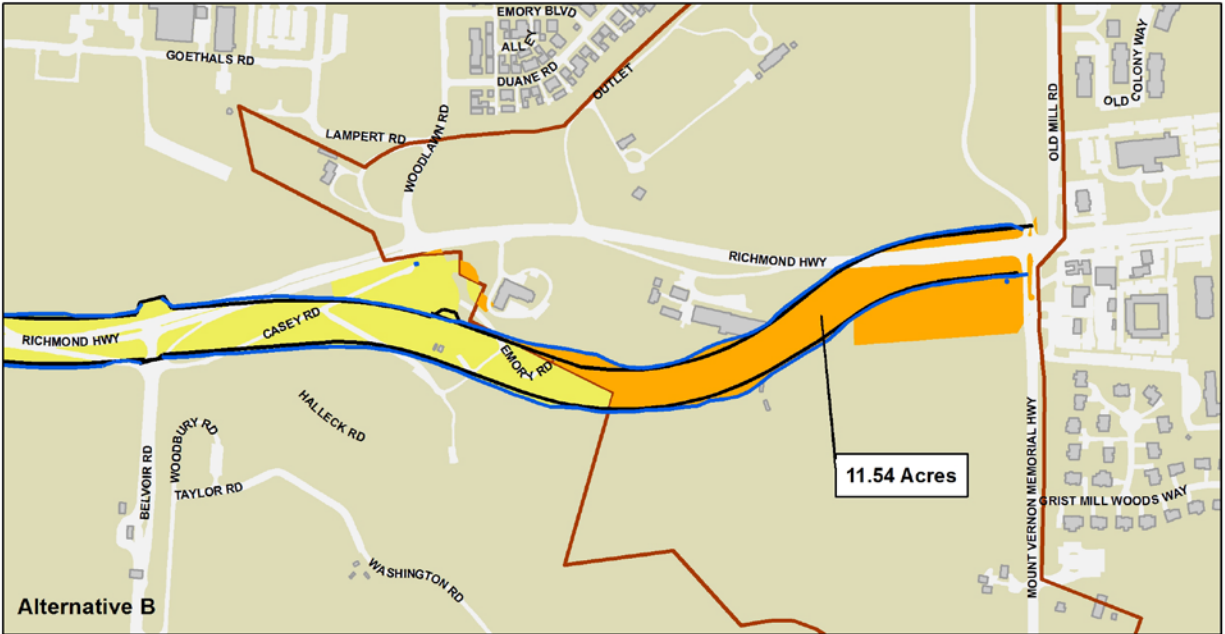
Figure 6. Fort Belvoir Military Railroad

4. As recently as 1985, the Fort Belvoir Railroad was utilized in transporting coal from Fort Belvoir to other military installations. The entire coal supply for the Military District of Washington, DC was stored at Fort Belvoir's North Post. The military coal supply was transported solely by rail.
5. During the entire time of operation, the Fort Belvoir Railroad continued to serve as a military transport system. Even after the majority of the tracks were closed, portions of the rail system were used for military testing.
6. Records indicated that during the 1990s sections of the track system located on the South Post were used by the Belvoir Research, Development and Engineering Center (BRDEC) to test rail equipment.
7. Due to the high cost of maintenance compared to the railroad's limited use, the status of Fort Belvoir's railroad system was reviewed in 1990 and it was decided to discontinue service.
8. The Fort Belvoir Military Railroad (FBMRR) track bed possesses the necessary significance in order to be considered eligible for inclusion in the NRHP under Criterion A as part of a multiple property listing as part of the FBMRR Historic District.

II.D. Woodlawn Historic District

a) Description of the Woodlawn Historic District: The Woodlawn Historic District is in the general location of the intersection of Route 1, Mount Vernon Memorial Highway, and Old Mill Road in Fairfax County, Virginia, as shown in **Figure 7**.

- Woodlawn Plantation (VDHR# 029-0056) - Woodlawn once was the plantation house for a 2,000-acre estate that was carved out of George Washington's Mount Vernon. After the marriage of Major Lawrence Lewis, Washington's nephew, to Eleanor Custis, a granddaughter of Martha Washington raised at Mount Vernon, Washington provided for them to receive a large portion of his estate by planning and funding the plantation and house. Washington himself selected the Woodlawn house site, and he hired his friend Dr. William Thornton, the first architect of the United States Capitol, to be the architect. Since 1951, the National Trust for Historic Preservation has administered the 126-acre Woodlawn Plantation property, which includes two parcels, one on each side of Route 1. The parcel on the north side of Route 1 also is designated a National Historic Landmark (NHL). The parcel on the south side of Route 1, which contains pasture and stables, is not part of the NHL designation. The entire NRHP-listed Woodlawn Plantation property on both sides of Route 1 contributes to the Woodlawn Historic District.
- Pope-Leighey House (VDHR# 029-0058) - This designation applies to the single-story home designed by Frank Lloyd Wright and moved onto Woodlawn Plantation property in 1964. It was individually listed in the NRHP in 1970. While not itself a contributing property to the Woodlawn Historic District, the Pope-Leighey House sits within the woods of the Woodlawn Plantation and is wholly contained within the NHL property and historic district boundary.
- Grand View (Jacob Troth) House (VDHR# 029-0062) - This dwelling was constructed in the 1850s. It is not individually eligible for the NRHP but is included within the boundaries of the NRHP-listed Woodlawn Plantation property (029-0056) and is a contributing resource to the Woodlawn Historic District.



Legend

- Construction Limit
- Right of Way
- Limits of Disturbance
- Woodlawn Historic District
- Section 4(f) Land Used by Alternative

Build Alternative Impacts on Woodlawn Historic District

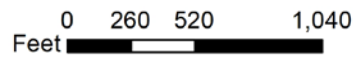


Figure 7. Woodlawn Historic District

- Woodlawn Baptist Church (VDHR# 029-0070) - The early 1870s church burned and no longer exists; it was associated with a cemetery remaining onsite, along with the modern church. Both the church and the cemetery have previously been determined not eligible for individual listing in the NRHP, but the property, containing approximately 5.2 acres, and the cemetery are considered contributing property to the Woodlawn Historic District.
- Woodlawn Quaker Meetinghouse (VDHR# 029-0172) - The Meetinghouse was constructed in the early 1850s and has associated with it a shed and cemetery. The property, containing approximately 2.4 acres, is individually listed in the NRHP and is also considered a contributing resource to the Woodlawn Historic District. The property owner, the Alexandria Monthly Meeting of the Religious Society of Friends (Friends), has granted a conservation easement on the property to the Virginia Department of Historic Resources.
- George Washington's Gristmill (VDHR# 029-0330) - Listed on the NRHP in 2003, the property also contributes to the Woodlawn Historic District. The Gristmill is located at 5514 Mount Vernon Memorial Highway, approximately 0.3 miles from U.S. Route 1. The property contains approximately 7 acres and is owned by the Mount Vernon Ladies Association.
- Sharpe Stable Complex (VDHR# 029-5181-0005) - The Sharpe Stable Complex contains six structures built between ca. 1913 and 1997. Only four of the six structures are historic; the dairy, the corncrib, the bank barn, and the ca. 1955 stable. The historic buildings contribute to the Woodlawn Historic District, and the bank barn within the complex is recommended as individually potentially eligible for the NRHP.
- Otis T. Mason House (VDHR# 029-5181-0006) - This expanded small mid-nineteenth-century rural dwelling housed the Mason family. The Mason family contributed to the intellectual and religious character of the surrounding community. The Otis T. Mason house is recommended as a contributing resource to the Woodlawn Historic District.

Portions of the transportation routes within the contiguous district, namely Route 1 and Mount Vernon Memorial Highway, both operated and maintained by VDOT, are not contributing properties to the District.

b) Features and Functions

1. The boundaries of the district encompass approximately 140 acres.
2. The following activities take place on the property: At Woodlawn Plantation, there are tours, seasonal exhibits, school programs, picnics, needlework exhibitions, children's workshops, haunted history tours, Christmas at Woodlawn, and private events. The research library is available to scholars by appointment and includes particular strengths in Colonial and Federal decorative arts, slavery, and Virginia history and genealogy. Woodlawn Plantation's stables are leased to a private operator for equestrian activities. The Quaker Meetinghouse hosts religious meetings. The George Washington's Gristmill property contains a reconstruction of a gristmill and distillery and is open to the public. The Woodlawn Baptist Church conducts regular worship services for its members and visitors and maintains the cemetery.
3. Existing facilities at Woodlawn Plantation include the mansion, a museum shop, a parking lot, picnic grounds, gardens, stables, outbuildings, and the Pope-Leighey House. Facilities at the Woodlawn Quaker Meetinghouse include the meeting house, a shed (reconstructed in 2008 after storm damage), and a cemetery. Facilities at George Washington's Gristmill include the reconstructed mill, a picnic area, and a parking lot.

4. The Woodlawn Plantation property on the Woodlawn Plantation NHL side of Route 1 is accessed by a main entrance off Route 1, which is presently opposite of the Mount Vernon Memorial Highway approach to the intersection. However, pursuant to the Section 106 Memorandum of Agreement for the Mulligan Road project currently under construction, the entrance will be relocated to a new driveway to be constructed off of the former Woodlawn Road. The Woodlawn Plantation property on the south side (stables side) of Route 1 is accessed by a driveway off of Route 1. The Quaker Meetinghouse is accessed from a driveway off of Fort Belvoir's Woodlawn Gate, the former Woodlawn Road. George Washington's Gristmill is accessed by a parking lot directly off Mount Vernon Memorial Highway. The Woodlawn Baptist Church property is accessed by a driveway off of Route 1.
5. The district has unusual characteristics: The northern portion of the Woodlawn Plantation is a designated National Historic Landmark. As such, it is subject to special statutory requirements in Section 110(f) of the National Historic Preservation Act. Under these requirements, federal agencies must, "to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to any National Historic Landmark that may be directly and adversely affected by an undertaking." Further, under regulations at 36 CFR 800.10(c), "The agency official shall notify the Secretary [of Interior] of any consultation involving a National Historic Landmark and invite the Secretary to participate in the consultation where there may be an adverse effect." FHWA notified the Department of Interior of consultation involving Woodlawn Plantation and invited its participation in the consultation to resolve the adverse effects. The National Trust for Historic Preservation (owner of Woodlawn Plantation) has engaged in a partnership with Arcadia Center for Sustainable Food and Agriculture, a non-profit organization dedicated to creating a more equitable and sustainable local food system. Arcadia Farm was established in 2010 on the grounds of Woodlawn Plantation and provides local produce and demonstrations of sustainable farming.

III. Impacts to the Section 4(f) Properties

III.A. Accotink Bay Wildlife Refuge

Alternatives B and C would both use approximately 0.07 acres of land from the Accotink Bay Wildlife Refuge in the form of easements from the Army to VDOT. Though portions of the Refuge close to the road may experience noise levels approaching or exceeding FHWA's Noise Abatement Criterion of 67 dBA, there are no trails or other human activity areas within that portion of the Refuge. Similarly, there are no human activity areas in the Refuge close enough to the road to experience any air quality impacts from the project. Access and safety should be improved due to the addition of a bike trail, sidewalk, and turn lanes where currently there are none.

III.B. Fort Belvoir Forest and Wildlife Corridor

Alternatives B and C would both use approximately 23.4 acres of land from the Fort Belvoir Forest and Wildlife Corridor in the form of easements from the Army to VDOT. The portion of Route 1 adjacent to the Corridor crosses Accotink Creek and the design and elevation of the replacement bridge at this location could potentially affect wildlife movements between the

Corridor side of the road to the Accotink Bay Wildlife Refuge side of the road. The proposed bridge would be designed to minimize adverse effects in this regard.

III.C. Fort Belvoir Military Railroad

Alternatives B and C would both use approximately 0.85 acres of land from the Fort Belvoir Military Railroad historic property, including removal of the existing concrete and steel bridge over Route 1 and regrading of the railroad embankments in the bridge abutment areas.

III.D. Woodlawn Historic District

Alternative B would shift the Route 1 alignment to the south to bypass (hence “Southern Bypass”) the Woodlawn Baptist Church and cemetery. It would use approximately 11.54 acres of land from the Woodlawn Historic District, as shown in **Figure 7** and the table below. On the Woodlawn Plantation property, this alternative would displace the Otis Mason House, a contributing resource to the District, and non-contributing barns. Aside from the physical encroachment on the Woodlawn Historic District property, the project would require relocation of the Otis Mason house (a contributing resource to the District, but not individually eligible for the NRHP). Additionally, the access to the parcels comprising the District would be altered, as shown in **Attachment 2**. Sight-line profiles were prepared to assist in visualizing the proposed roadway widening in the Woodlawn area, as shown in **Attachment 4**. This alternative would also likely result in the conversion of 2.89 acres of land currently in use as road right-of-way for Route 1 back to a use compatible with the Historic District and National Historic Landmark. The reversion of these 2.89 acres would essentially reduce the total use of land area for road right-of-way for Route 1 from 11.54 acres to 8.65 acres.

Alternative C would widen existing Route 1 through the Woodlawn Historic District. It would require the use of approximately 12.49 acres of land, as shown in Figure 7 and itemized below.

Table 1. Alternative B Section 4(f) Use in Woodlawn Historic District

	Permanent Right-of-Way/Easement (acres)	Conversion of Road Right-of-Way* (acres)	TOTAL
Woodlawn Quaker Meetinghouse	0.00	n/a	0.00
Woodlawn Baptist Church	0.75	n/a	0.75
Woodlawn Plantation National Historic Landmark	0.59	n/a	0.59
Woodlawn Historic District/ Stables Parcel	10.20	n/a	10.20
Total Woodlawn Historic District	11.54	2.89	8.65

Table 2. Alternative C Section 4(f) Use in Woodlawn Historic District

	Permanent Right-of-Way/Easement (acres)	Conversion of Road Right-of-Way* (acres)	TOTAL
Woodlawn Quaker Meetinghouse	0.00	n/a	0.00
Woodlawn Baptist Church	0.49	n/a	0.49
Woodlawn Plantation National Historic Landmark	3.90	n/a	3.90
Woodlawn Historic District/Stables Parcel	8.10	n/a	8.10
Total Woodlawn Historic District	12.49	0	12.49

*Subject to Commonwealth Approval

A modified widening of Route 1, on existing alignment, between Mount Vernon Memorial Highway and Belvoir Road (modified segment of Alternative C) was investigated. This modified alternative C segment shifted the widening towards the Woodlawn Baptist Church rather than into the area of the National Historic Landmark property, thereby reducing the area of roadway right of way use of historic landmark property but increasing the use of area from the eligible historic district property by an approximately equal area. This modification results in placing the road right of way in very close proximity to the Woodlawn Baptist Church building.

IV. Avoidance Alternatives

In accordance with Section 4(f), consideration must first be given to whether there is a feasible and prudent alternative to the use of Section 4(f) property. For this undertaking, the following alternatives would avoid all Section 4(f) properties:

- a) No-Build Alternative.** The No-Build Alternative assumes that no transportation improvements would be undertaken and Route 1 would remain in its existing configuration (i.e., four lanes undivided). Regular maintenance would be performed to preserve the structural integrity of the pavement and the existing bridges. However, this alternative would not satisfy the purpose and need for the project because it would not provide the needed additional transportation capacity on Route 1 through Fort Belvoir.
- b) Transportation System Management (TSM) Alternative.** “TSM” generally means implementation of relatively low-cost actions to improve efficiency of existing transportation systems. Examples include traffic controls, signal synchronization, turn lanes, parking management, access management, operational modifications, flexible work hours, van pools, transit scheduling, bicycle and pedestrian improvements, modifying driver behavior with incentives, pricing, or restrictions. Although such actions are important elements in the overall transportation plan for any urbanized area, there are none alone or in combination that would meet the identified needs for this study because they would not provide the additional capacity needed to serve existing traffic demand and to safely accommodate the forecasted traffic that is expected in the study area due to regional growth and the BRAC relocations to Fort Belvoir Main Post.

- c) **Mass Transit Alternative.** Although transit expansions are necessary and desirable elements of the overall regional transportation system, and in fact are being developed independently of this highway project, as described further in the Environmental Assessment, there are none that would preclude the need to construct the proposed Route 1 improvements. Indeed, the proposed improvements would allow transit usage in the corridor to be more fully realized by reducing congestion, providing space for more user-friendly transit facilities such as bus stop shelters, and improving pedestrian mobility and safety with the addition of continuous sidewalks. In addition, the alternatives evaluated in the Environmental Assessment preserve right-of-way in the median for transit, in accordance with the Fairfax County Comprehensive Plan, which includes a Route 1 cross-section with six lanes and an at-grade transitway in the median.
- d) **Alternative Alignments to the North - Telegraph Road/Mulligan Road Alternative.** Shifting the alignment farther to the north would entail shifting to or beyond Telegraph Road in order to avoid all Section 4(f) properties. As shown on Figure 2, the Fort Belvoir Military Railroad historic property and the Fort Belvoir Wildlife Corridor extend to Telegraph Road. This Alternative would entail improvements to Telegraph Road from Route 1 to Mulligan Road (currently under construction), with traffic then being routed along Mulligan Road to get back to Route 1. Such a facility would not meet the needs for the project because it would entail circuitous routing and would not provide the needed additional transportation capacity on Route 1 through Fort Belvoir. Except for the Mulligan Road corridor, there are no other alignments that would connect Telegraph Road and Route 1 without also using Section 4(f) property.
- e) **Woodlawn Avoidance Alternative**
Constructing a bypass of the Woodlawn Historic District to avoid use of this Section 4(f) property, as shown on **Figure 8**, would align the road to the south through Fort Belvoir, crossing Mount Vernon Memorial Highway south of the Woodlawn property and the George Washington Gristmill property, passing through a portion of the Mount Vernon Country Club, and rejoining existing Route 1 to the north. This alternative would have extensive impacts to existing development on Fort Belvoir, impacts to Dogue Creek, and impacts to residential and commercial developments east of Mount Vernon Memorial Highway.

V. All Possible Planning to Minimize Harm

Minimization measures were incorporated into the project to minimize the impact to the Section 4(f) resources.

V.A. Accotink Bay Wildlife Refuge

- a) **Minimize encroachment:** Alternatives B and C both establish the centerline of the proposed widening such that only minimal encroachment (0.07 acres) onto the Refuge land would be required. Complete avoidance of the property is constrained by engineering considerations involving a transition from widening mostly to the south side of existing Route 1 (in order to avoid the Inlet Cove community) and mostly to the north side of existing Route 1 to avoid the Refuge property. Even if a further shift could be practically accomplished, it would only increase the use of Fort Belvoir Wildlife Corridor land, which also is subject to Section 4(f). Temporary construction easements beyond the permanent right-of-way limits also would be necessary. The amount of encroachment onto the Refuge

property would be the minimum necessary to accommodate the proposed road widening, consistent with sound engineering principles and safety. The proposed cross-section of the road was agreed upon through an agreement between VDOT and Fort Belvoir representatives and is consistent with Fairfax County's Comprehensive Plan.

Other measures: In accordance with Fort Belvoir's tree protection policy, trees removed because of this action would be replaced on a 2:1 basis. Construction of one or more wildlife underpasses in the vicinity of Route 1's crossing of Accotink Creek would help maintain and enhance wildlife habitat connection between the Forest and Wildlife Corridor north of Route 1 and the Refuge south of Route 1. Such underpasses could be achieved in a variety of ways. One would be to provide the underpass in conjunction with the new bridge over Accotink Creek. The proposed bridge would be longer and higher than the existing bridge, which would provide sufficient clearance for the largest animals that would be expected (white-tail deer). The bridge also would provide more than adequate accommodation of fish passage. Another way would be to install a bottomless concrete box culvert at some distance away from the Accotink Creek bridge. Such an underpass was installed when the Fairfax County Parkway (Route 286, formerly 7100) was constructed. Smaller pipe culverts also could be installed, which could be used by small mammals, reptiles, and amphibians. FHWA will make a decision on whether to provide such mitigation before completing the environmental process. However, the exact dimensions and placements of such wildlife passages are beyond the scope of this study, and would be determined during the detailed project design in consultation with representatives of Fort Belvoir to identify the optimum configurations. Finally, the Fort's ongoing native habitat restoration program could serve as a framework for restoring an area in the Refuge as compensation for impacts, with such an area to be identified in future coordination with Fort Belvoir representatives. The multi-use path and sidewalk planned as part of the proposed project would enhance opportunities for public viewing, access, and enjoyment of the Refuge.

- c) **Maintenance of traffic:** Traffic flow would be maintained during construction so that access to the Refuge would not be interrupted.
- d) **Turn lanes and traffic control:** The project would improve access to Pohick Road and enhance safety and the ease of ingress and egress to the Refuge and Fort Belvoir.
- e) **Erosion and sediment control:** Temporary and permanent erosion and sediment controls would be installed during construction to minimize any detrimental effects of project generated sediment on Refuge land.
- f) **Stormwater management:** Temporary and permanent stormwater management measures, including vegetative controls, detention basins, and filtration systems, would be implemented for this project to minimize potential short-term and long-term effects on water quality. These measures would reduce or detain discharge volumes and remove pollutants.
- g) **Additional coordination:** Additional coordination with Fort Belvoir representatives will be undertaken to ensure consistency with the views of officials with jurisdiction over the property and to develop design details for mitigation measures.

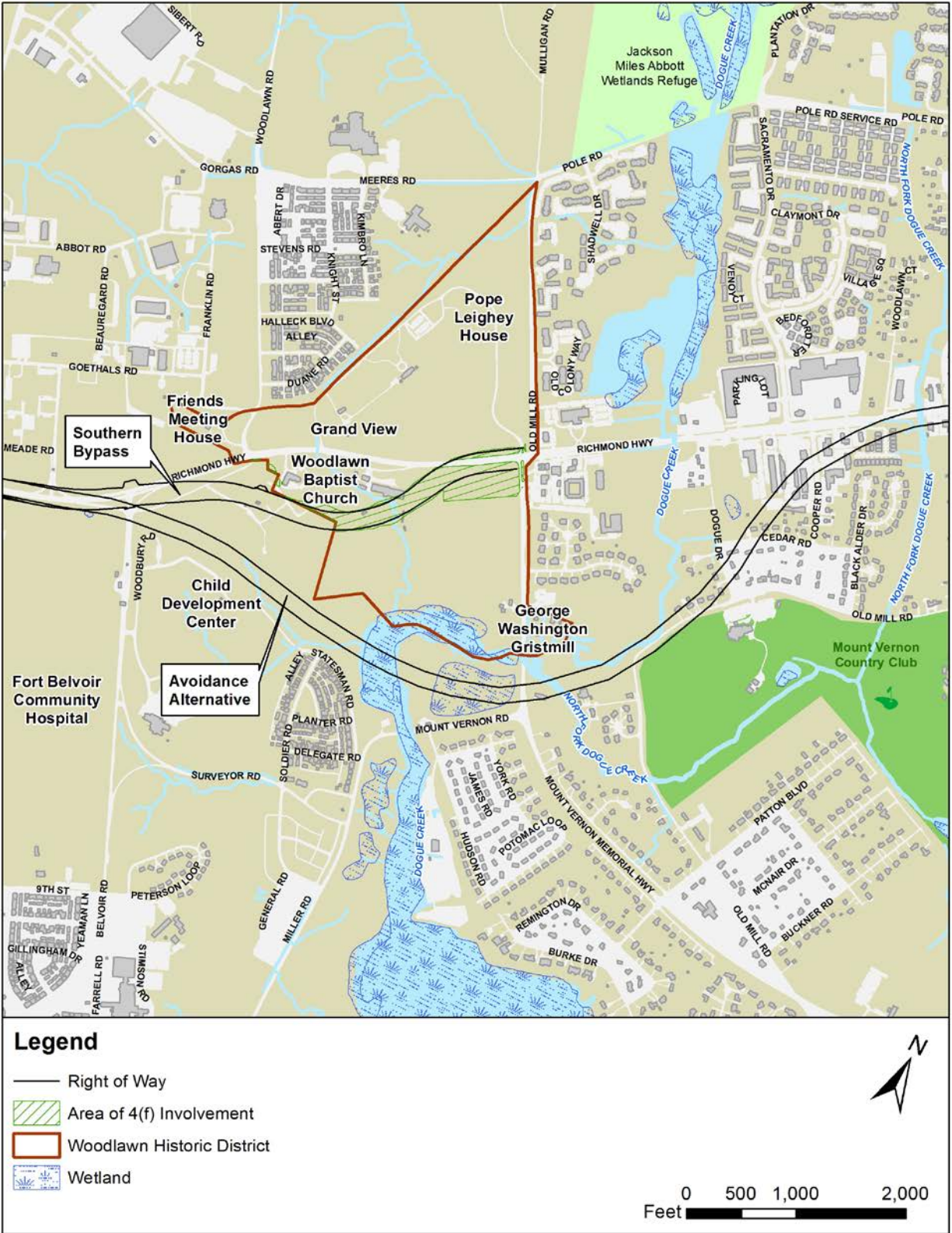


Figure 8. Woodlawn Avoidance Alternative

V.B. Fort Belvoir Forest and Wildlife Corridor

- a) **Minimize Encroachment:** The amount of encroachment into the Corridor would be the minimum necessary to accommodate the proposed alignment of Route 1 consistent with sound engineering principles and safety.
- b) **Access:** The impacted area will not impact access to the Corridor.
- c) **Other measures:** See discussion above regarding provisions for wildlife passage.
- d) **Maintenance of Traffic:** Traffic flow would be maintained during construction and should not impact the Corridor, which lies adjacent to the construction activity.
- e) **Erosion and Sediment Control:** Temporary and permanent erosion and sediment controls would be installed during construction to minimize any detrimental effects of project generated sediment within the Corridor. The practices recommended in the *1992 Virginia Erosion and Sediment Control Handbook* will be used for this project.
- f) **Additional coordination:** Additional coordination will be conducted with Fort Belvoir Directorate of Installation Support – Environmental and Natural Resources Division to address and minimize adverse affects and potential mitigation for the Corridor. Coordination will continue throughout the design process.

V.C. Fort Belvoir Military Railroad

- a) **Minimize Encroachment:** The amount of encroachment on the railroad corridor would be the minimum necessary to accommodate the proposed alignment of Route 1 consistent with sound engineering principles and safety.
- b) **Documentation:** The existing railroad bridge would be fully documented prior to demolition. Copies of the documentation would be provided to VDHR, Fort Belvoir, Fairfax County, and other interested parties.
- c) **Additional coordination:** Additional coordination would be undertaken with VDHR, Fort Belvoir, and others as appropriate regarding the methods and details of documentation.

V.D. Woodlawn Historic District

- a) **Minimize Encroachment:** The amount of encroachment into the district would be the minimum necessary to accommodate the proposed widening and alignment of Route 1, consistent with sound engineering principles and safety.
- b) **Access:** The main entrance to the Woodlawn Plantation NHL is being relocated as part of the Mulligan Road project. The new entrance would be off of Woodlawn Road; the existing main entrance would be closed. The entrance to Woodlawn Baptist Church also would be relocated, with a new connection opposite the current Woodlawn Road intersection. The intersection will remain signalized.
- c) **Maintenance of Traffic:** Traffic flow would be maintained during construction so that access to properties both within and adjacent to the District would not be interrupted.
- d) **Turn lanes and traffic control:** The project would provide medians, turn lanes and traffic signals at Woodlawn Road and at Mulligan Road/Mount Vernon Memorial Highway.
- e) **Erosion and Sediment Control:** Temporary and permanent erosion and sediment controls would be installed during construction to minimize any detrimental effects of project generated sediment on District land. The practices recommended in the *1992 Virginia Erosion and Sediment Control Handbook* will be used for this project.
- f) **Landscaping:** Landscaping would be developed in coordination with the Trust and other consulting parties.

- g) Additional coordination:** Additional coordination has been held with the Section 106 consulting parties. Through the Section 106 process, FHWA ensures that consulting parties provide input on proposed measures to minimize harm, refine design details, and agree to execute a Memorandum of Agreement (MOA) or Programmatic Agreement (PA) pursuant to 36 CFR 800.6.

VI. Least Overall Harm Analysis

Pursuant to 23 CFR 774.3(c), if the avoidance analysis determines that there is no feasible and prudent avoidance alternative, then only the alternative that causes the least overall harm to the Section 4(f) property may be approved. All of the action alternatives considered were evaluated to determine which alternatives would cause the least overall harm to the Section 4(f) property. This section evaluates those alternatives, including alternatives that would eliminate or reduce the use of individual Section 4(f) properties. The least overall harm is determined by balancing seven factors as listed in 23 CFR 774.3(c)(1) and discussed further below. A determination of the alternative that causes the least overall harm will be made in the Final Section 4(f) Evaluation.

- i. The ability to mitigate adverse impacts to the Section 4(f) property (including any measures that result in benefits to the property).*

In the areas adjacent to the Accotink Bay Wildlife Refuge, the Fort Belvoir Forest and Wildlife Corridor, and the Fort Belvoir Military Railroad, both Alternative B and Alternative C are the same; therefore, the ability to mitigate adverse impacts to the Section 4(f) properties is the same. Alternative B, both before and after mitigation, would result in less severe harm to the activities, attributes, and features of the Woodlawn Historic District than would Alternative C. Specifically, the overall acreage of Section 4(f) land in the Woodlawn Historic District would be less, the acreage of land from the National Historic Landmark portion of the District would be less, the displacement of graves in the contributing Woodlawn Baptist Church cemetery would be avoided, the distance to the Woodlawn Quaker Meeting House would be greater, and the impact to the Woodlawn Baptist Church property would be less severe.

- ii. The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify the Section 4(f) property for protection.*

Both Alternatives B and C would have the same impacts to the Accotink Bay Wildlife Refuge, the Fort Belvoir Forest and Wildlife Corridor, and the Fort Belvoir Military Railroad. Alternative B would require the use of approximately 11.54 acres of land from the Woodlawn Historic District; Alternative C would require the use of approximately 12.49 acres of land (**See Figure 7**). However, under Alternative B, the reversion of approximately 2.89 acres of current Route 1 right-of-way to non-road use lands essentially reduces the net use of the Woodlawn Historic District to 8.65 acres (**See Tables 1 and 2**). Alternative B would avoid displacement of graves in the Woodlawn Baptist Church cemetery; Alternative C would require relocation of approximately 100 graves. Alternative B would shift the alignment farther away from the Woodlawn Quaker Meeting House. Overall, Alternative B presents more opportunities to mitigate adverse impacts, including measures that would result in benefits to the contributing resources that comprise the Woodlawn Historic District.

iii. The relative significance of the Section 4(f) property.

Alternatives were analyzed that would avoid the use of each of the Section 4(f) properties. Constructing all of the widening along the north side of Route 1 to avoid use of the Accotink Bay Wildlife Refuge would increase impacts to the Fort Belvoir Forest and Wildlife Corridor, which also is a Section 4(f) property of equal significance. The Fort Belvoir Forest and Wildlife Corridor and Fort Belvoir Military Railroad are located on the north and south side of Route 1; therefore, the alignment could not be shifted to avoid use of this Section 4(f) property.

Several individually NRHP-listed properties contribute to the Woodlawn Historic District, including Woodlawn Plantation. The northern Woodlawn Plantation parcel has been designated a National Historic Landmark, and so is accorded a higher degree of significance and protection under the National Historic Preservation Act and as a Section 4(f) property. Alternative B includes the Southern Bypass. The Southern Bypass would still use land from a portion of the Woodlawn Historic District, but would largely bypass the Woodlawn Baptist Church property, including the cemetery. The alignment would be shifted away from the Quaker Meeting House and Woodlawn Plantation Building and minimize the use of land from the National Historic Landmark portion of Woodlawn Plantation. Alternative B would use approximately 0.59 acres of land from the National Historic Landmark parcel; in contrast, Alternative C would use approximately 3.90 acres of land.

iv. The views of the official(s) with jurisdiction over the Section 4(f) property.

Both VDHR and the National Trust for Historic Preservation have been receptive to consideration of Alternative B as compared to Alternative C, although neither has expressed a definitive preference at this time.

v. The degree to which the alternative meets the purpose and need for the project.

Both build Alternatives B and C would equally meet the purpose and need for the project.

vi. After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f).

Alternative B would require the use of more Army land on Fort Belvoir than would Alternative C.

vii. Substantial differences in costs among the alternatives.

Under Alternative A, Route 1 would remain in its existing configuration, and only regular maintenance would be performed to preserve the structural integrity of the pavement and the existing bridges. There would be minimal maintenance costs associated with Alternative A. The two build alternatives are similar except at the Telegraph Road and Fairfax County Parkway intersections and within the Woodlawn Historic District. Under Alternative B, Route 1 would be widened to six lanes along the existing alignment, with the exception being the Southern Bypass, and at-grade intersections would be constructed at Telegraph Road and Fairfax County Parkway. The cost associated with Alternative B would be approximately \$99 million. Under Alternative C, Route 1 would be widened to six lanes along the existing alignment and grade-separated interchanges would be constructed at Telegraph Road and Fairfax County Parkway. The cost associated with Alternative C would be approximately \$124 million dollars.

The flyover intersection options at Telegraph Road and Fairfax County Parkway are part of Alternative C, resulting in a substantial increase in the cost estimate for Alternative C. For the sake of cost comparison between the two options (one each in Alternatives B and C) for the segment of Route 1 between Mount Vernon Memorial Highway and Belvoir Road, it would not be proper to simply compare the total cost of Alternative B vs. Alternative C. A more appropriate cost estimate comparison would be to simply compare the estimated cost of each individual alignment option (each in Alternative B and C) for the segment of Route 1 between Mount Vernon Highway and Belvoir Road. This cost estimate comparison indicates that these two alignment options are substantially the same cost.

VII. Consultation and Coordination

Officials with jurisdiction over the Section 4(f) properties have been consulted throughout the duration of project development. They include:

- U.S. Army Garrison, Fort Belvoir – owners of Accotink Bay Wildlife Refuge, Fort Belvoir Wildlife Corridor, and Fort Belvoir Military Railroad.
- U.S. Department of Interior – has responsibilities regarding National Historic Landmarks, such as a portion of Woodlawn Plantation.
- Virginia Department of Historic Resources – State Historic Preservation Office for review of historic property issues.
- Alexandria Monthly Meeting of Friends – owners of Woodlawn Quaker Meetinghouse.
- Woodlawn Baptist Church – owners of Woodlawn Baptist Church.
- National Trust for Historic Preservation – owners of Woodlawn Plantation

Most of the coordination with these entities occurred through a series of meetings, both individually and collectively, to discuss issues of concern, project alternatives, design variations, and impacts. Section 4 of the Environmental Assessment provides additional information on the six Consulting Parties meetings that were held during the course of the study and the individual meetings with the National Trust for Historic Preservation, Woodlawn Baptist Church, Pohick Church, and Friends, among others. Section 4 also describes the extensive coordination with local, state, and federal agencies on the Route 1 improvements, and the inclusive public involvement program, which included three public meetings. Local, state, and federal agencies and the general public were contacted early in the study and asked to identify issues of concern and to provide information about environmental resources within the study area. The agency and public comments received in response to these coordination efforts were instrumental in defining the scope of the EA. In addition, throughout the process, the public was notified about study findings via the project website (<http://www.epl.fhwa.dot.gov/projects/environment.aspx>) and given opportunities to provide comments about transportation needs, potential alternatives, and environmental concerns.

The Draft Section 4(f) Evaluation will be sent to the Department of Interior for review and comment concurrently with the release of the EA to the public for a minimum of 45 days in accordance with 23 CFR 774.5.

VIII. Summary

FHWA's Eastern Federal Lands Highway Division, in cooperation with Fairfax County, U.S. Army Garrison Fort Belvoir, and the Virginia Department of Transportation, is conducting studies to address deficiencies in the 3.4-mile-long section of U.S. Route 1 between Telegraph Road (Route 611) and Mount Vernon Memorial Highway (Route 235) in Fairfax County, Virginia. The purpose of the project is to expand roadway capacity to accommodate travel demand, facilitate access to medical and other facilities on Fort Belvoir, implement facilities for pedestrian and bicycle travel, and provide space for future transit services pursuant to Fairfax County's Comprehensive Plan.

Three alternatives are currently under consideration, including the No-Build Alternative (Alternative A) and two build alternatives (Alternatives B and C). The No-Build Alternative would not meet the purpose and need for the project; both Alternatives B and C would equally meet the purpose and need. As described within this Section 4(f) evaluation, Accotink Bay Wildlife Refuge, Fort Belvoir Forest and Wildlife Corridor, Fort Belvoir Military Railroad, and Woodlawn Historic District meet the criteria for protection under Section 4(f) and would be "used" by Build Alternatives B or C.

Approved:

Melisa L. Ridenour, Division Engineer, EFLHD Date

ATTACHMENT 1

**MEMORANDUM OF AGREEMENT
BETWEEN THE DEPARTMENT OF THE ARMY
AND THE COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION
FOR
CONSTRUCTION OF ROADWAY IMPROVEMENTS AT THE INTERSECTIONS OF
POHICK ROAD AND BARTA ROAD, WITH RICHMOND HIGHWAY/ROUTE 1
AND
CONSTRUCTION OF A NEW FIVE-LANE BRIDGE ON GUNSTON ROAD
OVER RICHMOND HIGHWAY/ROUTE 1
AND
CONSTRUCTION OF THE ROUTE 1 WIDENING PROJECT**

**DRAFT SECTION 4(f) EVALUATION
Route 1 Improvements at Fort Belvoir
Fairfax County
From: Telegraph Road (Route 611)
To: Mount Vernon Memorial Highway (Route 235)**



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BELVOIR
9820 FLAGLER ROAD, SUITE 213
FORT BELVOIR, VIRGINIA 22060-5928

REPLY TO
ATTENTION OF

IMNE-BEL-ZA

August 18, 2010

Agreement No. _____

Memorandum of Agreement

between the

Department of the Army

and the

Commonwealth of Virginia
Department of Transportation

for

Construction of Roadway Improvements at the Intersections of Pohick Road
and Barta Road, with Richmond Highway/Route 1

and

Construction of a New Five-Lane Bridge on Gunston Road
Over Richmond Highway/Route 1

and

Construction of the Route 1 Widening Project

THIS MEMORANDUM OF AGREEMENT (Agreement) is made as of the date of the final signature below by and between the following parties: the United States of America, acting by and through the Department of the Army (Army), and the Commonwealth of Virginia (Commonwealth), acting by and through the Virginia Department of Transportation (VDOT).

RECITALS

WHEREAS, pursuant to the Base Closure and Realignment Act of 1990, Public Law 101-510, as amended, and certain approved recommendations of the BRAC Commission, approximately 19,300 military and civilian personnel will relocate to Fort Belvoir on or before September 15, 2011, including 8,500 to Fort Belvoir North Area, 6,400 to Mark Center, 1,000 to Rivanna Station, and 3,400 to Main Post who would use the Route 1 Corridor; and

WHEREAS, pursuant to authority granted in Public Law PL 101-510 the Army proposes to construct roadway improvements at the intersections of Pohick Road and Belvoir Road with Richmond Highway/Route 1 (Route 1) on Fort Belvoir, as part of Phase 1 of the Roads, Utilities and Security Improvements project needed to support implementation of the BRAC 2005 approved recommendations for realignment of Fort Belvoir (Phase 1 Improvements); and

“LEADERS IN EXCELLENCE”

WHEREAS, pursuant to authority granted in Public Law 101-510 as amended, the Army proposes to construct a new five-lane bridge on Gunston Road over Route 1 to replace the existing two-lane bridge on Gunston Road on Fort Belvoir, as part of Phase 2 of the Roads, Utilities and Security Improvements project needed to support implementation of the BRAC 2005 approved recommendations for realignment of Fort Belvoir (Phase 2 Improvements); and

WHEREAS, the United States, through the Secretary of the Army, has granted an easement, DACA-31-DA-49-80-ENG-4381, to the Commonwealth of Virginia for the construction, operation and maintenance of a public road known as Richmond Highway, US Route 1 (Route 1) over, across, in and upon lands of the United States between Fairfax County Parkway and Woodlawn Road, being a portion of Fort Belvoir, Virginia; and

WHEREAS, the Army has granted eight supplemental easements (collectively, easements) for additional public roadway improvements since the original easement was granted; and

WHEREAS, Route 1 is currently a four-lane roadway within the existing 80' easement, DACA-31-DA-49-80-ENG-4381 and supplemental easements thereto; and

WHEREAS, the Fairfax County Comprehensive Plan includes a plan for widening Route 1 and provisions for a transit system through Fort Belvoir and associated improvements (Route 1 Widening Project); and

WHEREAS, VDOT and Fairfax County propose that Route 1 be widened between the Fairfax County Parkway and Mount Vernon Memorial Highway/Mulligan Road, and Route 1 Widening Project is currently under design by Fairfax County; and

WHEREAS, VDOT is the authority responsible for approval and permitting of the construction of said widening, and any reference to VDOT performing design herein is intended to include other agencies or consultants involved in the design or design-build of the project.

WHEREAS, the parties, in a meeting on May 20, 2009, agreed to a base typical section for the widening of Route 1 in conjunction with the Phase 2 Improvements that included revisions to the proposed Fairfax County Comprehensive Plan of a 176 foot right-of-way, to a maximum easement width of 148 feet over Route 1 (per attached Appendix B); and

WHEREAS, The parties agree the 148' easement may be expanded upon agreement by the parties, once detailed design plans are developed for the Route 1 widening, to provide for utility relocation, storm water management facilities, turn lanes, traffic signalization, temporary construction, slopes, replacement railroad/transit bridge over U.S. 1, maintenance of traffic during construction and other ancillary improvements; and

WHEREAS, VDOT will submit project plans developed by VDOT or others to Fort Belvoir for review and comment at interim design stages (e.g. 30%, 60%, 90%) to facilitate cooperative development of design and easement requirements; and

WHEREAS, an easement that includes the Route 1 Widening Project may not be granted to VDOT until environmental studies, NEPA analysis, and National Historic Preservation Act (NHPA) analysis are completed for the proposed action, which requires design plans from Fairfax County, the Federal Highway Administration (FHWA) or VDOT; and

WHEREAS, environmental studies, NEPA analysis, and NHPA analysis will be completed by VDOT or FHWA as the principal agency with Fort Belvoir as a cooperating agency; and

WHEREAS, the design for Route 1 Widening Project is currently under development and NEPA analysis has not yet been initiated; and

WHEREAS, the parties have agreed that it is preferable to vacate a portion of the existing easements in favor of a single easement that will encompass a portion of the existing easement, the proposed Phase 1 and Phase 2 Improvements, and Route 1 Widening Project improvements; and

WHEREAS, construction of Phase 1 and Phase 2 Improvements by the Army requires that VDOT issue permits for construction of the Phase 1 and Phase 2 Improvements; and

WHEREAS, VDOT cannot issue permits on land not owned or controlled by VDOT by fee simple ownership or easement, or addressed in a Memorandum of Agreement (Agreement); and

WHEREAS, the Parties' continued participation in this Agreement is contingent on completion of the Route 1 Widening Project, and the Parties will continue to participate in this Agreement unless and until the County and VDOT decline to construct Route 1 Widening Project for whatever reason, in which case easements for the Phase 1 and Phase 2 improvements will be granted by separate agreement; and

WHEREAS, Army reserves the right to maintain existing access to Army property in construction areas covered in the easements for the Route 1 Widening Project; and

WHEREAS, the Parties agree to cooperate to ensure the timely consideration of VDOT's request for an easement through Fort Belvoir required for construction, operation and maintenance of the aforesaid Route 1 Widening Project, whether existing or proposed, and timely review of plans for the Route 1 Widening Project; and

WHEREAS, the Parties agree to cooperate to ensure timely consideration of the Army's requests for land use permits and timely review of plans for the Phase 1 and Phase 2 Improvements projects to ensure completion schedules will not be impacted;

WHEREAS, the Army is authorized to enter into this Agreement pursuant to the authority contained in 10 U.S.C. Section 3001, et seq., and is the agency with administrative jurisdiction, custody, and control over Fort Belvoir; and

WHEREAS, the Commonwealth Transportation Commissioner, acting pursuant to the decision of the Commonwealth Transportation Board, is authorized to enter into this Agreement pursuant to the authority contained in Sections 33.1-12 and 33.1-13 of the Code of Virginia, 1950 as amended, and VDOT is the state agency with administrative oversight, maintenance and jurisdictional authority for Richmond Highway, Route 1,

NOW, THEREFORE, for and in consideration of the mutual covenants and agreements contained herein, the Parties agree as follows:

ARTICLE I. SCOPE OF WORK

A. The Army agrees:

1. At the request of VDOT, to grant a Base Easement to VDOT for the construction, operation and maintenance of Route 1, 148 feet in width, to accommodate both the Route 1 Widening project, consistent with the typical section for the Route 1 Widening project agreed to by the Parties at the March 20, 2009 meeting and attached hereto as Appendix A, and the Phase 1 and Phase 2 improvements consistent with the approved plans for said improvements (hereinafter referred to as the "Base Easement");

2. At the request of VDOT, to grant easements in addition to the Base Easement as mutually agreed to by the parties to accommodate utility relocation, storm water management facilities, turn lanes, traffic signalization, temporary construction, slopes, replacement railroad/transit bridge over U.S. 1, maintenance of traffic during construction and other ancillary improvements upon a demonstration by VDOT that said improvements cannot reasonably, from a financial standpoint, or practicably be accommodated or maintained within the 148-foot easement;

3. To identify known archaeological sites within or adjacent to the Base Easement and to provide available information to facilitate completion of both a NHPA and a NEPA analysis by the Route 1 Widening project;

4. To negotiate mutually acceptable locations and types of storm water management facilities which would minimize surface impacts, reduce right of way impacts, and minimize construction and maintenance impacts and costs;

5. To negotiate with Woodlawn Baptist Church to provide access to Church property through Fort Belvoir property and to evaluate relocation of the ballfield as necessary to provide such access to Church property;

6. To accept standard turn lanes in lieu of ramps to Belvoir Road, as may be necessary to accommodate moving the proposed alignment to the south to avoid encroachment on Fremont Field (formerly the P-2 fields);

7. To vacate a portion of the existing easements in favor of a single easement that will encompass a portion of the existing easements, the proposed Phase 1 and Phase 2 Improvements, and the Route 1 Widening Project.

8. To request authorization from VDOT for use of airspace over the easements granted to VDOT pursuant to this Agreement, whether such use is by the Army or any other public or private entity, only to the extent that such use will not interfere with the construction, operation or maintenance of the transportation facilities, right of way, and improvements contemplated under this Agreement or anticipated future transportation needs, and otherwise complies with 23 CFR Part 710 Subpart D and all other FHWA, Federal Aviation Administration (FAA), and Davison Army Airfield (DAA) requirements.

9. Upon request by VDOT and/or FHWA, to provide copies of any environmental studies, investigations, aerial photographs, or other information in its possession which pertain to the property to be outgranted by easement (easement property) to VDOT and/or FHWA for the design, construction,

operation and maintenance of the Route 1 Widening Project. Upon request, to grant access to the easement property necessary for VDOT's or FHWA's performance of environmental due diligence for the Route 1 Widening Project. Upon notification by VDOT and/or FHWA of the presence of munitions and explosives of concern (MEC), petroleum or hazardous substances on the easement property, Army will perform environmental response action as required under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and other applicable Federal, state and local laws and regulations.

B. VDOT agrees:

1. To act in good faith to minimize, to the extent practicable as mutually agreed to by the parties, the amount of land required in addition to the Base Easement, for utility relocation, storm water management facilities, turn lanes, traffic signalization, temporary construction, slopes, replacement railroad/transit bridge over U.S. 1, maintenance of traffic during construction, and other ancillary improvements

2. To plan for construction sequencing in order to minimize the need for easements outside the Base Easement.

3. To negotiate mutually acceptable locations and types of storm water management facilities which would minimize surface impacts, reduce right of way impacts, and minimize construction and maintenance costs and impacts;

4. To the extent practicable as determined by VDOT, negotiate with utility providers for authorization to relocate all overhead utility relocations to one side of the roadway alignment;

5. To negotiate improvements within the easement, including signage, lighting, landscaping and fencing, consistent with Army, Fort Belvoir, and VDOT design standards, the ownership and maintenance of which will be determined prior to VDOT approval of the final design plans for Route 1;

6. To the extent practicable as mutually agreed to by the parties, consider the use of retaining walls to avoid impacts on Army property or facilities;

7. To the extent practicable as mutually agreed to by the parties, design the Route 1 Widening Project so as to minimize or avoid impacts to identified environmentally sensitive areas, Army community resources, and historic and archaeological resources, on or within Fort Belvoir,

8. To design future replacement of the existing railroad transit corridor bridge with a bridge consistent with the Real Property Master Plan Digest, Fort Belvoir Virginia, dated December 2009 which requires "Conversion of the abandoned railway into a transit corridor - either as BRT or light-rail system to connect to Franconia-Springfield Metrorail Station and VRE stations." At the time of design, VDOT will coordinate with Fort Belvoir to determine if more recent Master Plan information is available, and shall use the latest Fort Belvoir-adopted plan to design the bridge.

9. To invite the National Trust for Historic Preservation to represent Woodlawn National Historic Landmark as a stakeholder in the design process for the Route 1 Widening Project.

10. To pay with future Route 1 Widening project funds the administrative costs of vacation of a portion of the existing easements and granting of a single easement that will encompass a portion of the existing easements, the proposed Phase 1 and Phase 2 Improvements, and the Route 1 Widening Project. This provision shall not relieve the Army of its responsibility to fund the administrative costs of granting and recording easements in conjunction with the proposed Phase 1 and Phase 2 Improvements prior to granting an easement for the future widening of Route 1.

11. To grant land use permits in a timely manner, as appropriate to ensure completion of construction by the Army of Phase 1 and Phase 2 Improvements on schedule provided said permit applications and permits meet VDOT requirements.

ARTICLE II. TERM OF AGREEMENT

This Agreement will terminate upon any of the following: (1) Upon completion of the Phase 1 and Phase 2 improvements and a decision by VDOT not to construct the future Route 1 Widening improvements for any reason, in which case individual easements for Phase 1 and Phase 2 improvements will be granted by separate agreement, or (2) a mutual decision to terminate evidenced by a writing signed by both parties.

ARTICLE III. KEY OFFICIALS AND CONTACTS

Designated points of contact for the coordination of this project are:

- A. For the Army: Bill L. Sanders, Director of Public Works
9430 Jackson Loop, Suite 107
Fort Belvoir, Virginia 22060-6107
- B. For VDOT: Tom Fahrney, Commonwealth BRAC Coordinator
14685 Avion Parkway
Chantilly, Virginia 20151

ARTICLE IV. GENERAL TERMS AND CONDITIONS

A. This Agreement contains the entire Agreement and understanding of the Parties, and may not be amended, modified, or discharged nor may any of its terms be waived except by an instrument in writing signed by the Parties.

B. The failure of a Party to insist in any instance upon strict performance of any of the terms, conditions, or covenants contained, referenced, or incorporated into this Agreement shall not be construed as a waiver or a relinquishment of the Party's rights to the future performance of such terms, conditions, or covenants.

C. If any term or provision of this Agreement or the application thereof to any person or circumstance shall, to any extent, be invalid or unenforceable, the remainder of this Agreement, or the application of such term or provision to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected thereby, and each such term and

provision of the Agreement shall be valid and be enforced to the fullest extent permitted by applicable law.

D. This Agreement has been drafted jointly by the Parties hereto. As a result, the language used in this Agreement shall be deemed to be the language chosen by the Parties to express their mutual intent and no rule of strict construction shall be applied against either Party.

E. Nothing in this Agreement shall be construed as limiting or affecting the legal authorities of the parties, or as requiring the Parties to perform beyond their respective authorities. Nothing in this Agreement shall be deemed to bind either Party to expend funds in excess of available appropriations.

F. This Agreement is assignable; however, no transfer or assignment of this Agreement, or any part thereof or interest therein, directly or indirectly, voluntarily or involuntarily, shall be made unless such transfer or assignment is first approved in writing by the Parties.

G. The Parties shall not discriminate in the selection of employees or participants for any employment or other activities undertaken pursuant to this Agreement on the grounds of race, creed, color, sex, or national origin, and shall observe all of the provisions of Titles VI and VII of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. Section 2000(d) *et seq.*). The Parties shall take positive action to ensure that all applicants for employment or participation in any activities pursuant to this Agreement shall be employed or involved without regard to race, creed, color, sex, or national origin.

H. No member of, or Delegate to, or Resident Commissioner in Congress shall be admitted to any share or part of this Agreement, or to any benefits that may arise therefrom, unless the share or part or benefit is for the general benefit of a corporation or company.

I. The Parties will abide by the provisions of 18 U.S.C. Section 1913 (Lobbying with Appropriated Monies).

J. Contracts entered into by any Federal agency pursuant to this Agreement are subject to all laws governing federal procurement and to all regulations and rules promulgated thereunder, whether now in force or hereafter enacted or promulgated, except as specified in this Agreement.

K. The Parties accept full responsibility for any property damage, injury, or death caused by the acts or omissions of their respective employees, acting within the scope of their employment, or their contractors' scope of work, to the extent allowed by law. All claims shall be processed pursuant to applicable governing law.

L. Nothing in this Agreement shall be construed as in any way impairing the general powers of either of the Parties of supervision, regulation, and control of its property under such applicable laws, regulations, and rules.

ARTICLE V: FUNDING LIMITATIONS

The obligations of the Army to expend, pay, or reimburse any funds under this Agreement are subject to the availability of appropriated funds, and nothing

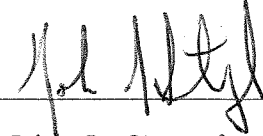
in this Agreement shall be interpreted to require obligations or payments by the Army in violation of the Antideficiency Act, 31 U.S.C. Section 1341, or other applicable fiscal laws.

IN WITNESS WHEREOF, the Parties have executed this Agreement, as verified by their signature below.

UNITED STATES OF AMERICA
DEPARTMENT OF THE ARMY

COMMONWEALTH OF VIRGINIA

By: _____

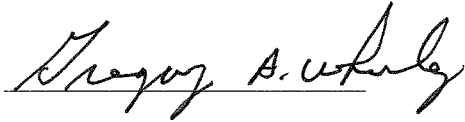


John J. Strycula
Colonel, US Army
Commanding

Date: _____

26 Aug 2010

By: _____



Date: _____

7/20/10

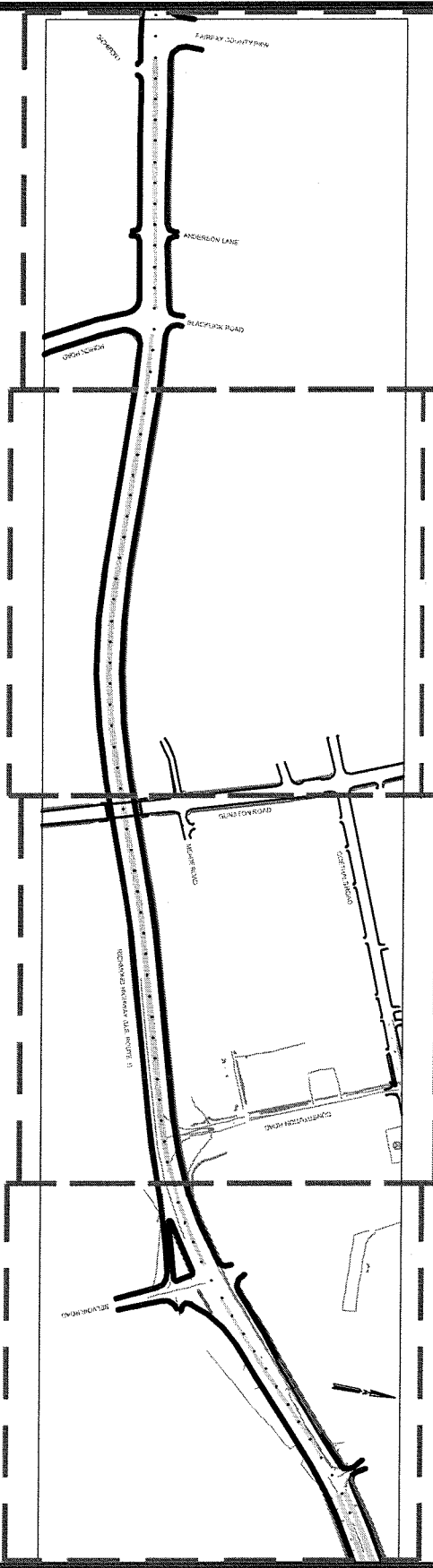
**RICHMOND HIGHWAY (U.S. ROUTE 1)
 FUTURE 8 LANES WITH 18' MEDIANS-SHOULDER SECTION
 (ROW WIDTH: 148 FEET)**


A-1

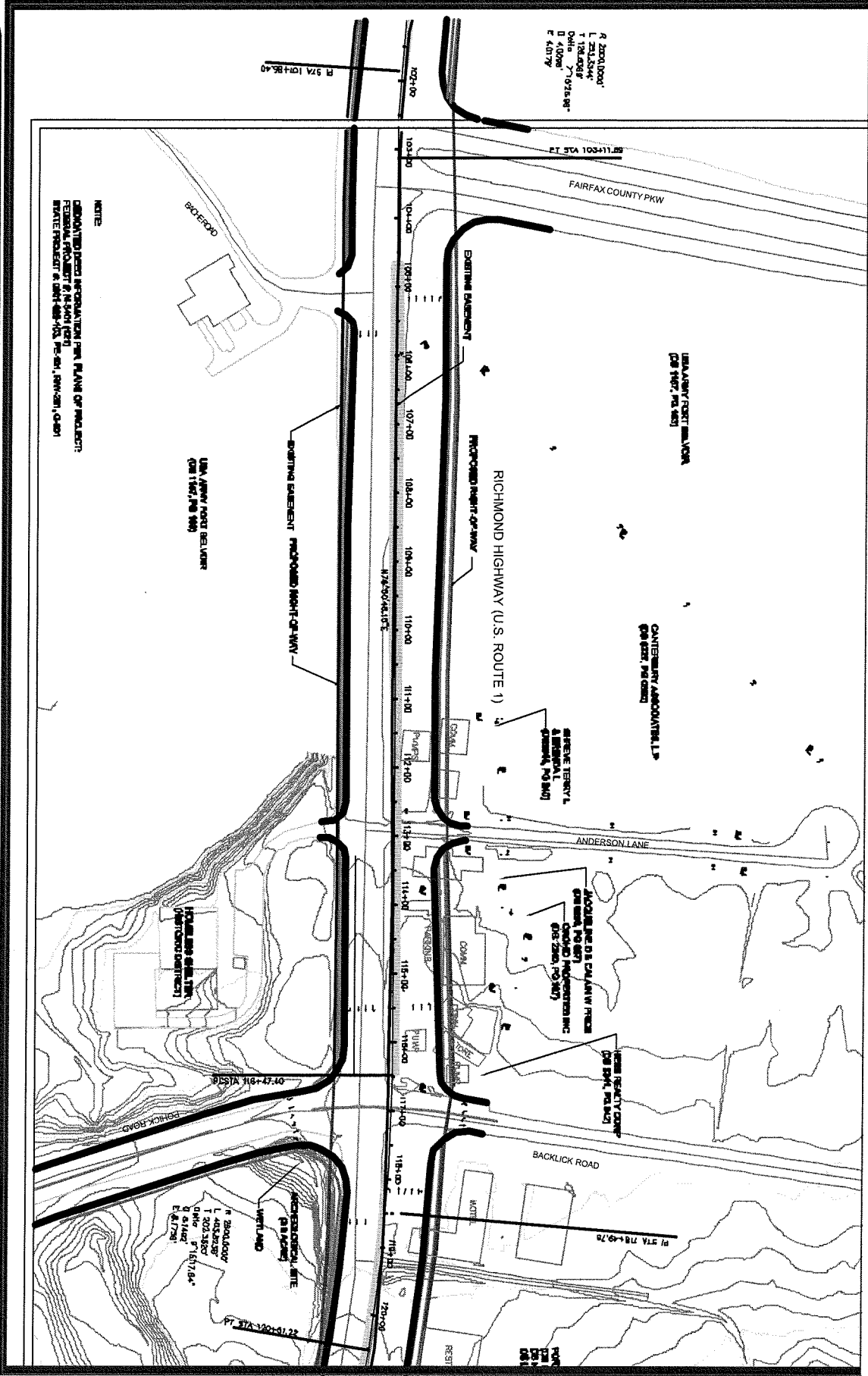
A-2

A-3

A-4



REVISION:	DESIGNED BY:	DATE: 1/11/2010	EXHIBIT A	 1100 NORTH GLEBE ROAD SUITE 500 ARLINGTON, VIRGINIA 22201 TEL (571) 218-1000 FAX (571) 218-1000
	DRAWN BY:	DRAWING No.		
	CHECKED BY:	SCALE: 1" = 500'		



REVISION:

DESIGNED BY:

DATE: 1/11/2010

DRAWN BY:

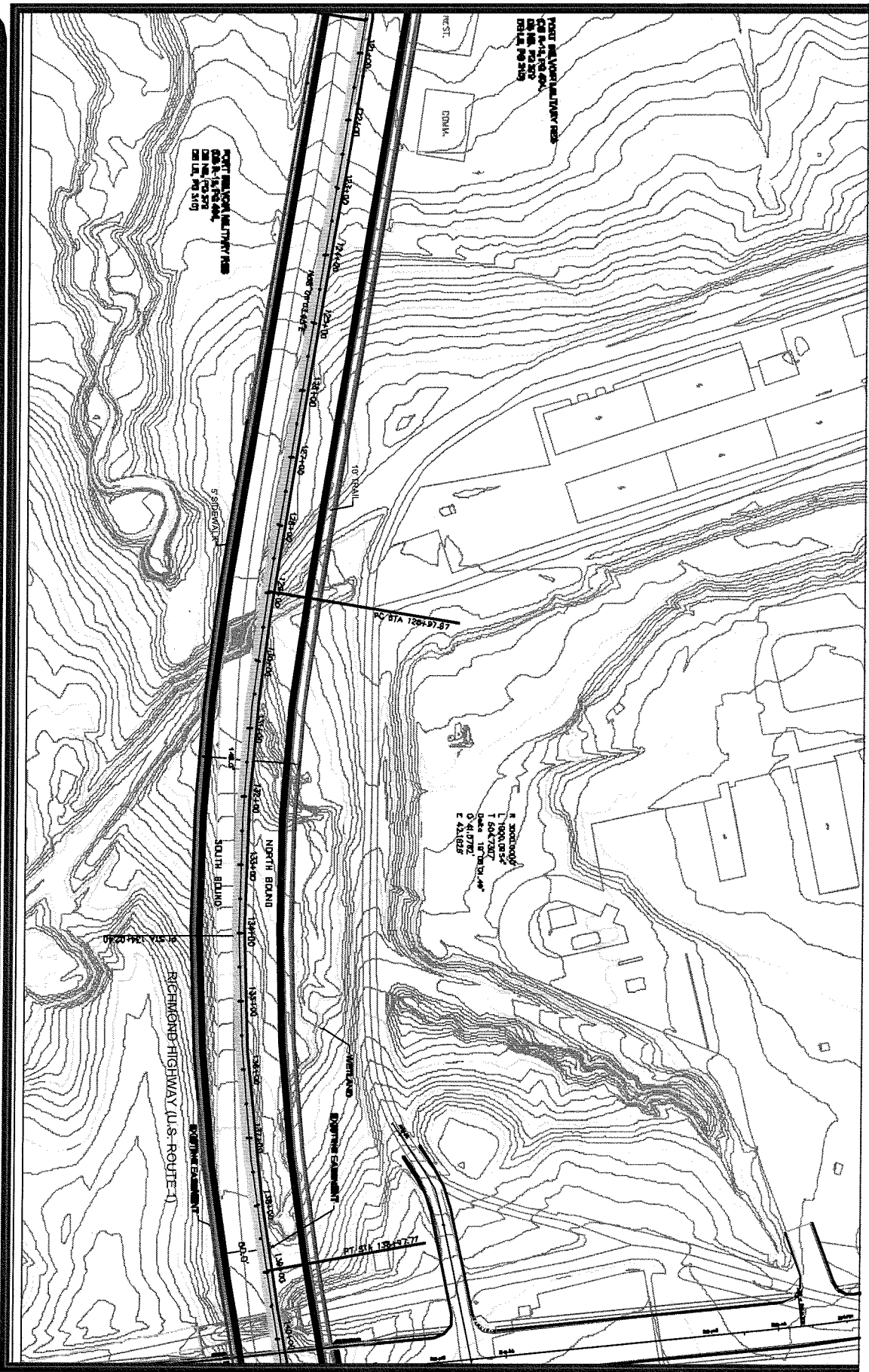
DRAWING No.

CHECKED BY:

SCALE: 1" = 200'

A-1

JE JACOBS
 1100 NORTH GLEBE ROAD SUITE 500
 ARLINGTON, VIRGINIA 22201
 TEL (571) 218-1000
 FAX (571) 218-1600



REVISION:

DESIGNED BY:

DATE: 1/11/2010

DRAWN BY:

DRAWING No.

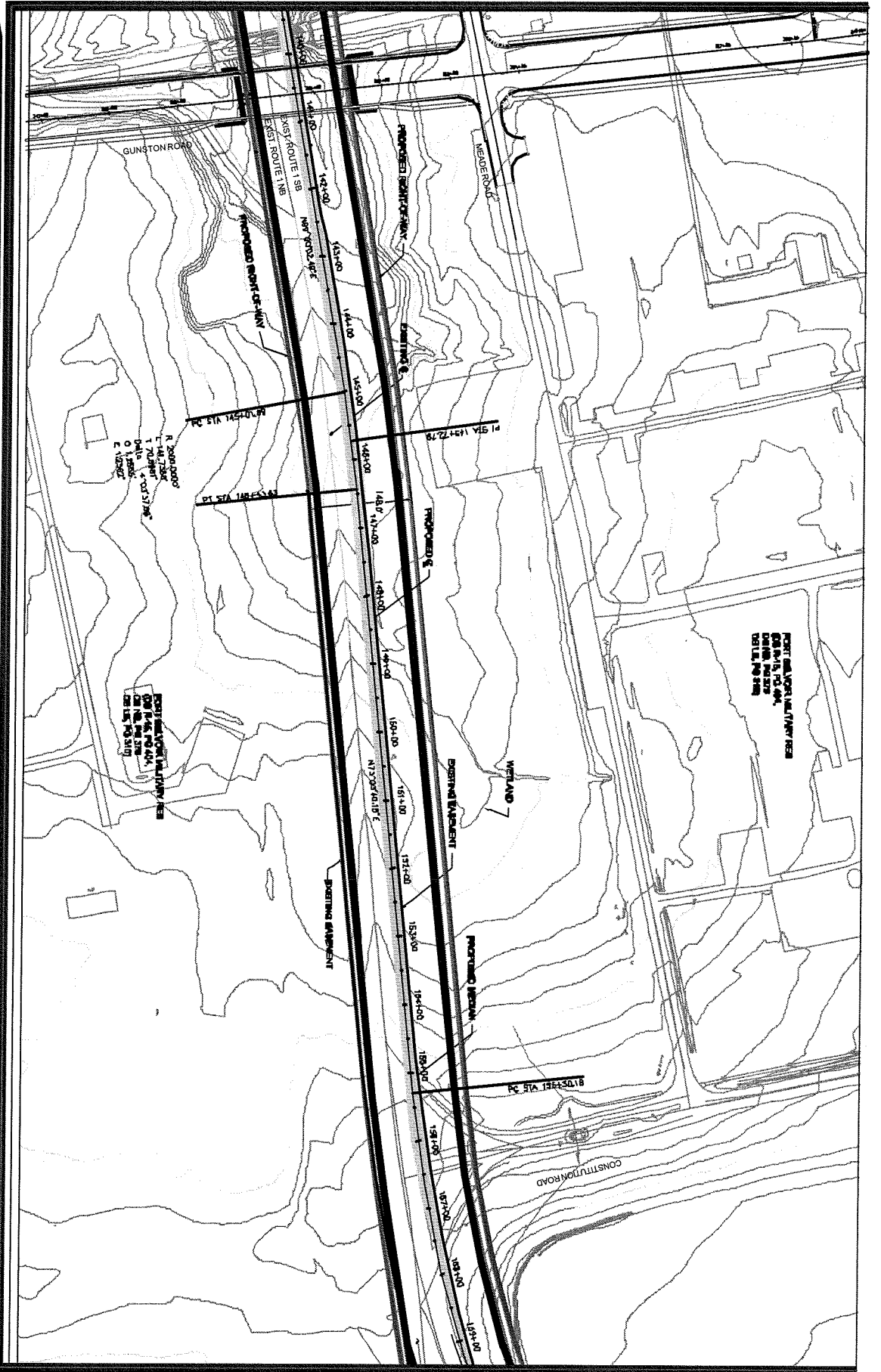
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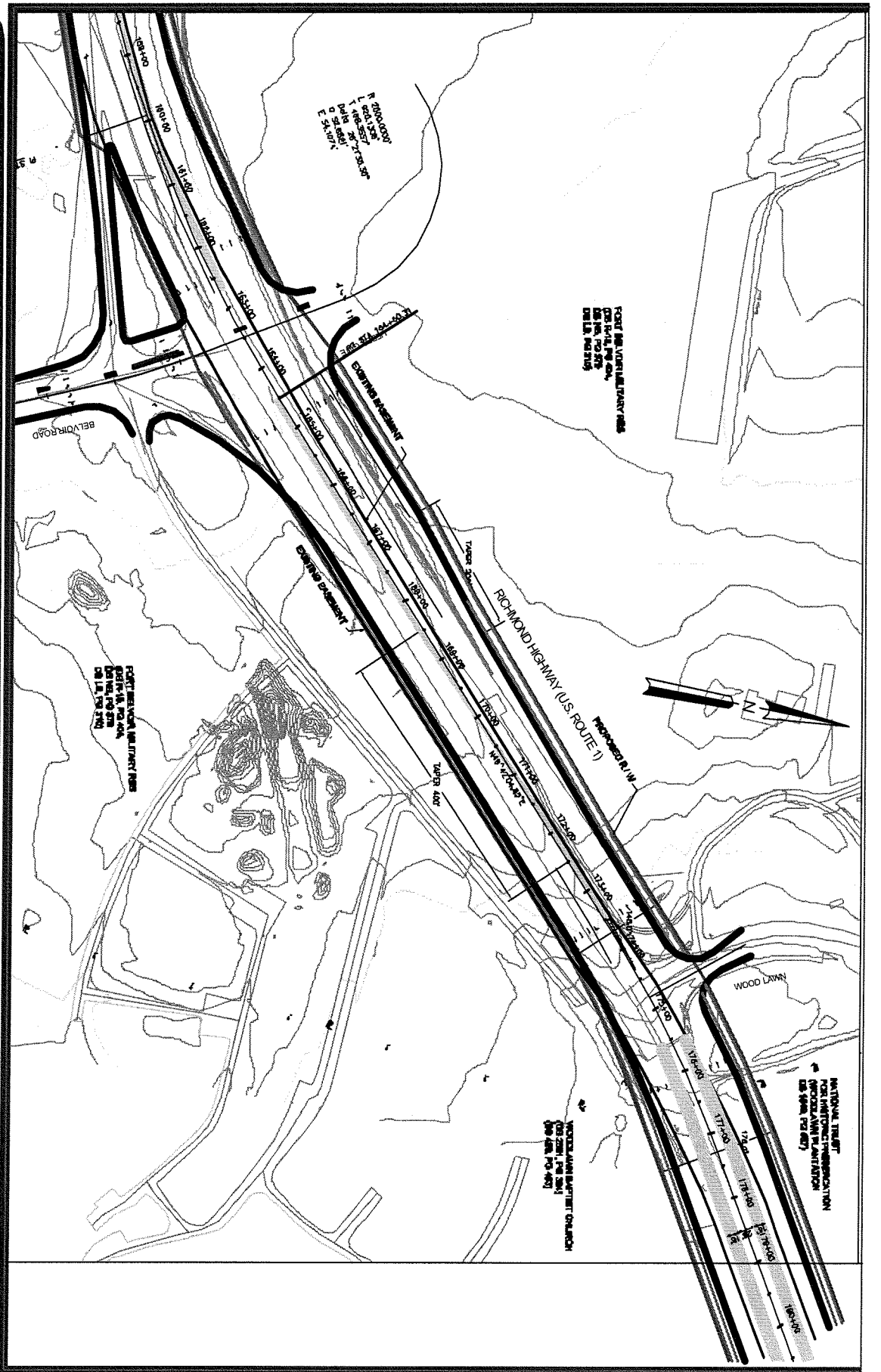
A-2



1100 NORTH GLEBE ROAD SUITE 500
 ARLINGTON, VIRGINIA 22201
 TEL (571) 218-1800
 FAX (571) 218-1800



REVISION:		DESIGNED BY:	DATE: 1/11/2010
DRAWN BY:		DRAWING NO.	
CHECKED BY:		SCALE: 1" = 200'	
		A-3	
			
1100 NORTH GLEBE ROAD SUITE 500 ARLINGTON, VIRGINIA 22201 TEL (571) 218-1800 FAX (571) 218-1800			



REVISION:

DESIGNED BY:

DATE: 1/11/2010

DRAWN BY:

DRAWING NO.

CHECKED BY:

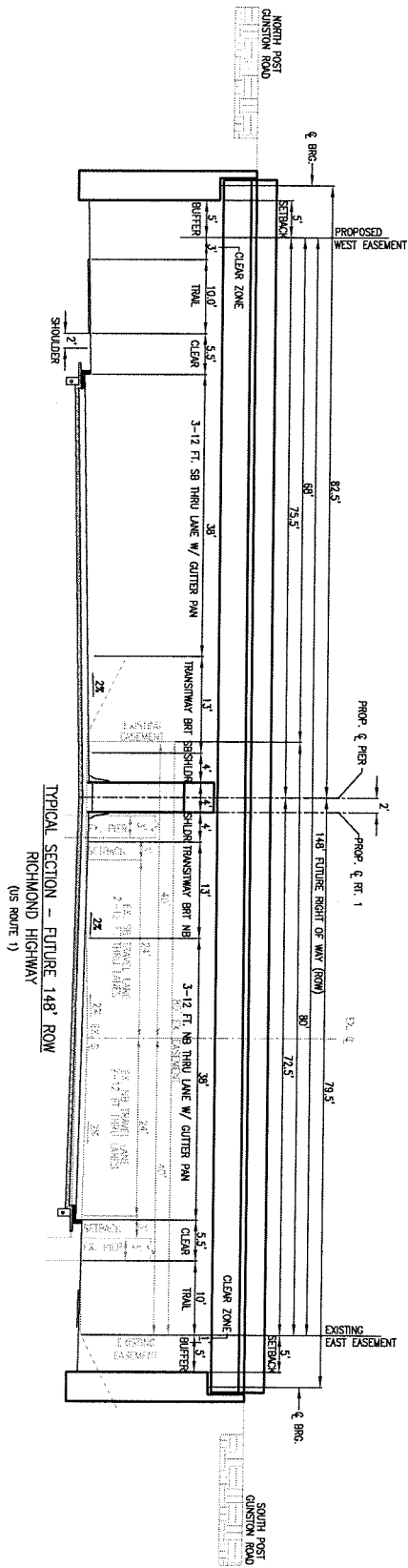
SCALE: 1" = 200'

A-4



1100 NORTH CLEEVE ROAD SUITE 500
 ARLINGTON, VIRGINIA 22201
 TEL (571) 218-1000
 FAX (571) 218-1800

EXHIBIT B



SCALE : 1" = 15'

ATTACHMENT 2

PRELIMINARY PLANS – ALTERNATIVE B

DRAFT SECTION 4(f) EVALUATION

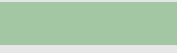



Route 1 Improvements at Fort Belvoir

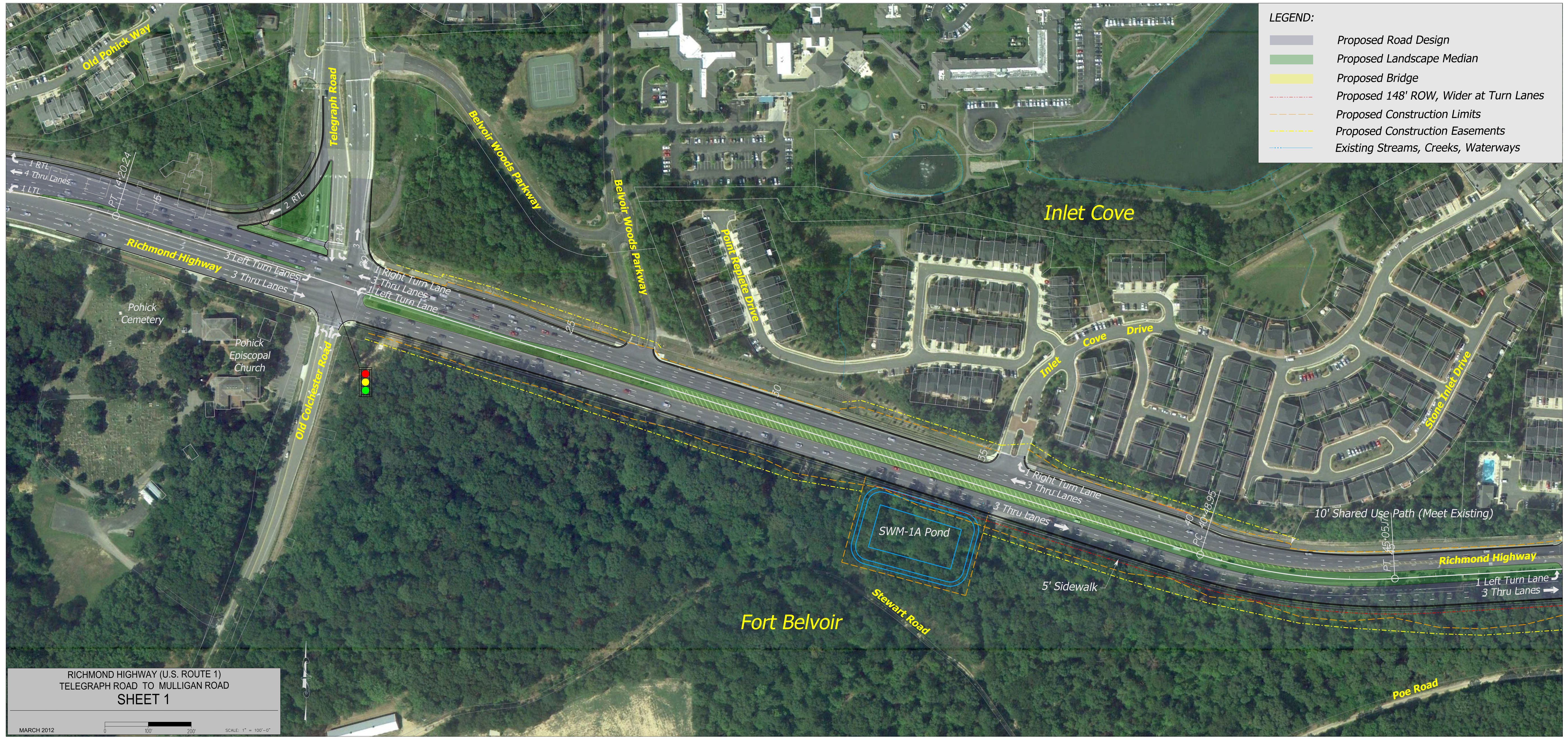
Fairfax County

From: Telegraph Road (Route 611)

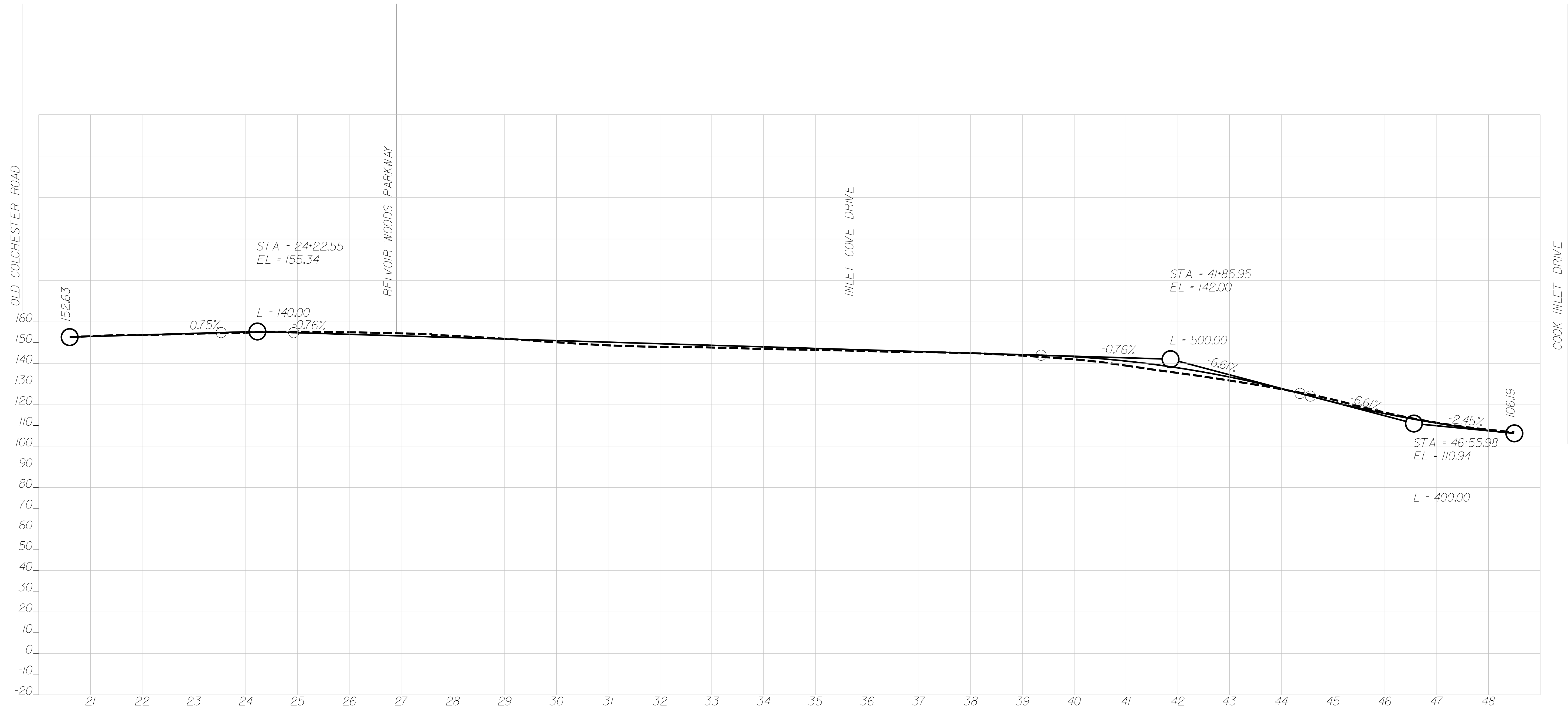
To: Mount Vernon Memorial Highway (Route 235)

LEGEND:

-  Proposed Road Design
-  Proposed Landscape Median
-  Proposed Bridge
-  Proposed 148' ROW, Wider at Turn Lanes
-  Proposed Construction Limits
-  Proposed Construction Easements
-  Existing Streams, Creeks, Waterways

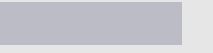
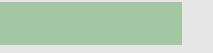

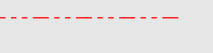
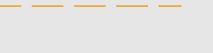
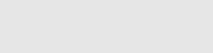
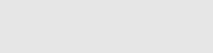
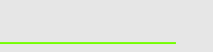



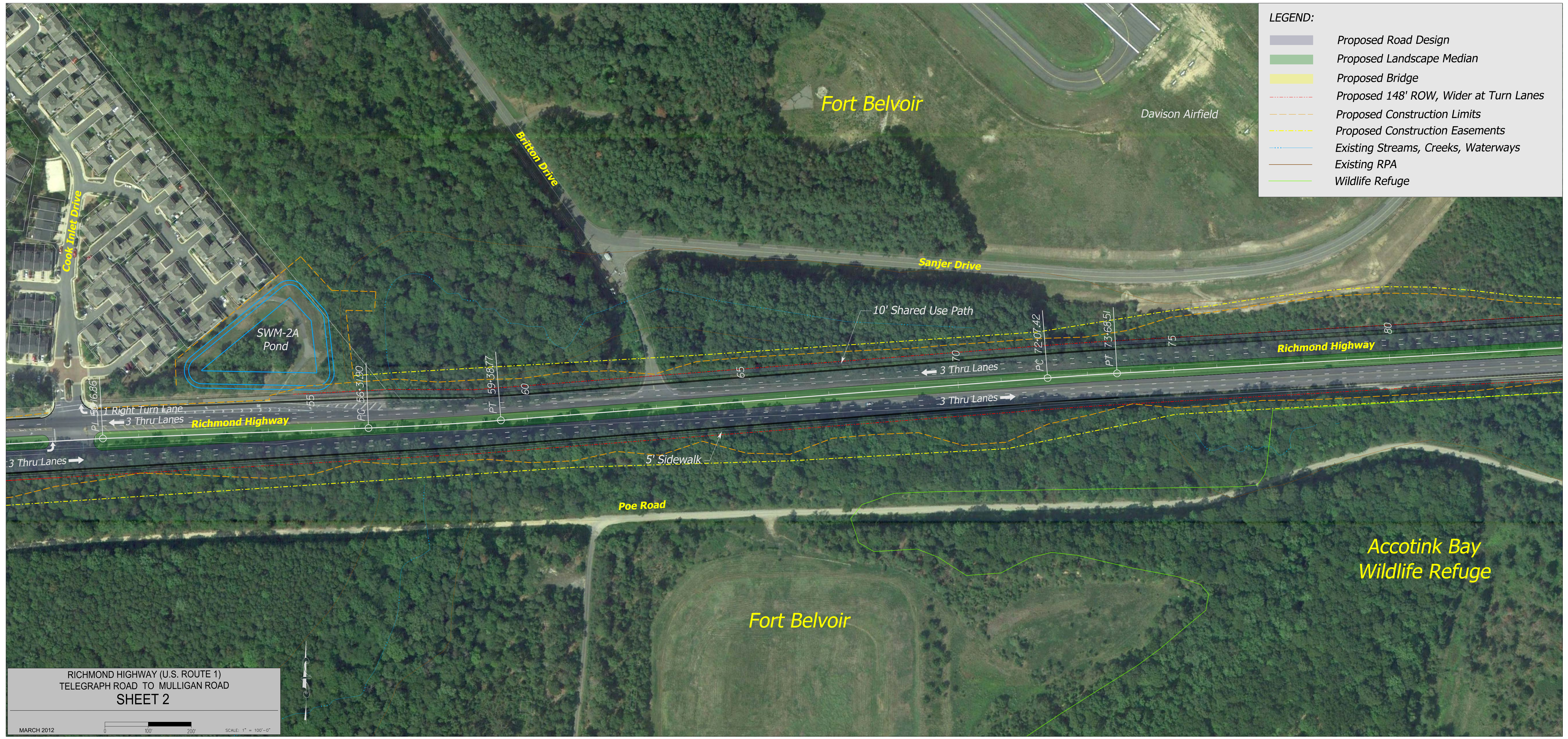
RICHMOND HIGHWAY (U.S. ROUTE 1)
TELEGRAPH ROAD TO MULLIGAN ROAD
SHEET 1



RICHMOND HIGHWAY (U.S. ROUTE 1)
 TELEGRAPH ROAD TO MULLIGAN ROAD PROFILE
SHEET 1A

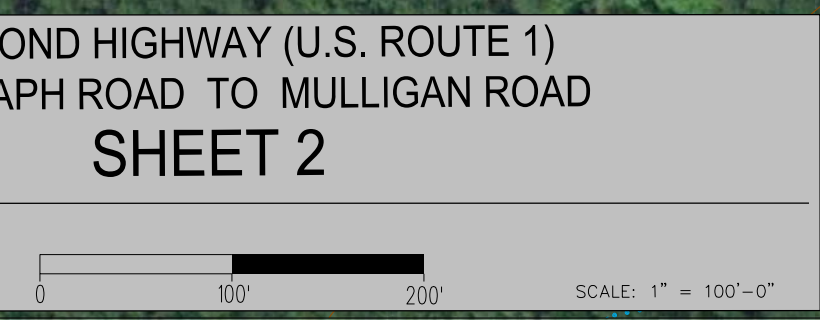
LEGEND:

	Proposed Road Design
	Proposed Landscape Median
	Proposed Bridge
	Proposed 148' ROW, Wider at Turn Lanes
	Proposed Construction Limits
	Proposed Construction Easements
	Existing Streams, Creeks, Waterways
	Existing RPA
	Wildlife Refuge

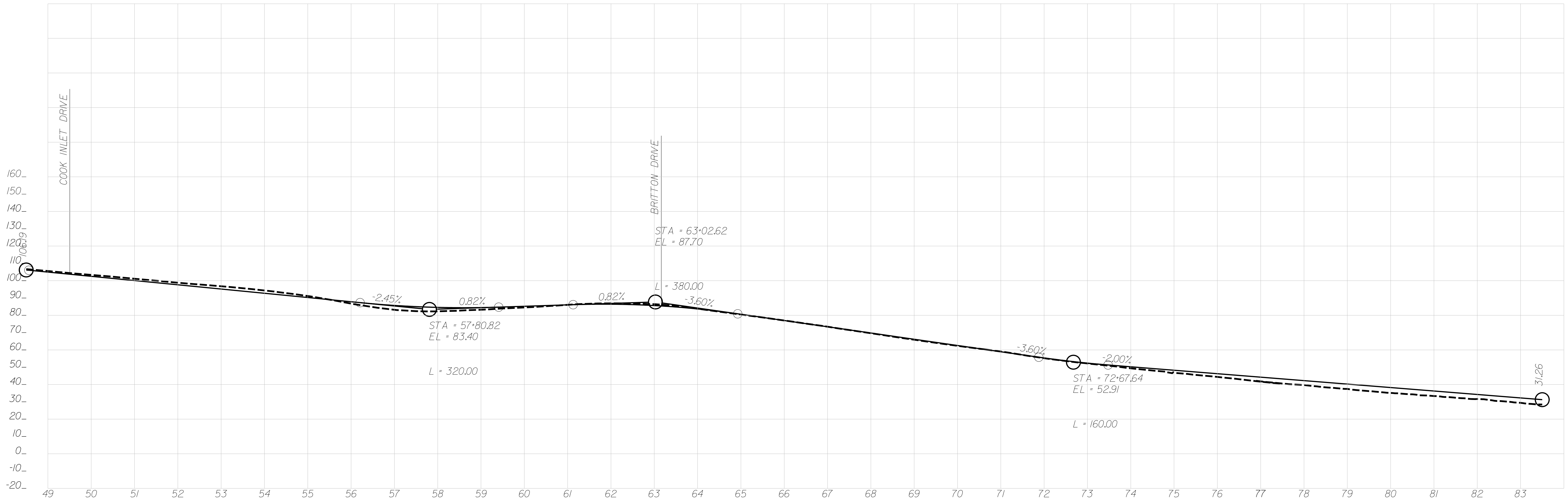


RICHMOND HIGHWAY (U.S. ROUTE 1)
TELEGRAPH ROAD TO MULLIGAN ROAD
SHEET 2

MARCH 2012

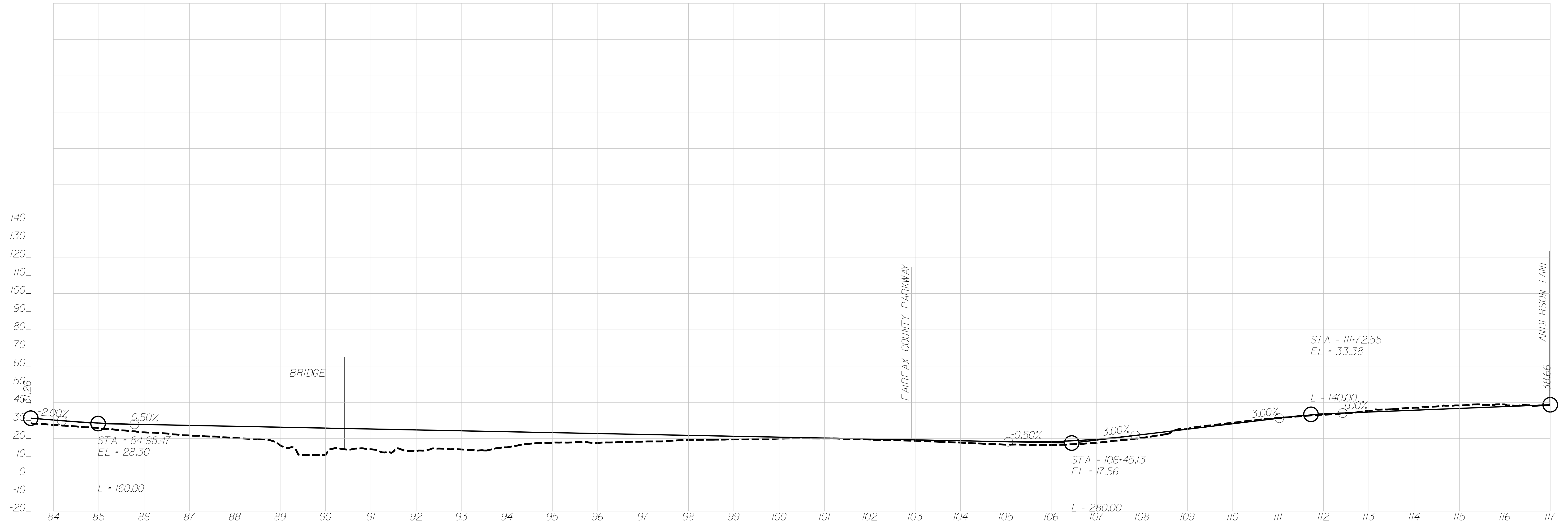


SCALE: 1" = 100'-0"

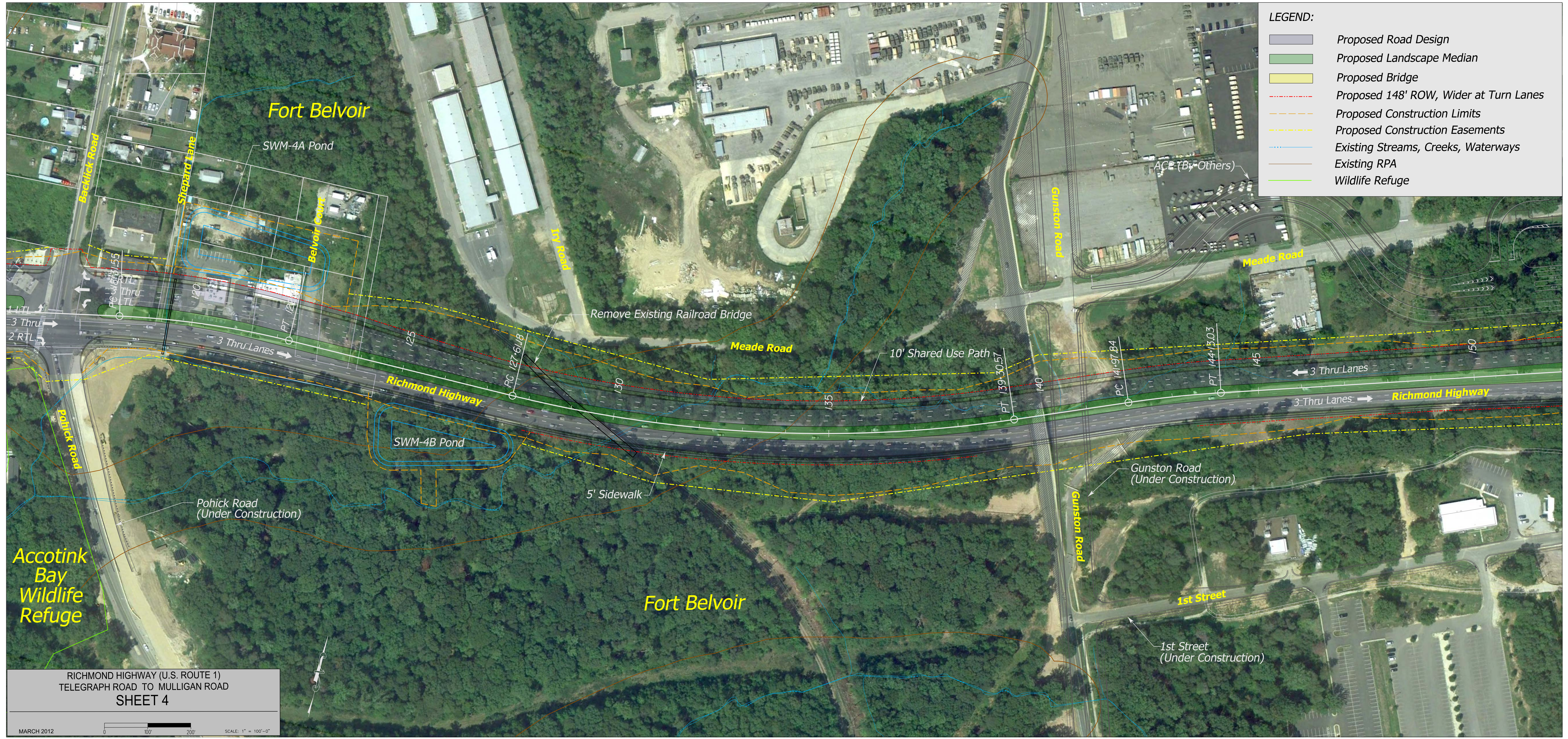


COOK INLET DRIVE

BRITTON DRIVE



RICHMOND HIGHWAY (U.S. ROUTE 1)
 TELEGRAPH ROAD TO MULLIGAN ROAD PROFILE
SHEET 3A



LEGEND:

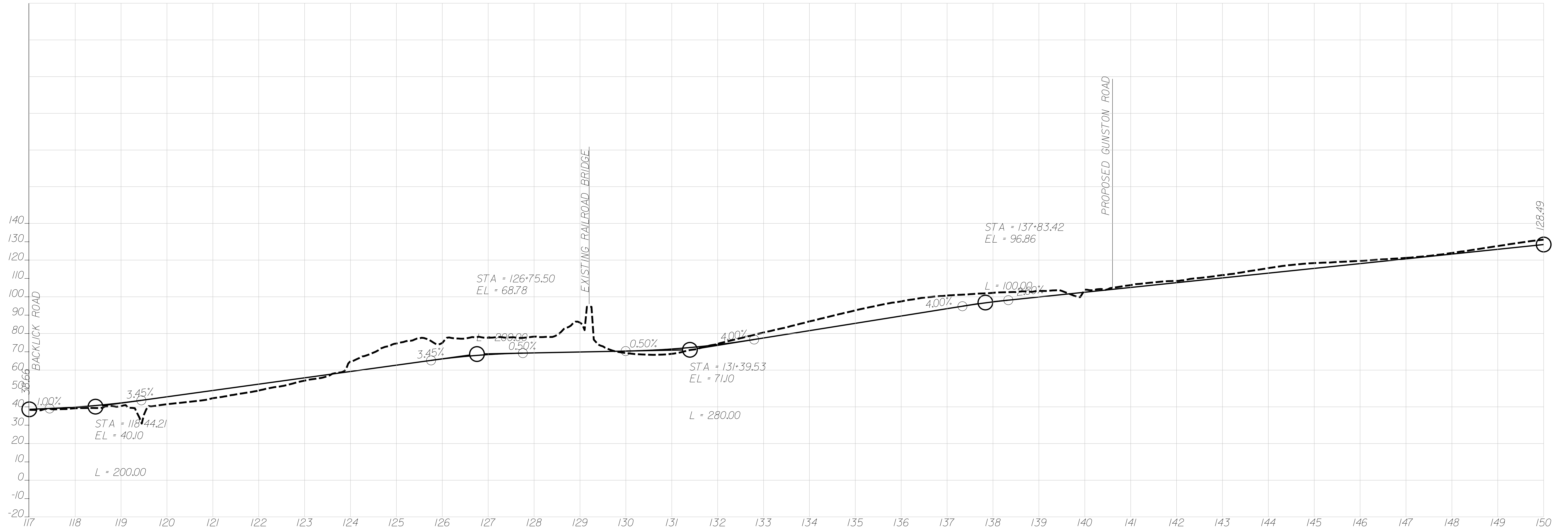
- Proposed Road Design
- Proposed Landscape Median
- Proposed Bridge
- Proposed 148' ROW, Wider at Turn Lanes
- Proposed Construction Limits
- Proposed Construction Easements
- Existing Streams, Creeks, Waterways
- Existing RPA
- Wildlife Refuge

RICHMOND HIGHWAY (U.S. ROUTE 1)
 TELEGRAPH ROAD TO MULLIGAN ROAD
SHEET 4

MARCH 2012

0 100' 200'

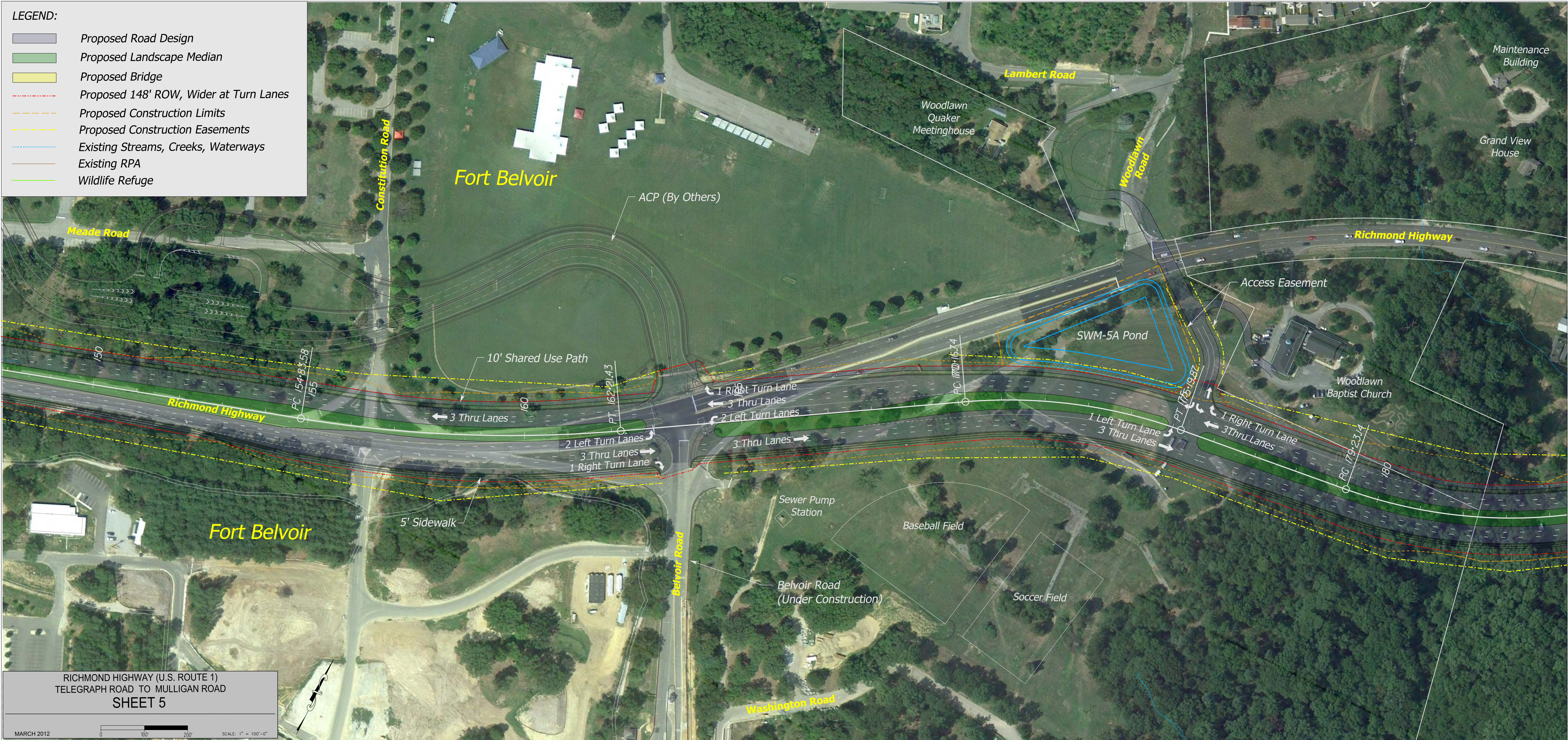
SCALE: 1" = 100'-0"



RICHMOND HIGHWAY (U.S. ROUTE 1)
 TELEGRAPH ROAD TO MULLIGAN ROAD PROFILE
SHEET 4A

LEGEND:

- Proposed Road Design
- Proposed Landscape Median
- Proposed Bridge
- Proposed 148' ROW, Wider at Turn Lanes
- Proposed Construction Limits
- Proposed Construction Easements
- Existing Streams, Creeks, Waterways
- Existing RPA
- Wildlife Refuge

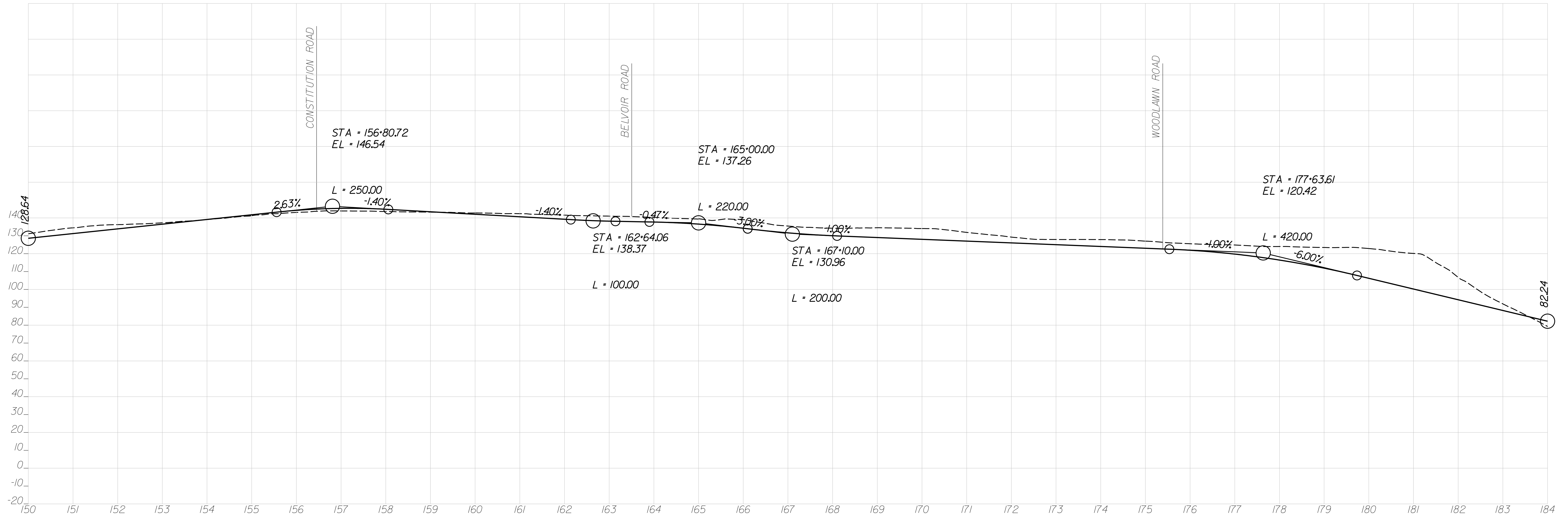


RICHMOND HIGHWAY (U.S. ROUTE 1)
TELEGRAPH ROAD TO MULLIGAN ROAD
SHEET 5

MARCH 2012

0 100 200

SCALE: 1" = 100'-0"



LEGEND:

-  Proposed Road Design
-  Proposed Landscape Median
-  Proposed Bridge
-  Proposed 148' ROW, Wider at Turn Lanes
-  Proposed Construction Limits
-  Proposed Construction Easements
-  Existing Streams, Creeks, Waterways
-  Existing RPA
-  Wildlife Refuge



Grand View House

10' Shared Use Path

Existing Entrance to be Closed (By Others)

Mulligan Road (Under Construction) (By Others)

Mulligan Road

IMP Building

Roy Rogers

Mobile Homes Sales

Richmond Highway

Richmond Highway

205

PT 197-71.50

PT 190-76.36

PT 192-72.53

PT 244-50.39

3 Thru Lanes
2 Left Turn Lanes
2 Thru Lanes
1 Right Turn Lane

1 Right Turn Lane
2 Thru Lanes
1 Left Turn Lane

2 Thru Lanes

SWM-6A Pond

5' Sidewalk

Mount Vernon Memorial Highway (Under Construction, By Others)

Mount Vernon Memorial Highway

Exxon Gas Station

7-Eleven

Woodlawn Auto-Center

Stores

Woodlawn Shells Gas Station

Shoe Warehouse (closed)

Quality Inn Suites near Ft. Belvoir

Woodlawn Stables

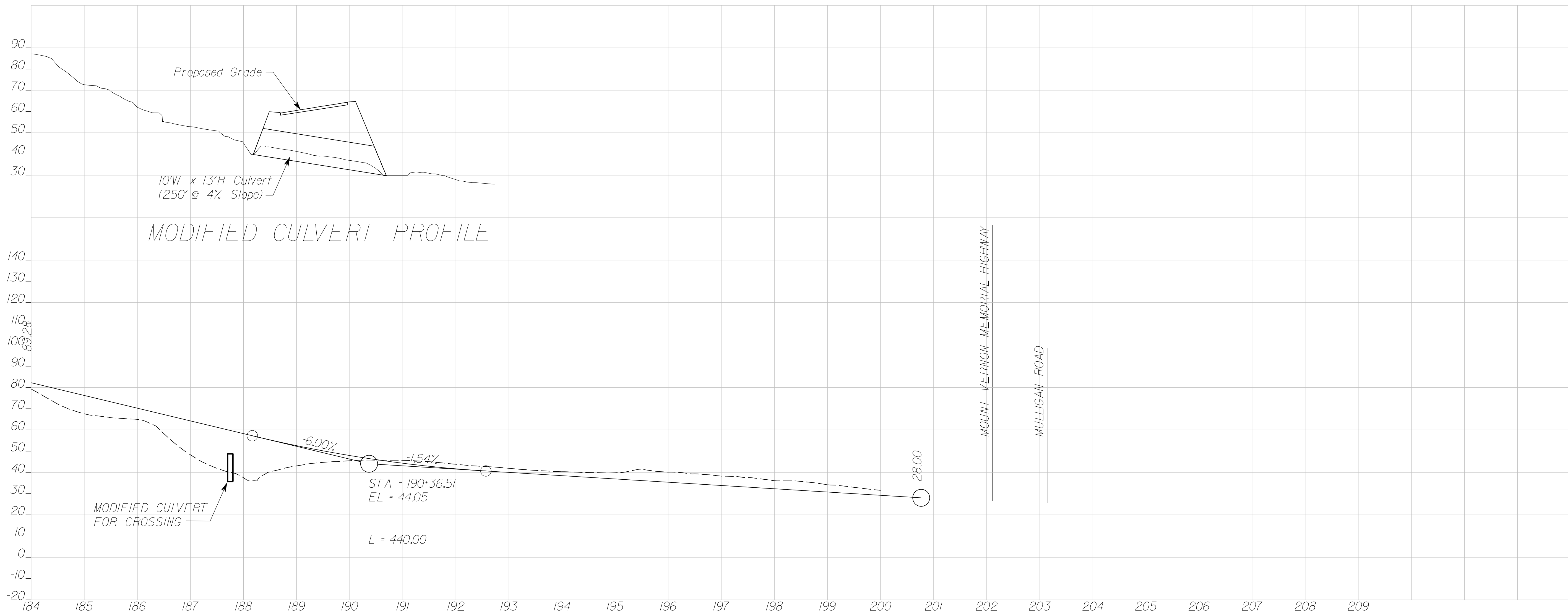
Otis Tufton Mason House

3 Thru Lanes

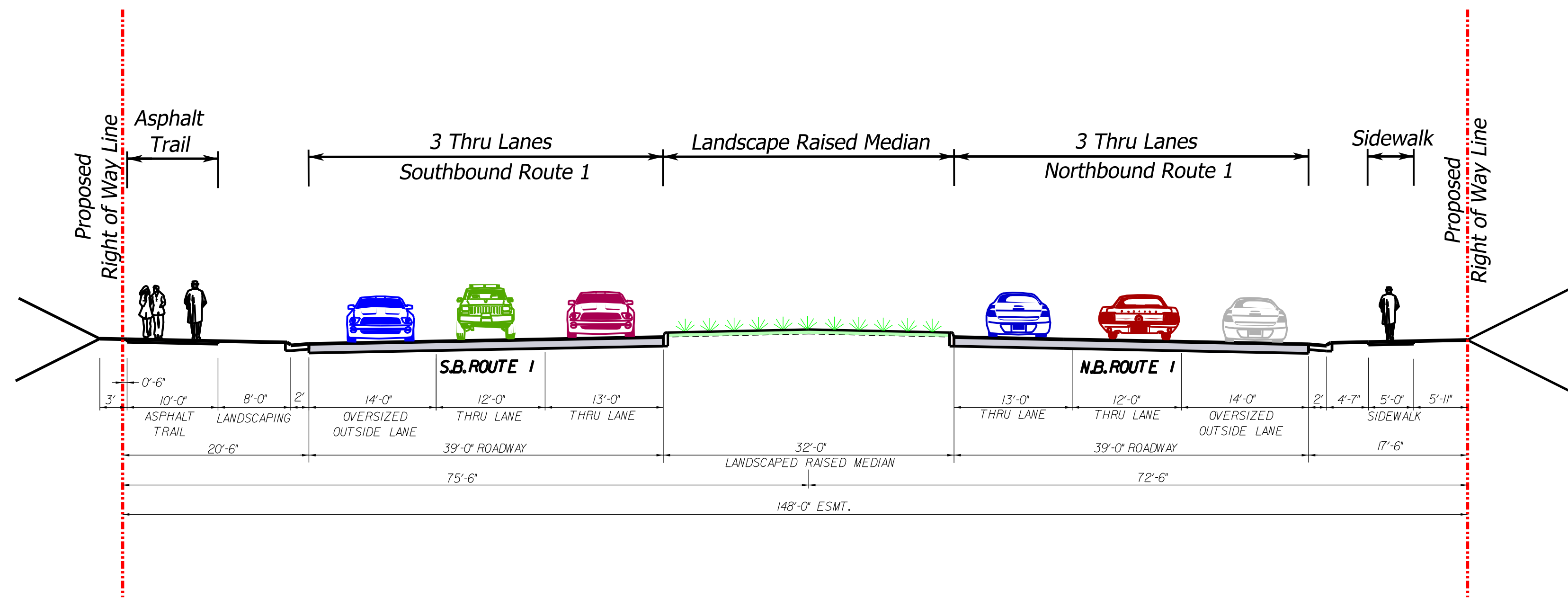
3 Thru Lanes

Modified Culvert for Crossing

RICHMOND HIGHWAY (U.S. ROUTE 1)
TELEGRAPH ROAD TO MULLIGAN ROAD
SHEET 6

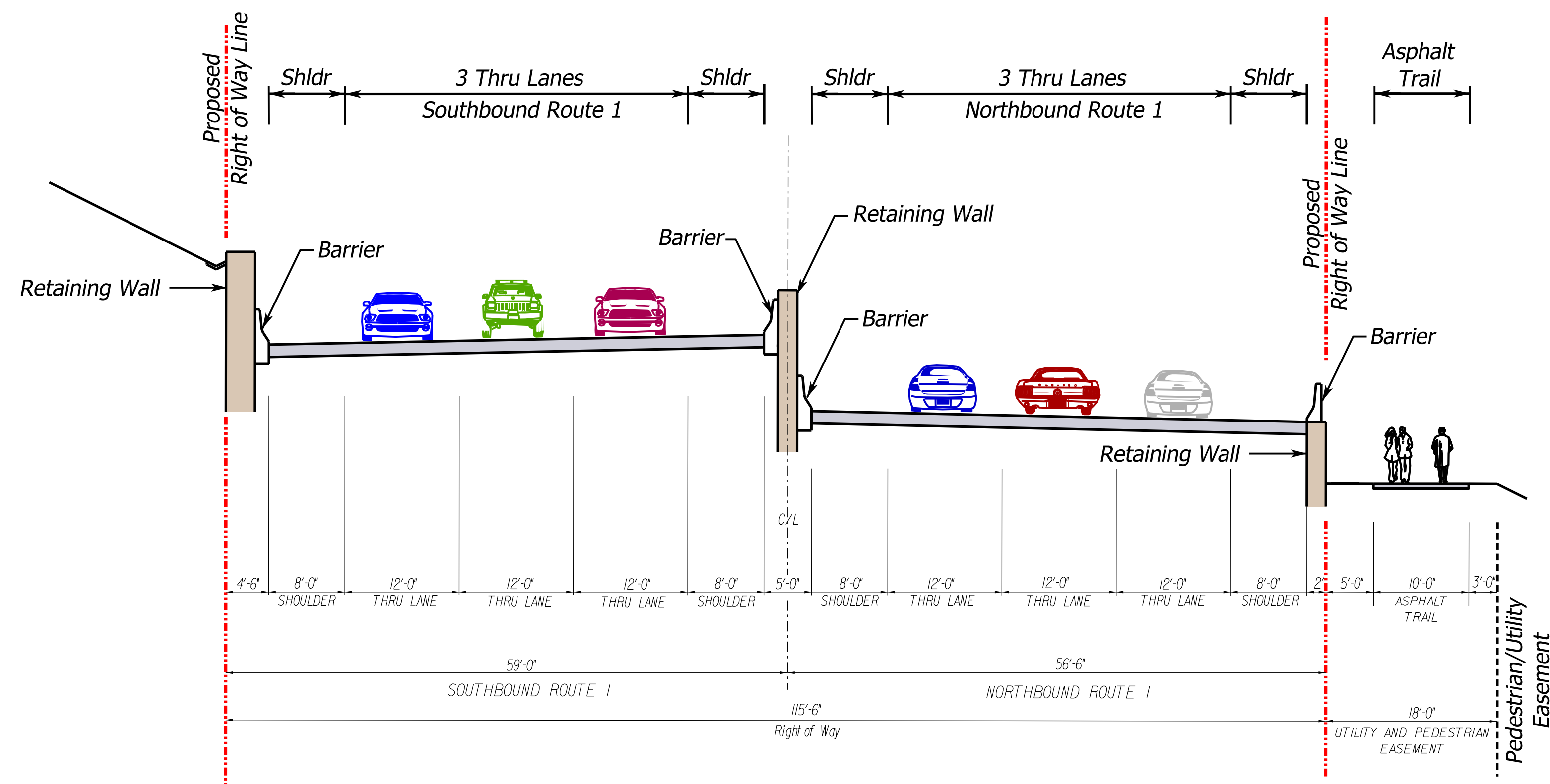
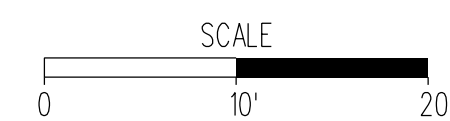


RICHMOND HIGHWAY (U.S. ROUTE 1)
 TELEGRAPH ROAD TO MULLIGAN ROAD PROFILE
SHEET 6A



ROUTE 1
TELEGRAPH ROAD TO MULLIGAN ROAD

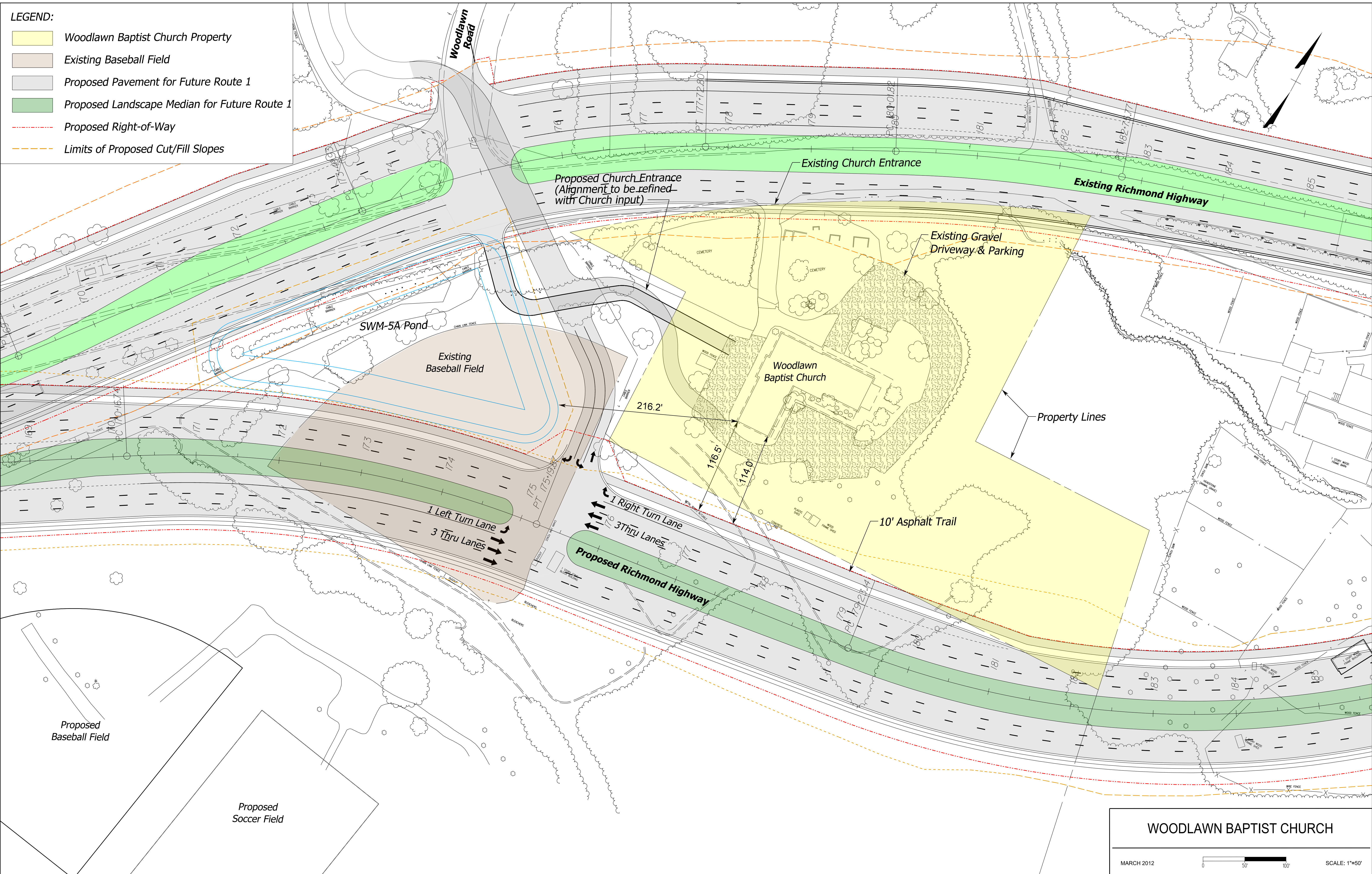
TYPICAL SECTION



ROUTE 1
WOODLAWN ROAD TO MULLIGAN ROAD

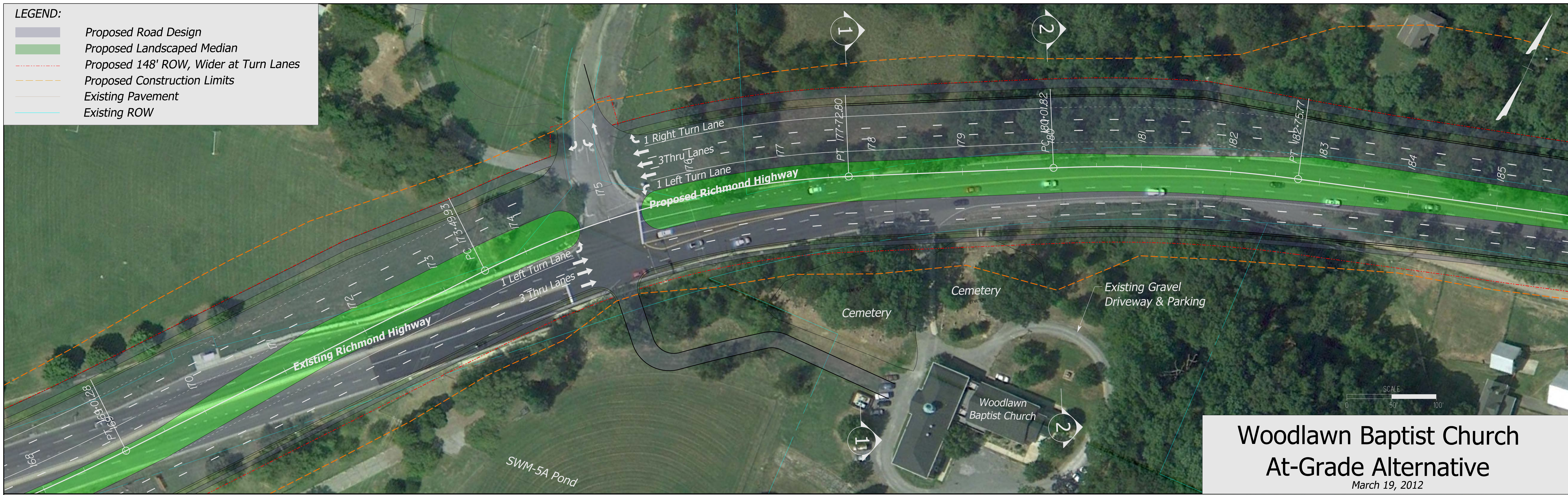
BIFURCATED SECTION

- LEGEND:**
- Woodlawn Baptist Church Property
 - Existing Baseball Field
 - Proposed Pavement for Future Route 1
 - Proposed Landscape Median for Future Route 1
 - Proposed Right-of-Way
 - Limits of Proposed Cut/Fill Slopes

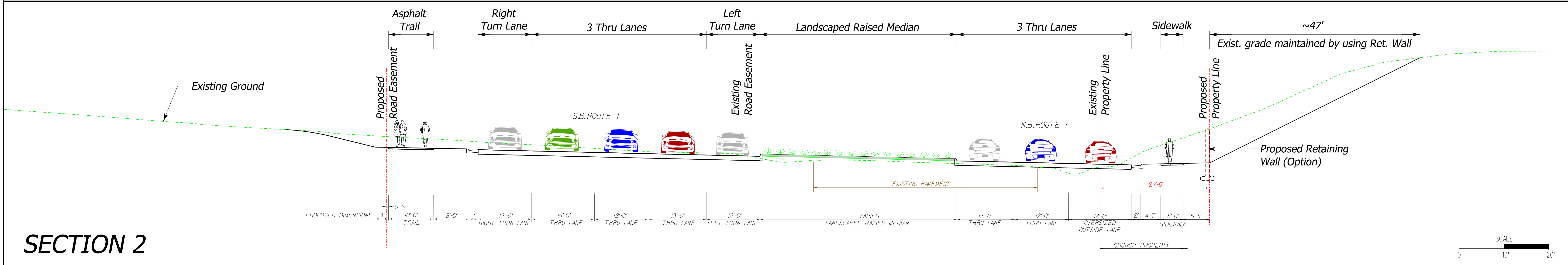
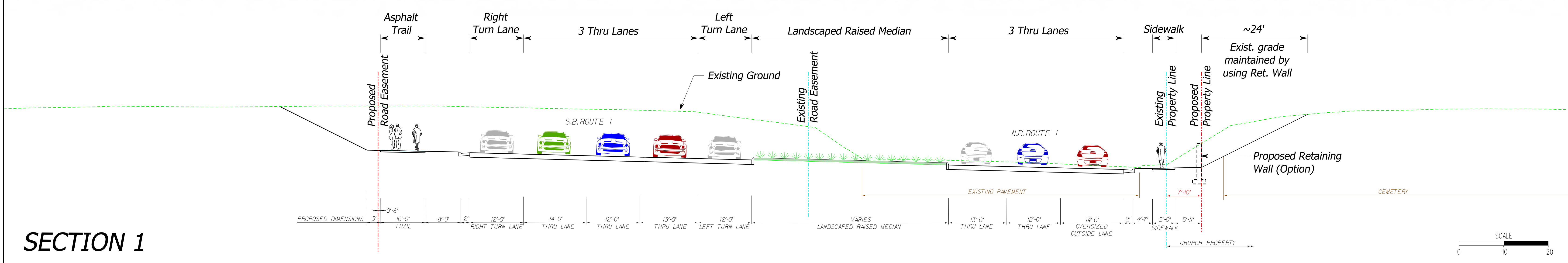


WOODLAWN BAPTIST CHURCH

- LEGEND:**
- Proposed Road Design
 - Proposed Landscaped Median
 - Proposed 148' ROW, Wider at Turn Lanes
 - Proposed Construction Limits
 - Existing Pavement
 - Existing ROW



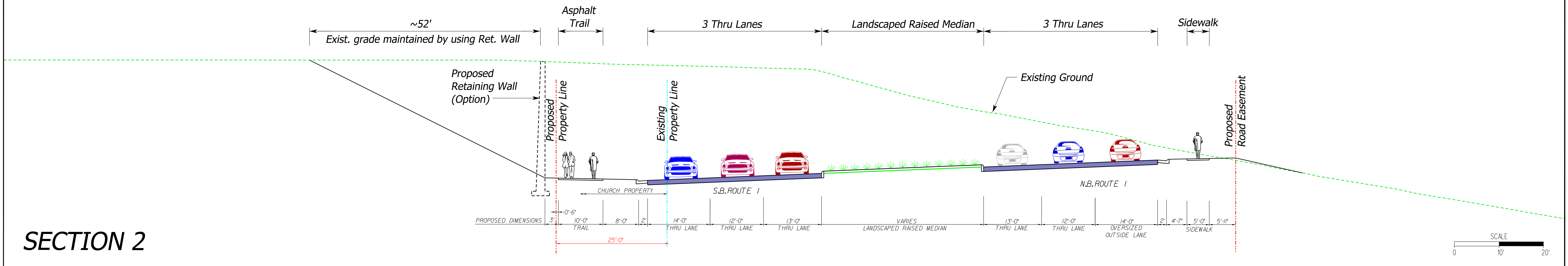
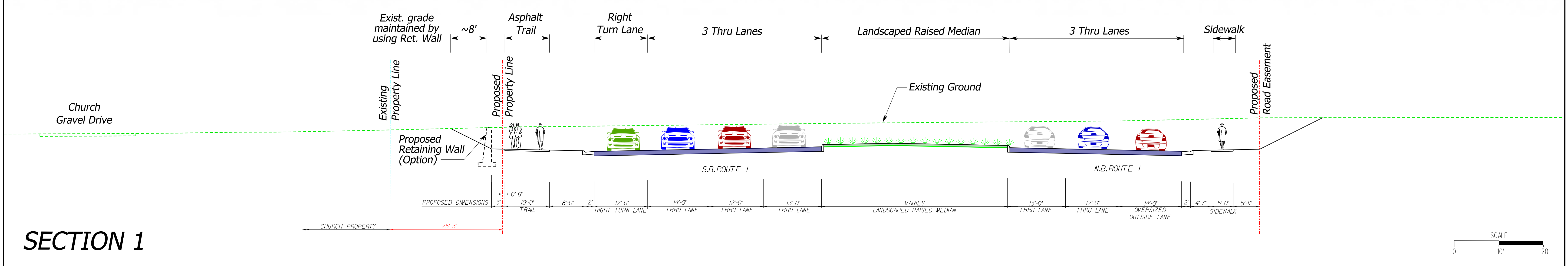
**Woodlawn Baptist Church
At-Grade Alternative**
March 19, 2012

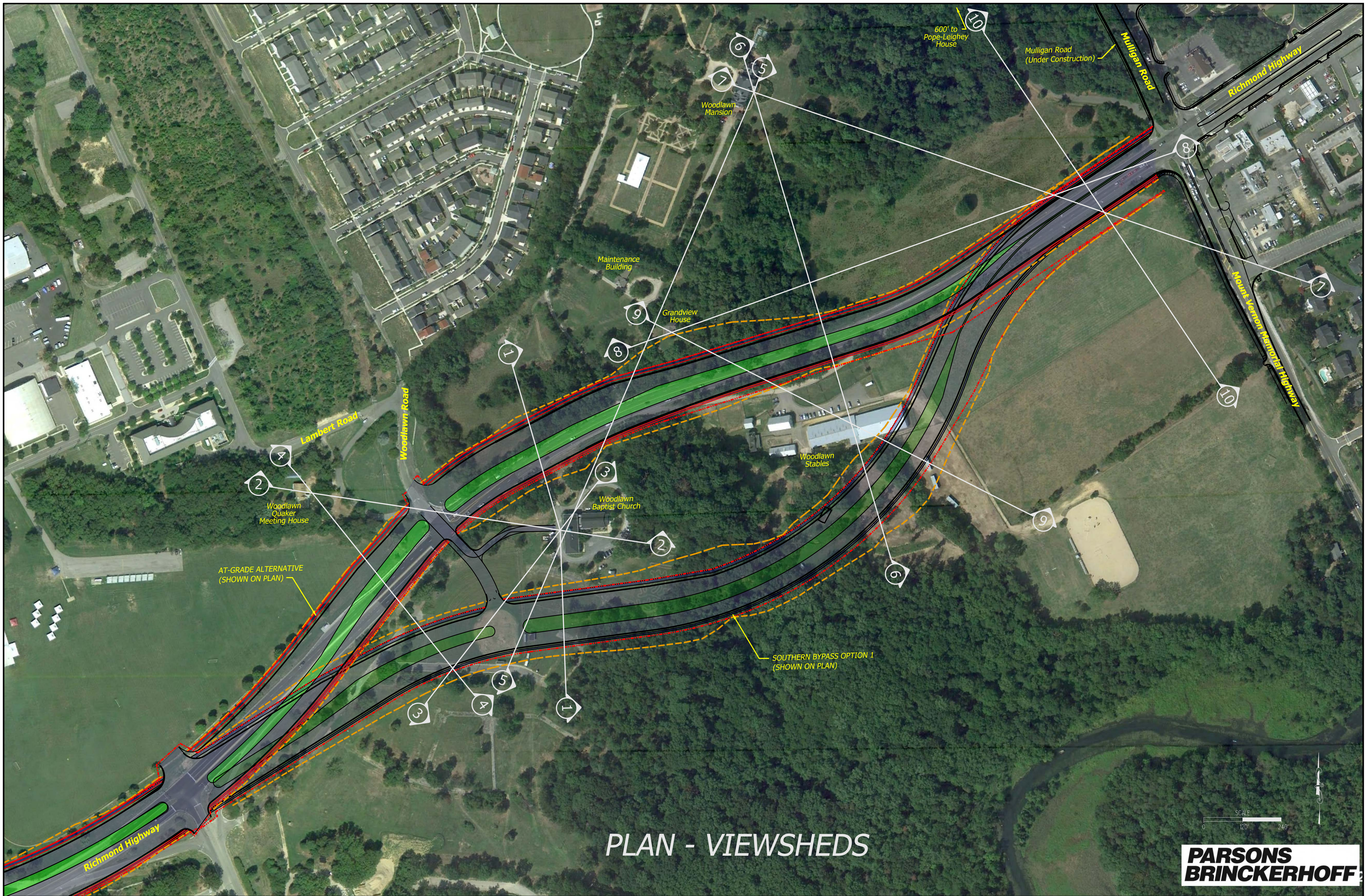


- LEGEND:**
- Proposed Road Design
 - Proposed Landscaped Median
 - Proposed 148' ROW, Wider at Turn Lanes
 - Proposed Construction Limits
 - Existing Pavement
 - Existing ROW



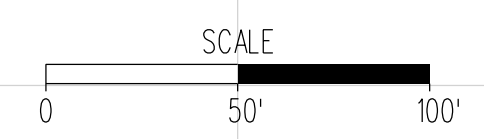
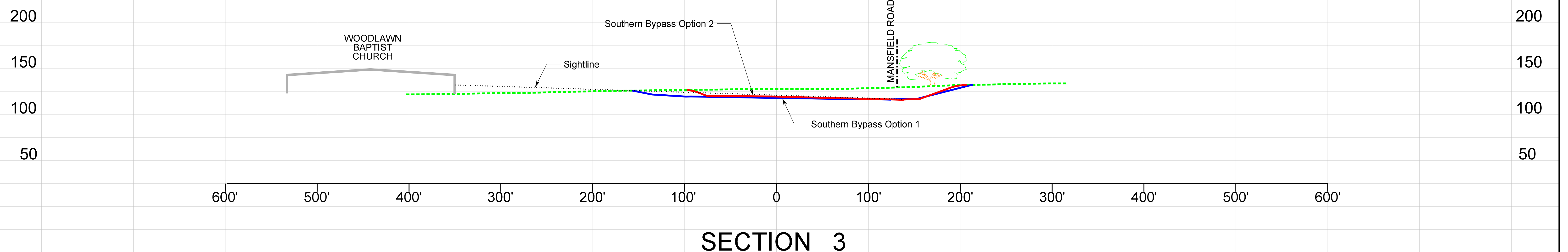
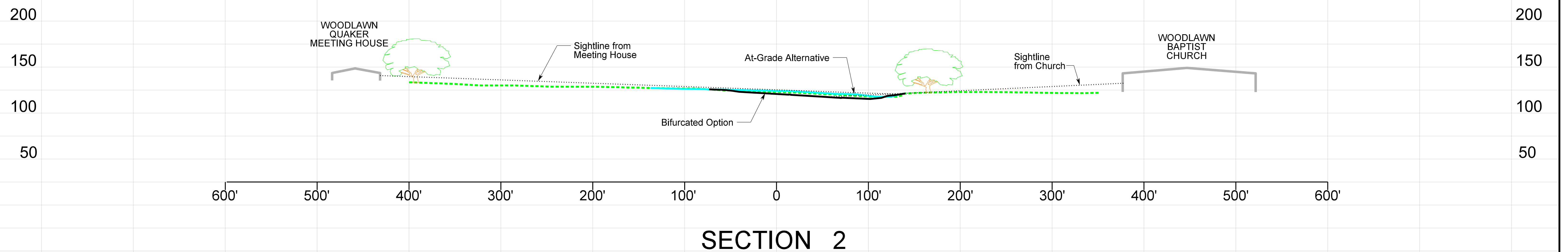
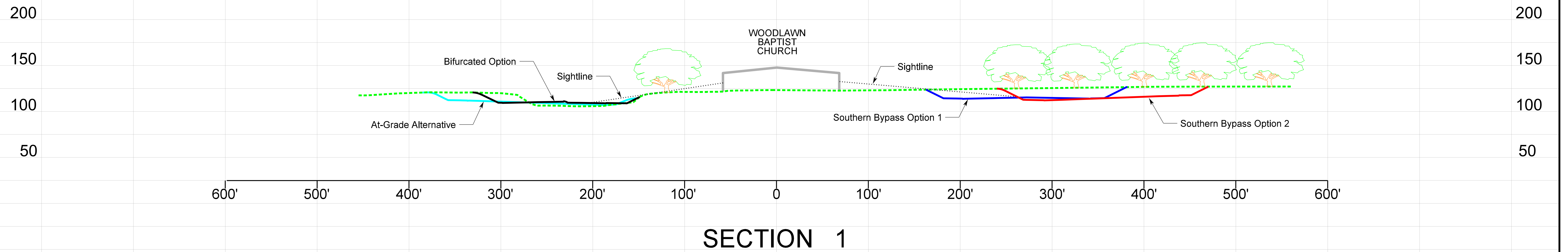
**Woodlawn Baptist Church
Southern Bypass Alternative**
March 20, 2012



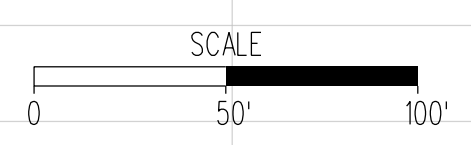
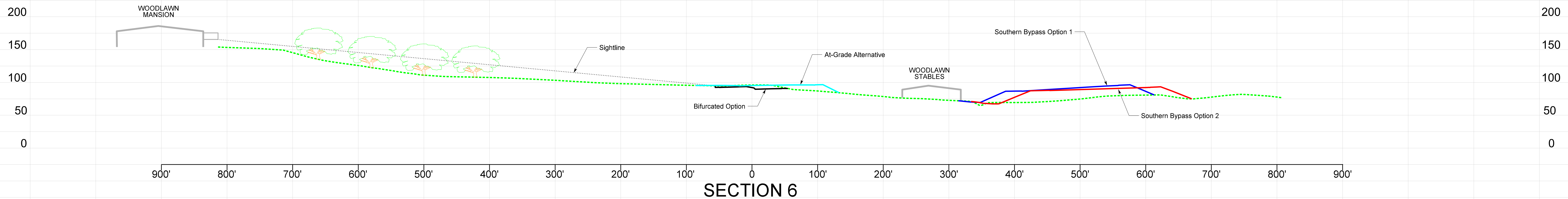
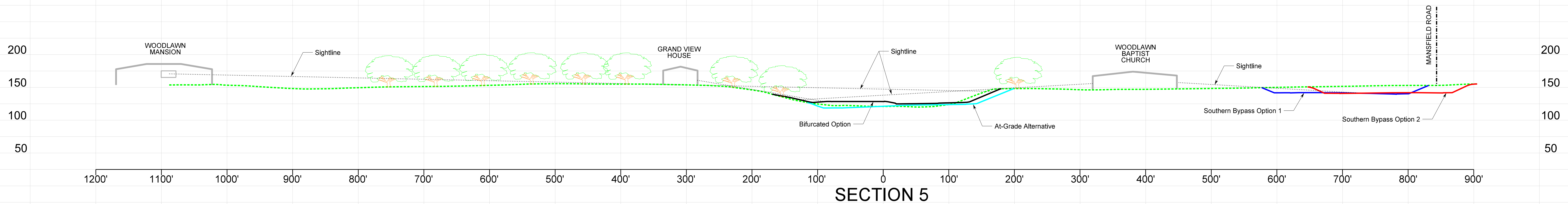
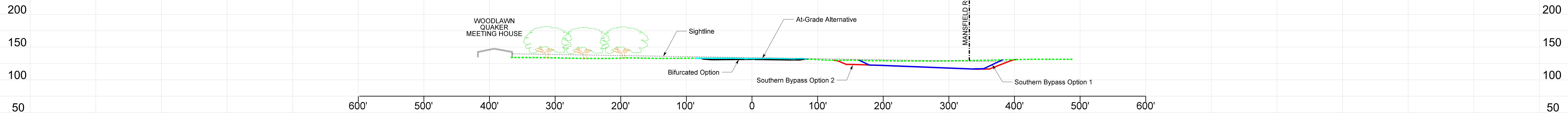


PLAN - VIEWSHEDS

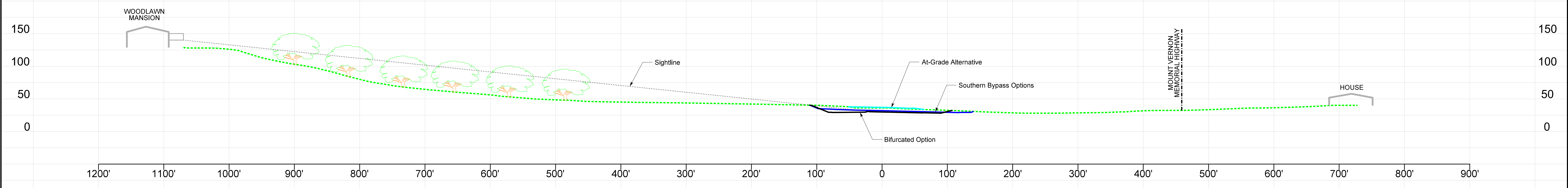
NOTE: Sightlines are drawn from the anticipated viewing location at each building to the closest visible point on each roadway based on existing and proposed grading.



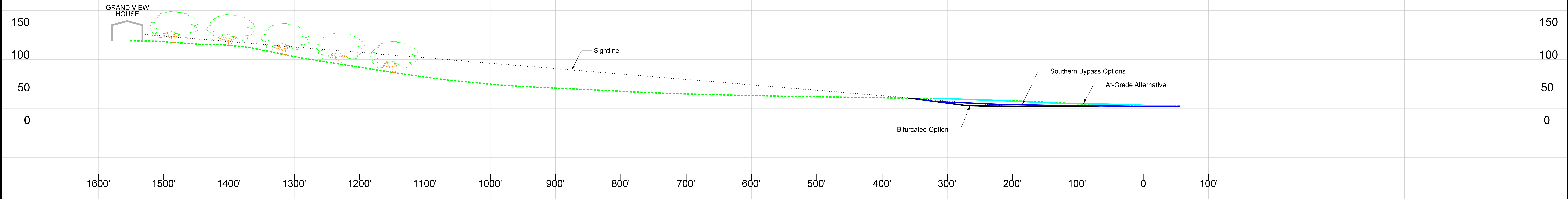
NOTE: Sightlines are drawn from the anticipated viewing location at each building to the closest visible point on each roadway based on existing and proposed grading.



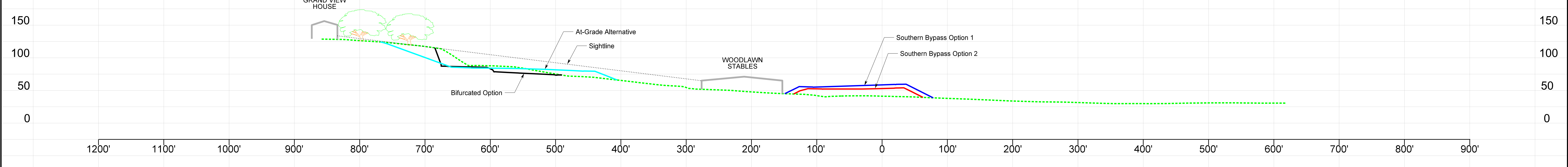
NOTE: Sightlines are drawn from the anticipated viewing location at each building to the closest visible point on each roadway based on existing and proposed grading.



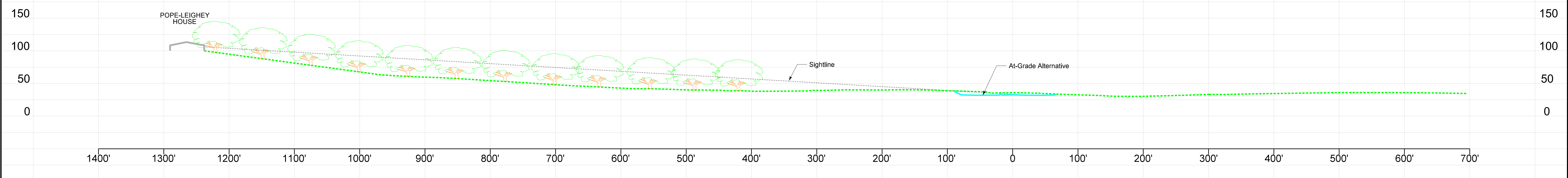
SECTION 7



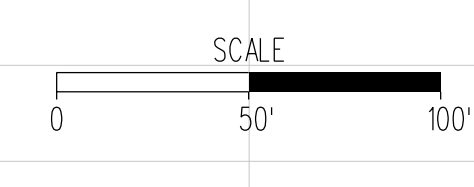
SECTION 8



SECTION 9



SECTION 10



ATTACHMENT 3

PRELIMINARY PLANS – ALTERNATIVE C

DRAFT SECTION 4(f) EVALUATION

Route 1 Improvements at Fort Belvoir

Fairfax County

From: Telegraph Road (Route 611)

To: Mount Vernon Memorial Highway (Route 235)



LEGEND:

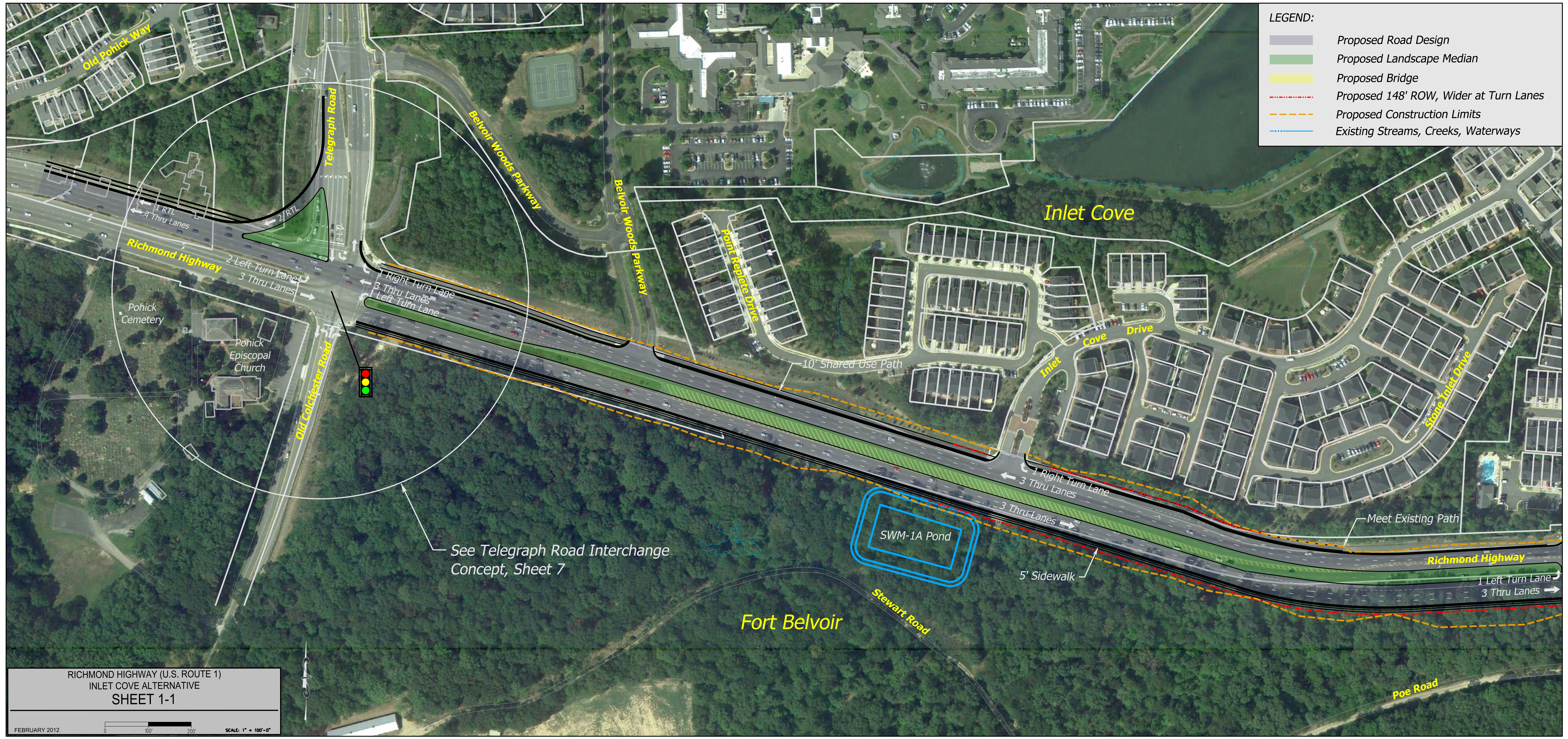
- Proposed Road Design
- Proposed Landscape Median
- Proposed Bridge
- Proposed 148' ROW, Wider at Turn Lanes
- Proposed Construction Limits
- Existing Streams, Creeks, Waterways

RICHMOND HIGHWAY (U.S. ROUTE 1)
 TELEGRAPH ROAD TO MULLIGAN ROAD
 SHEET 1

FEBRUARY 2012 0 100' 200' SCALE: 1" = 100'-0"

LEGEND:

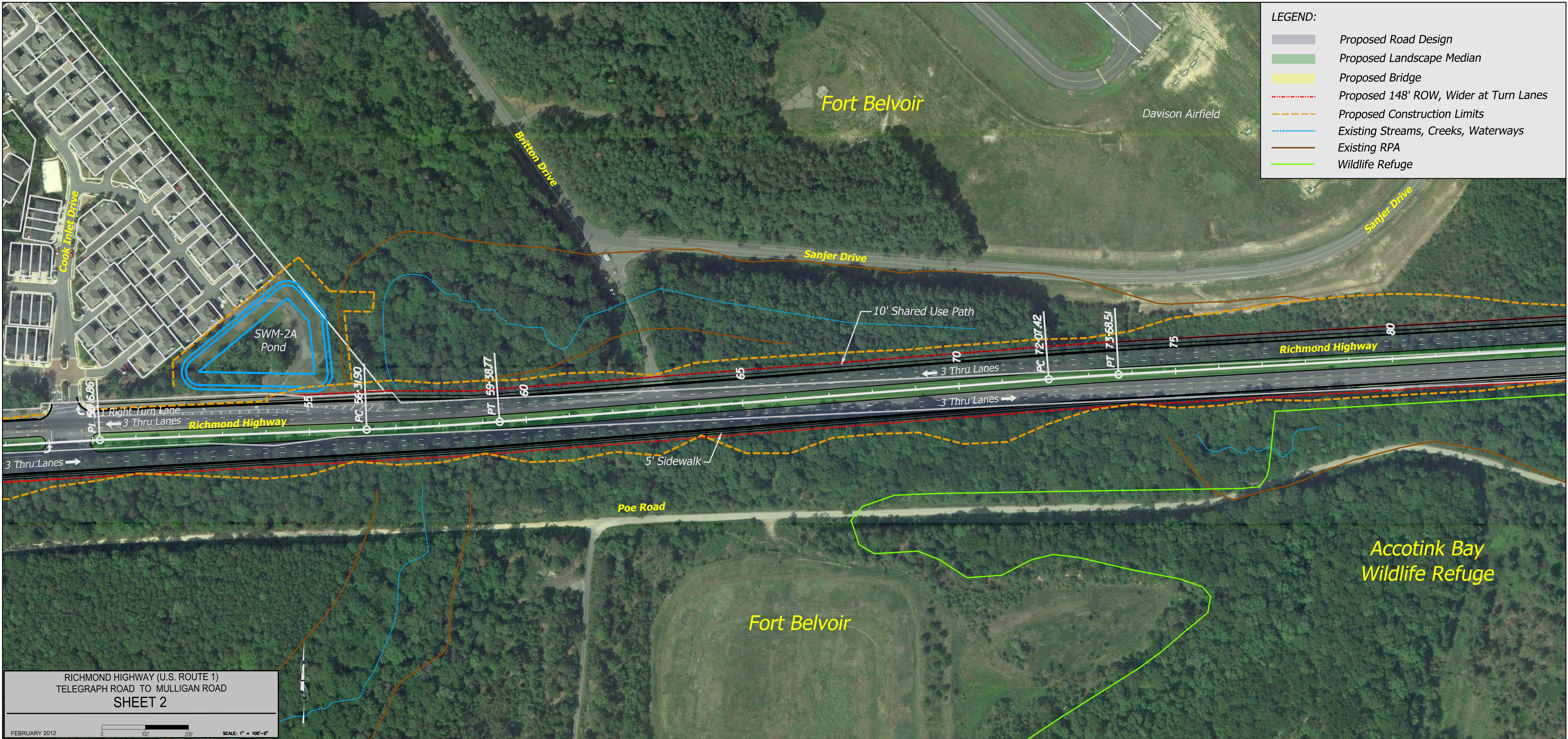
- Proposed Road Design
- Proposed Landscape Median
- Proposed Bridge
- Proposed 148' ROW, Wider at Turn Lanes
- Proposed Construction Limits
- Existing Streams, Creeks, Waterways



**RICHMOND HIGHWAY (U.S. ROUTE 1)
INLET COVE ALTERNATIVE
SHEET 1-1**

FEBRUARY 2012

SCALE: 1" = 100'-0"

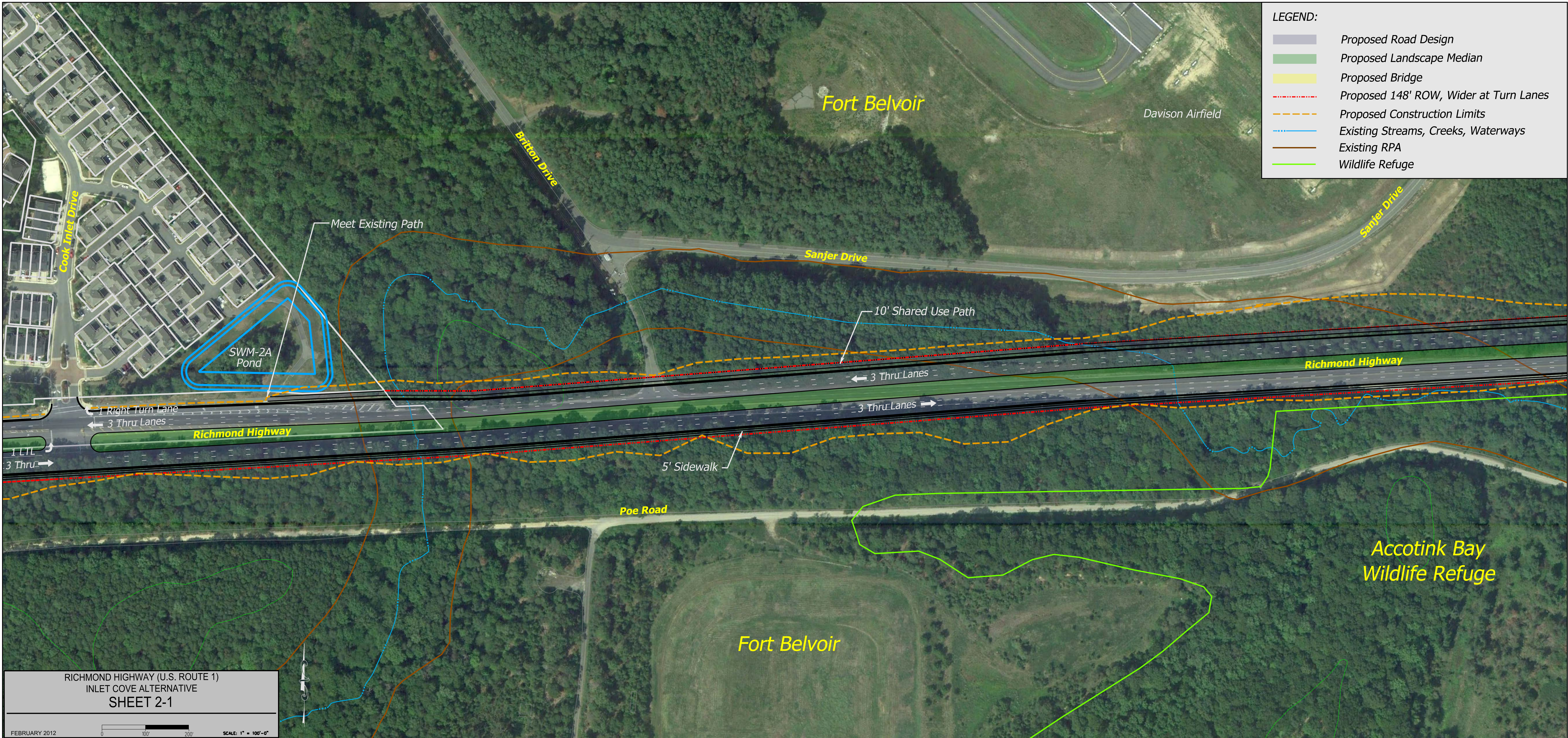


LEGEND:

- Proposed Road Design
- Proposed Landscape Median
- Proposed Bridge
- Proposed 148' ROW, Wider at Turn Lanes
- Proposed Construction Limits
- Existing Streams, Creeks, Waterways
- Existing RPA
- Wildlife Refuge

RICHMOND HIGHWAY (U.S. ROUTE 1)
 TELEGRAPH ROAD TO MULLIGAN ROAD
 SHEET 2

FEBRUARY 2012 0 100' 200' SCALE: 1" = 100'-0"



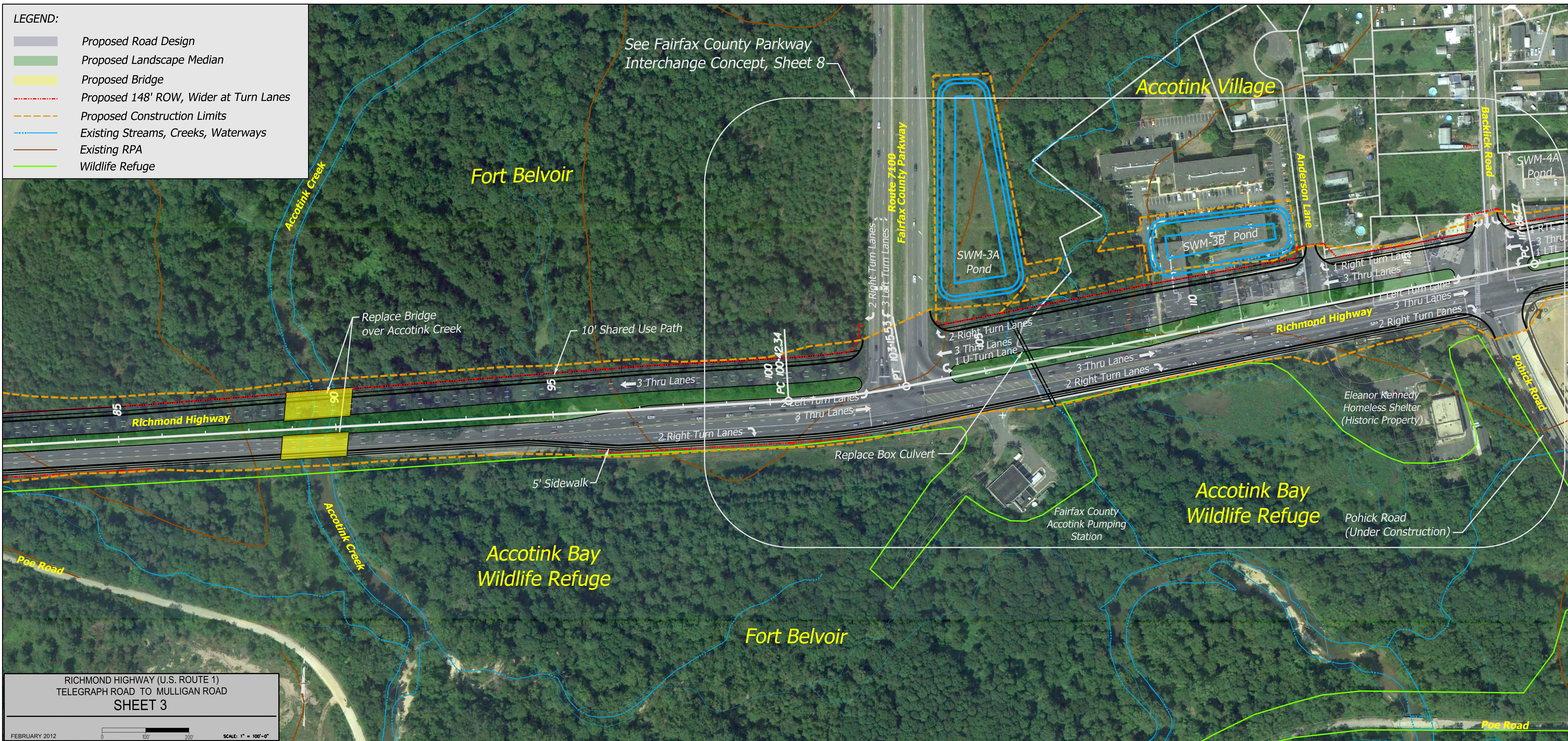
- LEGEND:**
- Proposed Road Design
 - Proposed Landscape Median
 - Proposed Bridge
 - Proposed 148' ROW, Wider at Turn Lanes
 - Proposed Construction Limits
 - Existing Streams, Creeks, Waterways
 - Existing RPA
 - Wildlife Refuge

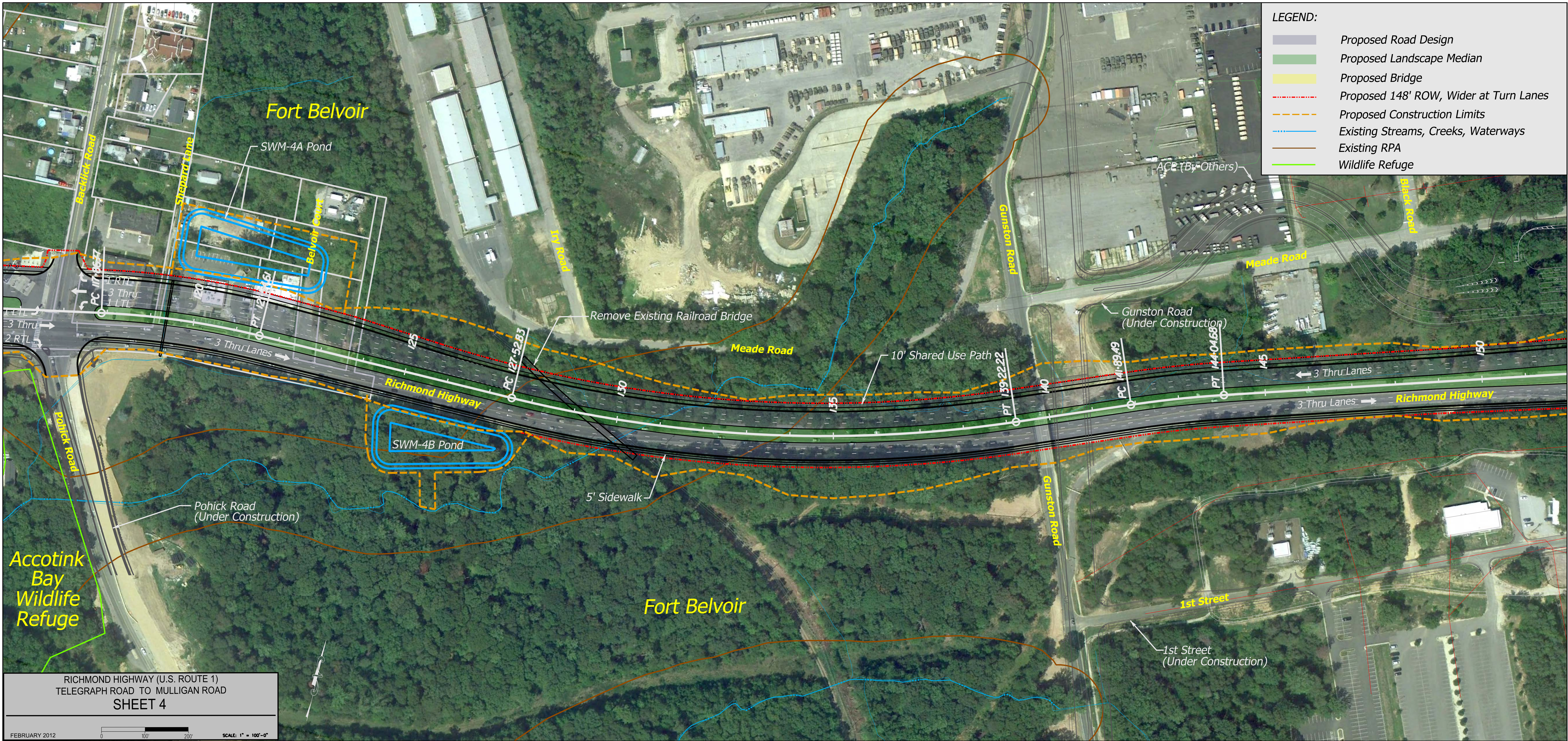
RICHMOND HIGHWAY (U.S. ROUTE 1)
 INLET COVE ALTERNATIVE
 SHEET 2-1

FEBRUARY 2012 0 100 200 SCALE: 1" = 100'-0"

LEGEND:

- Proposed Road Design
- Proposed Landscape Median
- Proposed Bridge
- Proposed 148' ROW, Wider at Turn Lanes
- Proposed Construction Limits
- Existing Streams, Creeks, Waterways
- Existing RPA
- Wildlife Refuge





LEGEND:

	Proposed Road Design
	Proposed Landscape Median
	Proposed Bridge
	Proposed 148' ROW, Wider at Turn Lanes
	Proposed Construction Limits
	Existing Streams, Creeks, Waterways
	Existing RPA
	Wildlife Refuge

RICHMOND HIGHWAY (U.S. ROUTE 1)
 TELEGRAPH ROAD TO MULLIGAN ROAD
SHEET 4

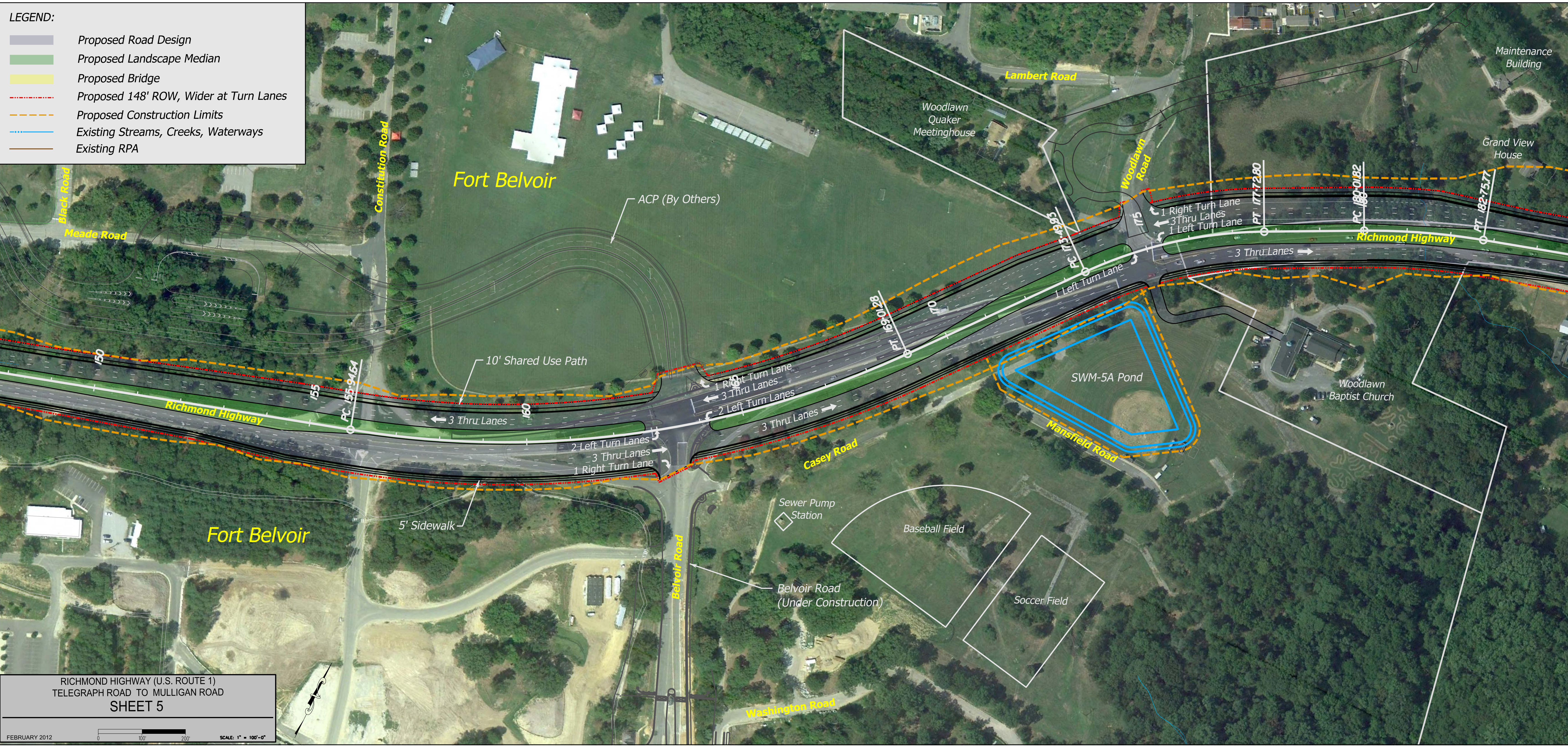
FEBRUARY 2012

0 100' 200'

SCALE: 1" = 100'-0"

LEGEND:

- Proposed Road Design
- Proposed Landscape Median
- Proposed Bridge
- Proposed 148' ROW, Wider at Turn Lanes
- Proposed Construction Limits
- Existing Streams, Creeks, Waterways
- Existing RPA



RICHMOND HIGHWAY (U.S. ROUTE 1)
 TELEGRAPH ROAD TO MULLIGAN ROAD
 SHEET 5

FEBRUARY 2012

0 100 200

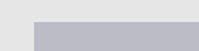

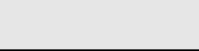
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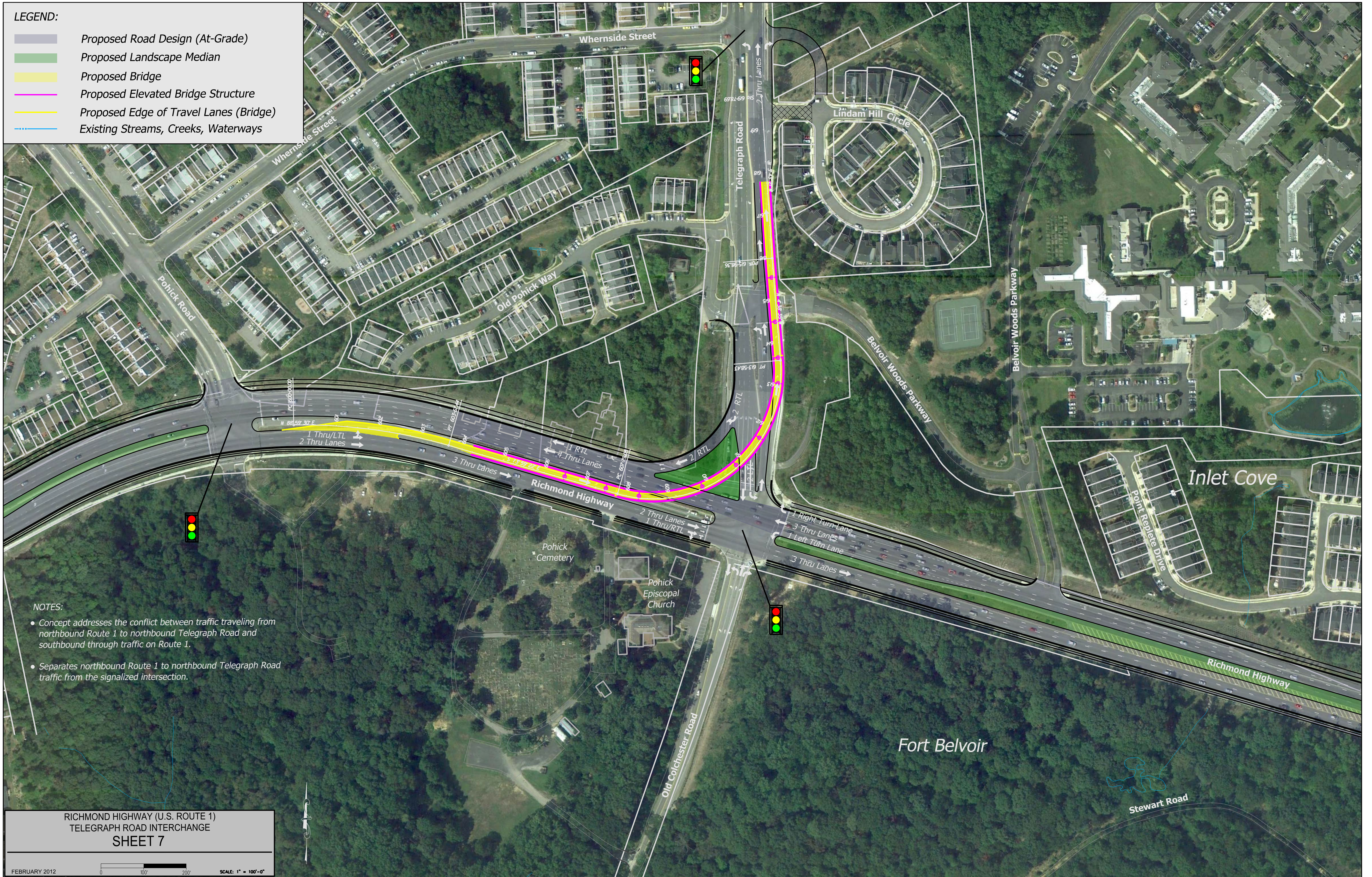
LEGEND:

- Proposed Road Design
- Proposed Landscape Median
- Proposed Bridge
- Proposed 148' ROW, Wider at Turn Lanes
- Proposed Construction Limits
- Existing Streams, Creeks, Waterways
- Existing RPA
- Wetlands



LEGEND:

-  Proposed Road Design (At-Grade)
-  Proposed Landscape Median
-  Proposed Bridge
-  Proposed Elevated Bridge Structure
-  Proposed Edge of Travel Lanes (Bridge)
-  Existing Streams, Creeks, Waterways

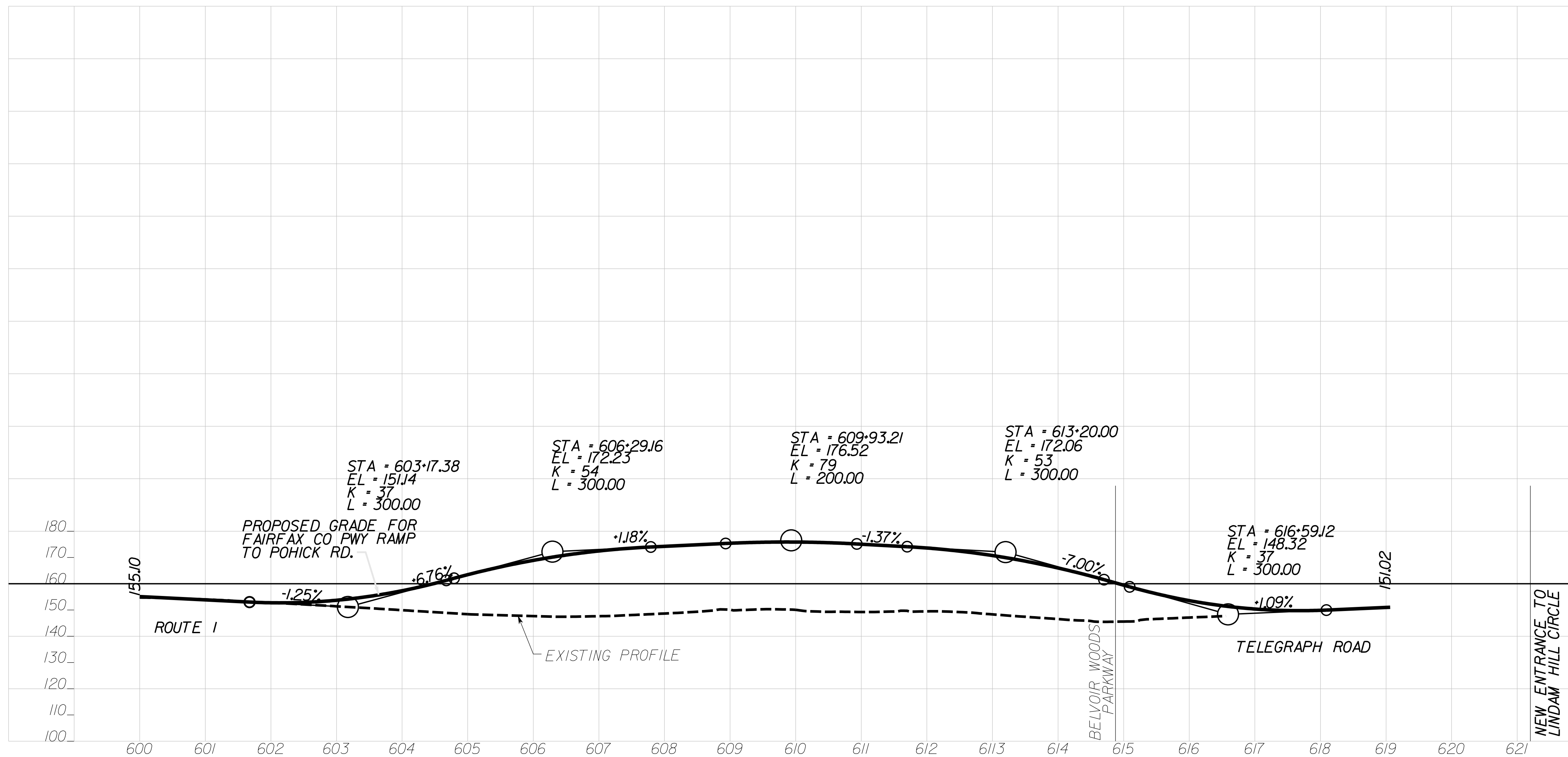


NOTES:

- Concept addresses the conflict between traffic traveling from northbound Route 1 to northbound Telegraph Road and southbound through traffic on Route 1.
- Separates northbound Route 1 to northbound Telegraph Road traffic from the signalized intersection.

RICHMOND HIGHWAY (U.S. ROUTE 1)
TELEGRAPH ROAD INTERCHANGE
SHEET 7

FEBRUARY 2012 0 100' 200' SCALE: 1" = 100'-0"



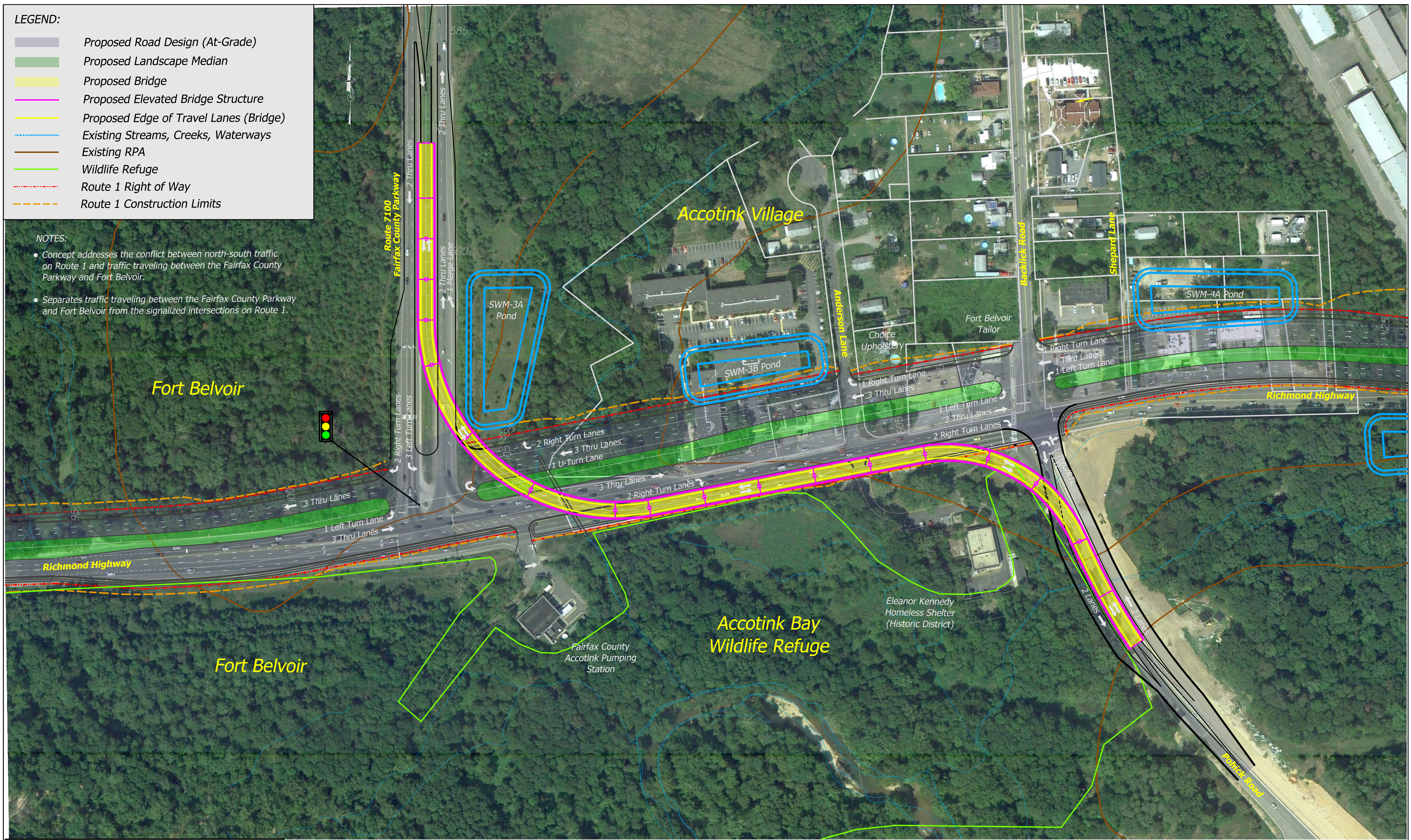
RICHMOND HIGHWAY (U.S. ROUTE 1)
 TELEGRAPH ROAD INTERCHANGE
 SHEET 7A

LEGEND:

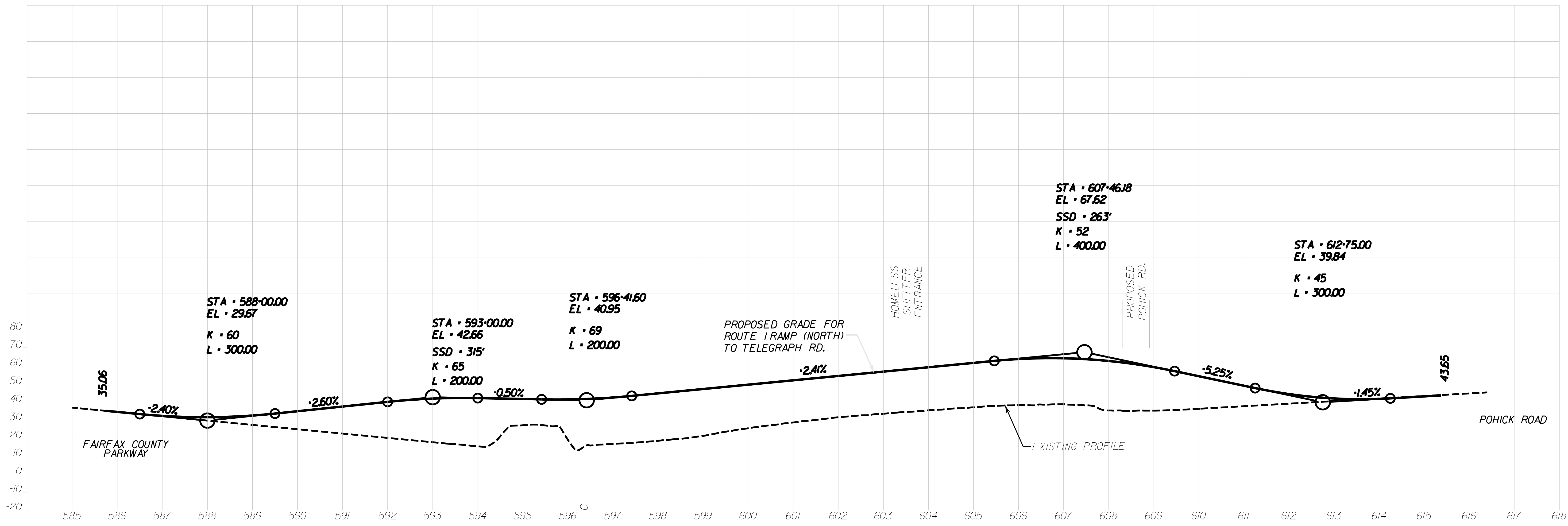
- Proposed Road Design (At-Grade)
- Proposed Landscape Median
- Proposed Bridge
- Proposed Elevated Bridge Structure
- Proposed Edge of Travel Lanes (Bridge)
- Existing Streams, Creeks, Waterways
- Existing RPA
- Wildlife Refuge
- Route 1 Right of Way
- Route 1 Construction Limits

NOTES:

- Concept addresses the conflict between north-south traffic on Route 1 and traffic traveling between the Fairfax County Parkway and Fort Belvoir.
- Separates traffic traveling between the Fairfax County Parkway and Fort Belvoir from the signalized intersections on Route 1.



RICHMOND HIGHWAY (U.S. ROUTE 1)
 FAIRFAX COUNTY PARKWAY INTERCHANGE (ALTERNATIVE)
 SHEET 8



ATTACHMENT 4

SIGHT-LINE PROFILES IN WOODLAWN AREA

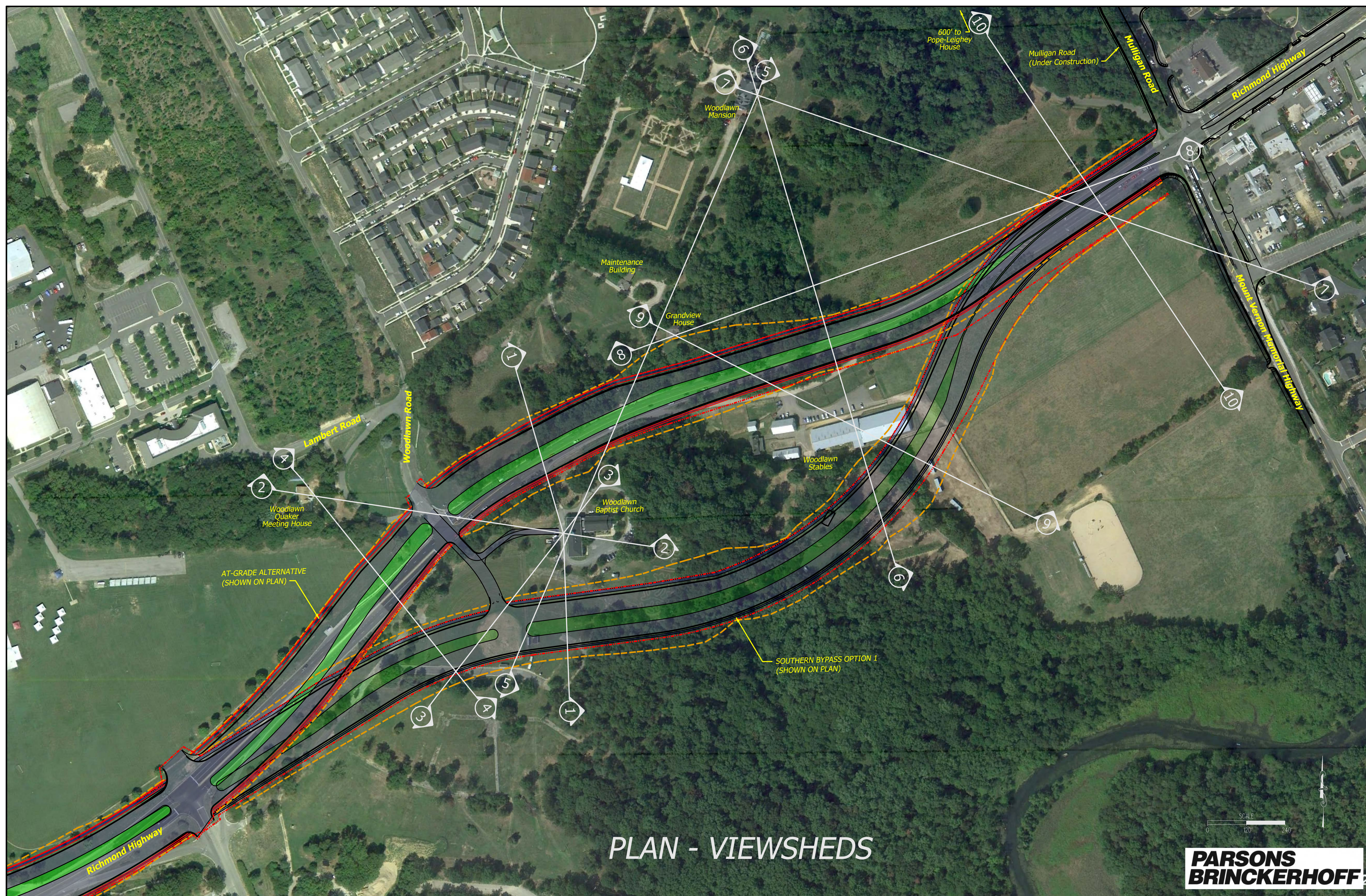
DRAFT SECTION 4(f) EVALUATION

Route 1 Improvements at Fort Belvoir

Fairfax County

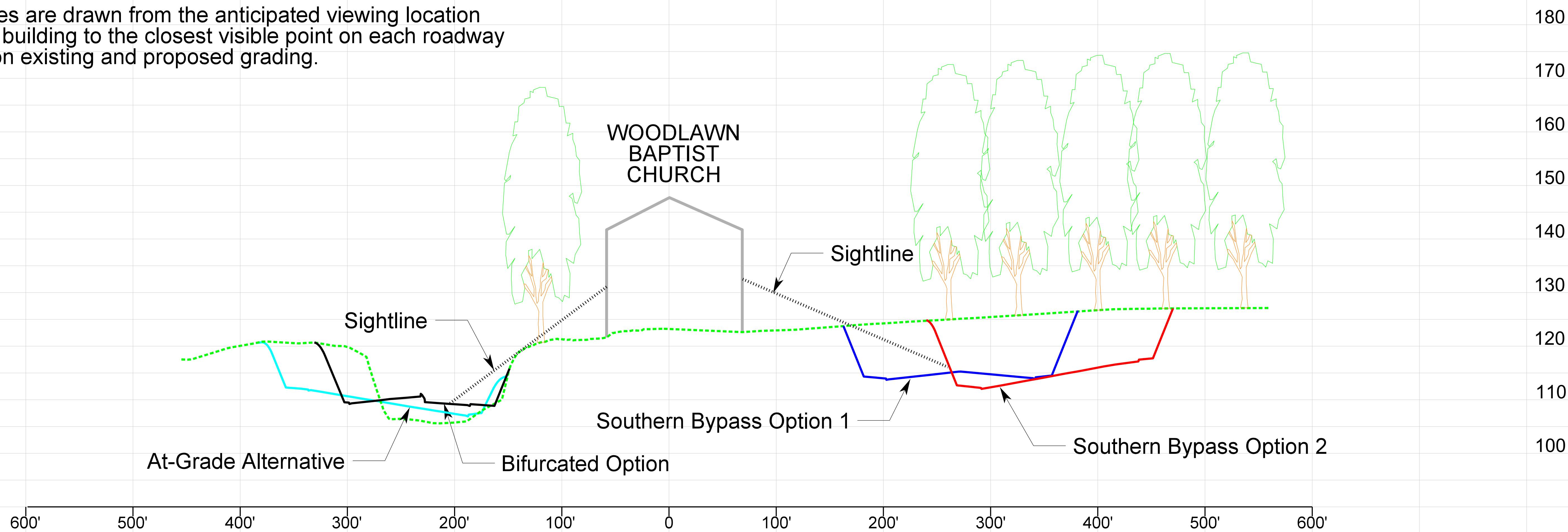
From: Telegraph Road (Route 611)

To: Mount Vernon Memorial Highway (Route 235)

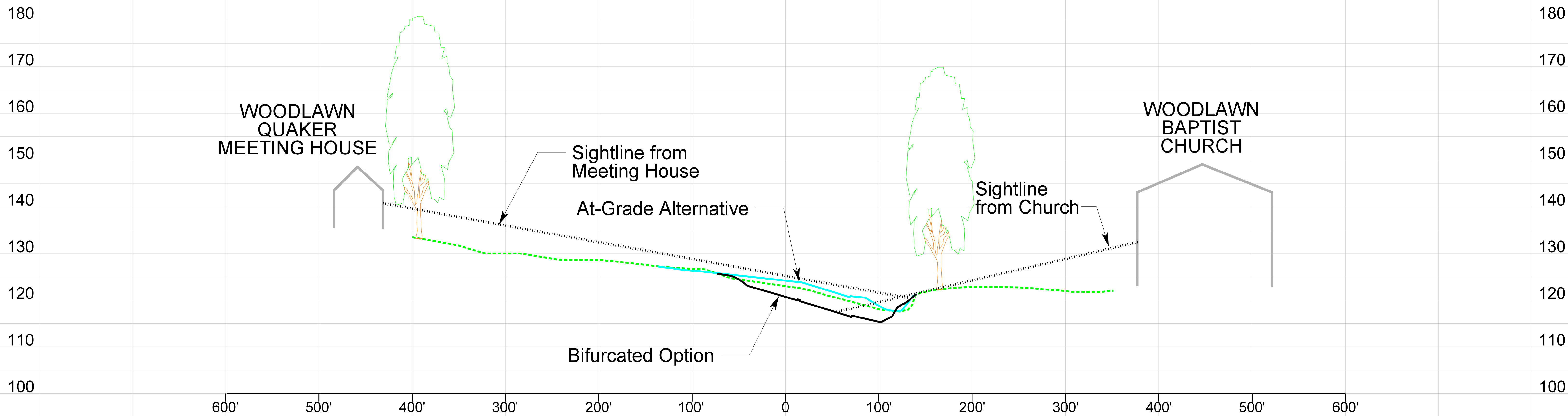


PLAN - VIEWSHEDS

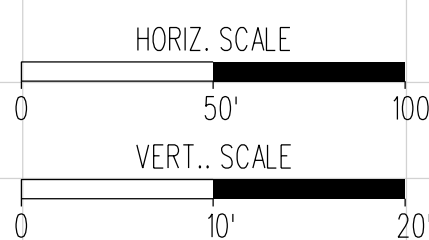
NOTE: Sightlines are drawn from the anticipated viewing location at each building to the closest visible point on each roadway based on existing and proposed grading.

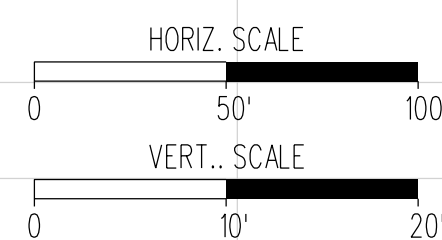
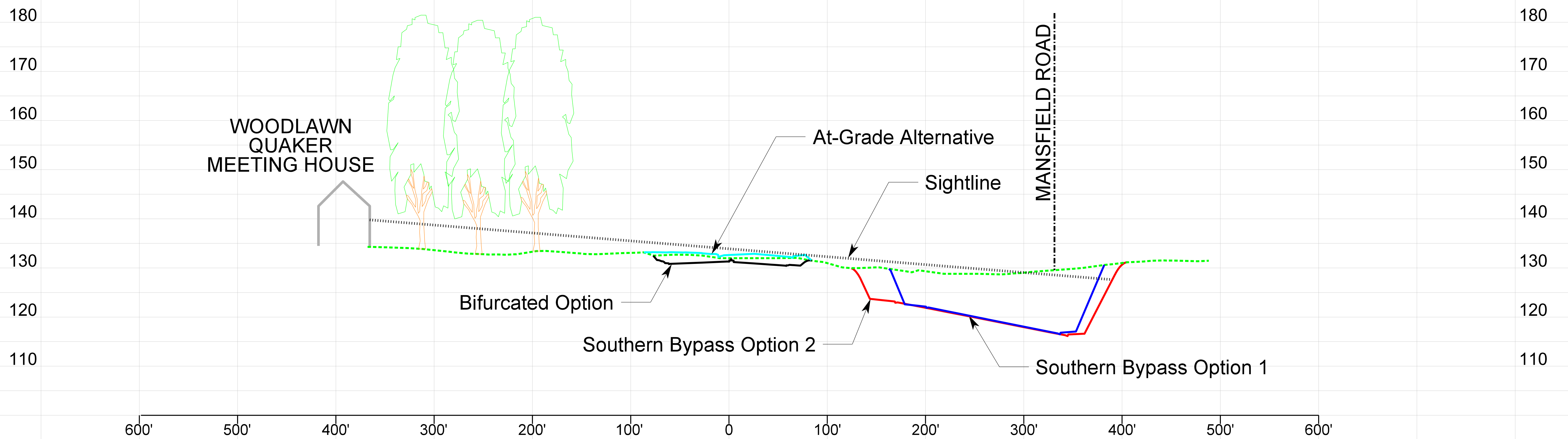
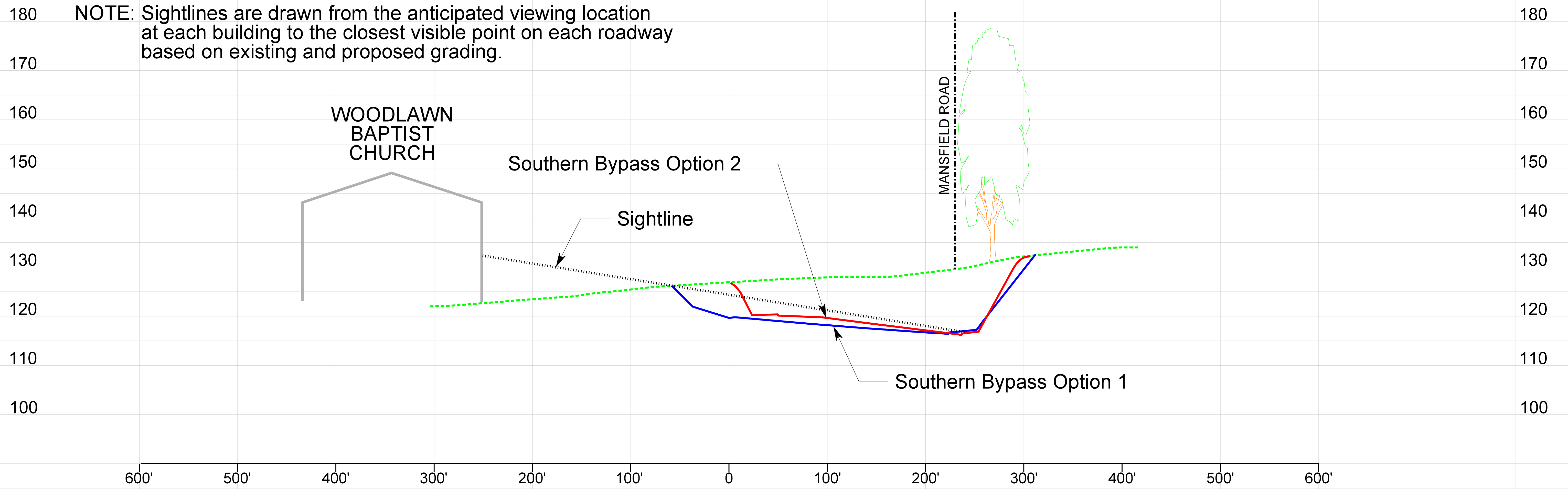


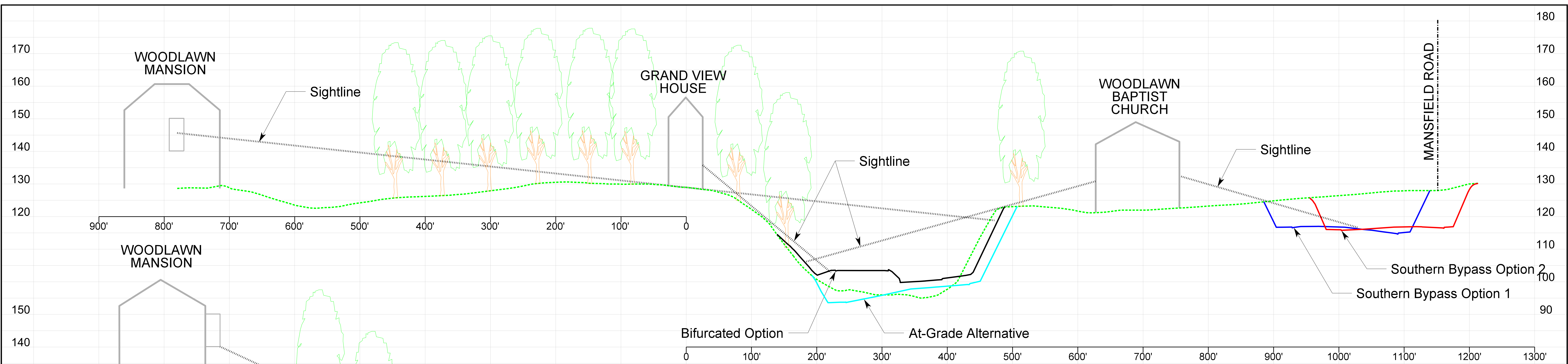
SECTION 1



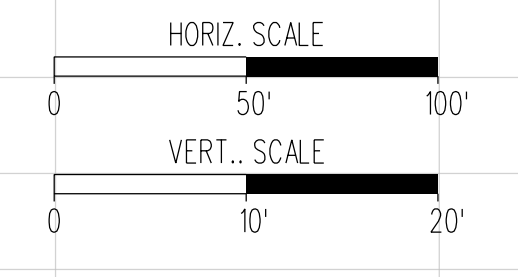
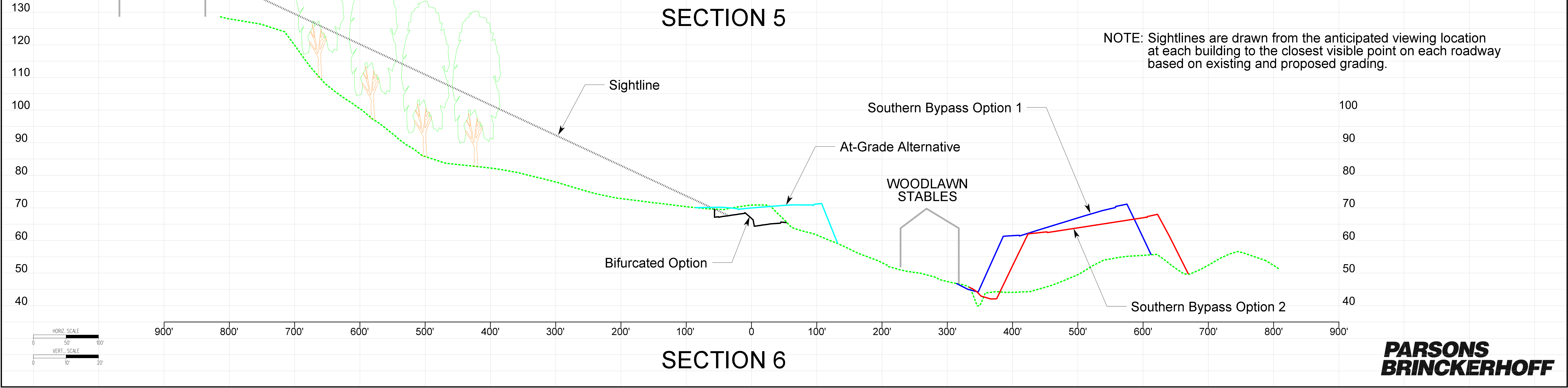
SECTION 2







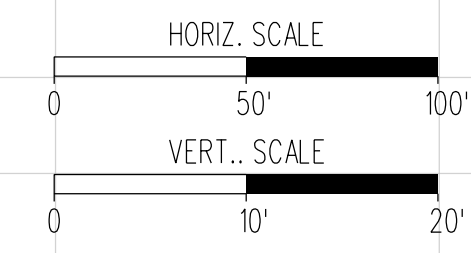
NOTE: Sightlines are drawn from the anticipated viewing location at each building to the closest visible point on each roadway based on existing and proposed grading.



NOTE: Sightlines are drawn from the anticipated viewing location at each building to the closest visible point on each roadway based on existing and proposed grading.

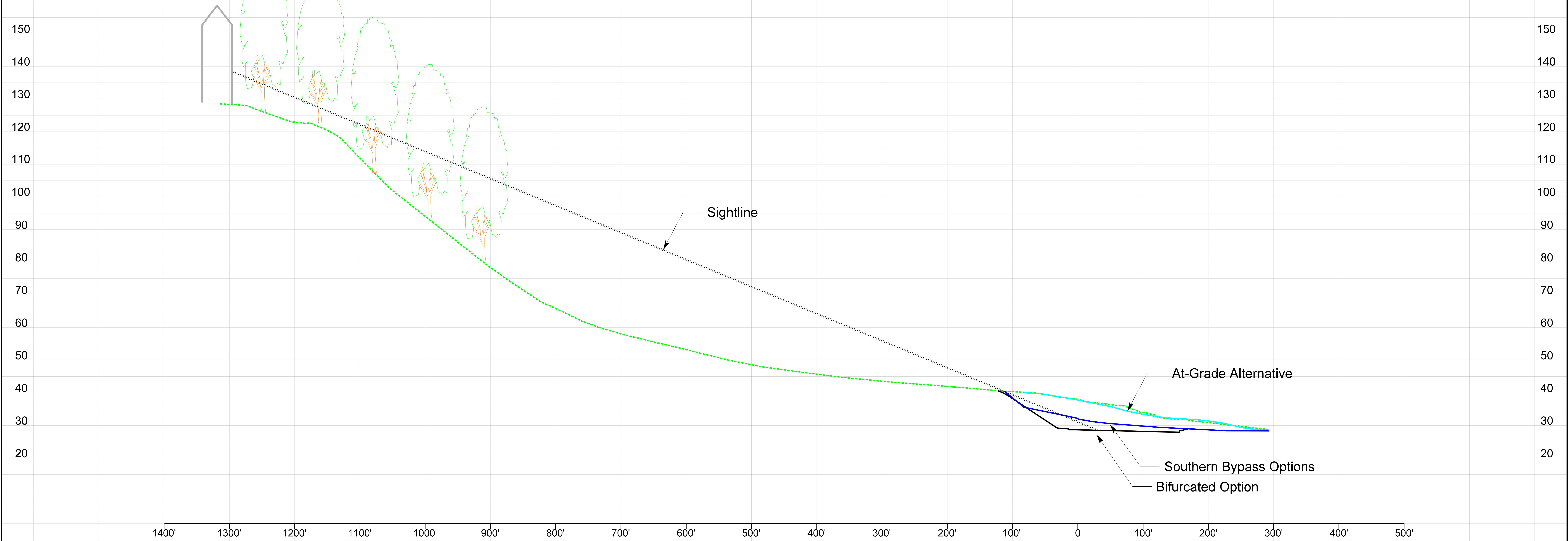


SECTION 7

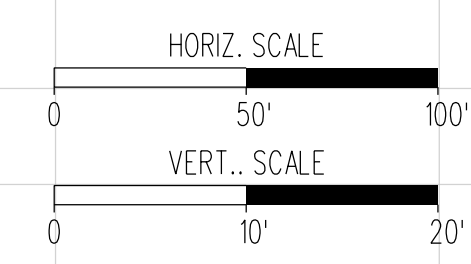


GRAND VIEW HOUSE

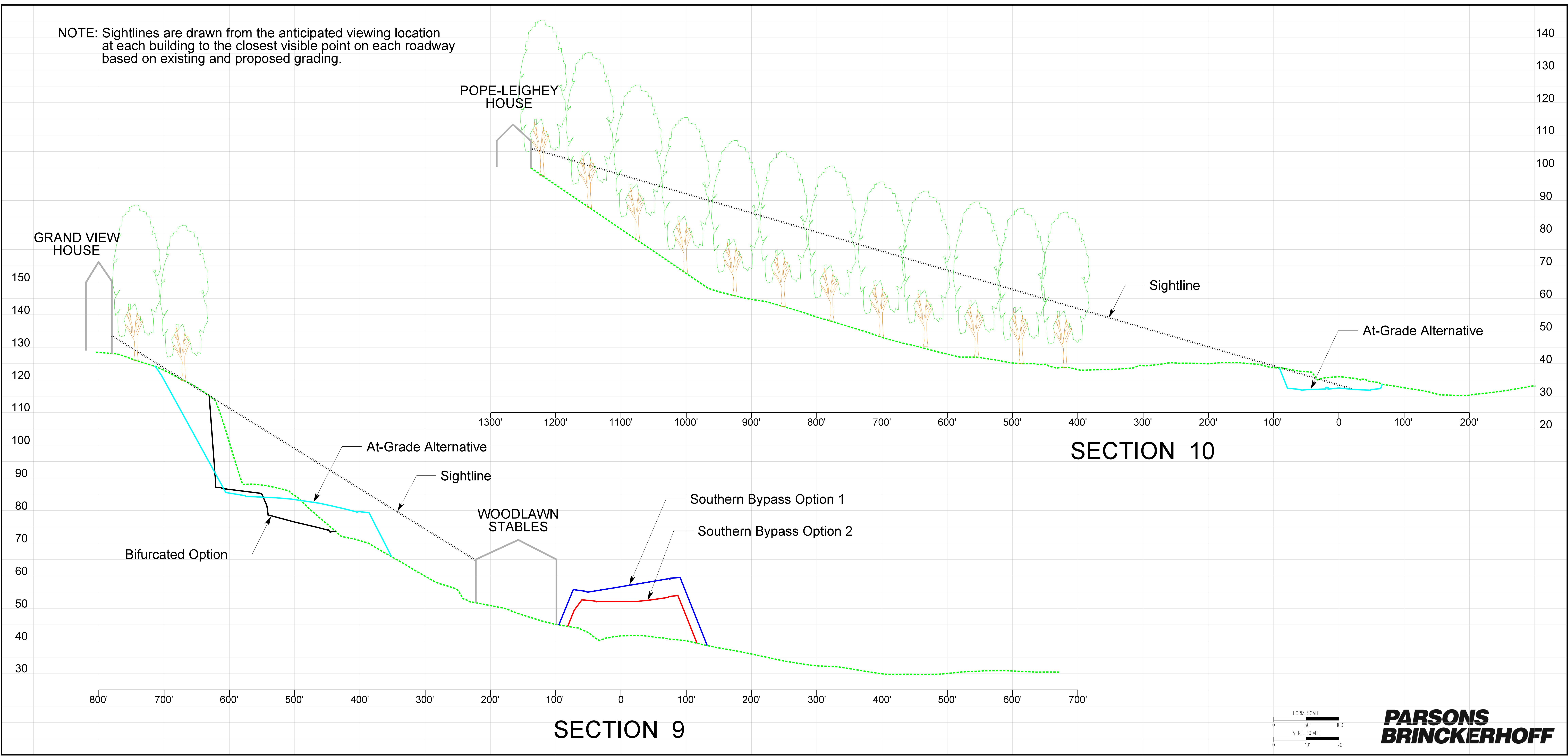
NOTE: Sightlines are drawn from the anticipated viewing location at each building to the closest visible point on each roadway based on existing and proposed grading.



SECTION 8



NOTE: Sightlines are drawn from the anticipated viewing location at each building to the closest visible point on each roadway based on existing and proposed grading.



Appendix D

Determination of Consistency with Coastal Resources Management Program



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

TDD (804) 698-4021

www.deq.virginia.gov

Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

March 27, 2012

Mr. Jack Van Dop
Federal Highway Administration
Eastern Federal Lands Highway Division
21400 Ridgetop Circle
Sterling, Virginia 20166-6511

RE: Federal Consistency Determination for the Route 1 Improvements at Fort Belvoir, Fairfax County, (DEQ 12-019F).

Dear Mr. Van Dop:

The Commonwealth of Virginia has completed its review of the Federal Consistency Determination (FCD) for the above-referenced project. The Department of Environmental Quality (DEQ) is responsible for coordinating Virginia's review of federal consistency documents and responding to appropriate officials on behalf of the Commonwealth. This letter is in response to your submission dated January 27, 2012 (received on January 31, 2012) requesting concurrence with the FCD prepared by the U.S. Department of Transportation (USDOT) Federal Highway Administration (FHWA). The following agencies and locality participated in this review:

- Department of Environmental Quality
- Department of Conservation and Recreation
- Department of Game and Inland Fisheries
- Marine Resources Commission
- Department of Agriculture and Consumer Services
- Department of Health
- Department of Historic Resources
- Fairfax County

In addition, the Department of Transportation, Department of Mines, Minerals and Energy and Northern Virginia Regional Commission were invited to comment on the proposed project.

PROJECT DESCRIPTION

The Federal Highway Administration (FHWA), Eastern Federal Lands Highway Division (EFLHD), in cooperation with the Virginia Department of Transportation (VDOT) and the U.S. Army Garrison Fort Belvoir proposes to make improvements to a 3.4-mile section of U.S. Route 1 between Telegraph Road (Route 611) and Mount Vernon Memorial Highway (Route 235) in Fairfax County. The proposed improvements include the widening of the existing four-lane section of Route 1 to six lanes, with appropriate turn lanes at intersections and a sidewalk and multi-use trail with right-of-way width of approximately 148 feet. The proposed right-of-way would include a 32-foot-wide median to be reserved for future public transit. The FCD notes that an Environmental Assessment is currently being prepared for the proposed activity under the National Environmental Policy Act.

PUBLIC PARTICIPATION

In accordance with 15 CFR § 930.2, public notice of the proposed action was published on DEQ's web site from February 3, 2012 to March 2, 2012. No public comments were received in response to the notice.

FEDERAL CONSISTENCY ANALYSIS

Pursuant to the Coastal Zone Management Act of 1972 (§ 1456(c)), as amended, and the federal consistency regulations implementing the CZMA (15 CFR Part 930, Subpart C, § 930.30 *et seq.*) federal actions that can have reasonably foreseeable effects on Virginia's coastal uses or resources must be conducted in a manner which is consistent, to the maximum extent practicable, with the Virginia Coastal Zone Management Program (VCP). The VCP is comprised of a network of programs administered by several agencies. In order to be consistent with the VCP, the federal agency must obtain all the applicable permits and approvals listed under the enforceable policies of the VCP prior to commencing the project.

According to information in the consistency determination, the proposed activity would have no effect on the following enforceable policies: fisheries management; dunes management; point source pollution control; shoreline sanitation; and coastal lands management. The agencies responsible for the administration of the enforceable policies of the VCP generally agree with the FHWA's determination. FHWA must ensure that the proposed action is consistent with the aforementioned policies. The analysis which follows responds to the FHWA's discussion of the enforceable policies of the VCP that apply and review comments submitted by agencies that administer the enforceable policies.

FEDERAL CONSISTENCY CONCURRENCE

Based on our review of the FHWA's consistency determination and the comments submitted by agencies administering the enforceable policies of the VCP, DEQ concurs that the proposed project as described is consistent with the VCP provided the project complies with all the applicable permits, approvals, and conditions of the enforceable policies of the VCP (see detailed discussions below).

However, should the proposed activity described in the Environmental Assessment (referenced in the FCD as currently under development) affect any of the state's coastal uses or resources substantially different than described in the FHWA's FCD, then in accordance with 15 CFR, Part 930, Subpart C, § 930.46, the FHWA shall further coordinate with DEQ and prepare a supplemental consistency determination for the commonwealth's review and concurrence. Substantially different coastal effects include: (1) substantial changes in the proposed activity that are relevant to the enforceable policies of the VCP; or (2) significant new circumstances or information relevant to the proposed activity and the proposed activity's effect on any coastal use or resource. In addition, a supplemental determination is required if substantial changes were made to the activity during the period of the commonwealth's initial review and DEQ did not receive notice of the substantial changes during its review period, and these changes are relevant to management program enforceable policies and/or affect coastal uses or resources.

Other state approvals which may apply to these projects are not included in this consistency concurrence. Therefore, FHWA must ensure that these projects are constructed and operated in accordance with all applicable federal, state, and local laws and regulations.

1. Fisheries Management. According to the FCD (page 1), the project crosses Mason Run, Accotink Creek and several of its unnamed tributaries, and a tributary of Dogue Creek, all of which discharge to the Potomac River. The document states that the contractor would be required to implement best management practices recommended by the Department of Conservation and Recreation and Department of Forestry, and that strict adherence to state and local regulations will be followed to protect these areas during and after construction.

1(a) Agency Jurisdiction. The Virginia Marine Resources Commission and the Department of Game and Inland Fisheries administer programs for the conservation and enhancement of finfish and shellfish resources and the promotion of commercial and recreational fisheries to maximize food production and recreational opportunities through Virginia Code §§ 28.2-200 to 28.2-713 and Virginia Code §§ 29.1-100 to 29.1-570.

1(b) Agency Findings. According to Department of Game and Inland Fisheries (DGIF) records, Accotink Creek, Dogue Creek, and Pohick Creek have been designated Anadromous Fish Use Areas.

1(c) Recommendations. DGIF provides the following recommendations for the protection of finfish and shellfish resources:

- adhere to a time-of-year restriction from February 15 through June 30 of any year for all instream work in Accotink Creek and/or its tributaries;
- conduct any in-stream activities during low or no-flow conditions;
- use non-erodible cofferdams or turbidity curtains to isolate the construction area;
- block no more than 50% of the streamflow at any given time;
- stockpile excavated material in a manner that prevents reentry into the stream;
- restore original streambed and streambank contours;
- revegetate barren areas with native vegetation;
- implement strict erosion and sediment control measures;
- construct stream crossings via clear-span bridges due to future maintenance costs associated with culverts and the loss of riparian and aquatic habitat; however, if this is not possible, countersink any culverts below the streambed at least 6 in. or use bottomless culverts to allow passage of aquatic organisms; and
- install floodplain culverts to carry bankfull discharges.

1(d) Conclusion. DGIF concludes that this project is consistent with the fisheries management enforceable policy of the VCP assuming adherence to erosion and sediment controls during construction.

For additional information, contact DGIF, Amy Ewing at (804) 367-2211.

2. Subaqueous Lands Management. According to the FCD (page 2), prior to construction, as appropriate, any jurisdictional impacts will be reviewed by the Virginia Marine Resources Commission during the Joint Permit Application process.

2(a) Agency Jurisdiction. The Virginia Marine Resources Commission (VMRC), pursuant to Section 28.2-1200 *et seq.* of the *Code of Virginia*, has jurisdiction over any encroachments in, on, or over any state-owned rivers, streams, or creeks in the Commonwealth.

The VMRC serves as the clearinghouse for the Joint Permit Application (JPA) used by the:

- U.S. Army Corps of Engineers (Corps) for issuing permits pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act;
- DEQ for issuance of a Virginia Water Protection Permit;
- VMRC for encroachments on or over state-owned subaqueous beds as well as tidal wetlands; and
- local wetlands board for impacts to wetlands.

2(b) Agency Comments. If any portion of the project involves encroachments channelward of ordinary high water along natural rivers and streams, a permit may be

required from VMRC. Any jurisdictional impacts would be reviewed by VMRC under the JPA process.

3. Wetlands Management. According to the FCD (page 2), the project would impact approximately 5,200 linear feet of stream and two acres of wetlands. The document states that the FHWA would obtain permits from the U.S. Army Corps of Engineers and the DEQ prior to construction and provide compensation as required for unavoidable impacts.

3(a) Agency Jurisdiction. The State Water Control Board (SWCB) promulgates Virginia's water regulations, covering a variety of permits to include Virginia Pollutant Discharge Elimination System Permit, Virginia Pollution Abatement Permit, Surface and Groundwater Withdrawal Permit, and the Virginia Water Protection Permit (VWPP). The VWPP is a State permit which governs wetlands, surface water, and surface water withdrawals/impoundments. It also serves as § 401 certification of the federal Clean Water Act § 404 permits for dredge and fill activities in waters of the U.S. The VWPP Program is under the Office of Wetlands and Water Protection/Compliance, within the DEQ Division of Water Quality Programs. In addition to central office staff who review and issue VWP permits for transportation and water withdrawal projects, the six DEQ regional offices perform permit application reviews and issue permits for the covered activities.

3(b) Agency Findings. According to the DEQ Northern Regional Office (NRO), based on the description of the potential impacts to surface waters, a VWPP from DEQ will most likely be required.

3(c) Recommendations. In general, DEQ recommends that stream and wetland impacts be avoided to the maximum extent practicable. To minimize unavoidable impacts to wetlands and waterways, DEQ recommends the following practices:

- Stockpile the excavated material for future replacement.
- Operate machinery and construction vehicles outside of stream-beds and wetlands; use synthetic mats when in-stream work is unavoidable;
- Preserve the top 12 inches of trench material removed from wetlands for use as wetland seed and root-stock in the excavated area.
- Erosion and sedimentation controls should be designed in accordance with the most current edition of the *Virginia Erosion and Sediment Control Handbook*. These controls should be in place prior to clearing and grading, and maintained in good working order to minimize impacts to State waters. The controls should remain in place until the area is stabilized.
- Place heavy equipment, located in temporarily impacted wetland areas, on mats, geotextile fabric, or use other suitable measures to minimize soil disturbance, to the maximum extent practicable.
- Restore all temporarily disturbed wetland areas to pre-construction conditions and plant or seed with appropriate wetlands vegetation in accordance with the cover type (emergent, scrub-shrub, or forested). The applicant should take all

appropriate measures to promote re-vegetation of these areas. Stabilization and restoration efforts should occur immediately after the temporary disturbance of each wetland area instead of waiting until the entire project has been completed.

- Place all materials which are temporarily stockpiled in wetlands, designated for use for the immediate stabilization of wetlands, on mats, geotextile fabric in order to prevent entry in state waters. These materials should be managed in a manner that prevents leachates from entering state waters and must be entirely removed within thirty days following completion of that construction activity. The disturbed areas should be returned to their original contours, stabilized within thirty days following removal of the stockpile, and restored to the original vegetated state.
- All non-impacted surface waters within the project or right-of-way limits that are within 50 feet of any clearing, grading, or filling activities should be clearly flagged or marked for the life of the construction activity within that area. The project proponent should notify all contractors that these marked areas are surface waters where no activities are to occur.
- Measures should be employed to prevent spills of fuels or lubricants into state waters.

3(d) Conclusion. Upon receipt of a Joint Permit Application for the proposed surface water impacts, DEQ-NRO VWPP staff will review the proposed project in accordance with the VWPP program regulations and guidance. The FHWA should allow for sufficient time for the processing of the permit application.

4. Nonpoint Source Pollution Control. According to the FCD (page 2), land-disturbing activities would impact more than 84 acres and would require a Virginia Stormwater Management Program permit and a Stormwater Pollution Prevention Plan. The FHWA would follow the Virginia Erosion and Sediment Control standards of Title 10.1, Chapter 5, Article 4 of the Virginia Code to ensure that nonpoint source pollution impacts are minimized.

4(a) Agency Jurisdiction. DCR's Division of Stormwater Management (DSM) administers the nonpoint source pollution control enforceable policy of the VCP through the *Virginia Erosion and Sediment Control Law and Regulations (VESCL&R)* and *Virginia Stormwater Management Law and Regulations (VSWML&R)*.

4(b) Erosion and Sediment Control and Stormwater Management Plans.

According to DCR-DSM, the FHWA and its authorized agents conducting regulated land-disturbing activities on private and public lands in the state must comply with the *VESCL&R*, *VSWML&R* (including coverage under the general permit for stormwater discharge from construction activities), and other applicable federal nonpoint source pollution mandates (e.g., *Clean Water Act* Section 313 and federal consistency under the *Coastal Zone Management Act*). Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, or other structures, soil or dredge spoil areas, or related land conversion activities that disturb 2,500 square feet or more in areas analogous to Chesapeake Bay Preservation Areas (CBPAs), would be

regulated by *VESCL&R* and *VSWML&R*. Accordingly, the FHWA must prepare and implement erosion and sediment control (ESC) plan to ensure compliance with state law and regulations. The ESC plan is submitted to the DCR Regional Office that serves the area where the project is located for review for compliance. The FHWA is ultimately responsible for achieving project compliance through oversight of on site contractors, regular field inspection, prompt action against non-compliant sites, and other mechanisms consistent with agency policy. [Reference: *VESCL* §10.1-567].

4(c) Virginia Stormwater Management Program General Permit for Stormwater Discharges from Construction Activities. DCR is responsible for the issuance, denial, revocation, termination and enforcement of the Virginia Stormwater Management Program (VSMP) General Permit for Stormwater Discharges from Construction Activities related to municipal separate storm sewer systems (MS4s) and construction activities for the control of stormwater discharges from MS4s and land disturbing activities under the Virginia Stormwater Management Program.

The operator or owner of a construction project involving land-disturbing activities equal to or greater than 2,500 square feet in areas designated as subject to the *Chesapeake Bay Preservation Area Designation and Management Regulations* are required to register for coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project specific stormwater pollution prevention plan (SWPPP). The SWPPP must be prepared prior to submission of the registration statement for coverage under the general permit and the SWPPP must address water quality and quantity in accordance with the VSMP Permit Regulations. General information and registration forms for the General Permit are available on DCR's website at http://www.dcr.virginia.gov/stormwater_management/vsmp.shtml. [Reference: *Virginia Stormwater Management Act* §10.1-603.1 *et seq.*; *VSMP Permit Regulations* 4 VAC-50 *et seq.*]

5. Air Pollution Control. According to the FCD (page 2), the assessment of potential impacts to carbon monoxide (CO), small particulate matter (PM_{2.5}) and mobile source air toxics (MSAT) is being conducted consistent with the Virginia Department of Transportation's protocols and other applicable guidance and findings. The document concludes that measures will be taken, as recommended by DEQ, to reduce emissions of volatile organic compounds, oxides of nitrogen and fine particulate matter generated from construction activities.

5(a) Agency Jurisdiction. DEQ's Air Quality Division, on behalf of the State Air Pollution Control Board, is responsible to develop regulations that become *Virginia's Air Pollution Control Law*. DEQ is charged to carry out mandates of the state law and related regulations as well as Virginia's federal obligations under the *Clean Air Act* as amended in 1990. The objective is to protect and enhance public health and quality of life through control and mitigation of air pollution. The division ensures the safety and quality of air in Virginia by monitoring and analyzing air quality data, regulating sources of air pollution, and working with local, state and federal agencies to plan and implement strategies to protect Virginia's air quality. The appropriate regional office is

directly responsible for the issue of necessary permits to construct and operate all stationary sources in the region as well as to monitor emissions from these sources for compliance. As a part of this mandate, the environmental documents of new projects to be undertaken in the state are also reviewed. In the case of certain projects, additional evaluation and demonstration must be made under the general conformity provisions of state and federal law.

5(b) Agency Findings. According to the DEQ Air Division, the project site is located in a designated ozone nonattainment area and emission control area for volatile organic compounds (VOCs) and oxides of nitrogen (NO_x). Precursors to ozone (O₃) pollution include VOCs and NO_x.

5(c) Recommendation. The project proponent should take all reasonable precautions to limit emissions of VOCs and NO_x, principally by controlling or limiting the burning of fossil fuels.

5(d) Requirements.

(i) Fugitive Dust

Fugitive dust must be kept to a minimum by using control methods outlined in 9 VAC 5-50-60 *et seq.* of the *Regulations for the Control and Abatement of Air Pollution*. These precautions include, but are not limited to, the following:

- Use, where possible, of water or chemicals for dust control;
- Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials;
- Covering of open equipment for conveying materials; and
- Prompt removal of spilled or tracked dirt or other materials from paved streets and removal of dried sediments resulting from soil erosion.

(ii) Asphalt Paving Operations

In accordance with 9 VAC 5-40-5490, there are limitations on the use of “cut-back” (liquefied asphalt cement, blended with petroleum solvents) that may apply in paving activities associated with the project. Moreover, there are time-of-year restrictions on its use during the months of April through October in VOC emission control areas.

(iii) Open Burning

If project activities include the open burning or use of special incineration devices for the disposal of land clearing debris, this activity must meet the requirements of 9 VAC 5-130-10 through 9 VAC 5-130-60 and 9 VAC 5-130-100 of the *Regulations* for open burning, and it may require a permit. The *Regulations* provide for, but do not require, the local adoption of a model ordinance concerning open burning. The FHWA should contact Fairfax County officials to determine what local requirements, if any, exist.

6. Coastal Lands Management. According to the document (page 2), the project corridor crosses approximately 17 acres of Chesapeake Bay Resource Protection Area. The document concludes that the project would include best management practices to comply with the Chesapeake Bay Preservation Area requirements.

6(a) Agency Jurisdiction. DCR's Division of Stormwater Management (DSM), Local Implementation (LI) (previously called the Division of Chesapeake Bay Local Assistance) administers the coastal lands management enforceable policy of the VCP which is governed by the *Chesapeake Bay Preservation Act (Bay Act)* (*Virginia Code* §10.1-2100-10.1-2114) and *Chesapeake Bay Preservation Area Designation and Management Regulations (Regulations)* (9 VAC 10-20 *et seq.*).

6(b) Agency Comments. According to DCR-DSM-LI, in Fairfax County, the areas protected by the *Chesapeake Bay Preservation Act*, as locally implemented, require conformance with performance criteria. These areas include Resource Protection Areas (RPAs) and Resource Management Areas (RMAs) as designated by the local government. RPAs include:

- tidal wetlands;
- certain non-tidal wetlands;
- tidal shores; and
- a 100-foot vegetated buffer area located adjacent to and landward of these features and along both sides of any water body with perennial flow.

All areas of the county not included in the RPA are designated as RMA.

6(c) Requirements. Federal actions on installations located within Tidewater Virginia are required to be consistent with the performance criteria of the *Regulations* on lands analogous to locally designated CBPAs. Projects that include land-disturbing activity must adhere to the performance criteria, especially with respect to:

- minimizing land disturbance (including access and staging areas);
- retaining indigenous vegetation;
- minimizing impervious cover;
- complying with the requirements of the *Virginia Erosion and Sediment Control Handbook*, Third Edition, 1992 (for land disturbance over 2,500 square feet); and
- satisfying stormwater management criteria consistent with water quality protection provisions of the *Virginia Stormwater Management Regulations* (4 VAC 50-60-10).

6(d) Recommendations.

(i) 1998 Federal Agencies' Chesapeake Ecosystem Unified Plan

The 1998 *Federal Agencies' Chesapeake Ecosystem Unified Plan (Plan)* calls for the

signatories of that Plan to cooperate with local and state governments in carrying out actions to comply with stormwater management regulations. The *Plan* further encourages low impact development practices that minimize the loss of natural areas and reduce impervious surfaces on federal facilities, as well as other best management practices to address stormwater management, and sediment and erosion control.

(ii) Chesapeake 2000 Agreement

The *Chesapeake 2000 Agreement* committed the government agencies to sound land use and stormwater quality controls. The signatories additionally committed the agencies to lead by example with respect to controlling nutrient, sediment and chemical contaminant runoff from government properties. In December 2001, the Executive Council of the Chesapeake Bay Program issued *Directive No. 01-1: Managing Storm Water on State, Federal and District-owned Lands and Facilities*, which includes specific commitments for agencies to lead by example with respect to stormwater control.

6(e) Agency Findings. Public roads and their appurtenant structures are conditionally exempt from the *Regulations* provided they are constructed in accordance with:

- (i) regulations promulgated pursuant to the Erosion and Sediment Control Law (§ 10.1-560 et seq. of the Code of Virginia) and the Stormwater Management Act (§ 10.1-603.1 et seq. of the Code of Virginia);
- (ii) an erosion and sediment control plan and a stormwater management plan approved by the Virginia Department of Conservation and Recreation; or
- (iii) local water quality protection criteria at least as stringent as the above state requirements.

The exemption of public roads is further conditioned upon the following:

- (a) optimization of the road alignment and design, consistent with other applicable requirements, to prevent or otherwise minimize:
 - (i) encroachment into Resource Protection Areas; and
 - (ii) adverse effects on water quality; and
- (b) local governments may choose to exempt:
 - (i) all public roads as defined in 9 VAC 10-20-40 of the *Chesapeake Bay Preservation Area Designation and Management Regulations*; or
 - (ii) only those public roads constructed by the Virginia Department of Transportation.

6(f) Conclusion. DCR-DSM-LI concludes that the proposal is consistent with the coastal lands management enforceable policy of the Virginia Coastal Zone Management Program as administered through the *Bay Act* and *Regulations*, provided project activities adhere to the above requirements.

ADDITIONAL ENVIRONMENTAL CONSIDERATIONS

In addition to the enforceable policies of the VCP, comments were also provided with respect to applicable requirements and recommendations of the following programs:

1. Solid and Hazardous Waste Management.

1(a) Agency Jurisdiction. Solid and hazardous wastes in Virginia are regulated by the Virginia Department of Environmental Quality, the Virginia Waste Management Board (VWMB) and the U.S. Environmental Protection Agency. They administer programs created by the federal *Resource Conservation and Recovery Act*, *Comprehensive Environmental Response Compensation and Liability Act*, commonly called Superfund, and the *Virginia Waste Management Act*. DEQ administers regulations established by the VWMB and reviews permit applications for completeness and conformance with facility standards and financial assurance requirements. All Virginia localities are required, under the Solid Waste Management Planning Regulations, to identify the strategies they will follow on the management of their solid wastes to include items such as facility siting, long-term (20-year) use, and alternative programs such as materials recycling and composting.

1(b) Agency Findings. DEQ's Division of Land Protection and Revitalization (DLPR) (formerly the Waste Division) conducted a geographic information system (GIS) database search and a cursory review of DEQ data files and determined that there are a number of hazardous waste sites, solid waste sites, Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) sites, Formerly Used Defense Sites (FUDS), voluntary remediation program (VRP) sites and petroleum release sites located in the same zip code. However, their proximity to the project sites is unknown. A complete list of these sites is attached.

1(c) Recommendations.

(i) Comprehensive Environmental Response Compensation and Liability Act and Formerly Used Defense Sites

The FHWA should contact the Directorate of Public Works, Environmental and Natural Resource Division, Fort Belvoir, for information concerning CERCLA obligations at the Fort Belvoir Main Post and to establish the nature and extent of any known environmental contamination at or near Military Munitions Restoration Program (MMRP) range areas and Main Post Solid Waste Management Units (SWMUs), or other Areas of Concern (AOCs) which may be in close proximity to the proposed project. In addition, the Directorate should be contacted prior to initiating any land-, sediment-, or groundwater-disturbing activities in the identified MMRP, SWMUs, and AOCs by Fort Belvoir.

(ii) Voluntary Remediation Program Sites

The FHWA should contact the DEQ VRP Program, Kevin Greene at (804) 698-4236 and/or DEQ-NRO, Richard Doucette at (703) 583-3813 for further information and the administrative records of the VRP cases and to establish the nature and extent of contamination in close proximity to the proposed project.

(iii) Petroleum Release Sites

The project manager or engineer should review the DEQ Pollution Complaint (PC) file to establish the exact location of petroleum releases, the nature and extent of the releases and the potential to impact the proposed project. The facility representative should contact DEQ-NRO, Mark Miller at (703) 583-3864, for further information and the administrative records of the PC cases which are in close proximity to the proposed project.

(iv) Pollution Prevention

Implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. All generation of hazardous wastes should be minimized and handled appropriately.

1(d) Requirements.

(i) Waste Management

Any soil that is suspected of contamination or wastes that are generated during construction-related activities must be tested and disposed of in accordance with applicable federal, state, and local laws and regulations.

(ii) Asbestos-containing Material and Lead-based Paint

Any existing structures to be demolished or otherwise impacted by construction should be checked for asbestos-containing materials (ACM) and lead-based paint (LBP) prior to construction. If ACM or LBP are found, in addition to the federal waste-related regulations mentioned above, state regulations 9 VAC 20-80-640 for ACM and 9 VAC 20-60-261 for LBP must be followed.

Questions or requests for further information may be directed to DEQ-DLPR, Steve Coe at (804) 698-4029.

2. Pesticides and Herbicides. DEQ recommends that the use of herbicides or pesticides for construction or landscape maintenance should be used in accordance with the principles of integrated pest management. The least toxic pesticides that are effective in controlling the target species should be used. Contact the Department of Agriculture and Consumer Services at (804) 786-3501 for more information.

3. Natural Heritage Resources.

3(a) Agency Jurisdiction.

(i) Department of Conservation and Recreation

The mission of the Virginia Department of Conservation and Recreation is to conserve Virginia's natural and recreational resources. DCR supports a variety of environmental programs organized within seven divisions including the Division of Natural Heritage. The Natural Heritage Program's (DCR-DNH) mission is conserving Virginia's biodiversity through inventory, protection, and stewardship. The *Virginia Natural Area Preserves Act*, 10.1-209 through 217 of the *Code of Virginia*, was passed in 1989 and codified DCR's powers and duties related to statewide biological inventory: maintaining a statewide database for conservation planning and project review, land protection for the conservation of biodiversity, and the protection and ecological management of natural heritage resources (the habitats of rare, threatened, and endangered species, significant natural communities, geologic sites, and other natural features).

(ii) Department of Agriculture and Consumer Services

The *Endangered Plant and Insect Species Act* of 1979, Chapter 39 §3.1-1020 through 1030 of the *Code of Virginia*, as amended, authorizes the Virginia Department of Agriculture and Consumer Services (VDACS) to conserve, protect, and manage endangered and threatened species of plants and insects. The VDACS Virginia Endangered Plant and Insect Species Program personnel cooperates with the U.S. Fish and Wildlife Service (USFWS), DCR-DNH and other agencies and organizations on the recovery, protection or conservation of listed threatened or endangered species and designated plant and insect species that are rare throughout their worldwide ranges. In those instances where recovery plans, developed by USFWS, are available, adherence to the order and tasks outlined in the plans are followed to the extent possible.

3(b) Agency Findings.

(i) Pohick/Accotink Wetlands Conservation Site

According to the information currently in DCR files, the Pohick/Accotink Wetlands Conservation Site is located within the project site. Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Conservation sites are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. The Pohick/Accotink Wetlands Conservation Site has been given a

biodiversity significance ranking of B3, which represents a site of high significance. The natural heritage resources of concern at this site are:

<i>Schoenoplectus fluviatilis</i>	River bulrush	G5/S2/NL/NL
<i>Glyptemys insculpta</i>	Wood turtle	G4/S2/NL/LT
<i>Haliaeetus leucocephalus</i>	Bald eagle	G5/S2S3B,S3N/NL/LT
Tidal Freshwater Marsh	(Mixed High Marsh Type)	GNR/S4?/NL/NL

River Bulrush - a state-listed rare plant species that inhabits fresh tidal marshes of the coastal plain of Virginia. This species forms predominantly sterile colonies that spread by rhizomes. Water pollution and sedimentation, sea level rise, and invasive species such as *Phragmites australis* pose the greatest threats to populations of this sedge. Nine populations of river bulrush are believed to be extant in Virginia.

Wood Turtle - ranges from southeastern Canada, south to the Great Lake states and New England. In Virginia, it is known from northern counties within the Potomac River drainage (NatureServe, 2009). The Wood turtle inhabits areas with clear streams with adjacent forested floodplains and nearby fields, wet meadows, and farmlands (Buhlmann et al., 2008; Mitchell, 1994). Since this species overwinters on the bottoms of creeks and streams, a primary habitat requirement is the presence of water (Mitchell, 1994).

Threats to the wood turtle include habitat fragmentation, urbanization, and automobile or farm machinery mortality (Buhlmann et al., 2008). The Wood turtle is currently classified as threatened by the Virginia Department of Game and Inland Fisheries (DGIF).

Bald Eagle - breeds from Alaska eastward through Canada and the Great Lakes region, along coastal areas off the Pacific and Atlantic Oceans, and the Gulf of Mexico, and in pockets throughout the western United States (NatureServe, 2009). In Virginia, it primarily breeds along the large Atlantic slope rivers (James, Rappahannock, Potomac, etc) with a few records at inland sites near large reservoirs (Byrd, 1991). Bald eagle nest sites are often found in the midst of large wooded areas near marshes or other bodies of water (Byrd, 1991). Bald eagles feed on fish, waterfowl, seabirds (Campbell *et al.*, 1990), various mammals and carrion (Terres, 1980). This species is currently classified as threatened by VDGIF.

Threats to this species include human disturbance of nest sites (Byrd, 1991), habitat loss, biocide contamination, decreasing food supply and illegal shooting (Herkert, 1992).

Tidal Freshwater Marsh (Mixed High Marsh Type) - occupies the higher elevation zone of freshwater to slightly oligohaline marshes on the Atlantic Coast from Maine to Virginia. From Delaware to northern Virginia, this is the principal mixed freshwater tidal marsh community and forms extensive patches along many tidal rivers. This community is composed of mixed, dense, and often diverse marsh vegetation

(*Impatiens capensis*, *Peltandra virginica*, *Polygonum arifolium*, *Schoenoplectus fluviatilis*, *Typha angustifolia*) with highly variable species composition and patch dominance. The soils are highly variable, from silts and silty mucks to peats and sands across the range (NatureServe, 2010). In Virginia, this community occurs most extensively in estuarine reaches of the Potomac River drainage, but has also been documented along the Rappahannock, Pamunkey, Mattaponi, and James Rivers.

Freshwater tidal marshes are naturally dynamic systems that are best developed where there is a major input of freshwater, daily tidal range of at least 0.5 m, and a geomorphology that tends to constrict and magnify tidal influence in the upper reaches of the estuary. These marshes are subject to diurnal flooding by tides and river discharge (NatureServe, 2010). Principal threats include chronic sea-level rise leading to increasing upstream salinity, pollutants, and invasive exotic plants such as marsh dewflower (*Murdannia keissak*) (Fleming et al. 2011).

(ii) Dogue Creek Wetlands Conservation Site

The Dogue Creek Wetlands Conservation Site is located in the project vicinity. This site has been given a biodiversity significance ranking of B5, which represents a site of general significance. The natural heritage resource of concern at this site is the Wood turtle. Furthermore, Laura's clubtail (*Stylurus laurae*, G4/S2/NL/NL) has been historically documented within Accotink Creek.

Laura's Clubtail - a state rare dragonfly, ranges from Ohio south to Florida with westward records to Texas (Kondratieff, 2000). In Virginia, there are records across the Piedmont and west to the Ridge and Valley region. Its habitat consists of moderated gradient streams with many shallow riffles and runs (NatureServe, 2009).

Though somewhat tolerant of decreased water quality, threats include activities which alter the water flow or substrate such as impoundments, channelization, dredging, siltation, agricultural non-point pollution, and municipal and industrial pollution. In addition, timber harvest may increase siltation and cause a decrease in dissolved oxygen as canopy cover is removed and water temperature rises (NatureServe, 2009).

(iii) Threatened and Endangered Waters

Dogue Creek and an unnamed tributary to Dogue Creek have been designated by DGIF as Threatened and Endangered (T&E) Waters. The species associated with these T&E Waters is the Wood turtle (*Glyptemys insculpta*, G4/S2/NL/LT).

(iv) Small Whorled Pogonia

According to VDACS, the federal- and state-protected small whorled pogonia (*Isotria medeoloides*) is documented to occur in the vicinity of the project.

(v) State Natural Area Preserves

DCR files do not indicate the presence of any State Natural Area Preserves under the agency's jurisdiction in the project vicinity.

3(c) Recommendations.

(i) Aquatic Ecosystem

To minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities, DCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control and stormwater management laws and regulations.

(ii) Wood Turtle and Bald Eagle

Due to the legal status of the Wood turtle and Bald eagle, DCR recommends the FHWA coordinate with DGIF to ensure compliance with the *Virginia Endangered Species Act* (Virginia Code §§ 29.1-563-570).

(iii) Small Whorled Pogonia

The FHWA should contact the USFWS and DCR-DNH to identify populations of the small whorled pogonia that may be affected by the proposed construction.

(iv) Natural Heritage Resources

Contact DCR-DNH, Rene Hypes at (804) 371-2708 for an update on natural heritage information if a significant amount of time passes before the project is initiated since new and updated information is continually added to the Biotics Data System.

4. Wildlife Resources and Protected Species.

4(a) Agency Jurisdiction. DGIF, as the Commonwealth's wildlife and freshwater fish management agency, exercises enforcement and regulatory jurisdiction over wildlife and freshwater fish, including state or federally listed endangered or threatened species, but excluding listed insects (*Virginia Code* Title 29.1). The DGIF is a consulting agency under the U.S. Fish and Wildlife Coordination Act (16 U.S.C. sections 661 *et seq.*), and provides environmental analysis of projects or permit applications coordinated through DEQ and several other state and federal agencies. DGIF determines likely impacts upon fish and wildlife resources and habitat, and recommends appropriate measures to avoid, reduce, or compensate for those impacts.

4(b) Agency Findings. According to DGIF records, the state-listed threatened wood turtle, state-listed threatened bald eagle, and resources known to support both have been documented from the project area. However, based on the scope and location of

the proposed work, DGIF does not anticipate it to result in adverse impacts upon these species and resources.

4(c) Recommendations. To minimize overall impacts to wildlife and natural resources, DGIF recommends that the FHWA:

- avoid and minimize impacts to undisturbed forest, wetlands, and streams to the fullest extent practicable;
- maintain naturally vegetated buffers of at least 100 feet in width around wetlands and on both sides of all perennial and intermittent streams, where practicable;
- conduct significant tree removal and ground clearing activities outside of the primary songbird nesting season of March 15 through August 15; and
- implement and maintain appropriate erosion and sediment controls throughout project construction and site restoration.

DGIF notes that adherence to these general recommendations may be infeasible in some situations. DGIF is available to work with the FHWA to develop project-specific measures as necessary to minimize project impacts upon wildlife resources.

4(d) Additional Information. DGIF maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. The database may be accessed from <http://vafwis.org/fwis/> or contact Shirl Dressler at (804) 367-6913.

For additional information, contact DGIF, Amy Ewing at (804) 367-2211.

5. Water Supply.

5(a) Agency Jurisdiction. The Virginia Department of Health (VDH), Office of Drinking Water (ODW) reviews projects for the potential to impact public drinking water sources (groundwater wells and surface water intakes).

5(b) Agency Findings. VDH finds that there are no groundwater wells within a one mile radius of the project site. No surface water intakes are located within the five-mile radius of the project site.

The project site does not fall within Zone 1 or Zone 2 of any public surface water sources. For public surface water intakes Zone 1 is the area included within a 5-mile radius around the surface water intake and Zone 2 is the entire up-gradient area of the watershed. For public groundwater wells Zone 1 is an area included within a 1,000-foot radius the well and Zone 2 is a radius of one mile.

5(c) Conclusion. VDH-ODW concludes that there are no apparent impacts to public drinking water resources as a result of the project.

Contact VDH-ODW, Diedre Forsgren at (804) 864-7241 for additional information.

6. Historic Structures and Archaeological Resources.

6(a) Agency Jurisdiction. The Department of Historic Resources (DHR) conducts reviews of projects to determine their effect on historic structures or cultural resources under its jurisdiction. DHR, as the designated State's Historic Preservation Office, ensures that federal actions comply with Section 106 of the National Historic Preservation Act of 1962 (NHPA), as amended, and its implementing regulation at 36 CFR Part 800. The NHPA requires federal agencies to consider the effects of federal projects on properties that are listed or eligible for listing on the National Register of Historic Places. Section 106 also applies if there are any federal involvements, such as licenses, permits, approvals or funding.

6(b) Agency Findings. According to DHR, the FHWA is coordinating this project with DHR pursuant to Section 106 of the NHPA, as amended, and its implementing regulation 36 CFR Part 800.

6(c) Requirements. The FHWA must continue to consult directly with DHR, as necessary.

For additional information, contact DHR, Roger Kirchen at (804) 482-6091.

7. Local Review.

7(a) Agency Jurisdiction. In accordance with CFR 930, Subpart A, §930.6(b) of the *Federal Consistency Regulations*, DEQ, on behalf of the state, is responsible for securing necessary review and comment from other state agencies, the public, regional government agencies, and local government agencies, in determining the Commonwealth's concurrence or objection to a federal consistency certification.

7(b) County Comments. The Fairfax County Department of Planning and Zoning (DPZ) notes that the FCD references an Environmental Assessment for the proposal that is currently under development. While the FCD provides a brief description of project resources and impacts, a more detailed analysis will be provided in the EA when complete. The county generally finds that without detailed information on impacts to wetlands, point and nonpoint source pollution control and impacts to Chesapeake Bay Preservation Areas, it is not possible to understand the full implications of these potential impacts. The full text of the county's comments is attached.

Questions regarding these comments may be directed to Fairfax County, Marianne Gardner at (703) 324-1380.

REGULATORY AND COORDINATION NEEDS

1. Subaqueous Lands Management. Should impacts to subaqueous lands occur, permitting may be required from the Virginia Marine Resources Commission, pursuant

to Section 28.2-1200 *et seq.* of the *Code of Virginia*. A Joint Permit Application should be submitted to the VMRC for any anticipated impacts. For additional information, contact VMRC, Jeff Madden at (757) 247-2276.

2. Wetlands Management. A Virginia Water Protection Permit may be required for anticipated impacts to wetlands and surface waters pursuant to Virginia Code §62.1-44.15:5. Coordination with the appropriate agencies for anticipated impacts is accomplished through the submission of a JPA to VMRC. For additional information, contact the VWPP program at DEQ-NRO, Trisha Beasley at (703) 583-3940.

3. Nonpoint Source Pollution Control.

3(a) Erosion and Sediment Control and Stormwater Management. The FHWA must ensure that it is in compliance with *Virginia's Erosion and Sediment Control Law* (Virginia Code 10.1-567) and *Regulations* (4 VAC 50-30-30 *et seq.*) and *Stormwater Management Law* (Virginia Code 10.1-603.5) and *Regulations* (4 VAC 3-20-210 *et seq.*). An erosion and sediment control plan may be submitted to the DCR Warrenton Regional Office at (540) 347-6420 for review and approval.

3(b) Virginia Stormwater Management Program General Permit for Stormwater Discharges from Construction Activities. For projects involving land-disturbing activities equal to or greater than 2,500 square feet in area analogous to Chesapeake Bay Preservation Areas, the FHWA is required to apply for registration coverage under the Virginia Stormwater Management Program General Permit for Discharges of Stormwater from Construction Activities. Specific questions regarding the Stormwater Management Program requirements should be directed to DCR, Holly Sepety at (804) 225-2613.

4. Air Pollution Control. This project is subject to air pollution control regulations administered by the Department of Environmental Quality. The following sections of the Code of Virginia and Virginia Administrative Code are applicable:

- 9 VAC 5-40-5490 *et seq.* for asphalt paving operations;
- 9 VAC 5-50-60 *et seq.* governing fugitive dust emissions; and
- 9 VAC 5-130 *et seq.*, for open burning.

For more information and coordination contact DEQ-NRO, Terry Darton at (703) 583-3845. Also, contact local Fairfax County officials for information on any local requirements pertaining to open burning

5. Coastal Lands Management. This project must be consistent to the maximum extent practicable with the coastal lands management enforceable policy of the VCP as administered by DCR-DSM-LI through the *Chesapeake Bay Preservation Area Designation and Management Regulations* (9 VAC 10-20 *et seq.*). Public roads and their appurtenant structures are conditionally exempt from the *Chesapeake Bay Preservation Area Designation and Management Regulations*. The FHWA must meet

the conditions of the exemptions to be consistent with the VCP. FHWA must coordinate this project with DCR-DSM-LI, Daniel Moore at (804) 786-1518, to ensure compliance with the *Regulations*.

6. Solid and Hazardous Wastes. All solid waste, hazardous waste, and hazardous materials must be managed in accordance with all applicable federal, state, and local environmental regulations. Some of the applicable state laws and regulations are:

- *Virginia Waste Management Act* (Code of Virginia Section 10.1-1400 *et seq.*);
- *Virginia Hazardous Waste Management Regulations* (VHWMR) (9 VAC 20-60);
- *Virginia Solid Waste Management Regulations* (VSWMR) (9 VAC 20-81); and
- *Virginia Regulations for the Transportation of Hazardous Materials* (9 VAC 20-110).

Some of the applicable federal laws and regulations are:

- *Resource Conservation and Recovery Act (RCRA)* (42 U.S.C. Section 6901 *et seq.*);
- Title 40 of the Code of Federal Regulations; and
- U.S. Department of Transportation Rules for Transportation of Hazardous materials (49 CFR Part 107).

For additional information concerning location and availability of suitable waste management facilities in the project area or if free product, discolored soils, or other evidence of contaminated soils are encountered, contact DEQ-NRO, Richard Doucette at (703) 583-3813.

6(a) Comprehensive Environmental Response Compensation and Liability Act and Formerly Used Defense Sites. The Environmental Compliance Branch Chief at Fort Belvoir (Marcia Kicos) may be contacted at (703) 806-0020 for information concerning CERCLA and FUDS obligations at Fort Belvoir. Ms. Kicos, or her designee, should be advised prior to initiating any land, sediment, or groundwater disturbing activities at or near Military Munitions Restoration Program range areas and Main Post Solid Waste Management Units.

6(b) Asbestos Containing Material. It is the responsibility of the owner or operator to thoroughly inspect the parts of the facility where the upgrades will occur for the presence of asbestos, including Category I and Category II nonfriable asbestos containing material (ACM). Upon classification as friable or non-friable, all waste ACM shall be disposed of in accordance with the Virginia Solid Waste Management Regulations (9 VAC 20-80-640), and transported in accordance with the Virginia regulations governing Transportation of Hazardous Materials (9 VAC 20-110-10 *et seq.*). Contact the DEQ-DLPR, Linda Richardson at (804) 698-4318 and the Department of Labor and Industry, Ronald L. Graham (804) 786-0574 for additional information.

6(c) Lead-Based Paint. If applicable, this project must comply with the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) regulations, and with the Virginia Lead-Based Paint Activities Rules and Regulations. For additional information regarding these requirements contact the Department of Professional and Occupational Regulation, David Dick at (804) 367-8588.

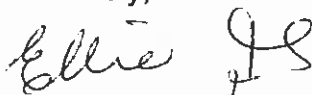
7. Petroleum Release. If evidence of a petroleum release is discovered during construction of this project, it must be reported to DEQ-NRO. Contact Cynthia Sale at (703) 583-3830 to report a release.

8. Portable AST Registration. The project proponent must register portable ASTs (>660 gallons) used more than 120 days with DEQ. Tank registration may be accomplished by contacting DEQ-NRO, Cynthia Sale at (703) 583-3830.

9. Protected Species Legislation. To ensure compliance with protected species legislation, the FHWA may coordinate with the USFWS Virginia Field Office at (804) 693-6694, in accordance with the *U.S. Fish and Wildlife Coordination Act* (16 USC 661 *et seq.*) and DGIF, Amy Ewing at (804) 367-2211, under the *Virginia Endangered Species Act* (Virginia Code §§ 29.1-563-570).

Thank you for the opportunity to comment on the FCD. The detailed comments of reviewing agencies are attached for your review. If you have questions, please call me at (804) 698-4325 or John Fisher at (804) 698-4339.

Sincerely,



Ellie Irons, Program Manager
Environmental Impact Review

Enclosures

Ec: David Hartshorn, DEQ-NRO
Dell Cheatham, DEQ-NRO
Steve Coe, DEQ- DLPR
Kotur Narasimhan, DEQ-Air
Tony Watkinson, VMRC
Amy Ewing, DGIF
Robbie Rhur, DCR
Keith Tignor, VDACS
Chip Ray, VDOT
Barry Matthews, VDH
Roger Kirchen, DHR
David Spears, DMME
G. Mark Gibb, Northern Virginia Regional Commission

Cc: Fred Selden, Fairfax County
Chris Landgraf, Fort Belvoir

Fisher, John (DEQ)

From: Ewing, Amy (DGIF)
Sent: Monday, March 05, 2012 1:47 PM
To: Fisher, John (DEQ)
Cc: Bugas, Paul (DGIF)
Subject: ESSLog# 32649_12-019F_Rt 1 Improvements at Ft. Belvoir

We have reviewed the subject project that proposes to widen Route 1 from Telegraph Road to Mt. Vernon Memorial Highway in Fairfax County, VA.

According to our records, state Threatened wood turtles, state Threatened bald eagles, and resources known to support both have been documented from the project area. However, based on the scope and location of the proposed work, we do not anticipate it to result in adverse impacts upon these species and resources.

Accotink Creek, Dogue Creek, and Pohick Creek have been designated Anadromous Fish Use Areas. Therefore, we recommend that any instream work in these waters and/or their tributaries adhere to a time of year restriction from February 15 through June 30 of any year. We recommend conducting any in-stream activities during low or no-flow conditions, using non-erodible cofferdams or turbidity curtains to isolate the construction area, blocking no more than 50% of the streamflow at any given time, stockpiling excavated material in a manner that prevents reentry into the stream, restoring original streambed and streambank contours, revegetating barren areas with native vegetation, and implementing strict erosion and sediment control measures. Due to future maintenance costs associated with culverts, and the loss of riparian and aquatic habitat, we prefer stream crossings to be constructed via clear-span bridges. However, if this is not possible, we recommend countersinking any culverts below the streambed at least 6 inches, or the use of bottomless culverts, to allow passage of aquatic organisms. We also recommend the installation of floodplain culverts to carry bankfull discharges.

To minimize the adverse impacts of linear utility project development on wildlife resources, we offer the following general recommendations: avoid and minimize impacts to undisturbed forest, wetlands, and streams to the fullest extent practicable; maintain naturally vegetated buffers of at least 100 feet in width around wetlands and on both sides of perennial and intermittent streams, where practicable; conduct significant tree removal and ground clearing activities outside of the primary songbird nesting season of March 15 through August 15; and, implement and maintain appropriate erosion and sediment controls throughout project construction and site restoration. We understand that adherence to these general recommendations may be infeasible in some situations. We are happy to work with the applicant to develop project-specific measures as necessary to minimize project impacts upon the Commonwealth's wildlife resources.

Assuming adherence to appropriate erosion and sediment controls, we find this project consistent with the Fisheries Management Section of the CZMA.

Thanks, Amy

Amy Ewing
Environmental Services Biologist
VA Dept. of Game and Inland Fisheries
4010 W. Broad Street
Richmond, VA 23230
804-367-2211
amy.ewing@dgif.virginia.gov

If you cannot meet the deadline, please notify JOHN FISHER at 804/698-4339 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

REVIEW INSTRUCTIONS:

- A. Please review the document carefully. If the proposal has been reviewed earlier (i.e. if the document is a federal Final EIS or a state supplement), please consider whether your earlier comments have been adequately addressed.
- B. Prepare your agency's comments in a form which would be acceptable for responding directly to a project proponent agency.
- C. Use your agency stationery or the space below for your comments. **IF YOU USE THE SPACE BELOW, THE FORM MUST BE SIGNED AND DATED.**

Please return your comments to:


MR. JOHN E. FISHER
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL IMPACT REVIEW
629 EAST MAIN STREET, SIXTH FLOOR
RICHMOND, VA 23219
FAX #804/698-4319
John.Fisher@deq.virginia.gov



JOHN E. FISHER
ENVIRONMENTAL PROGRAM PLANNER

COMMENTS

If the project encroaches over state-owned submerged lands, a permit may be required

(signed)  (date) March 16
(title) Env. Engineer
(agency) VMRS.

Hartshorn, David (DEQ)

From: Hartshorn, David (DEQ)
Sent: Friday, March 02, 2012 9:19 AM
To: Fisher, John (DEQ)
Cc: Hartshorn, David (DEQ)
Subject: CD #12-019F

RECEIVED

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DEQ-Office of Environmental
Integrity

NRO comments regarding the Route 1 Improvements at Fort Belvoir, USDOT/Federal Highway Administration are as follows:

Virginia Water Protection Permit (VWPP) Program - The project proposes the construction of road improvements to Route 1 between Telegraph Road (Route 611) and Mount Vernon Memorial Highway (Route 235) in Fairfax County, Virginia. The information provided indicates that the project will result in impacts to surface waters and that the permittee intends to obtain the necessary permits from VADEQ. Based on the description of the potential impacts to surface waters a VWP individual permit from DEQ will most likely be required. DEQ VWP staff recommends that the avoidance and minimization of surface water impacts to the maximum extent practicable. Upon receipt of a Joint Permit Application for the proposed surface water impacts, DEQ VWP Permit staff will review the proposed project in accordance with the VWP permit program regulations and current VWP permit program guidance. Please allow for sufficient time for the processing of the permit application.

Division of Land Protection and Revitalization - If any solid or hazardous waste is generated/encountered during construction and /or operation of the facility, the project manager and facility manager shall follow applicable federal, state, and county regulations for their disposal.

Air Compliance/Permitting - The project manager is reminded that during the construction phases that occur with this project; the project is subject to the Fugitive Dust/Fugitive Emissions Rule 9 VAC 5-50-60 through 9 VAC 5-50-120. In addition, should any open burning or use of special incineration devices be employed in the disposal of land clearing debris during construction, the operation would be subject to the Open Burning Regulation 9 VAC 5-130-10 through 9 VAC 5-130-60 and 9 VAC 5-130-100.

R. David Hartshorn
Regional Air Compliance Manager
DEQ-NRO
13901 Crown Court
Woodbridge, VA 22193
(703) 583-3895
fax (703) 583-3821
e-mail - R.David.Hartshorn@deq.virginia.gov

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Douglas W. Domenech
Secretary of Natural Resources

David A. Johnson
Director

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

203 Governor Street
Richmond, Virginia 23219-2010
(804) 786-1712

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FEB 29 2012
DEQ-Office of Environmental
Impact Review

MEMORANDUM

DATE: February 28, 2012
TO: John Fisher, DEQ
FROM: Roberta Rhur, Environmental Impact Review Coordinator
SUBJECT: DEQ 12-019F, FHA Route 1 Improvement at Fort Belvoir, Fairfax CO

Division of Natural Heritage

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in our files, the Pohick/Accotink Wetlands Conservation Site is located within the project site. Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Conservation sites are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. Pohick/Accotink Wetlands Conservation Site has been given a biodiversity significance ranking of B3, which represents a site of high significance. The natural heritage resources of concern at this site are:

<i>Schoenoplectus fluviatilis</i>	River bulrush	G5/S2/NL/NL
<i>Glyptemys insculpta</i>	Wood turtle	G4/S2/NL/LT
<i>Haliaeetus leucocephalus</i>	Bald eagle	G5/S2S3B,S3N/NL/LT
Tidal Freshwater Marsh (Mixed High Marsh Type)		GNR/S4?/NL/NL

River bulrush, a state-rare plant species, inhabits fresh tidal marshes of the coastal plain of Virginia. This species forms predominantly sterile colonies that spread by rhizomes. Water pollution and sedimentation, sea level rise, and invasive species such as *Phragmites australis* pose the greatest threats to populations of this sedge. Nine populations of river bulrush are believed to be extant in Virginia.

The Wood turtle (*Glyptemys insculpta*, G4/S2/NL/LT) ranges from southeastern Canada, south to the Great Lake states and New England. In Virginia, it is know from northern counties within the Potomac

River drainage (NatureServe, 2009). The Wood turtle inhabits areas with clear streams with adjacent forested floodplains and nearby fields, wet meadows, and farmlands (Buhlmann et al., 2008; Mitchell, 1994). Since this species overwinters on the bottoms of creeks and streams, a primary habitat requirement is the presence of water (Mitchell, 1994).

Threats to the wood turtle include habitat fragmentation, urbanization, and automobile or farm machinery mortality (Buhlmann et al., 2008). Please note that the Wood turtle is currently classified as threatened by the Virginia Department of Game and Inland Fisheries (VDGIF).

The Bald eagle breeds from Alaska eastward through Canada and the Great Lakes region, along coastal areas off the Pacific and Atlantic Oceans, and the Gulf of Mexico, and in pockets throughout the western United States (NatureServe, 2009). In Virginia, it primarily breeds along the large Atlantic slope rivers (James, Rappahannock, Potomac, etc) with a few records at inland sites near large reservoirs (Byrd, 1991). Bald eagle nest sites are often found in the midst of large wooded areas near marshes or other bodies of water (Byrd, 1991). Bald eagles feed on fish, waterfowl, seabirds (Campbell et. al., 1990), various mammals and carrion (Terres, 1980). Please note that this species is currently classified as threatened by the Virginia Department of Game and Inland Fisheries (VDGIF).

Threats to this species include human disturbance of nest sites (Byrd, 1991), habitat loss, biocide contamination, decreasing food supply and illegal shooting (Herkert, 1992).

Tidal Freshwater Marsh (Mixed High Marsh Type) (*Impatiens capensis-Peltandra virginica-Polygonum arifolium-Schoenoplectus fluviatilis-Typha angustifolia* Tidal Herbaceous Vegetation) occupies the higher elevation zone of freshwater to slightly oligohaline marshes on the Atlantic Coast from Maine to Virginia. From Delaware to northern Virginia, this is the principal mixed freshwater tidal marsh community and forms extensive patches along many tidal rivers. This community is composed of mixed, dense, and often diverse marsh vegetation with highly variable species composition and patch dominance. The soils are highly variable, varying from silts and silty mucks to peats and sands across the range (NatureServe, 2010). In Virginia, this community occurs most extensively in estuarine reaches of the Potomac River drainage, but has also been documented along the Rappahannock, Pamunkey, Mattaponi, and James Rivers.

Freshwater tidal marshes are naturally dynamic systems that are best developed where there is a major input of freshwater, daily tidal range of at least 0.5 m, and a geomorphology that tends to constrict and magnify tidal influence in the upper reaches of the estuary. These marshes are subject to diurnal flooding by tides and river discharge (NatureServe, 2010). Principal threats include chronic sea-level rise leading the increasing upstream salinity, pollutants, and invasive exotic plants such as marsh dewflower (*Murdannia keissak*) (Fleming et al. 2011).

In addition, Dogue Creek Wetlands Conservation Site is located in the project vicinity. This site has been given a biodiversity significance ranking of B5, which represents a site of general significance. The natural heritage resource of concern at this site is the Wood turtle.

Furthermore, Laura's clubtail (*Stylurus laurae*, G4/S2/NL/NL) has been historically documented within Accotink Creek. Laura's clubtail, a state rare dragonfly, ranges from Ohio south to Florida with westward records to Texas (Kondratieff, 2000). In Virginia, there are records across the Piedmont and west to the Ridge and Valley region. Its habitat consists of moderated gradient streams with many shallow riffles and runs (NatureServe, 2009).

Though somewhat tolerant of decreased water quality, threats include activities which alter the water flow or substrate such as: impoundments, channelization, dredging, siltation, agricultural non-point pollution,

and municipal and industrial pollution. In addition, timber harvest may increase siltation and cause a decrease in dissolved oxygen as canopy cover is removed and water temperature rises (NatureServe, 2009).

In addition, Dogue Creek and an Unnamed Tributary to Dogue Creek have been designated by the Virginia Department of Game and Inland Fisheries as a "Threatened and Endangered Waters". The species associated with this T & E water is the Wood turtle (*Glyptemys insculpta*, G4/S2/NL/LT).

To minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities, DCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/storm water management laws and regulations. Due to the legal status of the Wood turtle and Bald eagle, DCR also recommends coordination with Virginia's regulatory authority for the management and protection of this species, the VDGIF, to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 – 570).

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the Virginia Department of Conservation and Recreation (DCR), DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

New and updated information is continually added to Biotics. Please contact DCR for an update on this natural heritage information if a significant amount of time passes before it is utilized.

The Virginia Department of Game and Inland Fisheries maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from <http://vafwis.org/fwis/> or contact Shirl Dressler at (804) 367-6913.

Division of Stormwater Management

Chesapeake Bay Local Assistance:

In Fairfax County, the areas protected by the *Chesapeake Bay Preservation Act*, as locally implemented, require conformance with performance criteria. These areas include Resource Protection Areas (RPAs) and Resource Management Areas (RMAs) as designated by the local government. RPAs include tidal wetlands, certain non-tidal wetlands and tidal shores, and a minimum 100-foot vegetated buffer area located adjacent to and landward of these features and along both sides of any water body with perennial flow. RMAs, which require less stringent performance criteria, include floodplains, highly erodible soils, highly permeable soils, steep slopes in excess of fifteen percent, nontidal wetlands not included in the RPA, and other lands designated by Fairfax County to protect the quality of state waters.

Pursuant to the *Coastal Zone Management Act of 1972*, as amended, federal activities affecting Virginia's coastal resources or coastal uses must be consistent with Virginia's Coastal Zone Management Program (CZM Program) (see § 307(c)(1) of the Coastal Zone Management Act and 15 CFR Part 930, sub-part C of the *Federal Consistency Regulations*).

While Chesapeake Bay Preservation Areas (CBPA) are not locally designated on federal lands, this does not relieve federal agencies of their responsibility to be consistent with the provisions of the Regulations, § 9 VAC 10-20-10 et seq., as one of the enforceable programs of the CZM Program. Federal actions on installations located within Tidewater Virginia are required to be consistent with the performance criteria

of the Regulations on lands analogous to locally designated CBPAs. Projects that include land disturbing activity must adhere to the general performance criteria, especially with respect to minimizing land disturbance (including access and staging areas), retaining indigenous vegetation and minimizing impervious cover. The proposed Route 1 Improvements project is within lands analogous to locally designated CBPAs. While not impacting RPA lands, the project will be required to adhere to performance criteria related to construction activities on RMA lands. For land disturbance over 2,500 square feet, the project must comply with the requirements of the *Virginia Erosion and Sediment Control Handbook*, Third Edition, 1992. Additionally, stormwater management criteria consistent with water quality protection provisions of the *Virginia Stormwater Management Regulations*, § 4 VAC 50-60-10, shall be satisfied.

The 1998 *Federal Agencies' Chesapeake Ecosystem Unified Plan* (Plan) calls for the signatories of that Plan to cooperate with local and state governments in carrying out actions to comply with stormwater management regulations. The Plan further encourages low impact development practices that minimize the loss of natural areas and reduce impervious surfaces on federal facilities, as well as other best management practices to address stormwater management, and sediment and erosion control. In addition, the *Chesapeake 2000* agreement committed the government agencies to sound land use and stormwater quality controls. The signatories additionally committed the agencies to lead by example with respect to controlling nutrient, sediment and chemical contaminant runoff from government properties. In December 2001, the Executive Council of the Chesapeake Bay Program issued *Directive No. 01-1: Managing Storm Water on State, Federal and District-owned Lands and Facilities*, which includes specific commitments for agencies to lead by example with respect to stormwater control.

Public roads and their appurtenant structures are conditionally exempt from the *Chesapeake Bay Preservation Area Designation and Management Regulations* (Regulations) provided they are constructed in accordance with: (i) regulations promulgated pursuant to the Erosion and Sediment Control Law (§10.1-560 et seq. of the Code of Virginia) and the Stormwater Management Act (§10.1-603. 1 et seq of the Code of Virginia), (ii) an erosion and sediment control plan and a stormwater management plan approved by the Virginia Department of Conservation and Recreation, or (iii) local water quality protection criteria at least as stringent as the above requirements. The exemption of public roads is further conditioned on the following:

- (a) optimization of the road alignment and design, consistent with other applicable requirements, to prevent or otherwise minimize (i) encroachment into Resource Protection Areas and (ii) adverse effects on water quality; and
- (b) local governments may choose to exempt (i) all public roads as defined in §9 VAC 10-20-40 of the *Chesapeake Bay Preservation Area Designation and Management Regulations* or (ii) only those public roads constructed by the Virginia Department of Transportation.

Provided adherence to the above requirements, the proposed activity would be consistent with the *Chesapeake Bay Preservation Act* and the Regulations.

Stormwater Management:

The applicant and their authorized agents conducting regulated land disturbing activities on private and public lands in the state must comply with the Virginia Erosion and Sediment Control Law and Regulations (VESCL&R), Virginia Stormwater Management Law and Regulations including coverage under the general permit for stormwater discharge from construction activities, and other applicable federal nonpoint source pollution mandates (e.g. Clean Water Act-Section 313, Federal Consistency under the Coastal Zone Management Act). Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, borrow areas, soil stockpiles, and related land-disturbance activities that result in the land-disturbance of greater than 2,500 square feet would be regulated by VESCL&R. Accordingly, the applicant must prepare and implement erosion and sediment control (ESC)

plan to ensure compliance with state law and regulations. The ESC plan is submitted to the DCR Regional Office that serves the area where the project is located for review for compliance. The applicant is ultimately responsible for achieving project compliance through oversight of on site contractors, regular field inspection, prompt action against non-compliant sites, and other mechanisms consistent with agency policy. [Reference: VESCL §10.1-567;].

The operator or owner of construction activities involving land disturbing activities equal to or greater than 2,500 square feet in areas designated as subject to the Chesapeake Bay Preservation Area Designation and Management Regulations adopted pursuant to the Chesapeake Bay Preservation Act are required to register for coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project specific stormwater pollution prevention plan (SWPPP). The SWPPP must be prepared prior to submission of the registration statement for coverage under the general permit and the SWPPP must address water quality and quantity in accordance with the Virginia Stormwater Management Program (VSMP) Permit Regulations. General information and registration forms for the General Permit are available on DCR's website at http://www.dcr.virginia.gov/soil_and_water/index.shtml [Reference: Virginia Stormwater Management Law Act §10.1-603.1 et seq.; VSMP Permit Regulations §4VAC-50 et seq.]

The remaining DCR divisions have no comments regarding the scope of this project. Thank you for the opportunity to comment.

Cc: Amy Ewing, VDGIF

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR PROGRAM COORDINATION

ENVIRONMENTAL REVIEW COMMENTS APPLICABLE TO AIR QUALITY

TO: John E. Fisher

DEQ - OEIA PROJECT NUMBER: 12 - 019F

PROJECT TYPE: STATE EA / EIR FEDERAL EA / EIS SCC

X CONSISTENCY DETERMINATION

PROJECT TITLE: ROUTE 1 IMPROVEMENTS AT FORT BELVOIR

PROJECT SPONSOR: USDOT / FEDERAL AVIATION ADMINISTRATION

PROJECT LOCATION: X OZONE NON-ATTAINMENT AND
EMISSION CONTROL AREA FOR NOX & VOC

REGULATORY REQUIREMENTS MAY BE APPLICABLE TO: X CONSTRUCTION
 OPERATION

STATE AIR POLLUTION CONTROL BOARD REGULATIONS THAT MAY APPLY:

1. 9 VAC 5-40-5200 C & 9 VAC 5-40-5220 E - STAGE I
2. 9 VAC 5-40-5200 C & 9 VAC 5-40-5220 F - STAGE II Vapor Recovery
3. X 9 VAC 5-40-5490 et seq. - Asphalt Paving operations
4. X 9 VAC 5-130 et seq. - Open Burning
5. X 9 VAC 5-50-60 et seq. Fugitive Dust Emissions
6. 9 VAC 5-50-130 et seq. - Odorous Emissions; Applicable to _____
7. 9 VAC 5-50-160 et seq. - Standards of Performance for Toxic Pollutants
8. 9 VAC 5-50-400 Subpart _____, Standards of Performance for New Stationary Sources, designates standards of performance for the _____
9. 9 VAC 5-80-10 et seq. of the regulations - Permits for Stationary Sources
10. 9 VAC 5-80-1700 et seq. Of the regulations - Major or Modified Sources located in PSD areas. This rule may be applicable to the _____
11. 9 VAC 5-80-2000 et seq. of the regulations - New and modified sources located in non-attainment areas
12. 9 VAC 5-80-800 et seq. Of the regulations - Operating Permits and exemptions. This rule may be applicable to _____

COMMENTS SPECIFIC TO THE PROJECT:

All precautions are necessary to restrict the emissions of volatile organic compounds (VOC) and oxides of nitrogen (NO_x).



(Kotur S. Narasimhan)
Office of Air Data Analysis

DATE: February 24, 2012

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Impact Review

MEMORANDUM

TO: John Fisher, DEQ/EIR Environmental Program Planner

FROM: *G. Stephen "Steve" Coe*
Steve Coe, DLPR Review Coordinator

DATE: February 16, 2012

COPIES: Sanjay Thirunagari, DLP&R Review Manager
EIR File

SUBJECT: EIR Project No. 12-019F- Route 1 Improvements at Fort Belvoir- Fairfax County-
USDOT/FHA

The Division of Land Protection & Revitalization has completed its review of the Environmental Impact Report regarding the Project entitled U.S. Route 1 Improvements at Fort Belvoir, Fairfax County. . The project site is primarily located in zip code 22060, but also is in zip codes 22079, and 22309. The project scope includes: widening of Route 1 from four to six lanes between Telegraph Road (Route 611) and Mount Vernon Memorial Highway (Route 235) in Fairfax County. The project would construct appropriate turn lanes at intersections and a sidewalk and multi-use trail, with a general right-of-way width of approximately 148 feet. This proposed right-of-way would include a 32-foot wide median to be reserved for future public transit.

We have provided comments below concerning potential waste issues and environmental resources that could be affected and which may be impacted by this proposed project.

The submittal did not address potential solid and/or hazardous waste issues. The submittal did not include a search of waste-related databases. The DLPR staff has conducted a cursory review of its database files under zip codes 22060, 22079, and 22309, including a GIS database search (either 0.25 mile or 0.5 mile radius) of the project site and determined the information below.

Facility waste sites of concern were located within the same zip code of the proposed project under zip codes 22060, 22079, and 22309, and/or within the 0.25 mile to 0.5 mile radius from the project site. However, the proximity of identified waste sites to the project site and/or potential impact to the project should be further evaluated.

The staff's summary comments are as follows:

Hazardous Waste Facilities

The search of the RCRAInfo database under zip codes 22060, 22079, and 22309 and/or within 0.5 miles of the project site found the following large quantity generators (LQGs) and permitted treatment, storage, disposal (TSD) facilities under the RCRA:

- U.S. Army Garrison Fort Belvoir, Fort Belvoir, VA, 22060, EPA ID No. VA7213720082, Permitted Treatment Storage Disposal Facility under Full Enforcement Action by EPA. Facility is also a large quantity generator (LQG). Site is under RCRA Corrective Action. EPA is the lead on this project site and the EPA contact is Wanda Martinez, Project Manager, EPA Region 3, at (215) 814-3434. Fort Belvoir Permit and CA facility contacts are Patrick M. McLaughlin at (703) 806-3193 or Jim Stratton at (703) 664-1232.
- Alexandria Metal Finishers, Gunston Cove Road, Lorton, VA 22079, EPA ID No. VAD981045537, Facility is a LQG.

Solid Waste Facilities

Search of the DEQ's Solid Waste Sites Inventory under zip codes 22060, 22079, and 22309 and/or within 0.5 miles of the project site found the following facilities:

- SWP308, Closed Sanitary Landfill, U.S. Army Fort Belvoir, VA, 22060, Rt. 1 and Rt. 611, Telegraph and Potomac River, Solid Waste Unit Status – Post-Closure, Solid Waste Permit Status Post-Closure Permit.
- SWP490, Closed CDD Landfill (SW), U.S. Army Fort Belvoir, VA, 22060, Rt. 1 and Rt. 611, Telegraph and Potomac River, Solid Waste Unit Status – Post-Closure, Solid Waste Permit Status Post-Closure Permit.
- PBR 164, RMW Steam Sterilizer,- US Army - Fort Belvoir, U.S. Army Fort Belvoir, VA, 22060, Rt. 1 and Rt. 611, Telegraph and Potomac River, Solid Waste Unit Status –Active, Solid Waste Permit Status - Permitted.
- PBR 248, RMW Steam Sterilizer,- US Army - Fort Belvoir, U.S. Army Fort Belvoir, VA, 22060, Rt. 1 and Rt. 611, Telegraph and Potomac River, Solid Waste Unit Status –Closed, Solid Waste Permit Status – Revoked.
- SWP 055, Sanitary Landfill, Interstate 95 Landfill, 9850 Furnace Road, Lorton, VA 22079, Solid Waste Unit Status –Closed, Solid Waste Permit Status – Revoked.
- SWP 103, Sanitary Landfill, Interstate 95 Landfill, 9850 Furnace Road, Lorton, VA 22079, Solid Waste Unit Status –Active, Solid Waste Permit Status – Permitted.
- SWP 327, CDD Landfill, Rainwater Landfill - Richmond Highway, 9917 Richmond Hwy, Lorton, VA, 22079, Solid Waste Unit Status –Active, Solid Waste Permit Status – Permitted.
- SWP 331, CDD Landfill, Lorton CDD Landfill 9917, Richmond Hwy, Lorton, VA, 22079, Solid Waste Unit Status –Active, Solid Waste Permit Status – Permitted.
- SWP 510, Energy Recovery/Incineration Facility, Covanta Fairfax Incorporated, 9898 Furnace Road, Lorton, VA, 22079, Solid Waste Unit Status –Active, Solid Waste Permit Status – Permitted.

PBR – Permit-by-Rule

SWP- Solid Waste Permit

CERCLA Sites

The following CERCLA facility sites were found on the CERCLIS database under zip codes 22060, 22079, and 22309 and/or within 0.5 miles of the project site found the following facilities:

- Fort Belvoir, Fort Belvoir, VA, 22060, EPA ID No. VA5210020082, Not an NPL Status Site, Site Deferred to RCRA. Also listed as a Federal Facility.

The project corridor of Route 1 borders, or is in close proximity to the Mounted Pistol Range Military Munitions Restoration Program (MMRP) site, the Grenade Court MMRP site, and three separate Operational Range Areas at Fort Belvoir.

The DEQ's Federal Facilities Restoration Program recommends that the project manager or engineer contact Ms. Marcia Kicos, Environmental Compliance Branch Chief, Directorate of Public Works, Environmental & Natural Resource Division, Fort Belvoir, Virginia at (703) 806-0020 for information concerning Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) obligations at Fort Belvoir's Main Post. Ms. Kicos, or her designee, should be contacted to establish the nature and extent of any known environmental contamination at or near Military Munitions Restoration Program (MMRP) range areas and Main Post Solid Waste Management Units (SWMUs), or other Areas of Concern (AOCs) which may be in close proximity to the proposed project.

In addition Ms. Kicos, or her designee, should be contacted prior to initiating any land, sediment, or groundwater disturbing activities in the identified MMRP, SWMUs, and AOCs by Fort Belvoir.

(Also see EPA and Fort Belvoir facility contacts under Hazardous Waste Facilities listed above.)

FUDs Sites

The following FUDS facility sites were found on DEQ's FUDs Sites Inventory under zip codes 22060, 22079, and 22309 and/or within 0.5 miles of the project site found the following facilities:

- NIKE 64/65, Lorton, VA22079, FUDS No. C03VA0075, FFID No. VA9799F1572
- LORTON SM ARMS RNG ANX, Lorton, VA 22079, FUDS No. C03VA0115, FFID No. VA9799F1594.

Above sites are believed to be located at the property identified as DC Department of Corrections – Former Lorton Correctional Complex, 8515 Silverbrook Road, Lorton, VA 22709, under EPA ID No. VAD980830988. Above FUDS facility sites are under EPA RCRA Corrective Action (CA) and EPA Region 3 is the CA lead for the Former Lorton Correctional Complex. EPA Region 3 Contact is Luis Pizarro, (215) 814-3444.

VRP Sites

The following DEQ Voluntary Remediation Program (VRP) facility sites were found on DEQ's VRP Sites Inventory under zip codes 22060, 22079, and 22309 and/or within 0.5 miles of the project site:

- Gunston Plaza (Town Cleaners, VRP00251, VRP Certificate Issued.
- American Stone Facility (Former), VRP00521, Currently enrolled in VRP.

- Skyview Park (South), VRP00314, Currently enrolled in VRP.
- Pear Tree Village Center, VRP00552, Currently enrolled in VRP.
- Woodlawn Cleaners, VRP00217, VRP Certificate Issued.
- Skyview Park (North), VRP00332, VRP Certificate Issued.

Please note that the DEQ's VRP Nos. and VRP case files within the above zip codes and/or within 0.5 miles of the proposed project are identified above and these VRP cases should be further evaluated by the project engineer or manager to establish the exact location of the release and the nature and extent of the release and the potential to impact the proposed project. The facility representative should contact the DEQ's VRP Program and/or the DEQ's Northern Regional Office (NRO) for further information and the administrative records of the VRP cases and to establish the nature and extent of contamination which are in close proximity to the proposed project.

Petroleum Release Sites

The following petroleum release sites were found on the DEQ's Inventory under zip codes 22060, 22079, and 22309 and/or within 0.25 miles of the project site:

- Route I and Telegraph Road Intersection, Lorton, VA, 22309, DEQ PC No. 20043317, 6/20/2007, Status – Case Closed
- U.S. Army Fort Belvoir – Building 03165, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No. 20023027, 5/31/2007, Status – Case Closed.
- US Army Fort Belvoir – Building 1400, Telegraph Road and Potomac River, Fort Belvoir, VA 22060, DEQ PC No. 20083293, Status – Case Closed.
- US Army Fort Belvoir – Building 01960, Telegraph Road and Potomac River, Fort Belvoir, VA 22060, DEQ PC No. 20003031, Status – Case Closed.
- US Army Fort Belvoir – Building 01974, Telegraph Road and Potomac River, Fort Belvoir, VA 22060, DEQ PC No.19931716, Status – Case Closed.
- Hess 46207 – 9142 Richmond Hwy, Fort Belvoir, VA, 22060, DEQ PC No. 19911343, 6/20/2006, Status – Case Closed.
- Hess 46207 – 9142 Richmond Hwy, Fort Belvoir, VA, 22060, DEQ PC No. 19931848, 3/23/2007, Status – Case Closed.
- US Army Fort Belvoir – Building 1400, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.20083293, 11/24/2008, Status – Case Closed.
- Village Apartments, 9140 Richmond Hwy, Fort Belvoir, VA, 22060, DEQ PC No. 20033189, 3/29/2006, Status – Case Closed.
- US Army Fort Belvoir – 28 tanks various buildings, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.19880180, 6/20/2007, Status – Case Closed.
- US Army Fort Belvoir – Building 00753, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.20003022, 6/20/2007, Status – Case Closed.

- US Army Fort Belvoir – Building 01201, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.20003234, 6/20/2007, Status – Case Closed.
- US Army Fort Belvoir – Building 01475, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.20003185, 5/11/2007, Status – Case Closed
- US Army Fort Belvoir – Building 01487, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.20003028, 4/02/2007, Status – Case Closed
- US Army Fort Belvoir – Building 01488, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.20003312, 6/01/2007, Status – Case Closed
- US Army Fort Belvoir – Building 01901, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.20003076, 5/15/2007, Status – Case Closed
- US Army Fort Belvoir – Building 01902, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.20003077, 5/15/2007, Status – Case Closed
- US Army Fort Belvoir – Building 01907, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.20003078, 5/15/2007, Status – Case Closed
- US Army Fort Belvoir – Building 01908, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.19993351, 4/02/2007, Status – Case Closed
- US Army Fort Belvoir – Building 01911, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.20003079, 5/15/2007, Status – Case Closed
- US Army Fort Belvoir – Building 01923, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.20003080, 5/15/2007, Status – Case Closed
- US Army Fort Belvoir – Building 01926, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.20003187, 4/02/2007, Status – Case Closed
- US Army Fort Belvoir – Building 01928, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.20003081, 5/15/2007, Status – Case Closed
- US Army Fort Belvoir – Building 01939, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.20023014, 6/20/2007, Status – Case Closed
- US Army Fort Belvoir – Building 01902, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.20033130, 6/01/2007, Status – Case Closed
- US Army Fort Belvoir – Buildings 01481, 01485, 01486, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No. 19993350, 4/02/2007, Status – Case Closed
- US Army Fort Belvoir – Buildings 1916, 1919, 1924, 1927, 1929, 1930, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No. 19993352, 4/02/2007, Status – Case Closed
- US Army Fort Belvoir – Building 0095, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.20023018, 6/20/2007, Status – Case Closed
- US Army Fort Belvoir – Building 01813, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.20003071, 5/31/2007, Status – Case Closed

- US Army Fort Belvoir – Building 01816, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.20003072, 6/01/2007, Status – Case Closed
- US Army Fort Belvoir – Building 01817, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.20003073, 6/01/2007, Status – Case Closed
- US Army Fort Belvoir – Building 01819, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.20003074, 5/15/2007, Status – Case Closed
- US Army Fort Belvoir – Building 01833, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.20003075, 6/01/2007, Status – Case Closed
- US Army Fort Belvoir – Building 01837, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.20003186, 6/01/2007, Status – Case Closed
- US Army Fort Belvoir – Building 01810, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.20013016, 5/31/2007, Status – Case Closed
- US Army Fort Belvoir – Building 01856, Telegraph Road and Potomac River, Fort Belvoir, VA, 22060, DEQ PC No.19880501, 6/05/2007, Status – Case Closed
- Exxon 25374, 8861 Richmond Hwy, Alexandria, VA, 22309, DEQ PC No. 19954111, 4/25/2007, Status – Case Closed.
- Texaco 230681331 - Woodlawn, 8851 Richmond Hwy, Alexandria, VA, 22309, DEQ PC No. 19931332, 4/17/2007, Status – Case Closed.
- Texaco 230691331, 8851 Richmond Hwy, Alexandria, VA, 22309, DEQ PC No. 20033307, 5/11/2007, Status – Case Closed.
- Woodlawn Auto Center, 5634 Mount Vernon Memorial Hwy, Woodlawn, VA, 22309, DEQ PC No. 19870231, Status – Case Closed

(Note: Dates above are the latest PC Database edit dates of the specific PC Case Nos.)

Please note that the DEQ's PC case files of the PC Case Nos., within 0.25 miles of the proposed project are identified above and these petroleum releases should be evaluated by the project engineer or manager to establish the exact location of the release and the nature and extent of the petroleum release and the potential to impact the proposed project. The facility representative should contact the DEQ's Northern Regional Office for further information and the administrative records of the PC cases which are in close proximity to the proposed project.

GENERAL COMMENTS

Soil, Sediment, and Waste Management

Any soil that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. Some of the applicable state laws and regulations are: Virginia Waste Management Act, Code of Virginia Section 10.1-1400 *et seq.*; Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60); Virginia Solid Waste Management Regulations (VSWMR) (9VAC 20-81); Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20-110). Some of the applicable Federal laws and regulations are: the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901 *et seq.*, and the applicable

regulations contained in Title 40 of the Code of Federal Regulations; and the U.S. Department of Transportation Rules for Transportation of Hazardous materials, 49 CFR Part 107.

Asbestos and/or Lead-based Paint

All structures being demolished/renovated/ removed should be checked for asbestos-containing materials (ACM) and lead-based paint (LBP) prior to demolition. If ACM or LBP are found, in addition to the federal waste-related regulations mentioned above, State regulations 9VAC 20-81-620 for ACM and 9VAC 20-60-261 for LBP must be followed. Questions may be directed to Ms. Kathryn Perszyk at the Northern Virginia Regional Office (703-583-3856).

Pollution Prevention – Reuse - Recycling

Please note that DEQ encourages all construction projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. All generation of hazardous wastes should be minimized and handled appropriately.

If you have any questions or need further information, please contact Steve Coe, Environmental Specialist, at (804) 698-4029.

If you cannot meet the deadline, please notify JOHN FISHER at 804/698-4339 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

REVIEW INSTRUCTIONS:

- A. Please review the document carefully. If the proposal has been reviewed earlier (i.e. if the document is a federal Final EIS or a state supplement), please consider whether your earlier comments have been adequately addressed.
- B. Prepare your agency's comments in a form which would be acceptable for responding directly to a project proponent agency.
- C. Use your agency stationery or the space below for your comments. **IF YOU USE THE SPACE BELOW, THE FORM MUST BE SIGNED AND DATED.**

Please return your comments to:

MR. JOHN E. FISHER
 DEPARTMENT OF ENVIRONMENTAL QUALITY
 OFFICE OF ENVIRONMENTAL IMPACT REVIEW
 629 EAST MAIN STREET, SIXTH FLOOR
 RICHMOND, VA 23219
 FAX #804/698-4319
 John.Fisher@deq.virginia.gov

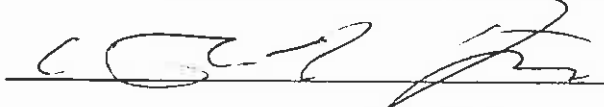
FEB 27 2012
 DEQ-Office of Environmental
 Impact Review



 JOHN E. FISHER
 ENVIRONMENTAL PROGRAM PLANNER

COMMENTS

Based on information in our database, the federal and state protected small whorled pogonia, *Isotria medeoloides*, is documented to occur in the vicinity of the project area. The applicant should contact the appropriate agency to identify populations that may be affected by the proposed work. At this time, we do not anticipate this project will have significant adverse affect as it relates to VDACS' responsibilities for the preservation of agricultural lands.

(signed)  (date) _____
 (title) _____ (Keith R. Tignor) February 27, 2012
 (agency) Endangered Species Coordinator

Fisher, John (DEQ)

From: Forsgren, Diedre (VDH)
Sent: Wednesday, February 08, 2012 2:08 PM
To: Fisher, John (DEQ)
Subject: (12-019F) CD: Route 1 Improvements at Fort Belvoir

DEQ Project #: 12-019F
Name: Route 1 Improvements at Fort Belvoir
Sponsor: USDOT/Federal Highway Administration
Location: Fairfax County

VDH – Office of Drinking Water has reviewed DEQ Project Number 12-019F. Below are our comments as they relate to proximity to **public drinking water** sources (groundwater wells, springs and surface water intakes). Potential impacts to public water distribution systems or sanitary sewage collection systems must be verified by the local utility.

No groundwater wells are within a 1 mile radius of the project site.

No surface water intakes are located within a 5 mile radius of the project site.

Project does not fall within Zone 1 (up to 5 miles into the watershed) or Zone 2 (greater than 5 miles into the watershed) of any public surface water sources.

There are no apparent impacts to public drinking water sources due to this project.

Diedre Forsgren

Office Services Specialist
VIRGINIA DEPARTMENT OF HEALTH
Office of Drinking Water, Room 622-A
109 Governor Street
Richmond, VA 23219
Phone: (804) 864-7241
email: diedre.forsgren@vdh.virginia.gov

Fisher, John (DEQ)

From: Kirchen, Roger (DHR)
Sent: Wednesday, February 22, 2012 11:02 AM
To: Fisher, John (DEQ)
Subject: Route 1 Improvements at Fort Belvoir (DEQ #12-019F; DHR File No. 2001-0007)

DHR has been in consultation with the FHWA regarding this project. We request that the FHWA continue to consult directly with DHR, as necessary, pursuant to Section 106 of the National Historic Preservation Act (as amended) and its implementing regulations codified at 36 CFR Part 800 which require Federal agencies to consider the effects of their undertakings on historic properties.

Roger

*Roger W. Kirchen, Archaeologist
Office of Review and Compliance
Division of Resource Services and Review
Department of Historic Resources
2801 Kensington Avenue
Richmond, VA 23221
phone: 804-482-6091 (NEW!)
fax: 804-367-2391
roger.kirchen@dhr.virginia.gov*



County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

March 5, 2012

John E. Fisher
Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, Virginia, 23219

RECEIVED

MAR 06 2012

DEQ-Office of Environmental
Impact Review

Dear Mr. Fisher:

The Department of Planning and Zoning has reviewed the Coastal Zone Management Act (CZMA) Consistency Determination for the Route 1 Improvements at Fort Belvoir, project number 12-019F.

The Federal Highway Administration (FHWA) is proposing to widen a section of Route 1 from four lanes to six lanes from Telegraph Road (Route 611) to Mount Vernon Memorial Highway (Route 235). The proposed general right-of-way width of 148 feet would include turn lanes at intersections, sidewalks, multi-use trail and a 32-foot wide median to be reserved for future public transit. The CZMA notes that the preferred alternative is evaluated in an Environmental Assessment (EA) along with a No-Build Alternative. It should be noted that the EA is referenced throughout the CZMA document. However, the EA has not been completed at this time.

While the CZMA provides a brief description of the individual areas of consideration contained in the EA, no specific details are contained in the CZMA as they are referenced as being provided in the EA. Among the items covered by the CZMA document which would be of specific immediate concern to Fairfax County are wetlands management, non-point source pollution, point source pollution and Chesapeake Bay Preservation Areas.

Both point source and non-point source pollution were noted as potential impacts resulting from the proposed work. The FHWA would meet state and local requirements for controlling both types of discharge. Best management practice (BMP) facilities would be provided in order to conform to nutrient reduction goals.

The preferred alternative is expected to result in some impacts to tidal and non-tidal wetlands. According to the information noted in the CZMA this alternative would result in impacts to approximately 5,200 linear feet of stream and approximately 2 acres of wetlands. Specific areas of impact and potential mitigations measures were not discussed in the CZMA but might be fully addressed in the EA.

The CZMA provides very limited information regarding impacts to Chesapeake Bay Preservation Areas noting that approximately 17 acres of Resource Protection Area (RPA) for Accotink Creek, its tributaries, and Dogue Creek would be crossed. Without the benefit of the details provided in the EA, it is not possible to discern the full implications of these potential impacts.

John E. Fisher

March 5, 2012

Page 2

Given the dependence of the CZMA on the EA regarding details for the proposed work, Fairfax County would appreciate the opportunity to review the EA prior to the commencement of any proposed work for this project. While the CZMA describes the scope of the proposed work and potential impacts in general terms, it is not possible to determine if the scope of the work and potential remediation measures would fully address all potential impacts.

Thank you for the opportunity to comment on this Consistency Determination. If you have any questions about our comments, please do not hesitate to contact John Bell of my staff at 703-324-1278.

Sincerely,



Marianne Gardner, Director
Planning Division

MG: JRB

cc: Board of Supervisors
Anthony H. Griffin, County Executive
Robert A. Stalzer, Deputy County Executive
David J. Molchany, Deputy County Executive
John R. Bell, Department of Planning and Zoning

Appendix E
Noise Impact Analysis Technical Report

Common Noise Environment	Receptor Site	Number of Dwelling Units	Existing Worst-Case Noise Level	Future No-Build (2040) Noise Level	Future Build (2040) Noise Level	Build With Barrier Noise Levels													
						8 ft	IL	10 ft	IL	12 ft	IL	14 ft	IL	16 ft	IL	18 ft	IL	20 ft	IL
CNE 1	R 1	4	66	66	68	64	4	63	5	62	6	62	6	62	6	62	6	62	6
	R 2	5	67	68	70	62	8	61	9	60	10	59	11	59	11	58	12	58	12
	R 3	5	67	67	70	61	8 ⁺	60	10	59	11	58	11 ⁺	58	12	57	13	57	13
	R 4	4	68	68	70	62	8	61	9	60	10	59	11	58	12	58	12	57	13
	R 5	2	68	68	69	64	6 ⁺	61	8	60	9	60	10 ⁺	59	10	59	11 ⁺	58	11
	R 6	3	63	63	65	60	4 ⁺	58	6 ⁺	58	7	57	8	57	8	56	9	56	9
	R 7	4	62	62	64	59	5	58	5 ⁺	55	8 ⁺	55	9	54	10	53	10 ⁺	53	11
	R 8 *	2	68	68	70	67	3	66	4	65	5	64	6	63	7	63	7	63	7
CNE 2	R 9	2	57	57	60	59	1	59	1	59	1	58	2	58	2	58	2	58	2
	R 10	2	53	54	57	56	1	55	2	54	3	53	4	53	4	52	5	52	5
CNE 3	R 11 *	2	61	62	63	63	1 ⁺	63	0	62	2 ⁺	61	2	61	2	61	3 ⁺	61	3 ⁺
	R 12 ²	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 13 *	4	62	63	70	65	5	64	6	61	9	60	10	59	11	59	11	58	12
	R 14	1	57	58	64	60	4	59	5	58	6	58	6	57	6 ⁺	57	7	57	7
	R 15 *	4	60	61	67	62	4 ⁺	62	5	61	6	60	6 ⁺	60	7	60	7	60	7
	R 16	1	57	58	61	60	1	58	4 ⁺	57	4	57	4	57	5 ⁺	57	5 ⁺	56	5
	R 17 *	2	60	61	65	62	3	62	3	61	4	61	4	61	5 ⁺	61	5 ⁺	61	5 ⁺
	R 18 *	2	61	63	64	63	2 ⁺	63	2 ⁺	62	2	62	2	62	2	62	2	62	2
CNE 4	R 19	1	65	65	65	62	3	61	4	61	5 ⁺	60	5	60	5	60	6 ⁺	60	6 ⁺
	R 19A	1	66	66	66	63	3	62	5 ⁺	61	5	61	6 ⁺	60	6	60	6	60	7 ⁺
	R 20	1	64	64	66	65	1	65	1	64	1 ⁺	64	2	64	2	64	2	64	2
	R 20A	1	65	65	66	66	1 ⁺	65	1	65	1	65	2 ⁺	65	2 ⁺	65	2 ⁺	65	2 ⁺
	R 21	1	61	62	63	63	0	62	1	62	1	62	1	62	1	62	1	62	1
	R 21A	1	62	63	64	63	0 ⁺	63	1	63	1	63	1	63	1	63	1	63	1
CNE 5	R 22 *	4	59	60	61	61	0	61	0	61	1 ⁺	61	1 ⁺	61	1 ⁺	61	1 ⁺	61	1 ⁺
	R 23 *	4	61	61	64	63	1	63	1	63	1	62	1 ⁺	62	1 ⁺	62	1 ⁺	62	1 ⁺
	R 24 *	2	65	65	68	66	2	65	3	65	4 ⁺	64	4	64	4	64	4	64	4
CNE 6	R 25 *	2	58	58	61	55	6	54	7	53	8	52	9	51	9 ⁺	51	10	51	10
	R 26 *	1	60	60	63	57	6	56	6 ⁺	55	8	54	9	54	9	54	9	53	9 ⁺
	R 27	3	59	59	61	58	3	56	6 ⁺	55	7 ⁺	54	7	54	8 ⁺	53	8	53	9 ⁺
	R 28	1	56	56	57	54	3	53	5 ⁺	50	7	49	8	49	9 ⁺	48	10 ⁺	47	10
	R 29 *	3	63	63	64	59	5	59	6 ⁺	56	9 ⁺	55	9	54	10	54	11 ⁺	54	11 ⁺
CNE 7	R 30	2	62	62	65	60	5	59	6	59	6	58	7	57	7 ⁺	57	8	57	8
	R 31 *	4	67	67	70	64	5 ⁺	64	6	63	7	62	8	62	8	62	8	62	8
	R 32 *	1	66	66	70	67	3	67	3	66	3 ⁺	66	4	66	4	66	4	66	4

Notes:

- 1 - The criterion is based on the substantial increase criterion, an overall increase of 10 dB when comparing existing to future project-related noise levels.
- 2 - Receptor is a measurement site which is not an outdoor use area; however, is representative of nearby outdoor use areas.
- * - Receptor is located on an elevated deck.
- + - Noise values, comparisons, and insertion losses are calculated to the tenth of a dB(A) and then rounded for presentation purposes.

Bold - Indicates noise impacts.

 - Meets feasibility criteria and noise reduction design goal.

Common Noise Environment	Receptor Site	Number of Dwelling Units	Existing Worst-Case Noise Level	Future No-Build (2040) Noise Level	Future Build (2040) Noise Level	Build With Barrier Noise Levels													
						8 ft	IL	10 ft	IL	12 ft	IL	14 ft	IL	16 ft	IL	18 ft	IL	20 ft	IL
CNE 8	R 33 *	2	65	65	69	65	4	64	5	61	8	60	9	59	10	59	10	58	11
	R 34	4	56	55	58	54	4	51	7	49	9	49	10 ⁺	48	10	47	11	46	12
	R 35	2	59	59	62	57	5	55	7	54	8	53	9	52	10	51	11	50	12
	R 36	2	54	56	58	56	2	51	7	50	8	48	9 ⁺	47	10 ⁺	46	12	45	13
	R 37 ²	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 38 *	2	65	65	67	61	6	57	10	55	12	54	14 ⁺	52	15	51	16	50	17
	R 39 *	4	56	56	58	53	5	53	6 ⁺	49	9	48	10	46	12	45	13	45	13
	R 40	4	67	67	67	64	3	59	7 ⁺	58	9	56	10 ⁺	56	11	55	11 ⁺	55	12
	R 41 *	2	69	69	71	67	3 ⁺	66	4 ⁺	65	5 ⁺	64	7	61	10	60	11	59	12
	R 42 *	2	67	67	69	66	3	65	4	64	5	62	7	61	8	60	9	60	10 ⁺
	R 43 *	2	65	65	67	64	3	63	4	63	4	61	6	60	7	60	7	60	7
R 44	Pool	64	64	66	64	3 ⁺	63	3	62	4	62	5 ⁺	61	5	61	5	61	5	
R 45 ²	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
CNE 9	R 46	2	67	67	69	68	1	67	1 ⁺	67	2	67	2	67	2	67	2	67	2
	R 47 ²	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 48	2	68	68	71	67	3 ⁺	67	4	65	6	65	6	64	6 ⁺	64	7	64	7
	R 49	2	65	65	67	63	4	63	5 ⁺	62	5	60	7	60	8 ⁺	60	8 ⁺	59	8
	R 50	2	61	61	64	61	3	61	3	60	4	59	5	59	5	59	5	59	5
CNE 10	R 51A	1	56	56	65	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 51	2	57	57	64	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 52	2	59	59	63	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 53	1	56	57	61	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 54	1	57	57	64	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 54A	1	60	61	69	68	2 ⁺	67	2	67	2	67	2	67	2	67	2	67	2
CNE 11	R 55	1	63	63	64	--	--	--	--	--	--	--	--	--	--	--	--	--	
CNE 12	R 56	1	61	61	60	--	--	--	--	--	--	--	--	--	--	--	--	--	
CNE13	R 57	1	60	60	69	64	5	63	6	61	9 ⁺	60	10 ⁺	59	10	59	11 ⁺	58	11
	R 58	1	59	60	66	62	3 ⁺	62	4	61	5	60	5 ⁺	60	5 ⁺	60	6	60	6
	R 59	1	59	59	66	62	4	61	4 ⁺	60	6	59	6 ⁺	59	7	59	7	59	7
	R 60	1	59	59	66	62	4	61	5	60	6	59	7	58	8	58	8	58	9 ⁺
	R 61	1	58	58	67	62	5	62	5	60	7	59	8	58	8 ⁺	58	9	58	9
	R 62	1	58	58	67	63	5 ⁺	62	5	61	7 ⁺	59	8	59	9 ⁺	58	9	58	9
	R 63	1	57	57	63	59	4	59	4	58	5	57	6	57	6	57	6	57	6
	R 64	1	57	57	63	60	4 ⁺	59	4	58	6 ⁺	57	6	57	6	57	7 ⁺	57	7 ⁺
	R 65	1	56	57	64	60	4	60	4	58	5 ⁺	58	6	57	7	57	7	57	7
	R 66	1	56	56	64	61	4 ⁺	60	4	59	5	58	6	58	6	58	7 ⁺	57	7
R 67	1	56	56	65	62	4 ⁺	61	4	61	4	59	6	59	6	59	6	59	6	

Notes:

- 1 - The criterion is based on the substantial increase criterion, an overall increase of 10 dB when comparing existing to future project-related noise levels.
- 2 - Receptor is a measurement site which is not an outdoor use area; however, is representative of nearby outdoor use areas.
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						8 ft	IL	10 ft	IL	12 ft	IL	14 ft	IL	16 ft	IL	18 ft	IL	20 ft	IL
CNE 14	R 68	1	57	57	68	63	5	63	6 ⁺	62	6	62	7 ⁺	61	7	61	7	61	7
	R 69	1	64	64	54	53	0 ⁺	53	0 ⁺	53	0 ⁺	53	0 ⁺	53	0 ⁺	53	1	53	1
CNE 15	R 70	1	72	72	64	58	6	57	7	56	8	55	10 ⁺	54	10	53	11	53	12 ⁺
	R 71	1	71	71	66	59	7	58	8	57	9	56	10	55	11	55	11	54	12
	R 72	1	70	70	67	60	7	59	8	58	9	57	10	56	11	55	11 ⁺	55	12
	R 73	1	69	69	68	62	6	60	7 ⁺	59	9	58	10	57	11	56	12	56	12
	R 74	1	69	69	70	64	6	63	7	60	9 ⁺	59	11	58	11 ⁺	57	12 ⁺	57	13
	R 75	1	69	69	71	67	4	65	5 ⁺	63	8	61	10	60	11	59	11 ⁺	59	12
	R 76	1	69	69	71	68	3	66	5	64	7	62	9	61	11 ⁺	60	11	59	12
	R 77	1	66	66	62	57	5	56	6	56	6	55	7	54	8	54	8	53	9
	R 78	1	65	65	63	58	5	57	6	57	6	56	7	55	8	54	9	54	9
	R 79	1	65	65	63	58	5	58	6 ⁺	57	6	56	7	55	8	55	9 ⁺	54	9
	R 80	1	64	64	64	59	5	59	5	58	6	56	8	56	8	55	9	55	9
	R 81	1	64	64	66	61	5	60	6	59	7	57	9	57	9	56	10	55	11
	R 82	1	64	64	67	62	5	61	6	61	6	58	9	57	10	57	10	56	11
	R 83	1	64	64	67	63	4	62	5	62	6 ⁺	59	8	58	9	58	10 ⁺	57	10
	R 84	1	64	64	68	64	4	63	5	62	5 ⁺	60	8	60	8	59	9	59	9
	R 85	1	62	62	60	56	4	56	5 ⁺	55	5	54	6	54	7 ⁺	53	7	53	8 ⁺
	R 86	1	62	62	61	57	4	56	5	56	5	55	6	54	7	54	7	53	8
	R 87	1	61	61	61	57	4	56	4 ⁺	56	5	55	6	54	7	54	7	53	8
R 88	1	61	61	61	57	4	57	4	56	5	55	6	54	7	54	7	54	8 ⁺	
R 89	1	61	61	62	59	4 ⁺	58	4	58	5 ⁺	56	7 ⁺	55	7	55	8 ⁺	54	8	
R 90	1	61	61	63	59	4	59	4	59	5 ⁺	57	7 ⁺	56	7	56	8 ⁺	55	8	
R 91	1	62	62	64	60	4	60	4	59	4 ⁺	57	6 ⁺	57	7	57	7	56	8	
R 92	1	62	62	64	61	3	60	4	59	5	58	6	58	6	57	7	57	7	
CNE 16	R 93	1	59	59	63	62	2 ⁺	60	3	60	3	60	3	60	3	60	3	60	3
	R 94	1	62	61	69	65	4	64	6 ⁺	62	7	61	8	61	8	61	9 ⁺	60	9
CNE 17	R 95	1	57	57	66	60	6	59	7	58	8	58	8	57	9	57	9	57	10 ⁺
	R 96	1	58	58	69	61	7 ⁺	60	9	59	10	58	10 ⁺	58	11	58	11	57	11 ⁺
	R 97	1	59	59	70	62	8	60	9 ⁺	60	10	59	11	59	11	58	11 ⁺	58	12
	R 98	1	60	60	70	62	7 ⁺	61	9	60	9 ⁺	60	10	60	10	59	10 ⁺	59	11
	R 99	1	56	56	64	59	5	58	6	58	6	58	6	57	7	57	7	57	7
	R 100	1	57	56	65	60	5	59	6	58	7	57	7 ⁺	57	7 ⁺	57	8	57	8
	R 101	1	57	57	65	61	5 ⁺	60	6 ⁺	59	7 ⁺	58	7	58	7	58	8 ⁺	58	8 ⁺
R 102	1	58	58	66	62	4	60	5 ⁺	60	6	59	6 ⁺	59	6 ⁺	59	7	59	7	

Notes:

- 1 - The criterion is based on the substantial increase criterion, an overall increase of 10 dB when comparing existing to future project-related noise levels.
- 2 - Receptor is a measurement site which is not an outdoor use area; however, is representative of nearby outdoor use areas.
- * - Receptor is located on an elevated deck.
- + - Noise values, comparisons, and insertion losses are calculated to the tenth of a dB(A) and then rounded for presentation purposes.

Bold - Indicates noise impacts.

- Meets feasibility criteria and noise reduction design goal.

Common Noise Environment	Receptor Site	Number of Residences	Existing Worst-Case Noise Level	Future No-Build (2040) Noise Level	Future Build (2040) Noise Level	Build With Barrier Noise Levels													
						8 ft	IL	10 ft	IL	12 ft	IL	14 ft	IL	16 ft	IL	18 ft	IL	20 ft	IL
CNE 18	R 103	1	65	65	65	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 104 *	1	65	65	64	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 105 *	1	63	63	62	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 106 *	1	62	62	61	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 107 *	1	61	61	60	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 108 *	2	62	62	62	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	R 109 *	1	63	63	63	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R 110 *	2	65	65	64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
CNE 19	R 111	2	68	68	68	59	9	57	11	56	12	56	13 ⁺	55	13	54	14	54	14
	R 112	3	68	68	68	62	6	60	8	59	9	58	10	57	11	57	11	57	11
	R 113	2	63	63	64	63	1	62	1 ⁺	62	2	62	2	62	2	62	2	62	2

Notes:

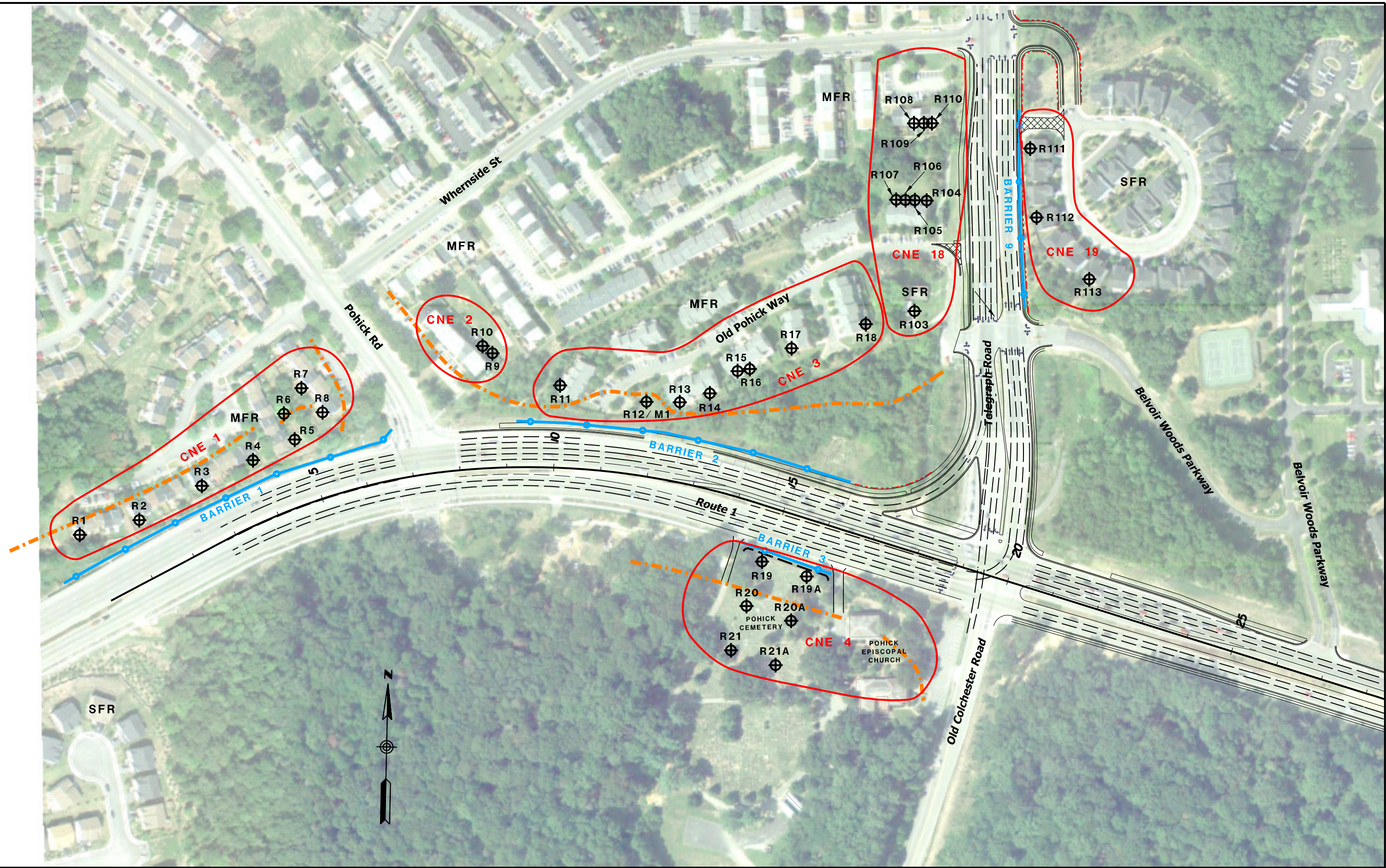
- 1 - The criterion is based on the substantial increase criterion, an overall increase of 10 dB when comparing existing to future project-related noise levels.
- 2 - Receptor is a measurement site which is not an outdoor use area; however, is representative of nearby outdoor use areas.
- * - Receptor is located on an elevated deck.
- + - Noise values, comparisons, and insertion losses are calculated to the tenth of a dB(A) and then rounded for presentation purposes.

Bold - Indicates noise impacts.

- Meets feasibility criteria and noise reduction design goal.

Barrier	Insertion Loss (IL)	Height (Range) (ft)	Total Length (ft)	Total Area (SF)	Benefitted	Area / Benefitted	Cost Effective	Total Cost* (\$SF)
Barrier 1	5-11	12	780	9,360	29	323	Yes	\$421,200
Barrier 2	2-9	12	730	8,760	9	973	Yes	\$394,200
Barrier 3	1-7	20	205	4,100	2	2,050	No	\$184,500
Barrier 4	1-9	12	780	9,360	16	585	Yes	\$421,200
Barrier 5	5-12	12-14	1,230	14,760	27	547	Yes	\$664,200
Barrier 6	2-7	14	590	8,260	6	1,377	Yes	\$371,700
Barrier 7	4-9	12	1,055	12,660	10	1,266	Yes	\$569,700
Barrier 8	3-8	10	1,220	12,200	17	718	Yes	\$549,000
Barrier 9	6-9	8	425	3,400	5	680	Yes	\$153,000
Barrier 10	7	14	400	5,600	1	5,600	No	\$252,000
Barrier 11	7	12	680	8,160	1	8,160	No	\$367,200
Barrier 12	5-9	10	790	7,900	8	988	Yes	\$355,500

* - Total barrier cost based on \$45 per square foot.

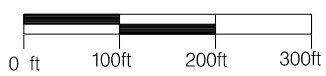


LEGEND
 ⊕ Rxx - RECEIVER SITE

SFR - SINGLE FAMILY RESIDENCE
 MFR - MULTI-FAMILY RESIDENCE
 COMM - COMMERCIAL

—○— SOUNDWALL
 - - - EXISTING WALL
 - - - 66 dBA CONTOUR LINE
 ○ - CNE BOUNDARY

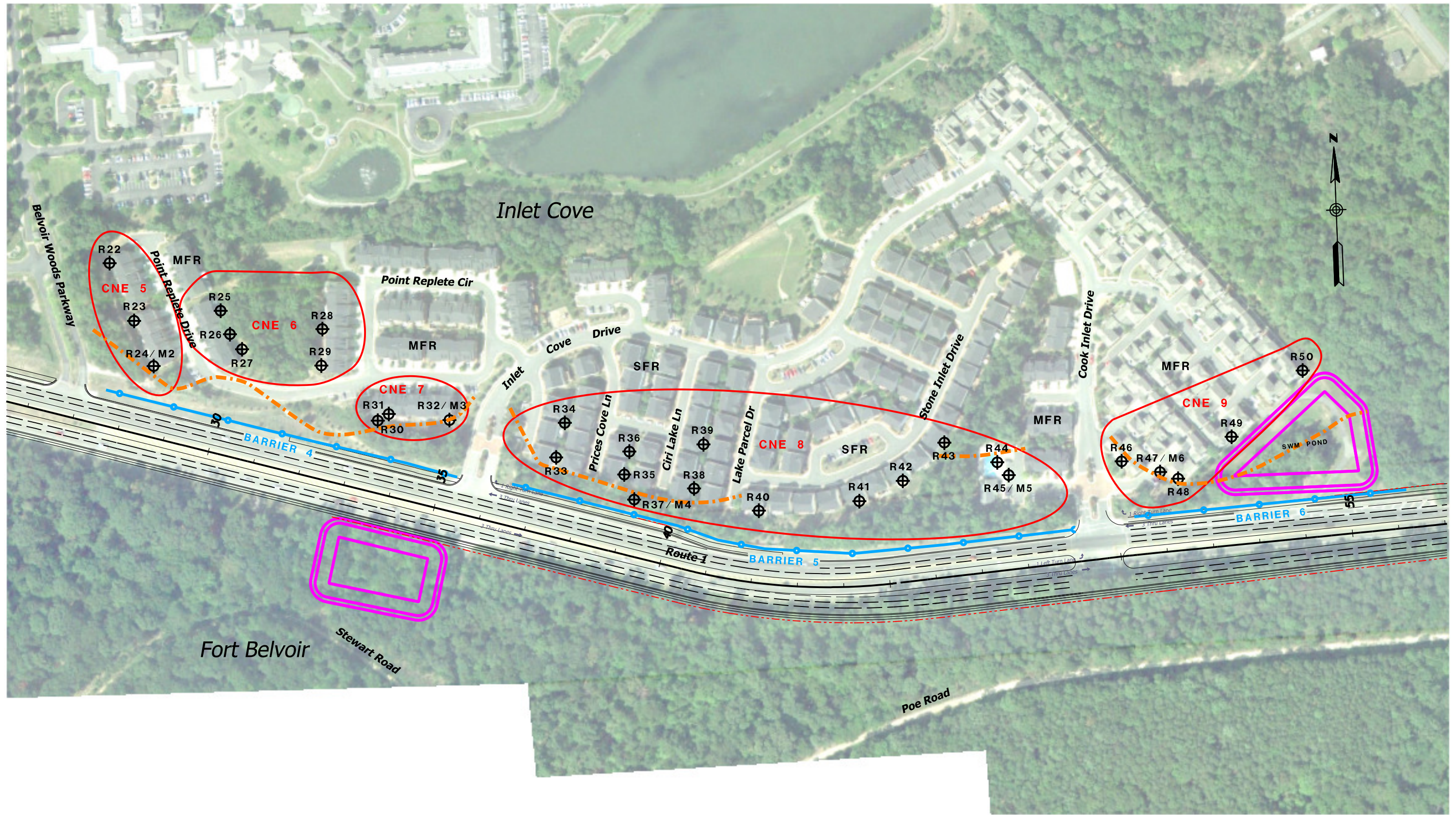
1in : 200ft



**ROUTE 1/ ALTERNATIVE B
 AT FORT BELVOIR PROJECT
 NOISE RECEIVER & BARRIER LOCATIONS**

MAY 30, 2011

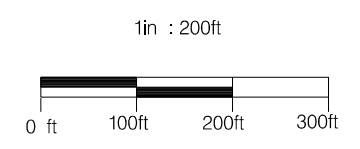
FIGURE 1



LEGEND
 ⊕ R_{xx} - RECEIVER SITE

SFR - SINGLE FAMILY RESIDENCE
 MFR - MULTI-FAMILY RESIDENCE
 COMM - COMMERCIAL

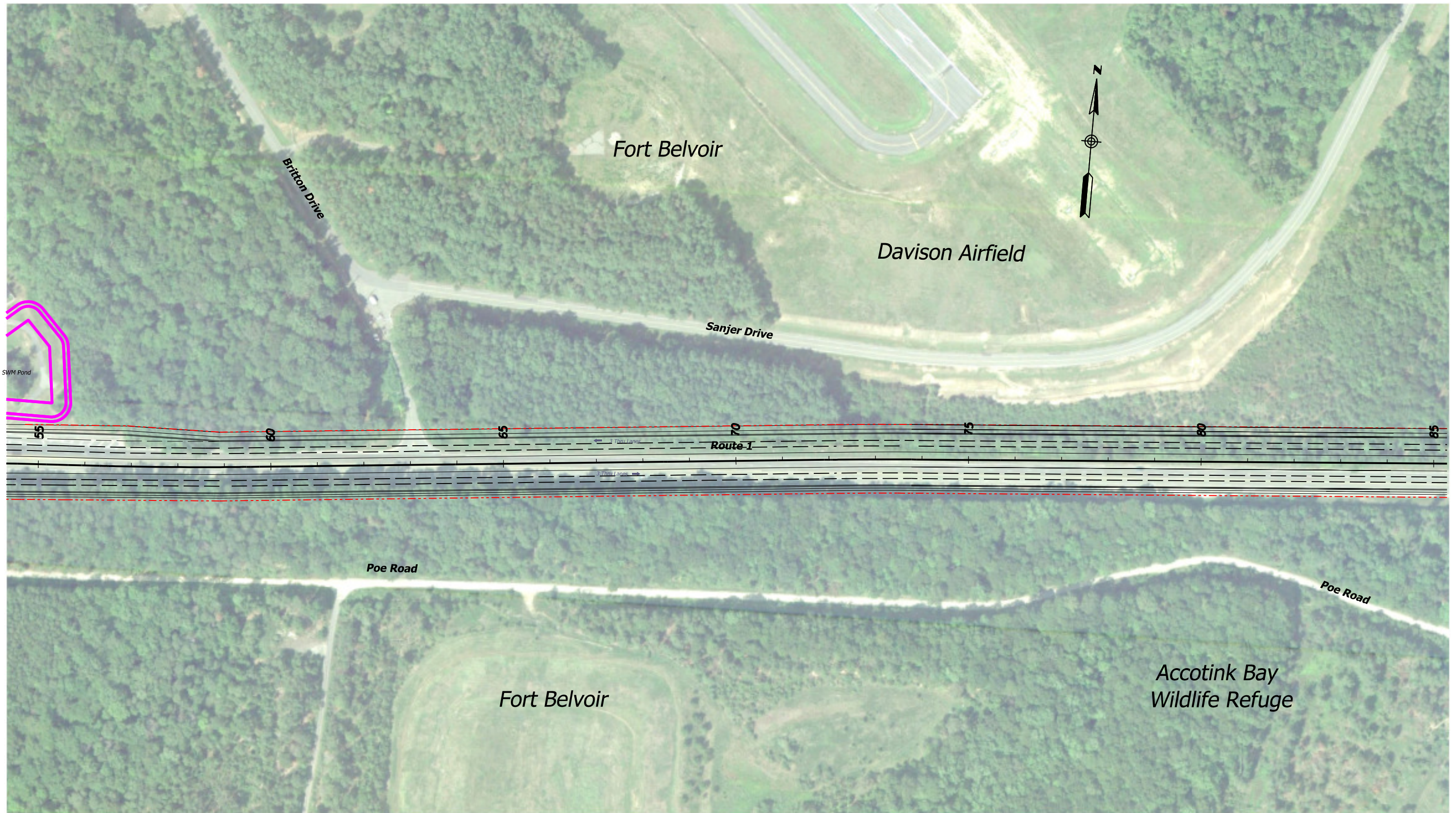
—○— SOUNDWALL
 - - - EXISTING WALL
 - - - 66 dBA CONTOUR LINE
 ○ CNE BOUNDARY



**ROUTE 1/ ALTERNATIVE B
 AT FORT BELVOIR PROJECT
 NOISE RECEIVER & BARRIER LOCATIONS**

MAY 30, 2011

FIGURE 2

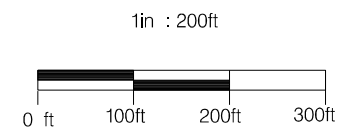


LEGEND

⊕ R_{xx} - RECEIVER SITE

SFR - SINGLE FAMILY RESIDENCE
MFR - MULTI-FAMILY RESIDENCE
COMM - COMMERCIAL

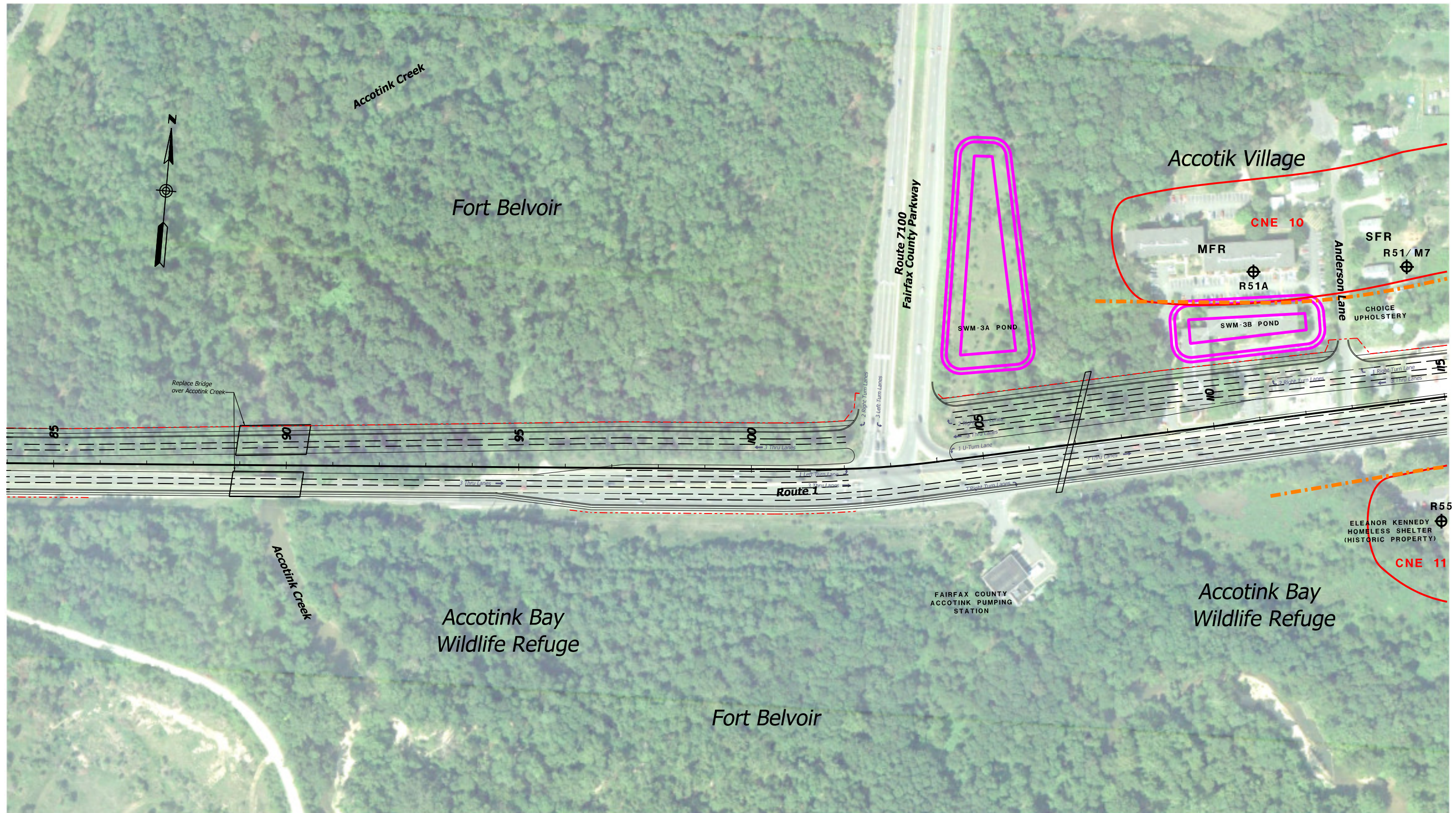
—○— SOUNDWALL
 - - - EXISTING WALL
 - - - 66 dBA CONTOUR LINE
 ○ CNE BOUNDARY



**ROUTE 1/ ALTERNATIVE B
 AT FORT BELVOIR PROJECT
 NOISE RECEIVER & BARRIER LOCATIONS**

MAY 30, 2011

FIGURE 3



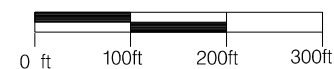
LEGEND

⊕ R_{xx} - RECEIVER SITE

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 COMM - COMMERCIAL

—○— SOUNDWALL
 - - - EXISTING WALL
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 ○ CNE BOUNDARY

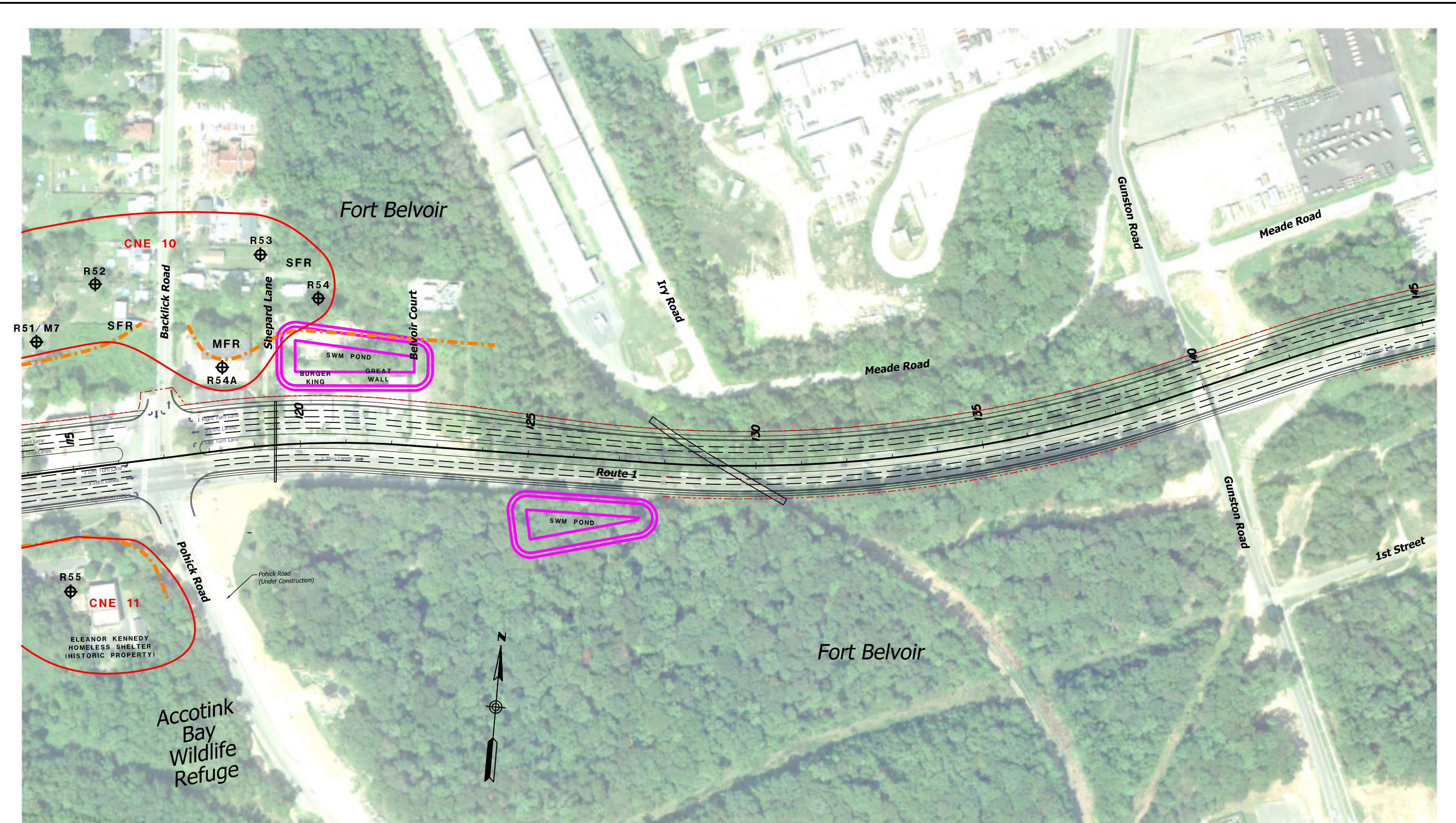
1in : 200ft



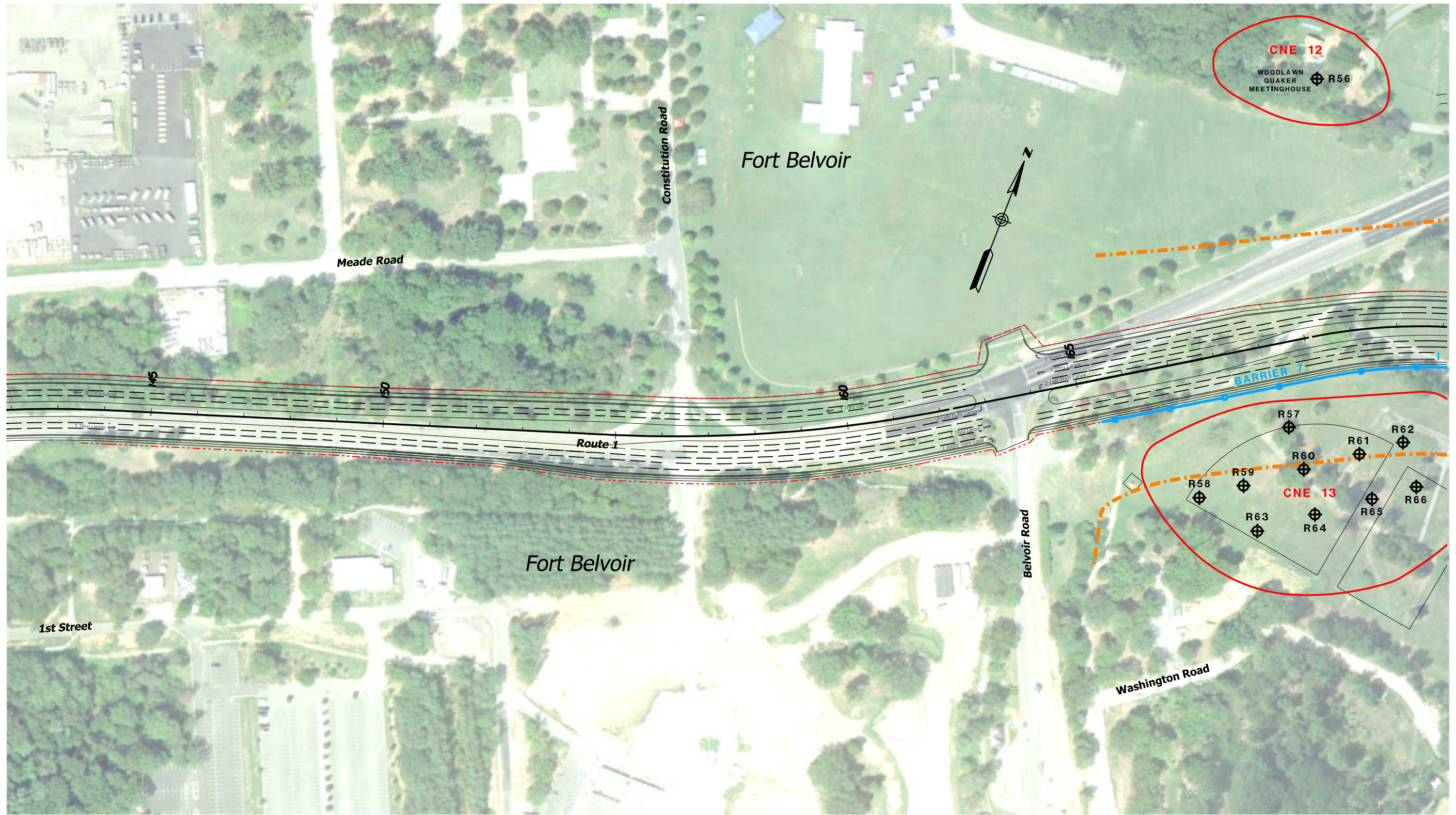
**ROUTE 1/ ALTERNATIVE B
 AT FORT BELVOIR PROJECT
 NOISE RECEIVER & BARRIER LOCATIONS**

MAY 30, 2011

FIGURE 4



<p>LEGEND</p> <p>⊕ R_{xx} - RECEIVER SITE</p>	<p>SFR - SINGLE FAMILY RESIDENCE</p> <p>MFR - MULTI-FAMILY RESIDENCE</p> <p>COMM - COMMERCIAL</p>	<p>—○— SOUNDWALL</p> <p>- - - EXISTING WALL</p> <p>- - - 66 dBA CONTOUR LINE</p> <p>○ - CNE BOUNDARY</p>	<p>1in : 200ft</p> <p>0 ft 100ft 200ft 300ft</p>	<p>ROUTE 1/ALTERNATIVE B AT FORT BELVOIR PROJECT NOISE RECEIVER & BARRIER LOCATIONS</p> <p>MAY 30, 2011</p> <p>FIGURE 5</p>
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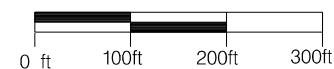
LEGEND

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—○— SOUNDWALL
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 - - - 66 dBA CONTOUR LINE
 ○ - CNE BOUNDARY

1in : 200ft

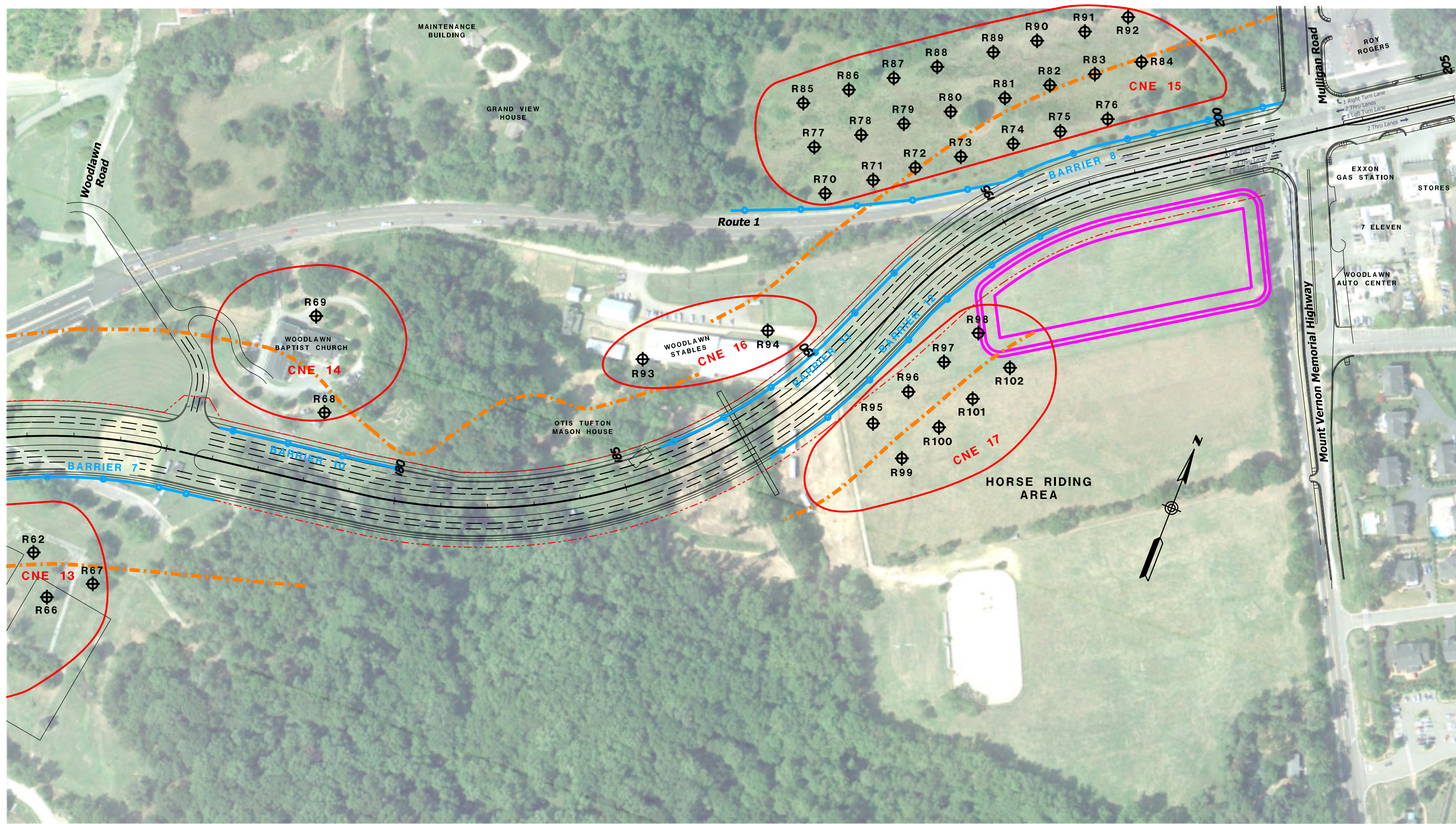


**ROUTE 1/ALTERNATIVE B
 AT FORT BELVOIR PROJECT
 NOISE RECEIVER & BARRIER LOCATIONS**

MAY 30, 2011

FIGURE 6

WOODLAND PLANTATION

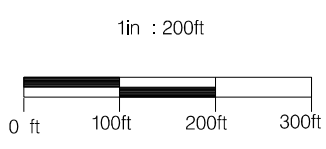


LEGEND

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**ROUTE 1/ALTERNATIVE B
 AT FORT BELVOIR PROJECT
 NOISE RECEIVER & BARRIER LOCATIONS**


MAY 30, 2011

FIGURE 7

Common Noise Environment	Receptor Site	Number of Dwelling Units	Existing Worst-Case Noise Level	Future No-Build (2040) Noise Level	Future Build (2040) Noise Level	Build With Barrier Noise Levels													
						8 ft	IL	10 ft	IL	12 ft	IL	14 ft	IL	16 ft	IL	18 ft	IL	20 ft	IL
CNE 12	R 56	1	61	61	65	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CNE 14	R 68	1	57	57	58	57	2 ⁺	57	2 ⁺	57	2 ⁺	56	2	56	2	56	2	56	2
	R 69	1	64	64	66	61	5	61	5	61	5	60	6	59	7	58	8	57	9
CNE 15	R 70	1	71	71	73	60	13	60	13	60	13	59	14	58	15	58	16 ⁺	57	16
	R 71	1	71	71	73	61	12	61	12	61	12	60	13	59	14	58	15	57	16
	R 72	1	70	70	72	61	11	61	11	61	11	60	12	60	13 ⁺	59	13	58	14
	R 73	1	69	69	72	62	10	62	10	62	10	61	11	60	12	59	13	58	14
	R 74	1	69	69	72	62	10	62	10	62	10	61	11	60	12	59	13	59	14 ⁺
	R 75	1	69	69	72	63	10 ⁺	63	10 ⁺	63	10 ⁺	62	11 ⁺	61	11	60	12	60	13 ⁺
	R 76	1	69	69	72	63	9	63	9	63	9	62	11 ⁺	61	12 ⁺	60	12	59	13
	R 77	1	66	66	69	60	9	60	9	60	9	60	10 ⁺	59	10	58	11	58	11
	R 78	1	65	65	69	60	9	60	9	60	9	59	10	58	10 ⁺	58	11	57	11 ⁺
	R 79	1	65	65	68	59	9	59	9	59	9	58	10	58	11 ⁺	57	11	57	12 ⁺
	R 80	1	64	64	68	59	9	59	9	59	9	57	11	57	11	57	11	56	12
	R 81	1	64	64	68	63	5	63	5	60	8	57	11	57	11	57	11	57	12 ⁺
	R 82	1	64	64	68	60	8	60	8	60	8	57	11	57	11	57	11	57	11
	R 83	1	64	64	68	61	8 ⁺	61	8 ⁺	61	8 ⁺	58	10	58	10	58	10	58	11 ⁺
	R 84	1	64	64	69	62	7	62	7	62	7	59	9 ⁺	59	9 ⁺	59	9 ⁺	59	10
	R 85	1	62	62	66	60	6	60	6	60	6	58	8	58	8	58	8	58	8
	R 86	1	62	62	65	59	6	59	6	59	6	57	8	57	8	57	8	57	8
	R 87	1	61	61	65	58	7	58	7	58	7	56	8 ⁺	56	8 ⁺	56	8 ⁺	56	9
R 88	1	61	61	65	58	7	58	7	58	7	56	9	56	9	56	9	55	9 ⁺	
R 89	1	61	61	65	58	6 ⁺	58	6 ⁺	58	6 ⁺	56	9	56	9	56	9	55	9 ⁺	
R 90	1	61	61	65	59	6	59	6	59	6	56	8 ⁺	56	8 ⁺	56	8 ⁺	56	9	
R 91	1	62	62	65	59	6	59	6	59	6	57	8	57	8	57	8	57	8	
R 92	1	62	62	65	59	5 ⁺	59	5 ⁺	59	5 ⁺	58	7	58	7	58	7	57	7 ⁺	
CNE 16	R 93	1	59	59	60	58	2	58	2	58	2	58	2	58	2	58	2	58	2
	R 94	1	62	61	62	57	5	57	5	57	5	56	6	56	6	56	6	56	6
CNE 20	R 114	1	69	69	69	61	8	61	8	61	8	61	9 ⁺	61	9 ⁺	61	9 ⁺	60	9
	R 115	1	63	63	66	59	7	59	7	59	7	59	7	59	7	59	7	58	8
	R 116	1	64	64	66	58	7 ⁺	58	7 ⁺	58	7 ⁺	58	8	58	8	57	8 ⁺	57	8 ⁺
	R 117	1	64	64	66	60	6	60	6	60	6	59	6 ⁺	59	6 ⁺	59	6 ⁺	59	6 ⁺
	R 118	1	64	64	66	62	4	62	4	62	4	61	5	61	5	61	5	61	5
	R 119	1	64	64	66	63	3	63	3	62	4	61	5	61	5	61	5	61	5
	R 120	1	61	61	62	59	3	58	4	58	5 ⁺	57	5	57	5	57	5	57	5
	R 121	1	61	61	63	60	3	59	4	59	4	58	5	58	5	58	5	58	5
R 122	1	61	61	63	60	3	60	3	59	4	58	5	58	5	58	5	58	5	

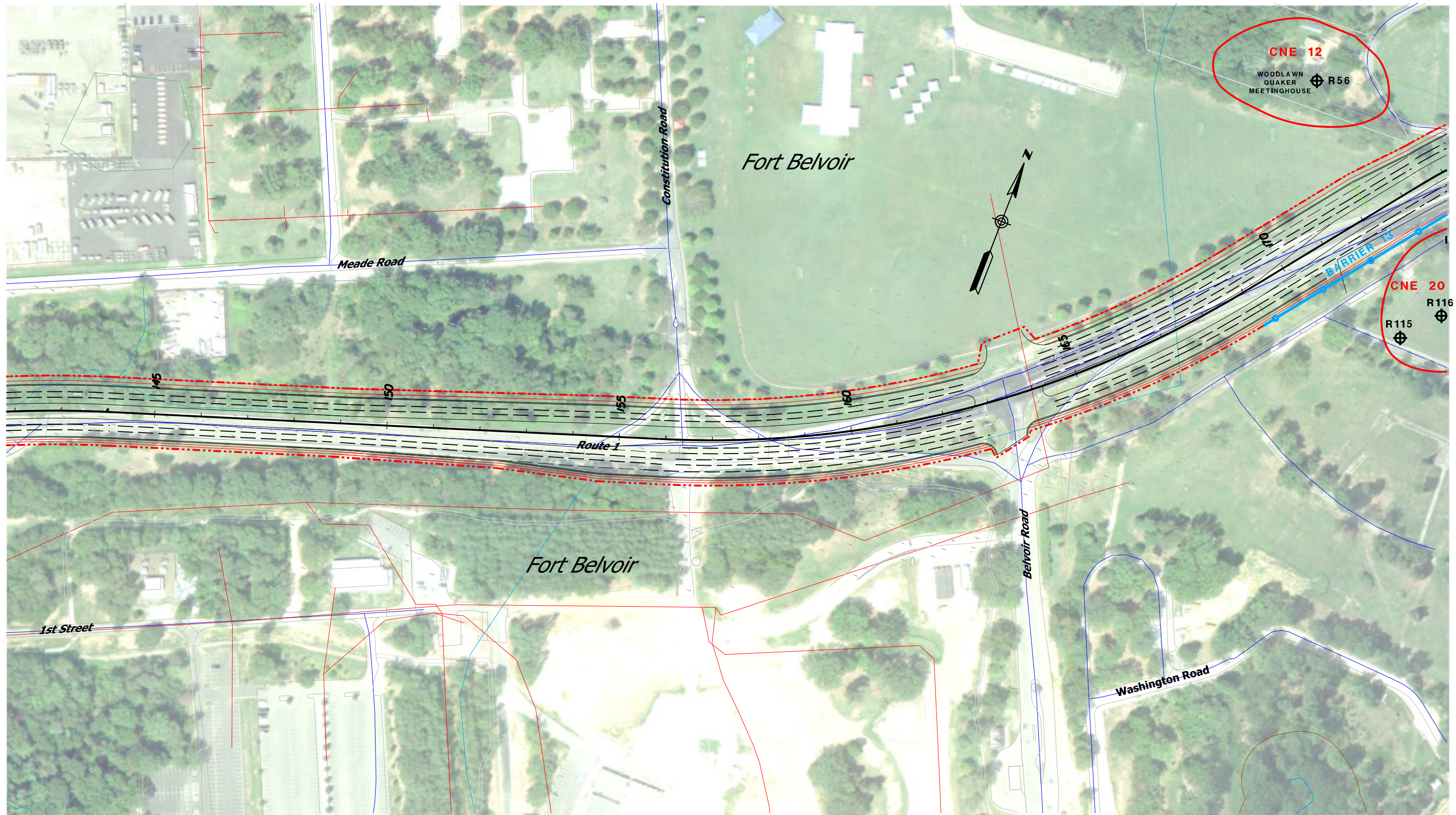
- Notes:
- * - Receptor is located on an elevated deck.
 - + - Noise values, comparisons, and insertion losses are calculated to the tenth of a dB(A) and then rounded for presentaion purposes.
 - Bold** - Indicates noise impacts.
 - Meets feasibility criteria and noise reduction design goal.

Common Noise Environment	Receptor Site	Number of Dwelling Units	Existing Worst-Case Noise Level	Future No-Build (2040) Noise Level	Future Build (2040) Noise Level	Build With Barrier Noise Levels													
						8 ft	IL	10 ft	IL	12 ft	IL	14 ft	IL	16 ft	IL	18 ft	IL	20 ft	IL
CNE 21	R 123	1	66	66	66	61	6 ⁺	59	7	58	8	57	10 ⁺	57	10 ⁺	57	10 ⁺	56	10
	R 124	1	65	65	68	61	7	60	8	59	9	57	11	57	11	57	11	57	11
	R 125	1	65	64	67	61	6	60	8 ⁺	59	8	57	10	57	10	57	10	57	10
	R 126	1	65	65	68	61	7	60	8	59	9	58	10	58	10	58	10	57	11
	R 127	1	65	65	68	62	6	60	7 ⁺	60	8	58	9 ⁺	58	9 ⁺	58	9 ⁺	58	9 ⁺
	R 128	2	61	60	63	59	4	58	5	57	6	56	7	56	7	56	7	56	7
	R 129	1	61	61	64	60	4	59	5	58	6	57	7	57	7	57	7	56	8
	R 130	2	61	61	64	60	4	59	5	58	6	57	6 ⁺	57	6 ⁺	57	6 ⁺	57	6 ⁺
	R 131	2	58	58	60	57	3	56	4	56	5 ⁺	55	6 ⁺	55	6 ⁺	55	6 ⁺	54	6
	R 132	2	58	58	61	58	3	57	4	56	5	55	5 ⁺	55	5 ⁺	55	5 ⁺	55	5 ⁺
R 133	2	59	58	61	59	2	58	3	57	4	56	5	56	5	56	5	56	5	

Notes:
 * - Receptor is located on an elevated deck.
 + - Noise values, comparisons, and insertion losses are calculated to the tenth of a dB(A) and then rounded for presentation purposes.
Bold - Indicates noise impacts.
 - Meets feasibility criteria and noise reduction design goal.

Barrier	Insertion Loss (IL)	Height (Range) (ft)	Total Length (ft)	Total Area (SF)	Benefitted	Area / Benefitted	Cost Effective	Total Cost* (\$SF)
Barriers 13 & 14	5-9	14-16	1,130	16,950	10	1,695	No	\$762,750
Barrier 15	2-7	8	920	7,360	6	1,227	Yes	\$331,200
Barrier 16	5-13	12	1,225	14,700	23	639	Yes	\$661,500

* - Total barrier cost based on \$45 per square foot.



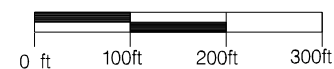
LEGEND

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 COMM - COMMERCIAL

—○— - SOUNDWALL
 - - - - - EXISTING WALL
 ○ - CNE BOUNDARY

1in : 200ft

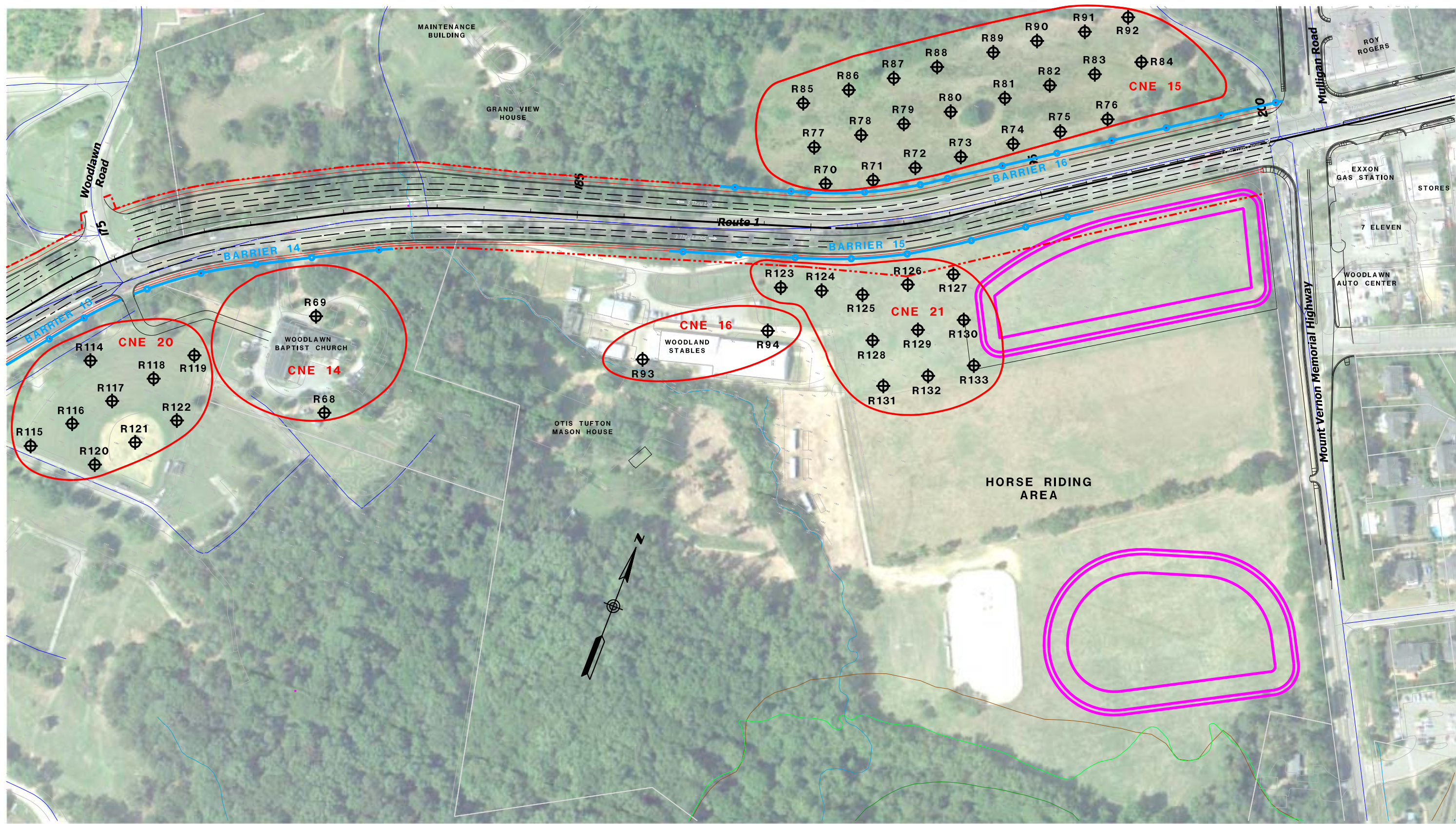


**ROUTE 1/ ALTERNATIVE C
 AT FORT BELVOIR PROJECT
 NOISE RECEIVER & BARRIER LOCATIONS**

JUNE 1, 2012

FIGURE 6

WOODLAND PLANTATION

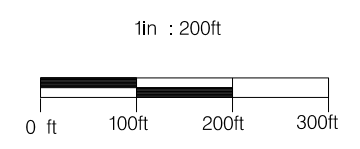


LEGEND

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 COMM - COMMERCIAL

—○— SOUNDWALL
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 ○ CNE BOUNDARY



**ROUTE 1/ ALTERNATIVE C
 AT FORT BELVOIR PROJECT
 NOISE RECEIVER & BARRIER LOCATIONS**

MAY 31, 2011

FIGURE 7

Appendix F
Air Quality Technical Report

ROUTE 1 IMPROVEMENTS AT FORT BELVOIR

Fort Belvoir, Virginia
Fairfax County, Virginia

AIR QUALITY REPORT

for
U.S. Department of Transportation
Federal Highway Administration
Eastern Federal Lands Highway Division

Cooperating Agencies

Fairfax County
U.S. Army Garrison Fort Belvoir
Virginia Department of Transportation

MAY 29, 2012

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1. Introduction

This report is produced for the Federal Highway Administration (FHWA) consistent with the *Consultant Guide: Air Quality Project-Level Analysis (Air Consultant Guide)* prepared by the Virginia Department of Transportation (VDOT, 2009). It supports an Environmental Assessment (EA) being prepared for the project pursuant to the National Environmental Policy Act (NEPA). Figure 1-1 shows the project location. Within the study area in Fairfax County, Route 1 bisects the Main Post of Fort Belvoir, a 7,760-acre U.S. Army installation with approximately 31,000 employees and numerous tenant and satellite organizations. The 2005 Defense Base Realignment and Closure Act (BRAC) stipulated realignment and closure actions for domestic military installations, including the relocation of thousands of personnel to Fort Belvoir.

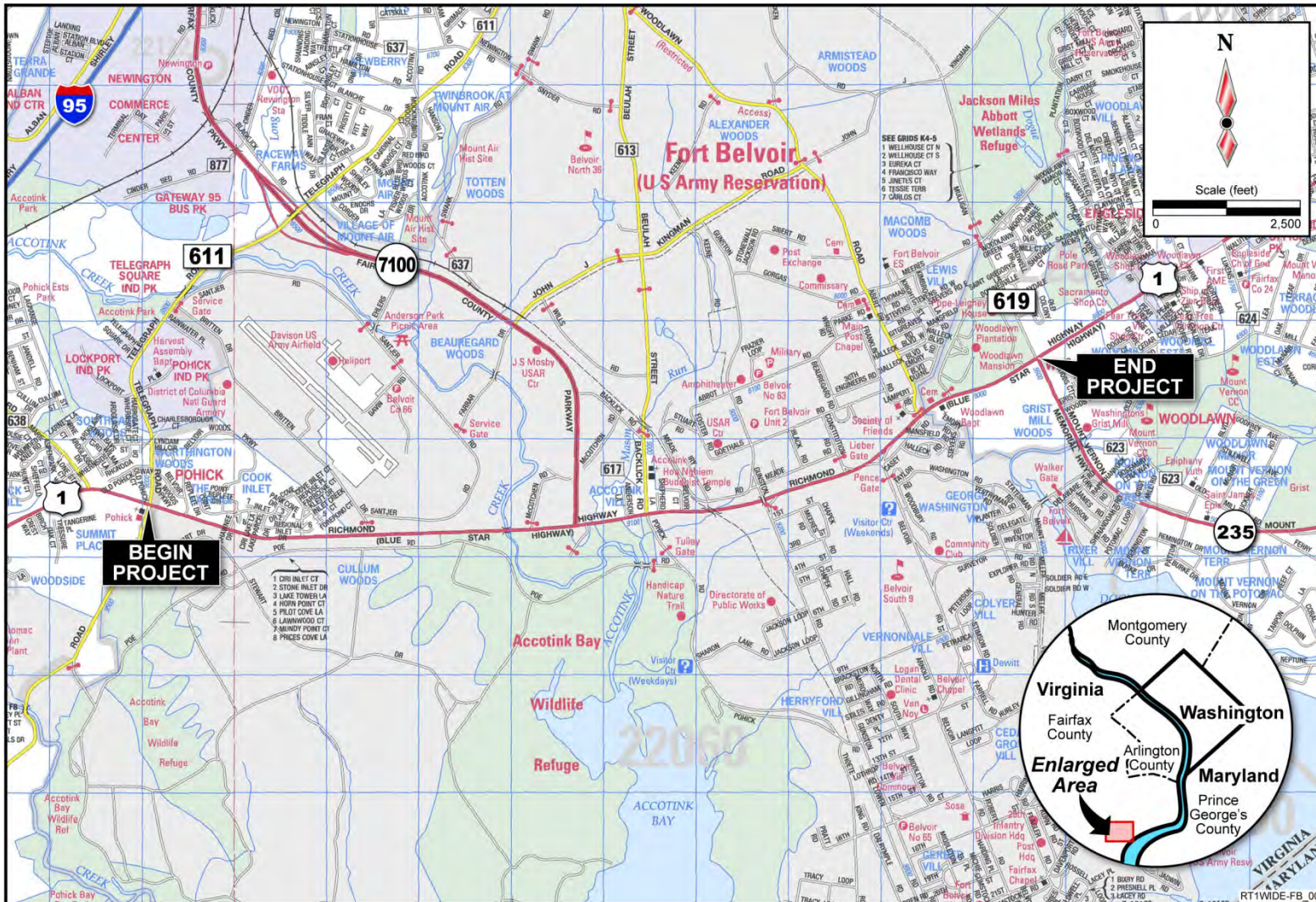
1.1. Need

Given that Route 1 is a north-south commuter route serving through trips and is the gateway to Fort Belvoir, congestion is prevalent within this section of Route 1 during the weekday peak periods and frequently during other times of the day as well, primarily between the Fairfax County Parkway and Belvoir Road. The existing four through lanes on Route 1 within the study area provide insufficient capacity for traffic volumes and the existing turn lane configurations provide insufficient capacity for turning volumes at cross streets. Long range planning shows continued growth in both population and employment in the Route 1 corridor and the southeastern region of Fairfax County. In addition, continued growth in employment at Fort Belvoir is anticipated. The need for improvements to Route 1 within the study area has been identified in numerous previous studies and it was cited in the BRAC 2005 EIS as well.

1.2. Air Quality Context

The Clean Air Act (CAA) – enacted in 1970 and substantially amended in 1990 – serves as the primary framework for federal air quality regulation, standards and guidance, and related research activities. The United States Environmental Protection Agency (EPA) is the federal agency with primary responsibility for implementation of the CAA. For regulatory purposes, air pollutants can be divided into those for which distinct, concentration-based health-based exposure criteria have been developed (“criteria air pollutants”) and others (often referred to as “air toxics”) for which exposure is typically evaluated relative to units of cancer or non-cancer health risk. National ambient air quality standards (NAAQS) are promulgated for criteria air pollutants, and regions of the country are designated according to whether and to what extent they violate the NAAQS. The region surrounding and extending northward from the project corridor is designated as nonattainment with respect to two criteria air pollutants – ozone and particulate matter 2.5 or fewer microns in diameter (PM_{2.5}). Figure 1-2 portrays the corridor within the context of these nonattainment areas.

Figure 1-1. Project Location



2. Alternative Descriptions

This air quality analysis considers the following three alternatives. It emphasizes the comparison between Alternatives A and B. Air quality impacts for Alternative C are considered briefly and qualitatively relative to Alternative B.

2.1. Alternative A (No Build Alternative)

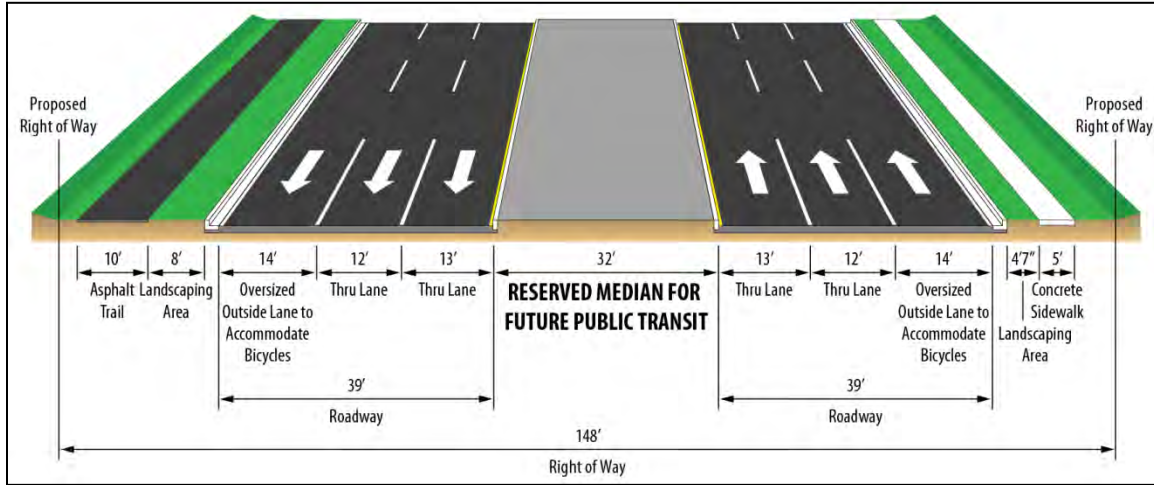
Under the No-Build Alternative, Route 1 would remain in its existing configuration (i.e., four lanes undivided). Regular maintenance would be performed to preserve the structural integrity of the pavement and the existing bridges. This alternative would not displace any families, businesses, farms, or nonprofit organizations, and would not significantly affect any natural, ecological, cultural, or scenic resources. However, it would not satisfy the identified deficiency because it would not provide the needed additional transportation capacity in the study area.

For the two future-year scenarios, the No-Build Alternative includes all of the transportation projects identified in the Metropolitan Washington Council of Governments (MWCOG) Constrained Long Range Plan (*CLRP*) for completion by 2020 and 2040 (MWCOG, 2010).

2.2. Alternative B (Build Alternative)

The Preferred Alternative, in addition to including all of the planned and programmed improvements for the roadway network included in the No-Build Alternative, assumes that Route 1 will be widened to six lanes, with appropriate turning lanes, between Telegraph Road and Mount Vernon Memorial Highway. A 148-foot-wide typical section was established for these improvements. Figure 2-1 represents this section schematically. On the Telegraph Road approach to Route 1, a two-lane free-flow channelized right turn, not under signal control, would be constructed to replace the current triple right-turn lanes.

Figure 2-1. Current Proposed 148-foot-wide Typical Section



2.3. Alternative C (Build Alternative)

This alternative would be similar to Alternative B except for at the following three locations:

- At the Telegraph Road intersection where Alternative B proposes triple left-turn lanes to accommodate the northbound Route 1 to northbound Telegraph Road traffic, this alternative proposes a grade-separated flyover to accommodate this movement. Along Telegraph Road, the flyover would tie in north of Belvoir Woods Parkway. Similar to Alternative B, Lyndam Hill Circle access would be moved further north across from Whernside Street. A signal would be added at this new four-legged intersection.
- At the Fairfax County Parkway intersection where Alternative B proposes triple left-turn lanes to accommodate the southbound Fairfax County Parkway to northbound Route 1 traffic, this alternative proposes a grade-separated flyover to accommodate this movement.
- North of Belvoir Road, where Alternative B diverts from Route 1 along the “Southern Bypass” Alignment, this alternative would instead continue along the current Route 1 alignment.

3. Traffic Summary

Intersection traffic volume and operations data used in this air quality analysis were extracted from the *Route 1 Improvements at Fort Belvoir Draft Transportation Technical Report (Traffic Report)*. The authors of the *Traffic Report* (Parsons, 2012) generated travel demand forecasts for the project using Version 2.2 of the Metropolitan Washington Council of Governments (MWCOC) regional travel demand model, with Round 8.0 Cooperative Land Use Forecasts, released in December 2010. The traffic study used the base year model (2011) and the 2020 and 2040 horizon year models to develop forecasts for the Opening Year and Design Year, respectively, with modifications as appropriate. The analysis of the intersections within the study area was conducted using Synchro Version 7.0. Separate from the *Traffic Report*, the MWCOC travel demand model served as the basis for prediction of average travel speeds by link segment and hour of the day.

The current study's microscale CO concentration analysis relies on *Traffic Report* Synchro data for turning movement and associated link volumes and for intersection operational parameters relevant to queue prediction. It relies on the aforementioned average travel speed predictions as the basis for emission factors applied to non-queue links. Appendix A provides relevant Synchro analysis reports, Appendix B presents a summary of relevant turning movements, and Appendix C includes relevant travel speed estimates/predictions. Note that the direction conventions applied in Appendices A and B are based on geographic directions. Accordingly, Route 1 is treated as an east-west link, even though it is designated as a northbound-southbound facility on a regional basis.

4. Existing Conditions

The proposed project is located in northern Virginia in Fairfax County. The area is best categorized as a humid subtropical climate that averages approximately 43 inches of precipitation per year. The average daily high temperature in July is 90 degrees Fahrenheit while the average daily low temperature in January is 23 degrees Fahrenheit.

As demonstrated in Figure 1-2, the proposed project site is located within the Metropolitan Washington Nonattainment Areas (MWNAs) for ozone and PM_{2.5}. For ozone, the currently-adopted nonattainment area – related to the 1997 NAAQS – coincides with the nonattainment area that the EPA currently intends to establish for the ozone NAAQS revision promulgated in 2008. While the region is still designated as nonattainment with respect to the 1997 PM_{2.5} NAAQS, it is considered attainment/unclassifiable for the more stringent 2006 PM_{2.5} NAAQS. The project corridor is located outside of the nearest CO Maintenance Area.

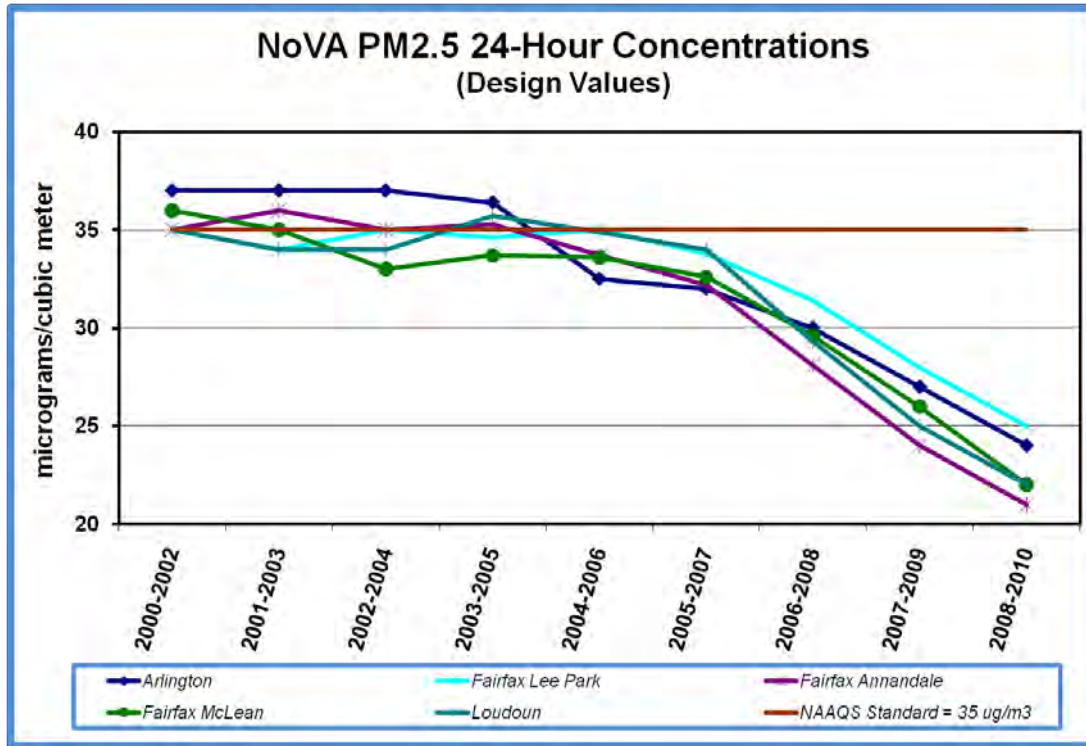
Table 4-1 summarizes air pollutant data from the nearest monitoring stations over the previous three years. Figure 1-2 illustrates the location of the four nearest monitoring stations. For each pollutant, data is reported for the nearest station with uninterrupted monitoring from 2009 to 2011. Among the air pollutants for which the Metropolitan

Planning Area is current designated as nonattainment, PM_{2.5} has shown a substantial decreasing trend over the long-term. Figure 4-1 illustrates this trend.

Table 4-1. Criteria Air Pollutant Monitoring Data

Pollutant	Averaging Period	Context	Parameter	Value		
				2009	2010	2011
CO	1-hour	S 18 th and Hayes St, Arlington County	Max. Concentration (ppm) for 2 nd -Highest Day	1.7	2.2	1.9
		MWNA	> NAAQS (35 ppm)	N	N	N
	8-hour	S 18 th and Hayes St, Arlington County	Max. Concentration (ppm)	1.3	1.7	1.4
		MWNA	> NAAQS (9 ppm)	N	N	N
NO ₂	1-hour	517 N Saint Asaph St, City of Alexandria	98 th Percentile Concentration (ppb)	53	57	47
		MWNA	> NAAQS (100 ppb)	N	N	N
Ozone	8-hour	Sta. 46-B9, Lee Park, Telegraph Road, Groveton	Max. Concentration (ppm) for 4 th -Highest Day	0.070	0.089	0.087
		MWNA	> 1997 NAAQS (0.08 ppm, effectively 0.084 ppm)	Y	Y	Y
			> 2008 NAAQS (0.075 ppm)	Y	Y	Y
PM _{2.5}	24-hour	Sta. 46-B9, Lee Park, Telegraph Road, Groveton	98 th Percentile Concentration (µg/m ³)	24	24	24
		MWNA	> 1997 NAAQS (65 µg/m ³)	N	N	N
			> 2006 NAAQS (35 µg/m ³)	N	N	N
	Annual Mean	Sta. 46-B9, Lee Park, Telegraph Road, Groveton	Concentration (µg/m ³)	9.8	11.3	9.2
		MWNA	> NAAQS (15 µg/m ³)	N	N	N
PM ₁₀	24-hour	517 N Saint Asaph St, City of Alexandria	Concentration (µg/m ³) for 2 nd -Highest Day	36	32	41
		MWNA	> NAAQS (150 µg/m ³)	N	N	N
Notes: MWNA – Metropolitan Washington Nonattainment Area						
SOURCE: EPA, 2012a						

Figure 4-1. Long-term Concentration Trends – PM_{2.5}, 24-Hour Average



SOURCE: MWCOG, 2011b

5. Regulatory Standards/Criteria

5.1. Criteria Air Pollutants

Table 5-1 lists all of the NAAQS.

Table 5-1. National Ambient Air Quality Standards (Primary)

Pollutant	Level	Averaging Time	Status
Carbon Monoxide (CO)	9 ppm	8-hour	Designations in place.
	35 ppm	1-hour	
Lead (Pb)	0.15 µg/m ³	Rolling 3-month average	Designations in place.
Nitrogen Dioxide (NO ₂)	53 ppb	Annual (arithmetic mean)	Designations in place.
	100 ppb	1-hour (98 th percentile)	
Particulate Matter (PM ₁₀)	150 µg/m ³	24-hour	Designations in place.
Particulate Matter (PM _{2.5})	15.0 µg/m ³	Annual (arithmetic mean)	Designations in place.
	35 µg/m ³	24-hour	
Ozone (O ₃)	0.075 ppm	8-hour	Recently adopted, intended designations published, final designations expected to be promulgated by mid-2012.
	0.08 ppm	8-hour	Designations in place.
Sulfur Dioxide (SO ₂)	30 ppb	Annual (arithmetic mean)	Revoked, but associated nonattainment designations remain in place.
	140 ppb	24-hour	
	75 ppb	1-hour	Designations expected to be promulgated by end of 2012.

SOURCE: EPA, 2011

Relevant air quality plans include the MWCOG's State Implementation Plan (SIP) documents for ozone and PM_{2.5}. The 2007 ozone SIP predicted attainment of the ozone NAAQS by 2010. However, violations of this NAAQS continue to be documented within the plan area and – as demonstrated in Table 5-1 – the EPA has subsequently promulgated a more stringent ozone NAAQS. The 2008 PM_{2.5} SIP was intended to demonstrate continued attainment of the 1997 PM_{2.5} NAAQS through 2009. While recent monitoring data supports that demonstration, redesignation of the applicable planning area to attainment for PM_{2.5} is still pending.

5.2. Air Toxics

Air toxics -- also referred to as hazardous air pollutants (HAPs) -- are those pollutants that are known or suspected to cause cancer and/or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. Examples of toxic air pollutants include benzene, which is found in gasoline, and diesel particulate matter / diesel exhaust organic gases (DPM/DEOG), byproducts of combustion by diesel engines. Some EPA programs address air toxics from the perspective of specific settings (e.g., urban areas); others address them in the context of specific source categories. An example of the latter is the EPA's Mobile Source Air Toxics (MSAT) program. Documentation associated with the MSAT regulations mentions nonroad emissions (such as those from mobile construction equipment), but focuses on on-road motor vehicles.

Transportation-related agencies such as the FHWA have developed guidance in addressing proposed project MSATs in the context of the assessment of transportation projects under the National Environmental Policy Act (NEPA). In its "Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents" (referred to hereafter as "Interim Guidance"), the FHWA presents a tiered approach for analyzing MSATs in such documents. Depending on the specific project circumstances, the FHWA has identified three levels of analysis:

- No analysis for projects with no potential for meaningful MSAT effects;
- Qualitative analysis for projects with low potential MSAT effects; or
- Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects.

5.3. Transportation Conformity

Transportation conformity is required by CAA section 176(c) [Title 42 of the United States Code, 42 U.S.C. 7506(c)] (EPA, 2003a) to ensure that federal funding and approval are given to highway and transit projects that are consistent with ("conform to") the air quality goals established by a SIP. Conformity, to the purpose of the SIP, means that transportation activities will not cause new air quality violations, worsen existing violations, or delay timely attainment of the NAAQS. As a matter of practice, federal funding and approval for such projects are generally provided through the involvement of the FHWA and/or the Federal Transit Administration (FTA).

6. Conformity

As previously demonstrated, the project corridor is within nonattainment areas for ozone and PM_{2.5}. The FHWA is the lead agency for the project and the project is regionally significant. Accordingly, transportation conformity requirements apply.

6.1. Regional Conformity

The proposed project is represented by VDOT Project ID VP1a in MWCOG's 2011 CLRP. Project ID VP1a – as considered in the Air Quality Conformity Determination (AQCD) for the 2011 CLRP (MWCOG, 2011) – correctly reflects the project completion schedule, design concept, and scope of proposed Alternative B. The 2011 CLRP AQCD determined the CLRP to meet regional conformity requirements. On February 17, 2012, the FHWA and FTA approved the MWCOG's conformity determination. The project is also included in the “2012 CLRP FY2013-2018 [Transportation Improvement Program] TIP Air Quality Conformity Inputs” currently being applied to the corresponding air quality conformity analysis. Accordingly, Alternative B meets regional conformity requirements. Appendix D includes the relevant project listings.

If Alternative C were selected for construction, the project corridor limits and the standard number of mainline through travel lanes per direction would remain the same. However, proposed flyovers at Telegraph Road and Fairfax County Parkway under Alternative C might need to be reflected in the MWCOG's air pollutant emissions modeling for transportation conformity determination.

Exhibit 16 of the 2011 CLRP AQCD is titled “Air Quality Conformity: Summary Table - 8-Hour Ozone Nonattainment Area: Mobile Source Emissions Inventories for 2011 CLRP (Tons/Day)”. This exhibit considers predicted mobile source emissions of ozone precursors for future years 2016, 2020, 2030, and 2040. Among those years, Exhibit 16 shows that net predicted emissions of VOC are between 24.8 and 32.2 tons per day below corresponding conformity budgets, depending on analysis year. For NO_x, predicted future emissions are 79.7 to 112.4 tons per day below corresponding conformity budgets. Any differences in mobile source emissions between Alternatives B and C can be expected to be orders of magnitude below these emission allowance surpluses. Therefore, it is reasonable to expect that changes in predicted emissions of ozone precursors under Alternative C would not alter the current determination of regional conformity consistent with Alternative B.

The 2011 CLRP AQCD considers PM_{2.5} emissions in two categories: direct emissions and emissions of NO_x as a PM_{2.5} precursor. Exhibits 17 and 18 in the AQCD address these two categories and compare predicted emissions with corresponding conformity budgets for Year 2016. For direct emissions, predicted annual totals are approximately 348 tons lower than the applicable conformity budget. Predicted annual emissions of NO_x are approximately 28,500 tons below the corresponding budget. As with the ozone precursors, it is reasonable to expect that changes under Alternative C in predicted direct emissions of PM_{2.5} or emissions of NO_x as a PM_{2.5} precursor would not alter the current determination of regional conformity consistent with Alternative B.

6.2. Project Conformity

Project conformity will be assessed in the context of the ozone, PM_{2.5}, and CO discussions within the following section of this report.

7. Impacts: Operations

7.1. Criteria Air Pollutants

7.1.1. Ozone Precursors

Near-ground ozone is produced indirectly from photochemical reactions between volatile organic compounds (VOCs) and nitrogen oxides (NO_x). Accordingly, it is a pollutant that does not tend to concentrate in the immediate vicinity of the sources of precursor emissions, and is primarily of regional concern. The regional conformity evaluation process discussed in the previous section includes assessment of conformance of predicted regional transportation emissions with ozone precursor emission budgets from the SIP. Alternative B's influence on those regional emissions has been addressed in the AQCD and the difference between the influence of Alternative B and Alternative C would be negligible at the scale of region-wide emissions. The regional conformity determination process is the most appropriate and effective means of accounting for the project's potential affect on future regional ozone levels.

7.1.2. PM_{2.5}

40 CFR 93.123(b)(1) identifies several types of transportation projects that call for quantitative PM₁₀ and/or PM_{2.5} hot spot analysis. Such projects are commonly referred to as "projects of air quality concern" (POAQCs). Appendix B of the EPA's *Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas (Quantitative PM Hot-spot Guidance)* provides specific examples of POAQCs. The proposed project does not conform to any of these types, nor does it match any of the corresponding examples. The project does generally conform to an example provided in the *Quantitative PM Hot-spot Guidance* of a class of projects deemed not to be of air quality concern:

"Any new or expanded highway project that primarily services gasoline vehicle traffic (i.e., does not involve a significant number or increase in the number of diesel vehicles), including such projects involving congested intersections operating at Level-of-Service D, E, or F;..."

Accordingly, this project does not require a PM hot spot analysis under either Alternative B or C.

7.1.3. Carbon Monoxide

Consistent with the *Air Consultant Guide* and 40 CFR §93.123(a) (EPA, 2012b), this study evaluates local ambient CO concentrations at key sensitive locations along the project corridor. Specifically, it focuses on the area from west of Fairfax County Parkway to east of Backlick/Pohick Roads, where some of the worst traffic congestion within the project corridor currently occurs and is predicted to persist without or with the project. Pursuant to the *Air Consultant Guide* and the EPA's *Guideline for Modeling Carbon Monoxide from Roadway Intersections (CO Modeling Guidelines)*, these locations included a 4(f) natural-area resource as well as areas where human exposure is the overriding concern. Table 7-1 summarizes information about modeled receptor locations. Figures 7-1 and 7-2 show these locations graphically in the context of the Alternative B design.

Emission factors were derived from the FHWA's EMIT interface (FHWA, 2007) to the EPA's MOBILE6.2 emissions model (EPA, 2003). In general, the *Air Consultant Guide's* MOBILE6.2 input recommendations were followed. MOBILE6.2 defaults provided most of the assumed vehicle characteristics. However, vehicle classification counts performed along Route 1 between Pohick Road (east intersection) and Belvoir Road served as the basis for assumed vehicle type distributions. Distributions matching MOBILE6.2 vehicle types were derived from these FHWA-category classification counts using methods discussed in the EPA's "MOBILE6 Implementation Experience 2005". Appendix E presents EMIT modeling documentation.

The FHWA's CAL3i interface (FHWA, 2011) was used to develop inputs for and run the EPA's CAL3QHC dispersion model (EPA, 1995). The modeling approach was primarily influenced by the *Air Consultant Guide*. Traffic-related inputs to CAL3i were discussed in Section 3 of this report. Background concentrations were obtained from the CO monitoring data presented in Table 4-1 of this report. CAL3QHC input and output is included in Appendix F.

Sensitive receptors were selected based on a thorough review of existing and proposed land uses and pedestrian/bicyclist facilities and in a manner consistent with guidance provided in the *CO Modeling Guidelines* and *Air Consultant Guide*.

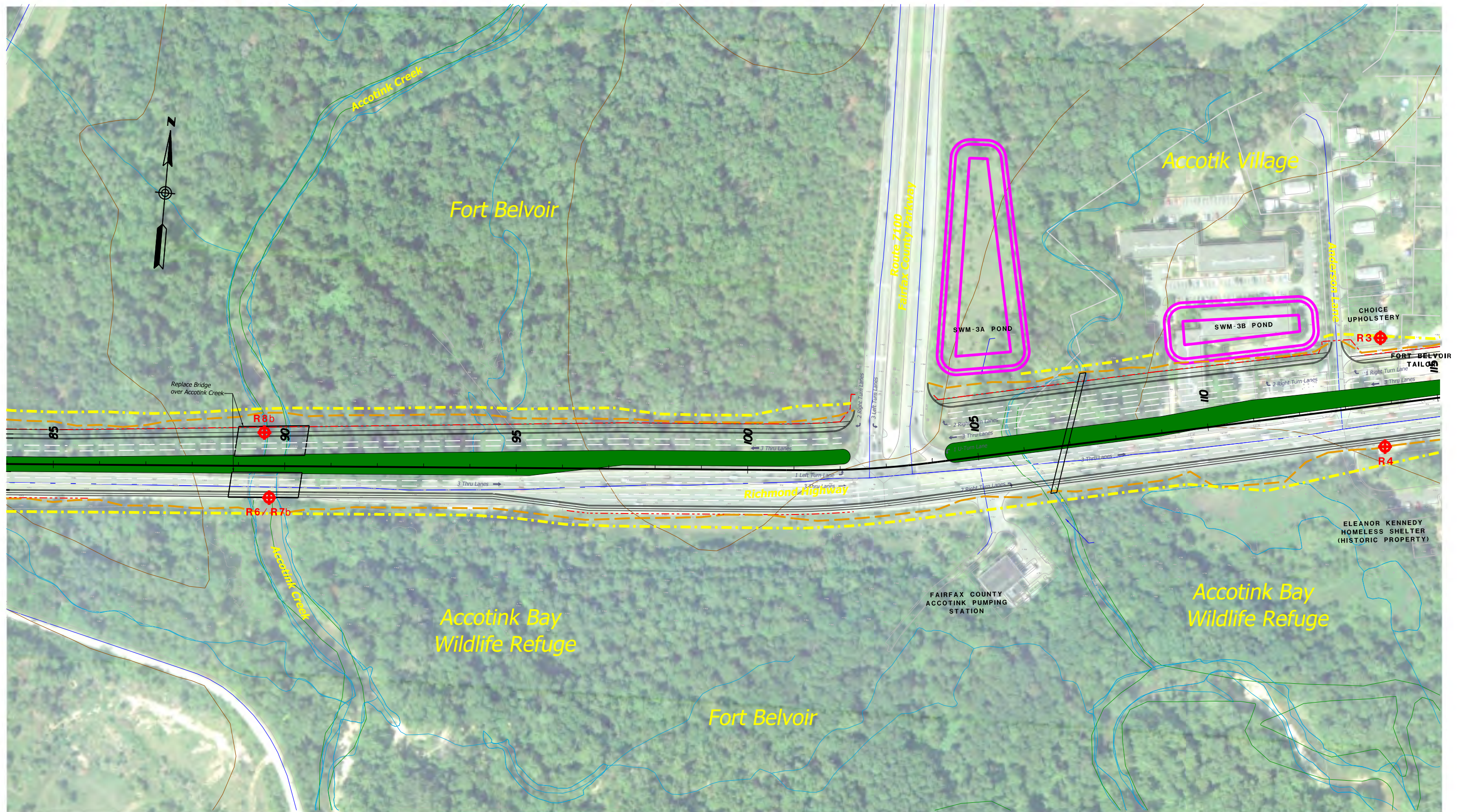
Table 7-1. Characteristics of Modeled Receivers

Receptor	Location	Averaging Period(s)	Land Use	Exposure Issues	
				General	Project-Specific
R1	9140 Richmond Highway (Route 1)	1- & 8-Hr	Historically MFR (property zoned commercial)	Near intersection between Route 1 and Pohick/ Backlick Roads, which experiences substantial congestion during peak periods.	Build Alternative would widen and realign Route 1 in a manner that would bring it much closer to these receptors.
R2	9136 Backlick Road	1- & 8-Hr	Vacant (property zoned residential)		
R3	9135 Anderson Lane	1- & 8-Hr	SFR		
R4	Bus Stop along Route 1	1-Hr	Route 1 right-of-way	Location of possible extended roadside exposure. Bus stop to be improved in future; those improvements are not part of the current project.	
R5	Eleanor Kennedy Homeless Shelter	1- & 8-Hr	As indicated	Near intersection between Route 1 and Pohick/ Backlick Roads, which experiences substantial congestion during peak periods.	
R6	Accotink Creek (at juncture of Accotink Wildlife Refuge and Fort Belvoir Forest and Wildlife Corridor)	1- & 8-Hr	Nature preserve	Creek-level receiver representing "...4(f) parks, recreation or refuge areas..." a category that warrants consideration per the <i>Air Consultant Guide</i> .	
R7	Proposed multi-use path where it would cross Accotink Creek	1-Hr	Route 1 right-of-way	Roadside exposure.	Location along proposed path where users might tend to linger.
R8	Proposed sidewalk where it would cross Accotink Creek	1-Hr	Route 1 right-of-way		Location along proposed sidewalk where pedestrians might tend to linger.

Notes:

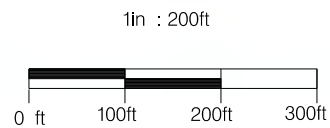
SFR – Single-family residential; MFR – Multifamily residential.

SOURCE: Parsons, 2012



LEGEND
 ⊕RXX - RECEPTOR SITE (ALL SCENERIOS)
 ⊕RXXb - RECEPTOR SITE (BUILD ONLY)

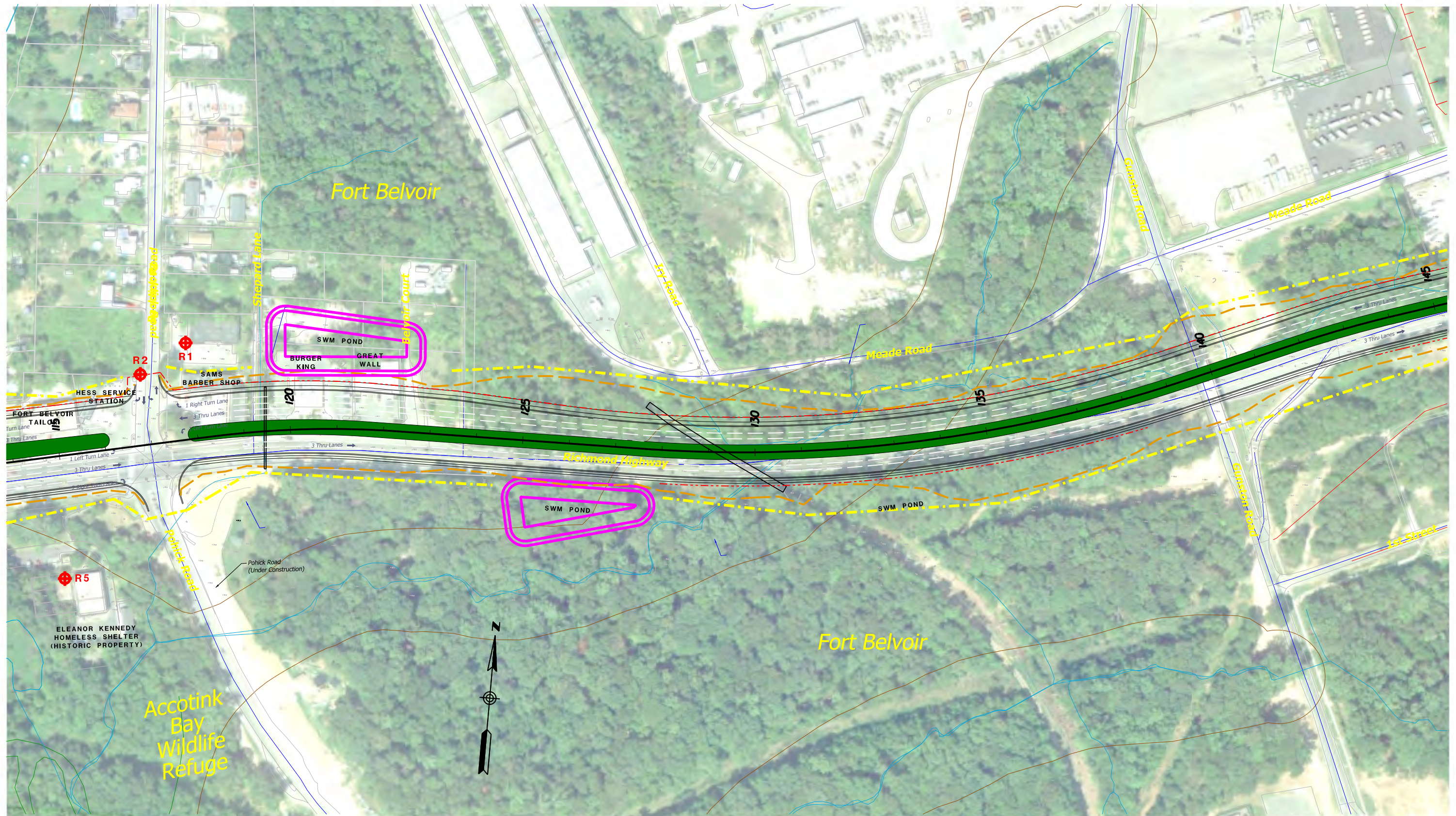
SFR - SINGLE FAMILY RESIDENCE
 MFR - MULTI-FAMILY RESIDENCE
 COMM - COMMERCIAL



**ROUTE 1 AT FORT BELVOIR PROJECT
 ALTERNATIVE B
 CO RECEPTOR LOCATIONS**

MAY 29, 2011

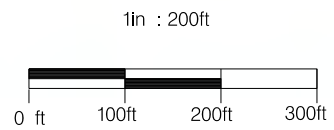
FIGURE 7-1



LEGEND

- ⊕ RXX - RECEPTOR SITE (ALL SCENERIOS)
- ⊕ RXXb - RECEPTOR SITE (BUILD ONLY)

- SFR - SINGLE FAMILY RESIDENCE
- MFR - MULTI-FAMILY RESIDENCE
- COMM - COMMERCIAL



**ROUTE 1 AT FORT BELVOIR PROJECT
ALTERNATIVE B
CO RECEPTOR LOCATIONS**

MAY 29, 2011

FIGURE 7-2

Table 7-2 summarizes microscale CO modeling results. It considers three different temporal scenarios:

- Existing (2012)
- Interim (Opening) Year (2020)
- Design Year (2040)

For future years, Table 7-2 includes a comparison of predicted CO concentrations for Alternatives A and B.

Table 7-2. Predicted Worst-Case CO Concentrations at Representative Worst-Case Locations

Receptor	CO Concentrations (ppm) ^{1,2}										NAAQS: 1-; 8-Hr
	Existing (2012) ³		Interim Year (2020)				Design Year (2040)				
	Alternative A		Alternative A		Alternative B		Alternative A		Alternative B		
	1-Hr	8-Hr ⁴	1-Hr	8-Hr ⁴	1-Hr	8-Hr ⁴	1-Hr	8-Hr ⁴	1-Hr	8-Hr ⁴	
R1	4.4	3.3	3.7	2.7	4.3	3.3	3.7	2.8	4.3	3.3	35; 9
R2	9.8	7.4	5.9	4.5	6.5	4.9	6.4	4.9	6.2	4.7	
R3	4.6	3.5	<u>4.3</u>	3.3	<u>4.9</u>	3.7	4.0	3.0	<u>4.8</u>	3.6	
R4	13.8	*	11.0	*	8.4	*	10.7	*	8.5	*	
R5	4.3	3.3	3.9	3.0	4.2	3.2	3.9	3.0	4.1	3.1	
R6 ⁵	8.9	6.8	7.7	5.8	<u>7.5</u>	5.7	7.7	5.8	<u>7.2</u>	5.5	
R7 ⁶					<u>7.6</u>	*			<u>7.6</u>	*	
R8 ⁶					<u>7.3</u>	*			<u>7.0</u>	*	

Notes:

¹ Assumed ambient background concentrations are based upon the average of 2nd-highest CO concentrations at the Arlington monitoring station for each of the preceding three years. These values are 1.9 ppm for 1-hour-average concentration and 1.5 ppm for 8-hour-average concentration.

² For each combination of receiver and scenario, 1-hour-average values represent either AM or PM peak hour, whichever represents the highest concentration. Values in **bold underlined font** are PM peak hour concentrations; values in regular font indicate AM peak hour concentrations.

³ Reported concentration values are based on intersection analysis reflecting constrained conditions.

⁴ Predicted 8-hour concentrations were derived from predicted 1-hour concentrations based on a persistence factor of 0.76. That factor was derived from the same monitoring data from which the ambient background concentrations were derived.

⁵ This receptor is located at creek level and represents a 4(f) area pursuant to the VDOT *Consultant Guide*. It does not represent an area of anticipated extended human presence.

⁶ These locations represent a proposed sidewalk and multi-use path, respectively. In this portion of the corridor, there are no such improved facilities under No Build conditions.

* Receptors where the 8-Hr columns are marked with asterisks represent locations or pedestrian/bicyclist corridors within which individuals might be exposed to the indicated CO concentrations for about 1 hour. Such exposure would not be expected to persist for 8 hours.

SOURCE: Parsons, 2012

Predicted 8-hour concentrations were derived from modeled 1-hour concentrations based on a persistence factor of 0.76. That factor was derived from the same monitoring data from which the ambient background concentrations were derived.

In no case does a predicted CO concentration exceed the applicable NAAQS. CO emission rates for future vehicle fleets are expected to be lower than those for existing fleets due to the incorporation of newer vehicles with better emission control technologies. Those improved technologies are motivated by increasingly stringent emission limits for new vehicles. On the other hand, for reasons described in Section 1.1 of this report, traffic volumes within the study area are expected to continue to increase over time. In the absence of the proposed project, the other improvements anticipated within the study area under the CLRP would have only a limited capacity to respond to this increased demand as it affects the Route 1 corridor. By comparing Existing and future No Build results, the predicted outcome of the interaction between these opposing influences becomes evident. In general, the net predicted result is anywhere from a slight to a substantial decrease in CO levels.

The project would affect CO concentrations at the selected receptor locations by altering the capacity and function of the transportation corridor and its several intersections. It would also alter those concentrations by widening and realigning Route 1, particularly in the vicinity of Woodlawn Road. Finally, the project would introduce a new multipurpose path and sidewalk in portions of the corridor that currently do not have such pedestrian/bicyclist improvements. Considered together, these project-related changes are predicted to increase CO concentrations at most existing receptors but decrease concentrations at one or two. Part of the reason for the localized increases in CO concentrations with the project is the tendency of mass emission rates of CO per unit distance (as predicted by MOBILE 6.2) to begin increasing at speeds above 30 to 35 miles per hour.

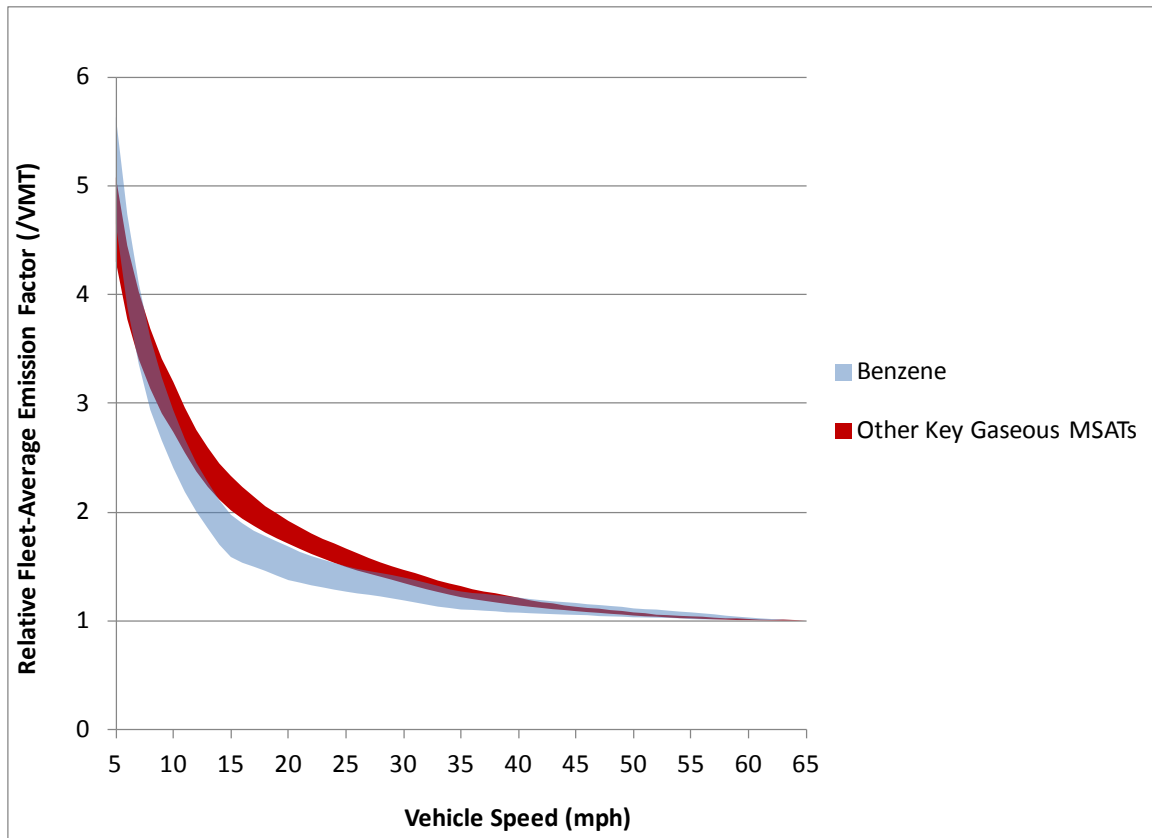
Under Alternative C, the specific pattern of predicted CO concentrations would differ slightly from that under Alternative B. However, at each of the receptors considered in Table 7-2, predicted CO concentrations under Build Conditions would be comparable to those predicted under Alternative B, and in any case would remain below applicable NAAQS. Introduction of the flyover at Fairfax County Parkway under Alternative C would eliminate the contribution of intersection cycle red time to queuing of vehicles taking a left turn from that roadway onto Route 1. This difference would have more of an effect during the AM peak period when the demand for left turn movements from Fairfax County Parkway is higher. In the vicinity of the intersection with Route 1, the greatest effect on CO concentrations would likely occur along the Fairfax County Parkway leg; however, no sensitive receptor locations were identified along that leg.

7.2. Mobile Source Air Toxics

The purpose of the proposed project is to alleviate predicted future increases in congestion along the project corridor. Through widening and realignment of Route 1, the project would locally redistribute roadside MSAT impacts, resulting in increased exposure at some locations and decreased exposure at others. More focused differences in localized emissions of MSATs would occur between Alternatives B and C. The area-

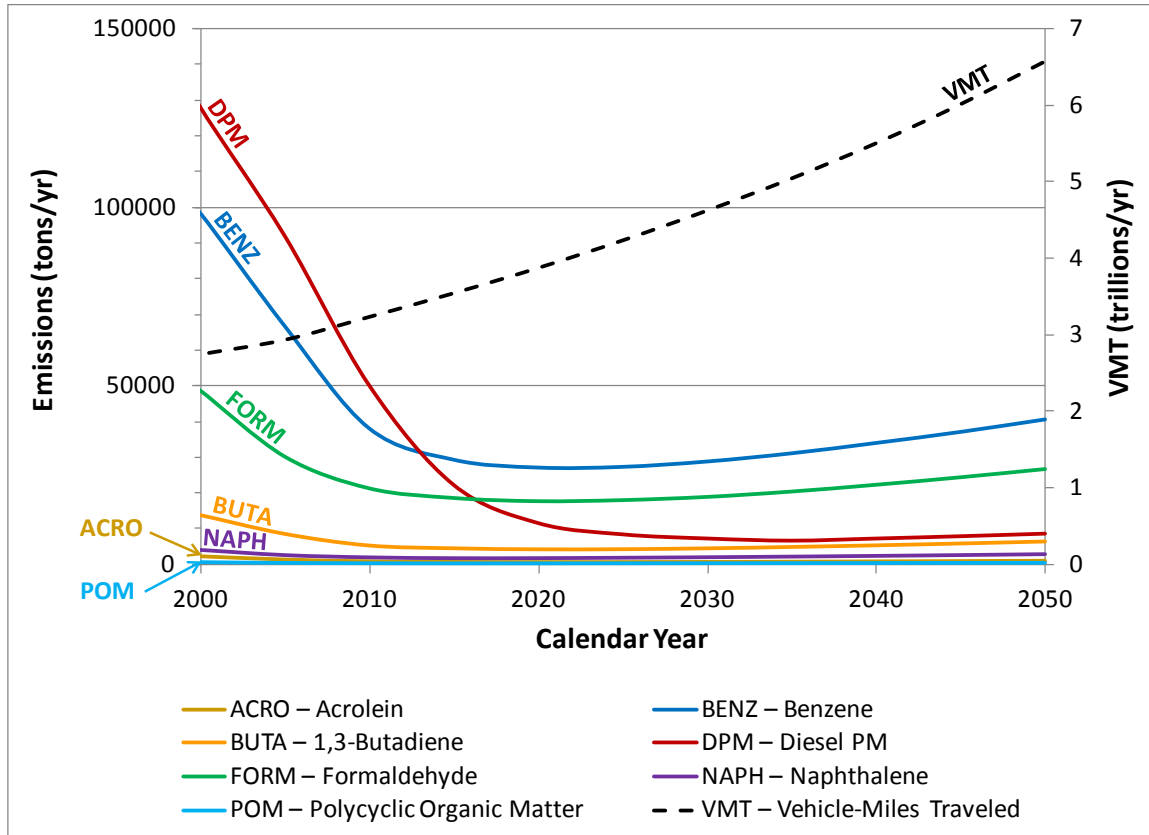
wide effect on MSAT emissions is expected to be negligible to beneficial. Figure 7-3 shows that – within the speed range of 5 to 65 miles per hour – emission rates of key MSATs are predicted by MOBILE6.2 to decrease as travel speeds increase. By increasing average travel speeds, the project would therefore tend to reduce average MSAT emission rates. Furthermore, overall traffic volumes along the corridor are not expected to be high enough to generate substantial MSAT impacts at receptor locations representing exposure durations relevant to MSAT effects. Finally, MSAT emission rates for the on-road vehicle fleet are predicted to decrease over time, producing overall MSAT emission trends represented in Figure 7-4. Accordingly, no additional analysis of prospective MSAT impacts is required.

Figure 7-3. Relative Emission Rates for Key Gaseous MSATs versus Vehicle Speed



SOURCE: Claggett & Houk, 2007

Figure 7-4. National MSAT Emission Trends, 2000-2050 – On-Road Vehicles



SOURCE: FHWA, 2009

8. Impacts: Construction

Project construction activities would generate temporary air pollutant emissions along the project alignment. Such emissions would include new emissions from the exhaust of stationary and non-road mobile construction equipment and of delivery and haul trucks. Ground disturbance, exposure of uncovered ground surfaces, and soil stockpiling and transport would contribute to fugitive dust emissions, a small proportion of which would be PM_{2.5}. Off-gassing from asphalt and pavement coatings would contribute to VOC emissions. Emissions from on-road motor vehicles traveling through construction zones could temporarily increase due to construction-related disturbances in traffic flow.

Emissions would include the ozone precursors (NO_x and VOC), PM, and MSATs. From a regional perspective and in a general sense, the applicable SIP documents already account for the contributions of road construction to emissions of ozone precursors and PM_{2.5}. For ozone, this accounting is accomplished primarily through the use of the NONROAD model and its allocations of nonroad equipment activity based on such factors as market/activity category (e.g., construction), year (using activity growth rate

assumptions), and geographic location (to the county level). In the PM_{2.5} SIP, "...road construction [activity] was grown using [vehicle miles traveled] VMT projections."

The preceding discussion focused on construction emissions from a regional perspective. From a local perspective, the influence on project on air pollutant concentrations is not likely to be significant under either Alternatives B or C. In the Woodlawn area, the local distribution of construction-related emissions impacts would be different under Alternatives B and C due to different proposed Route 1 alignments and the different patterns of grading, pavement removal, and finishing activities associated with those alignments. Where flyovers are proposed under Alternative C, localized construction-related emissions will differ relative to Alternative B as a result of more intensive soil importing and structure erection activities under Alternative C.

9. Mitigation

No significant operational project air pollutant impacts were identified; accordingly, no operational mitigation measures are required. Regarding construction activities, under either Alternative A or B, the project sponsor and/or applicable representatives (e.g., construction contractors) shall abide by applicable VDOT Road & Bridge Specifications provisions including the following:

- 107.16(b)(2) addressing control of air pollutant impacts.
- 411.09 focusing on protection from exposure to leaded paint and other hazardous materials related to removal operations and other specific activities.
- 413.01, including implementation of the National Emission Standard for Hazardous Air Pollutants (NESHAP) for asbestos if and where warranted.
- 413.02(c)(1) regarding general environmental protection during demolition activities.
- 511.02 related to dust suppression.

Government agencies responsible for promulgating and/or enforcing applicable air pollution regulations and with jurisdiction over the project corridor include:

- Virginia Department of Labor and Industry (e.g., asbestos NESHAP enforcement)
- State Air Pollution Control Board (e.g., 9VAC5-40-90. Standard for fugitive dust/emissions)

Furthermore, the project sponsors shall assure that the following measures are implemented during construction:

- *Maintain Traffic Flow.* Some disturbance of normal traffic flow during construction is inevitable. Furthermore, CO analysis results discussed in Section 7 of this report demonstrate that vehicle queuing as a result of intersection

capacity constraints is not predicted to generate violations of the applicable NAAQS. Nevertheless, sufficient traffic flow should be maintained to avoid regular, substantial, and extended-duration queuing of on-road vehicles in the vicinity of sensitive receptors as a direct result of construction-related disturbances. Note that the proposed project includes a wide corridor to accommodate a prospective future transit alignment. Also note that, as discussed in the EA: “The base easement of 148 feet may be expanded once detailed design plans are developed to provide for...maintenance of traffic during construction...”

- *Appropriate Positioning of Stationary Internal-Combustion-Engine-Powered Equipment.* To the extent practical, a substantial buffer should be maintained between operating stationary internal-combustion-powered equipment such as generators and compressors and sensitive locations such as occupied residences.
- *Proper Maintenance and Tuning of Construction Equipment.* Internal-combustion-engine-powered equipment used in project construction should be properly maintained and tuned. For each such piece of equipment originally delivered with an emission control device, the same or an equivalent/improved control device should remain in place and properly functioning.

10. Conclusion

The region surrounding the project is designated as nonattainment for ozone and PM_{2.5}. The proposed project would alter motor vehicle travel patterns in the area. By expanding capacity along Route 1 near Fort Belvoir, it would generally enhance intersection function and overall traffic flow relative to the corresponding No Build condition. The project is also predicted to redistribute some of the traffic demand from competing routes to Route 1. The combination of the project’s physical and functional changes along the Route 1 corridor would result in some localized increases in the concentrations for directly-emitted criteria air pollutants such as CO and some localized decreases in such concentrations. In no case would project operations be expected to cause or substantially contribute to violations of NAAQS for criteria air pollutants. Accordingly, the project complies with project-level conformity requirements.

From an area-wide perspective, Alternative B’s influence on ozone precursor emissions has already been accounted for in the context of the MWCOG’s conforming CLRP. Therefore, Alternative B meets regional conformity requirements. From a regional perspective, differences in emissions of nonattainment pollutants and their precursors between Alternative C and Alternative B would be negligible. Therefore, it is reasonable to expect that any adjustments that might need to be made to the regional air quality model to reflect the Alternative C design would result in the same affirmative determination of regional conformity.

The area-wide influence of the proposed project on MSAT emissions is expected to be negligible to beneficial. Through widening and realignment of Route 1, the project

would locally redistribute roadside MSAT impacts, resulting in increased exposure at some locations and decreased exposure at others. More focused differences in localized emissions of MSATs would occur between Alternatives B and C.

The project would generate emissions of both criteria air pollutants and MSATs during construction. The resulting air pollutant impacts would be temporary. Nevertheless, under both Alternatives B and C, mitigation measures are warranted for construction-related emissions, and are presented in Section 9 of this report.

11. References

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Appendix A Intersection Analysis Worksheets

ROUTE 1 IMPROVEMENTS AT FORT BELVOIR

TRANSPORTATION TECHNICAL REPORT

FOR

FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION

Parsons Transportation Group, Inc.
100 M. Street, SE
Washington, DC 20003

DRAFT

February 17, 2012

























2010 EXISTING CONDITIONS – CONSTRAINED VOLUMES

INTERSECTION MOE SUMMARY TABLES

HCM-BASED OUTPUTS

HCM Signalized Intersection Capacity Analysis
 27: Richmond Hwy & Backlick Rd

1/26/2012

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1695	1065	215	1330	45	110	5	5	210	165	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	9	9	10
Total Lost time (s)		7.0	7.0	6.5	7.0		6.0	6.0		7.0	7.0	7.0
Lane Util. Factor		0.95	1.00	1.00	0.95		0.95	0.95		1.00	1.00	1.00
Flt		1.00	0.85	1.00	1.00		1.00	0.99		1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.96		0.95	1.00	1.00
Satd. Flow (prot)		3539	1583	1770	3522		1681	1678		1593	1676	1478
Flt Permitted		1.00	1.00	0.04	1.00		0.95	0.96		0.95	1.00	1.00
Satd. Flow (perm)		3539	1583	69	3522		1681	1678		1593	1676	1478
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1842	1158	234	1446	49	120	5	5	228	179	5
RTOR Reduction (vph)	0	0	176	0	1	0	0	2	0	0	0	3
Lane Group Flow (vph)	0	1842	982	234	1494	0	65	63	0	228	179	2
Turn Type	pm+pt		Perm	pm+pt			Split			Split		Perm
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	2		2	6								3
Actuated Green, G (s)		101.5	101.5	124.3	124.3		12.7	12.7		23.0	23.0	23.0
Effective Green, g (s)		101.5	101.5	124.3	124.3		12.7	12.7		23.0	23.0	23.0
Actuated g/C Ratio		0.56	0.56	0.69	0.69		0.07	0.07		0.13	0.13	0.13
Clearance Time (s)		7.0	7.0	6.5	7.0		6.0	6.0		7.0	7.0	7.0
Vehicle Extension (s)		4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)		1996	893	202	2432		119	118		204	214	189
v/s Ratio Prot		0.52		c0.11	0.42		c0.04	0.04		c0.14	0.11	
v/s Ratio Perm			0.62	c0.70								0.00
v/c Ratio		0.92	1.10	1.16	0.61		0.55	0.54		1.12	0.84	0.01
Uniform Delay, d1		35.7	39.2	67.1	15.0		80.9	80.8		78.5	76.7	68.5
Progression Factor		0.84	0.75	0.98	0.98		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		3.5	51.6	109.3	1.0		6.3	5.8		98.2	24.6	0.0
Delay (s)		33.3	80.9	175.1	15.8		87.2	86.6		176.7	101.2	68.6
Level of Service		C	F	F	B		F	F		F	F	E
Approach Delay (s)		51.7			37.3			86.9			142.6	
Approach LOS		D			D			F			F	

Intersection Summary			
HCM Average Control Delay	54.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	19.5
Intersection Capacity Utilization	106.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Existing Conditons - Constrained 6/1/2011 AM 2 (7-8AM)
 %user_name%

Synchro 7 - Report
 Page 8

HCM Signalized Intersection Capacity Analysis
 28: Richmond Hwy & Fairfax Co Pkwy

1/26/2012



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔↔	↑↑	↑↑	↔	↔↔	↔
Volume (vph)	285	1930	595	850	830	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	6.5	6.5	4.0	7.0	7.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	3539	3539	1583	3433	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	3539	3539	1583	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	310	2098	647	924	902	16
RTOR Reduction (vph)	0	0	0	0	0	10
Lane Group Flow (vph)	310	2098	647	924	902	6
Turn Type	Prot			Free		pm+ov
Protected Phases	1	6	2		4	1
Permitted Phases				Free		4
Actuated Green, G (s)	20.6	123.0	95.4	180.0	43.5	64.1
Effective Green, g (s)	20.6	123.0	95.4	180.0	43.5	64.1
Actuated g/C Ratio	0.11	0.68	0.53	1.00	0.24	0.36
Clearance Time (s)	7.0	6.5	6.5		7.0	7.0
Vehicle Extension (s)	3.0	5.0	5.0		3.5	3.0
Lane Grp Cap (vph)	393	2418	1876	1583	830	625
v/s Ratio Prot	0.09	c0.59	0.18		c0.26	0.00
v/s Ratio Perm				0.58		0.00
v/c Ratio	0.79	0.87	0.34	0.58	1.09	0.01
Uniform Delay, d1	77.6	22.2	24.3	0.0	68.2	37.4
Progression Factor	1.00	1.00	0.45	1.00	1.00	1.00
Incremental Delay, d2	10.1	4.5	0.4	1.3	57.5	0.0
Delay (s)	87.7	26.7	11.3	1.3	125.7	37.4
Level of Service	F	C	B	A	F	D
Approach Delay (s)		34.6	5.4		124.2	
Approach LOS		C	A		F	
Intersection Summary						
HCM Average Control Delay			42.0		HCM Level of Service	D
HCM Volume to Capacity ratio			0.92			
Actuated Cycle Length (s)			180.0		Sum of lost time (s)	13.5
Intersection Capacity Utilization			88.3%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

Existing Conditons - Constrained 6/1/2011 AM 2 (7-8AM)
 %user_name%

Synchro 7 - Report
 Page 9

HCM Signalized Intersection Capacity Analysis
 27: Richmond Hwy & Backlick Rd

1/26/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	1280	135	65	1645	155	1000	15	35	115	15	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	9	9	10
Total Lost time (s)	6.5	7.0	7.0	6.5	7.0		6.0	6.0		7.0	7.0	7.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95		1.00	1.00	1.00
Flt	1.00	1.00	0.85	1.00	0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.96		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3494		1681	1676		1593	1676	1478
Flt Permitted	0.05	1.00	1.00	0.05	1.00		0.95	0.96		0.95	1.00	1.00
Satd. Flow (perm)	90	3539	1583	94	3494		1681	1676		1593	1676	1478
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	1391	147	71	1788	168	1087	16	38	125	16	11
RTOR Reduction (vph)	0	0	44	0	3	0	0	2	0	0	0	10
Lane Group Flow (vph)	5	1391	103	71	1953	0	576	563	0	125	16	1
Turn Type	pm+pt		Perm	pm+pt			Split			Split		Perm
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	2		2	6								3
Actuated Green, G (s)	84.3	82.8	82.8	99.0	91.0		44.0	44.0		17.0	17.0	17.0
Effective Green, g (s)	84.3	82.8	82.8	99.0	91.0		44.0	44.0		17.0	17.0	17.0
Actuated g/C Ratio	0.47	0.46	0.46	0.55	0.51		0.24	0.24		0.09	0.09	0.09
Clearance Time (s)	6.5	7.0	7.0	6.5	7.0		6.0	6.0		7.0	7.0	7.0
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)	56	1628	728	142	1766		411	410		150	158	140
v/s Ratio Prot	0.00	0.39		c0.03	c0.56		c0.34	0.34		c0.08	0.01	
v/s Ratio Perm	0.04		0.07	0.25								0.00
v/c Ratio	0.09	0.85	0.14	0.50	1.11		1.40	1.37		0.83	0.10	0.01
Uniform Delay, d1	42.8	43.2	28.1	34.1	44.5		68.0	68.0		80.1	74.5	73.9
Progression Factor	0.62	1.08	1.25	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.7	4.2	0.3	3.7	56.5		194.8	183.3		39.4	1.3	0.1
Delay (s)	27.1	50.9	35.4	37.9	101.0		262.8	251.3		119.5	75.8	74.0
Level of Service	C	D	D	D	F		F	F		F	E	E
Approach Delay (s)		49.4			98.8			257.1			111.6	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	120.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	26.5
Intersection Capacity Utilization	104.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Existing Conditions - Constrained PM1 (4-5PM)
 %user_name%

Synchro 7 - Report
 Page 8

HCM Signalized Intersection Capacity Analysis
 28: Richmond Hwy & Fairfax Co Pkwy

1/26/2012



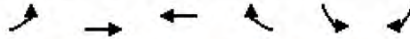
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖↗	↖↗	↖↗	↖	↖↗	↖
Volume (vph)	40	685	2020	635	735	655
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	6.5	6.5	4.0	7.0	7.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Fit Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	3539	3539	1583	3433	1583
Fit Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	3539	3539	1583	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	745	2196	690	799	712
RTOR Reduction (vph)	0	0	0	0	0	5
Lane Group Flow (vph)	43	745	2196	690	799	707
Turn Type	Prot		Free		pm+ov	
Protected Phases	1	6	2		4	1
Permitted Phases				Free		4
Actuated Green, G (s)	6.5	128.0	114.5	180.0	38.5	45.0
Effective Green, g (s)	6.5	128.0	114.5	180.0	38.5	45.0
Actuated g/C Ratio	0.04	0.71	0.64	1.00	0.21	0.25
Clearance Time (s)	7.0	6.5	6.5		7.0	7.0
Vehicle Extension (s)	3.0	5.0	5.0		3.5	3.0
Lane Grp Cap (vph)	124	2517	2251	1583	734	457
v/s Ratio Prot	0.01	0.21	c0.62		0.23	c0.06
v/s Ratio Perm				0.44		0.39
v/c Ratio	0.35	0.30	0.98	0.44	1.09	1.55
Uniform Delay, d1	84.7	9.5	31.4	0.0	70.8	67.5
Progression Factor	0.84	1.90	0.62	1.00	1.00	1.00
Incremental Delay, d2	1.7	0.3	2.4	0.1	59.9	256.6
Delay (s)	72.4	18.4	21.7	0.1	130.7	324.1
Level of Service	E	B	C	A	F	F
Approach Delay (s)		21.3	16.5		221.8	
Approach LOS		C	B		F	
Intersection Summary						
HCM Average Control Delay			77.1		HCM Level of Service	E
HCM Volume to Capacity ratio			1.15			
Actuated Cycle Length (s)			180.0		Sum of lost time (s)	13.5
Intersection Capacity Utilization			107.6%		ICU Level of Service	G
Analysis Period (min)			15			
c Critical Lane Group						

Existing Conditions - Constrained PM1 (4-5PM)
 %user_name%

Synchro 7 - Report
 Page 9

HCM Signalized Intersection Capacity Analysis
 28: Richmond Hwy & Fairfax Co Pkwy

1/26/2012



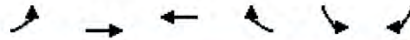
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖↗	↖↗	↖↗	↖	↖↗	↖
Volume (vph)	40	685	2020	635	735	655
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	6.5	6.5	4.0	7.0	7.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Fit Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	3539	3539	1583	3433	1583
Fit Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	3539	3539	1583	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	745	2196	690	799	712
RTOR Reduction (vph)	0	0	0	0	0	5
Lane Group Flow (vph)	43	745	2196	690	799	707
Turn Type	Prot		Free		pm+ov	
Protected Phases	1	6	2		4	1
Permitted Phases				Free		4
Actuated Green, G (s)	6.5	128.0	114.5	180.0	38.5	45.0
Effective Green, g (s)	6.5	128.0	114.5	180.0	38.5	45.0
Actuated g/C Ratio	0.04	0.71	0.64	1.00	0.21	0.25
Clearance Time (s)	7.0	6.5	6.5		7.0	7.0
Vehicle Extension (s)	3.0	5.0	5.0		3.5	3.0
Lane Grp Cap (vph)	124	2517	2251	1583	734	457
v/s Ratio Prot	0.01	0.21	c0.62		0.23	c0.06
v/s Ratio Perm				0.44		0.39
v/c Ratio	0.35	0.30	0.98	0.44	1.09	1.55
Uniform Delay, d1	84.7	9.5	31.4	0.0	70.8	67.5
Progression Factor	0.84	1.90	0.62	1.00	1.00	1.00
Incremental Delay, d2	1.7	0.3	2.4	0.1	59.9	256.6
Delay (s)	72.4	18.4	21.7	0.1	130.7	324.1
Level of Service	E	B	C	A	F	F
Approach Delay (s)		21.3	16.5		221.8	
Approach LOS		C	B		F	
Intersection Summary						
HCM Average Control Delay			77.1		HCM Level of Service	E
HCM Volume to Capacity ratio			1.15			
Actuated Cycle Length (s)			180.0		Sum of lost time (s)	13.5
Intersection Capacity Utilization			107.6%		ICU Level of Service	G
Analysis Period (min)			15			
c Critical Lane Group						

Existing Conditions - Constrained PM1 (4-5PM)
 %user_name%

Synchro 7 - Report
 Page 9

HCM Signalized Intersection Capacity Analysis
 28: Richmond Hwy & Fairfax Co Pkwy

1/26/2012



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖↗	↕	↕	↖	↖↗	↖
Volume (vph)	50	875	2035	725	785	555
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	6.5	6.5	4.0	7.0	7.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	1.00
Fr _t	1.00	1.00	1.00	0.85	1.00	0.85
Fl _t Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	3539	3539	1583	3433	1583
Fl _t Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	3539	3539	1583	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	951	2212	788	853	603
RTOR Reduction (vph)	0	0	0	0	0	5
Lane Group Flow (vph)	54	951	2212	788	853	598
Turn Type	Prot			Free		pm+ov
Protected Phases	1	6	2		4	1
Permitted Phases				Free		4
Actuated Green, G (s)	7.0	128.0	114.0	180.0	38.5	45.5
Effective Green, g (s)	7.0	128.0	114.0	180.0	38.5	45.5
Actuated g/C Ratio	0.04	0.71	0.63	1.00	0.21	0.25
Clearance Time (s)	7.0	6.5	6.5		7.0	7.0
Vehicle Extension (s)	3.0	5.0	5.0		3.5	3.0
Lane Grp Cap (vph)	134	2517	2241	1583	734	462
v/s Ratio Prot	0.02	0.27	c0.62		0.25	c0.05
v/s Ratio Perm				0.50		0.33
v/c Ratio	0.40	0.38	0.99	0.50	1.16	1.29
Uniform Delay, d ₁	84.5	10.3	32.3	0.0	70.8	67.2
Progression Factor	0.98	1.57	0.62	1.00	1.00	1.00
Incremental Delay, d ₂	1.9	0.4	3.5	0.1	87.6	147.6
Delay (s)	84.6	16.5	23.6	0.1	158.3	214.9
Level of Service	F	B	C	A	F	F
Approach Delay (s)		20.2	17.4		181.8	
Approach LOS		C	B		F	
Intersection Summary						
HCM Average Control Delay			61.7		HCM Level of Service	E
HCM Volume to Capacity ratio			1.08			
Actuated Cycle Length (s)			180.0		Sum of lost time (s)	13.5
Intersection Capacity Utilization			101.9%		ICU Level of Service	G
Analysis Period (min)			15			
c Critical Lane Group						

Existing Conditons - Constrained PM2 (5-6PM)
 %user_name%

Synchro 7 - Report
 Page 9

2020 No-BUILD ALTERNATIVE

INTERSECTION MOE SUMMARY TABLES

HCM-BASED OUTPUTS

HCM Signalized Intersection Capacity Analysis
 27: Richmond Hwy & Backlick Rd

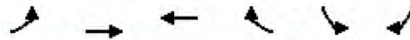
1/26/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗	↗	↖	↖↗		↖↗	↖		↖	↖	↖
Volume (vph)	15	1576	1410	123	1403	20	85	10	9	149	116	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	9	9	10
Total Lost time (s)	6.5	7.0	7.0	6.5	7.0		6.0	6.0		7.0	7.0	7.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	1.00		1.00	1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3532		3433	1730		1593	1676	1478
Flt Permitted	0.10	1.00	1.00	0.06	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	195	3539	1583	105	3532		3433	1730		1593	1676	1478
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	1713	1533	134	1525	22	92	11	10	162	126	60
RTOR Reduction (vph)	0	0	187	0	0	0	0	9	0	0	0	52
Lane Group Flow (vph)	16	1713	1346	134	1547	0	92	12	0	162	126	8
Turn Type	pm+pt		Perm	pm+pt			Split			Split		Perm
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	2		2	6								3
Actuated Green, G (s)	113.3	110.1	110.1	124.5	115.7		10.0	10.0		24.6	24.6	24.6
Effective Green, g (s)	113.3	110.1	110.1	124.5	115.7		10.0	10.0		24.6	24.6	24.6
Actuated g/C Ratio	0.63	0.61	0.61	0.69	0.64		0.06	0.06		0.14	0.14	0.14
Clearance Time (s)	6.5	7.0	7.0	6.5	7.0		6.0	6.0		7.0	7.0	7.0
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)	151	2165	968	154	2270		191	96		218	229	202
v/s Ratio Prot	0.00	0.48		c0.04	c0.44		c0.03	0.01		c0.10	0.08	
v/s Ratio Perm	0.07		c0.85	0.56								0.01
v/c Ratio	0.11	0.79	1.39	0.87	0.68		0.48	0.12		0.74	0.55	0.04
Uniform Delay, d1	17.3	26.3	35.0	42.9	20.4		82.5	80.8		74.7	72.5	67.5
Progression Factor	0.94	0.85	0.76	2.45	0.14		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.0	0.3	176.4	26.9	1.0		2.6	0.8		13.6	3.5	0.1
Delay (s)	16.3	22.6	203.1	132.2	3.9		85.1	81.6		88.3	76.0	67.6
Level of Service	B	C	F	F	A		F	F		F	E	E
Approach Delay (s)		107.4			14.1			84.4			80.3	
Approach LOS		F			B			F			F	
Intersection Summary												
HCM Average Control Delay			76.2			HCM Level of Service				E		
HCM Volume to Capacity ratio			1.26									
Actuated Cycle Length (s)			180.0			Sum of lost time (s)			33.5			
Intersection Capacity Utilization			119.5%			ICU Level of Service				H		
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 28: Richmond Hwy & Fairfax Co Pkwy

1/26/2012



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖↗	↕	↕	↖	↖↗	↖
Volume (vph)	135	2215	798	745	786	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	6.5	6.5	4.0	7.0	7.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	1.00
Fr _t	1.00	1.00	1.00	0.85	1.00	0.85
Fl _t Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	3539	3539	1583	3433	1583
Fl _t Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	3539	3539	1583	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	147	2408	867	810	854	8
RTOR Reduction (vph)	0	0	0	0	0	5
Lane Group Flow (vph)	147	2408	867	810	854	3
Turn Type	Prot		Free		pm+ov	
Protected Phases	1	6	2		4	1
Permitted Phases				Free		4
Actuated Green, G (s)	11.4	120.5	102.1	180.0	46.0	57.4
Effective Green, g (s)	11.4	120.5	102.1	180.0	46.0	57.4
Actuated g/C Ratio	0.06	0.67	0.57	1.00	0.26	0.32
Clearance Time (s)	7.0	6.5	6.5		7.0	7.0
Vehicle Extension (s)	3.0	5.0	5.0		3.5	3.0
Lane Grp Cap (vph)	217	2369	2007	1583	877	566
v/s Ratio Prot	0.04	c0.68	0.24		c0.25	0.00
v/s Ratio Perm				0.51		0.00
v/c Ratio	0.68	1.02	0.43	0.51	0.97	0.00
Uniform Delay, d ₁	82.5	29.8	22.3	0.0	66.4	41.8
Progression Factor	1.00	1.00	0.18	1.00	1.00	1.00
Incremental Delay, d ₂	8.1	22.7	0.5	0.9	24.0	0.0
Delay (s)	90.6	52.5	4.5	0.9	90.4	41.8
Level of Service	F	D	A	A	F	D
Approach Delay (s)		54.7	2.8		90.0	
Approach LOS		D	A		F	
Intersection Summary						
HCM Average Control Delay			43.6		HCM Level of Service	D
HCM Volume to Capacity ratio			1.00			
Actuated Cycle Length (s)			180.0		Sum of lost time (s)	13.5
Intersection Capacity Utilization			94.9%		ICU Level of Service	F
Analysis Period (min)			15			
c Critical Lane Group						

No Build 2020 1/26/2012 AM Peak Hour
 %user_name%

Synchro 7 - Report
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HCM Signalized Intersection Capacity Analysis
27: Richmond Hwy & Backlick Rd

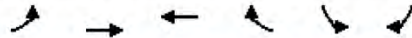
1/26/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	1227	285	7	1715	204	686	73	11	78	17	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	9	9	10
Total Lost time (s)	6.5	7.0	7.0	6.5	7.0		6.0	6.0		7.0	7.0	7.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	1.00		1.00	1.00	1.00
Fr't	1.00	1.00	0.85	1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3483		3433	1826		1593	1676	1478
Flt Permitted	0.05	1.00	1.00	0.09	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	84	3539	1583	165	3483		3433	1826		1593	1676	1478
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	92	1334	310	8	1864	222	746	79	12	85	18	16
RTOR Reduction (vph)	0	0	94	0	5	0	0	3	0	0	0	13
Lane Group Flow (vph)	92	1334	216	8	2081	0	746	88	0	85	18	3
Turn Type	pm+pt		Perm	pm+pt			Split			Split		Perm
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	2		2	6								3
Actuated Green, G (s)	93.5	88.5	88.5	87.5	85.5		30.0	30.0		33.0	33.0	33.0
Effective Green, g (s)	93.5	88.5	88.5	87.5	85.5		30.0	30.0		33.0	33.0	33.0
Actuated g/C Ratio	0.52	0.49	0.49	0.49	0.48		0.17	0.17		0.18	0.18	0.18
Clearance Time (s)	6.5	7.0	7.0	6.5	7.0		6.0	6.0		7.0	7.0	7.0
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)	90	1740	778	98	1654		572	304		292	307	271
v/s Ratio Prot	c0.03	0.38		0.00	c0.60		c0.22	0.05		c0.05	0.01	
v/s Ratio Perm	c0.50		0.14	0.04								0.00
v/c Ratio	1.02	0.77	0.28	0.08	1.26		1.30	0.29		0.29	0.06	0.01
Uniform Delay, d1	45.6	37.3	26.9	30.6	47.2		75.0	65.7		63.4	60.7	60.1
Progression Factor	1.54	1.19	1.65	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	93.7	2.8	0.8	0.5	121.2		149.3	0.7		2.5	0.4	0.1
Delay (s)	163.9	47.3	45.3	31.0	168.4		224.3	66.4		65.9	61.0	60.2
Level of Service	F	D	D	C	F		F	E		E	E	E
Approach Delay (s)		53.1			167.9			207.1			64.4	
Approach LOS		D			F			F			E	
Intersection Summary												
HCM Average Control Delay			130.6			HCM Level of Service				F		
HCM Volume to Capacity ratio			1.10									
Actuated Cycle Length (s)			180.0			Sum of lost time (s)		33.0				
Intersection Capacity Utilization			101.1%			ICU Level of Service		G				
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 28: Richmond Hwy & Fairfax Co Pkwy

1/26/2012



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔↔	↑↑	↑↑	↔	↔↔	↔
Volume (vph)	76	1069	1909	507	528	713
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	6.5	6.5	4.0	7.0	7.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	1.00
Fr _t	1.00	1.00	1.00	0.85	1.00	0.85
Fl _t Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	3539	3539	1583	3433	1583
Fl _t Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	3539	3539	1583	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	83	1162	2075	551	574	775
RTOR Reduction (vph)	0	0	0	0	0	3
Lane Group Flow (vph)	83	1162	2075	551	574	772
Turn Type	Prot		Free		pm+ov	
Protected Phases	1	6	2		4	1
Permitted Phases				Free		4
Actuated Green, G (s)	5.0	106.5	94.5	180.0	60.0	65.0
Effective Green, g (s)	5.0	106.5	94.5	180.0	60.0	65.0
Actuated g/C Ratio	0.03	0.59	0.52	1.00	0.33	0.36
Clearance Time (s)	7.0	6.5	6.5		7.0	7.0
Vehicle Extension (s)	3.0	5.0	5.0		3.5	3.0
Lane Grp Cap (vph)	95	2094	1858	1583	1144	633
v/s Ratio Prot	0.02	0.33	c0.59		0.17	c0.03
v/s Ratio Perm				0.35		0.45
v/c Ratio	0.87	0.55	1.12	0.35	0.50	1.22
Uniform Delay, d ₁	87.2	22.3	42.8	0.0	48.0	57.5
Progression Factor	1.05	0.79	0.41	1.00	1.00	1.00
Incremental Delay, d ₂	51.7	1.0	53.4	0.1	0.4	113.0
Delay (s)	143.6	18.8	70.8	0.1	48.4	170.5
Level of Service	F	B	E	A	D	F
Approach Delay (s)		27.1	55.9		118.5	
Approach LOS		C	E		F	
Intersection Summary						
HCM Average Control Delay			65.2		HCM Level of Service	E
HCM Volume to Capacity ratio			1.16			
Actuated Cycle Length (s)			180.0		Sum of lost time (s)	13.5
Intersection Capacity Utilization			108.2%		ICU Level of Service	G
Analysis Period (min)			15			
c Critical Lane Group						

No Build 2020 1/26/2012 PM Peak Hour
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2020 BUILD ALTERNATIVE

INTERSECTION MOE SUMMARY TABLES

HCM-BASED OUTPUTS

HCM Signalized Intersection Capacity Analysis
 27: Richmond Hwy & Backlick Rd

1/26/2012

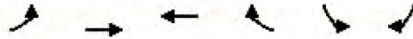
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	2039	1499	118	1668	20	86	10	9	108	56	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	9	9	10
Total Lost time (s)	6.5	7.0	7.0	6.5	7.0	7.0	6.0	6.0		7.0	7.0	7.0
Lane Util. Factor	1.00	0.91	0.88	1.00	0.91	1.00	0.97	1.00		1.00	1.00	1.00
Fr't	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	2787	1770	5085	1583	3433	1730		1593	1676	1478
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	2787	1770	5085	1583	3433	1730		1593	1676	1478
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	2216	1629	128	1813	22	93	11	10	117	61	60
RTOR Reduction (vph)	0	0	0	0	0	8	0	9	0	0	0	53
Lane Group Flow (vph)	16	2216	1629	128	1813	14	93	12	0	117	61	7
Turn Type	Prot		Perm	Prot		Perm	Split			Split		Perm
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			2			6						3
Actuated Green, G (s)	4.7	104.2	104.2	18.4	117.9	117.9	11.3	11.3		19.6	19.6	19.6
Effective Green, g (s)	4.7	104.2	104.2	18.4	117.9	117.9	11.3	11.3		19.6	19.6	19.6
Actuated g/C Ratio	0.03	0.58	0.58	0.10	0.66	0.66	0.06	0.06		0.11	0.11	0.11
Clearance Time (s)	6.5	7.0	7.0	6.5	7.0	7.0	6.0	6.0		7.0	7.0	7.0
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)	46	2944	1613	181	3331	1037	216	109		173	182	161
v/s Ratio Prot	0.01	0.44		c0.07	0.36		c0.03	0.01		c0.07	0.04	
v/s Ratio Perm			c0.58			0.01						0.00
v/c Ratio	0.35	0.75	1.01	0.71	0.54	0.01	0.43	0.11		0.68	0.34	0.04
Uniform Delay, d1	86.1	28.3	37.9	78.2	16.6	10.8	81.3	79.6		77.1	74.2	71.8
Progression Factor	0.99	0.79	0.82	1.38	0.06	0.01	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.3	1.0	18.9	9.9	0.5	0.0	1.9	0.6		10.9	1.5	0.1
Delay (s)	89.0	23.3	49.8	118.0	1.5	0.1	83.1	80.2		88.0	75.7	71.9
Level of Service	F	C	D	F	A	A	F	F		F	E	E
Approach Delay (s)		34.7			9.1			82.6			80.8	
Approach LOS		C			A			F			F	

Intersection Summary			
HCM Average Control Delay	29.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	26.5
Intersection Capacity Utilization	84.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
28: Richmond Hwy & Fairfax Co Pkwy

























1/26/2012



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	299	2561	978	831	992	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	6.5	6.5	6.5	7.0	7.0
Lane Util. Factor	0.97	0.91	0.91	0.88	0.94	0.88
Fr _t	1.00	1.00	1.00	0.85	1.00	0.85
Fit Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	5085	5085	2787	4990	2787
Fit Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	5085	5085	2787	4990	2787
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	325	2784	1063	903	1078	21
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	325	2784	1063	903	1078	21
Turn Type	Prot			pt+ov		pm+ov
Protected Phases	1	6	2	2 4	4	1
Permitted Phases						4
Actuated Green, G (s)	21.7	117.7	89.0	144.3	48.8	70.5
Effective Green, g (s)	21.7	117.7	89.0	144.3	48.8	70.5
Actuated g/C Ratio	0.12	0.65	0.49	0.80	0.27	0.39
Clearance Time (s)	7.0	6.5	6.5		7.0	7.0
Vehicle Extension (s)	3.0	5.0	5.0		3.5	3.0
Lane Grp Cap (vph)	414	3325	2514	2234	1353	1200
v/s Ratio Prot	0.09	c0.55	0.21	0.32	c0.22	0.00
v/s Ratio Perm						0.01
v/c Ratio	0.79	0.84	0.42	0.40	0.80	0.02
Uniform Delay, d1	76.9	23.8	29.1	5.2	61.0	33.5
Progression Factor	1.00	1.00	0.24	0.73	1.00	1.00
Incremental Delay, d2	9.4	2.7	0.5	0.1	3.4	0.0
Delay (s)	86.3	26.5	7.4	3.9	64.4	33.5
Level of Service	F	C	A	A	E	C
Approach Delay (s)		32.8	5.8		63.8	
Approach LOS		C	A		E	
Intersection Summary						
HCM Average Control Delay			29.7		HCM Level of Service	C
HCM Volume to Capacity ratio			0.83			
Actuated Cycle Length (s)			180.0		Sum of lost time (s)	13.5
Intersection Capacity Utilization			79.6%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis
 27: Richmond Hwy & Backlick Rd

1/26/2012

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	1529	289	9	2149	162	720	47	14	51	11	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	9	9	10
Total Lost time (s)	6.5	7.0	7.0	6.5	7.0	7.0	6.0	6.0		7.0	7.0	7.0
Lane Util. Factor	1.00	0.91	0.88	1.00	0.91	1.00	0.97	1.00		1.00	1.00	1.00
Flt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	2787	1770	5085	1583	3433	1799		1593	1676	1478
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	2787	1770	5085	1583	3433	1799		1593	1676	1478
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	92	1662	314	10	2336	176	783	51	15	55	12	16
RTOR Reduction (vph)	0	0	0	0	0	86	0	6	0	0	0	13
Lane Group Flow (vph)	92	1662	314	10	2336	90	783	60	0	55	12	3
Turn Type	Prot		Perm	Prot		Perm	Split			Split		Perm
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			2			6						3
Actuated Green, G (s)	9.2	82.5	82.5	2.0	75.3	75.3	36.0	36.0		33.0	33.0	33.0
Effective Green, g (s)	9.2	82.5	82.5	2.0	75.3	75.3	36.0	36.0		33.0	33.0	33.0
Actuated g/C Ratio	0.05	0.46	0.46	0.01	0.42	0.42	0.20	0.20		0.18	0.18	0.18
Clearance Time (s)	6.5	7.0	7.0	6.5	7.0	7.0	6.0	6.0		7.0	7.0	7.0
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)	90	2331	1277	20	2127	662	687	360		292	307	271
v/s Ratio Prot	c0.05	c0.33		0.01	c0.46		c0.23	0.03		c0.03	0.01	
v/s Ratio Perm			0.11			0.06						0.00
v/c Ratio	1.02	0.71	0.25	0.50	1.10	0.14	1.14	0.17		0.19	0.04	0.01
Uniform Delay, d1	85.4	39.2	29.8	88.5	52.4	32.3	72.0	59.6		62.2	60.5	60.1
Progression Factor	1.04	0.92	0.99	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	96.6	1.7	0.4	24.4	52.2	0.4	79.7	0.3		1.4	0.2	0.1
Delay (s)	185.5	37.8	29.9	112.9	104.6	32.7	151.7	59.9		63.6	60.7	60.2
Level of Service	F	D	C	F	F	C	F	E		E	E	E
Approach Delay (s)		43.1			99.6			144.6			62.5	
Approach LOS		D			F			F			E	

Intersection Summary			
HCM Average Control Delay	84.8	HCM Level of Service	F
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	33.5
Intersection Capacity Utilization	89.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 28: Richmond Hwy & Fairfax Co Pkwy

1/26/2012



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔↔	↑↑↑	↑↑↑	↔↔	↔↔↔	↔↔
Volume (vph)	132	1317	2267	617	586	1065
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	6.5	6.5	6.5	7.0	7.0
Lane Util. Factor	0.97	0.91	0.91	0.88	0.94	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	5085	5085	2787	4990	2787
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	5085	5085	2787	4990	2787
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	143	1432	2464	671	637	1158
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	143	1432	2464	671	637	1158
Turn Type	Prot			pt+ov		pm+ov
Protected Phases	1	6	2	2 4	4	1
Permitted Phases						4
Actuated Green, G (s)	9.0	106.5	90.5	157.0	60.0	69.0
Effective Green, g (s)	9.0	106.5	90.5	157.0	60.0	69.0
Actuated g/C Ratio	0.05	0.59	0.50	0.87	0.33	0.38
Clearance Time (s)	7.0	6.5	6.5		7.0	7.0
Vehicle Extension (s)	3.0	5.0	5.0		3.5	3.0
Lane Grp Cap (vph)	172	3009	2557	2431	1663	1177
v/s Ratio Prot	0.04	0.28	c0.48	0.24	0.13	c0.05
v/s Ratio Perm						0.37
v/c Ratio	0.83	0.48	0.96	0.28	0.38	0.98
Uniform Delay, d1	84.7	20.9	43.2	1.9	45.9	54.9
Progression Factor	1.24	0.65	0.31	0.87	1.00	1.00
Incremental Delay, d2	26.8	0.5	1.5	0.0	0.2	22.2
Delay (s)	132.1	14.0	14.8	1.7	46.0	77.2
Level of Service	F	B	B	A	D	E
Approach Delay (s)		24.7	12.0		66.1	
Approach LOS		C	B		E	
Intersection Summary						
HCM Average Control Delay			30.0		HCM Level of Service	C
HCM Volume to Capacity ratio			0.97			
Actuated Cycle Length (s)			180.0		Sum of lost time (s)	13.5
Intersection Capacity Utilization			92.3%		ICU Level of Service	F
Analysis Period (min)			15			
c Critical Lane Group						

Build 2020 PM Peak Hour
 %user_name%

Synchro 7 - Report
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2040 NO-BUILD ALTERNATIVE

INTERSECTION MOE SUMMARY TABLES

HCM-BASED OUTPUTS

HCM Signalized Intersection Capacity Analysis
 27: Richmond Hwy & Backlick Rd

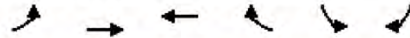
1/26/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕	↵	↵	↕	↵	↵	↕	↵	↵	↕	↵
Volume (vph)	15	1583	1451	127	1416	20	87	10	9	159	131	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	9	9	10
Total Lost time (s)	6.5	7.0	7.0	6.5	7.0		6.0	6.0		7.0	7.0	7.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	1.00		1.00	1.00	1.00
Fr't	1.00	1.00	0.85	1.00	1.00		1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3532		3433	1730		1593	1676	1478
Flt Permitted	0.10	1.00	1.00	0.06	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	185	3539	1583	106	3532		3433	1730		1593	1676	1478
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	1721	1577	138	1539	22	95	11	10	173	142	60
RTOR Reduction (vph)	0	0	171	0	0	0	0	9	0	0	0	52
Lane Group Flow (vph)	16	1721	1406	138	1561	0	95	12	0	173	142	9
Turn Type	pm+pt		Perm	pm+pt			Split			Split		Perm
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	2		2	6								3
Actuated Green, G (s)	113.5	110.5	110.5	122.5	115.0		10.0	10.0		25.5	25.5	25.5
Effective Green, g (s)	113.5	110.5	110.5	122.5	115.0		10.0	10.0		25.5	25.5	25.5
Actuated g/C Ratio	0.63	0.61	0.61	0.68	0.64		0.06	0.06		0.14	0.14	0.14
Clearance Time (s)	6.5	7.0	7.0	6.5	7.0		6.0	6.0		7.0	7.0	7.0
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)	143	2173	972	141	2257		191	96		226	237	209
v/s Ratio Prot	0.00	0.49		c0.04	c0.44		c0.03	0.01		c0.11	0.08	
v/s Ratio Perm	0.07		c0.89	0.63								0.01
v/c Ratio	0.11	0.79	1.45	0.98	0.69		0.50	0.12		0.77	0.60	0.04
Uniform Delay, d1	17.8	26.1	34.8	44.7	21.0		82.6	80.8		74.4	72.5	66.7
Progression Factor	0.95	0.86	0.79	2.81	0.05		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.0	0.3	201.6	49.7	1.0		2.8	0.8		15.1	4.7	0.1
Delay (s)	17.0	22.7	229.0	175.3	2.0		85.3	81.6		89.5	77.2	66.8
Level of Service	B	C	F	F	A		F	F		F	E	E
Approach Delay (s)		120.8			16.0			84.6			81.2	
Approach LOS		F			B			F			F	
Intersection Summary												
HCM Average Control Delay			85.0			HCM Level of Service				F		
HCM Volume to Capacity ratio			1.32									
Actuated Cycle Length (s)			180.0			Sum of lost time (s)			33.5			
Intersection Capacity Utilization			122.3%			ICU Level of Service			H			
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 28: Richmond Hwy & Fairfax Co Pkwy

1/26/2012



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔↔	↑↑	↑↑	↔	↔↔	↔
Volume (vph)	107	2359	866	692	690	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	6.5	6.5	4.0	7.0	7.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	3539	3539	1583	3433	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	3539	3539	1583	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	116	2564	941	752	750	7
RTOR Reduction (vph)	0	0	0	0	0	5
Lane Group Flow (vph)	116	2564	941	752	750	2
Turn Type	Prot			Free		pm+ov
Protected Phases	1	6	2		4	1
Permitted Phases				Free		4
Actuated Green, G (s)	9.6	127.5	110.9	180.0	39.0	48.6
Effective Green, g (s)	9.6	127.5	110.9	180.0	39.0	48.6
Actuated g/C Ratio	0.05	0.71	0.62	1.00	0.22	0.27
Clearance Time (s)	7.0	6.5	6.5		7.0	7.0
Vehicle Extension (s)	3.0	5.0	5.0		3.5	3.0
Lane Grp Cap (vph)	183	2507	2180	1583	744	489
v/s Ratio Prot	0.03	c0.72	0.27		c0.22	0.00
v/s Ratio Perm				0.47		0.00
v/c Ratio	0.63	1.02	0.43	0.48	1.01	0.00
Uniform Delay, d1	83.5	26.2	18.1	0.0	70.5	48.0
Progression Factor	1.00	1.00	0.16	1.00	1.00	1.00
Incremental Delay, d2	7.0	24.0	0.5	0.8	35.0	0.0
Delay (s)	90.5	50.2	3.4	0.8	105.5	48.0
Level of Service	F	D	A	A	F	D
Approach Delay (s)		52.0	2.2		105.0	
Approach LOS		D	A		F	

Intersection Summary			
HCM Average Control Delay		43.4	HCM Level of Service D
HCM Volume to Capacity ratio		1.02	
Actuated Cycle Length (s)		180.0	Sum of lost time (s) 13.5
Intersection Capacity Utilization		96.1%	ICU Level of Service F
Analysis Period (min)		15	
c Critical Lane Group			

No Build 2040 AM Peak Hour
 %user_name%

Synchro 7 - Report
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HCM Signalized Intersection Capacity Analysis
 27: Richmond Hwy & Backlick Rd

1/26/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	1235	295	8	1782	207	734	76	11	85	19	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	9	9	10
Total Lost time (s)	6.5	7.0	7.0	6.5	7.0		6.0	6.0		7.0	7.0	7.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3484		3433	1827		1593	1676	1478
Flt Permitted	0.05	1.00	1.00	0.08	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	85	3539	1583	156	3484		3433	1827		1593	1676	1478
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	92	1342	321	9	1937	225	798	83	12	92	21	16
RTOR Reduction (vph)	0	0	97	0	5	0	0	2	0	0	0	13
Lane Group Flow (vph)	92	1342	224	9	2157	0	798	93	0	92	21	3
Turn Type	pm+pt		Perm	pm+pt			Split			Split		Perm
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	2		2	6								3
Actuated Green, G (s)	92.5	87.5	87.5	86.5	84.5		31.0	31.0		33.0	33.0	33.0
Effective Green, g (s)	92.5	87.5	87.5	86.5	84.5		31.0	31.0		33.0	33.0	33.0
Actuated g/C Ratio	0.51	0.49	0.49	0.48	0.47		0.17	0.17		0.18	0.18	0.18
Clearance Time (s)	6.5	7.0	7.0	6.5	7.0		6.0	6.0		7.0	7.0	7.0
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)	90	1720	770	93	1636		591	315		292	307	271
v/s Ratio Prot	c0.03	0.38		0.00	c0.62		c0.23	0.05		c0.06	0.01	
v/s Ratio Perm	c0.49		0.14	0.05								0.00
v/c Ratio	1.02	0.78	0.29	0.10	1.32		1.35	0.29		0.32	0.07	0.01
Uniform Delay, d1	45.2	38.3	27.7	31.4	47.8		74.5	65.0		63.7	60.8	60.1
Progression Factor	1.64	1.06	1.42	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	93.3	3.0	0.8	0.6	147.8		168.6	0.7		2.8	0.4	0.1
Delay (s)	167.5	43.5	40.0	32.1	195.5		243.1	65.7		66.5	61.2	60.2
Level of Service	F	D	D	C	F		F	E		E	E	E
Approach Delay (s)		49.4			194.9			224.2			64.9	
Approach LOS		D			F			F			E	

Intersection Summary			
HCM Average Control Delay	145.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	33.0
Intersection Capacity Utilization	104.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 28: Richmond Hwy & Fairfax Co Pkwy

1/26/2012



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖↗	↕	↕	↖	↖↗	↖
Volume (vph)	76	1171	2096	435	444	687
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	6.5	6.5	4.0	7.0	7.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	1.00
Fr _t	1.00	1.00	1.00	0.85	1.00	0.85
Fl _t Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	3539	3539	1583	3433	1583
Fl _t Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	3539	3539	1583	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	83	1273	2278	473	483	747
RTOR Reduction (vph)	0	0	0	0	0	2
Lane Group Flow (vph)	83	1273	2278	473	483	745
Turn Type	Prot		Free		pm+ov	
Protected Phases	1	6	2		4	1
Permitted Phases				Free		4
Actuated Green, G (s)	5.0	111.5	99.5	180.0	55.0	60.0
Effective Green, g (s)	5.0	111.5	99.5	180.0	55.0	60.0
Actuated g/C Ratio	0.03	0.62	0.55	1.00	0.31	0.33
Clearance Time (s)	7.0	6.5	6.5		7.0	7.0
Vehicle Extension (s)	3.0	5.0	5.0		3.5	3.0
Lane Grp Cap (vph)	95	2192	1956	1583	1049	589
v/s Ratio Prot	0.02	0.36	c0.64		0.14	c0.04
v/s Ratio Perm				0.30		0.44
v/c Ratio	0.87	0.58	1.16	0.30	0.46	1.26
Uniform Delay, d ₁	87.2	20.4	40.2	0.0	50.5	60.0
Progression Factor	1.12	0.62	0.37	1.00	1.00	1.00
Incremental Delay, d ₂	51.0	1.1	74.7	0.0	0.4	132.3
Delay (s)	148.6	13.7	89.6	0.0	50.9	192.3
Level of Service	F	B	F	A	D	F
Approach Delay (s)		22.0	74.2		136.8	
Approach LOS		C	E		F	
Intersection Summary						
HCM Average Control Delay			75.4		HCM Level of Service	E
HCM Volume to Capacity ratio			1.20			
Actuated Cycle Length (s)			180.0		Sum of lost time (s)	13.5
Intersection Capacity Utilization			111.7%		ICU Level of Service	H
Analysis Period (min)			15			
c Critical Lane Group						

No Build 2040 PM Peak Hour
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2040 BUILD ALTERNATIVE

INTERSECTION MOE SUMMARY TABLES

HCM-BASED OUTPUTS

HCM Signalized Intersection Capacity Analysis
 27: Richmond Hwy & Backlick Rd

1/26/2012

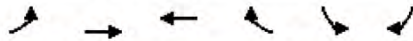
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	2072	1575	131	1688	20	91	10	10	104	56	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	9	9	10
Total Lost time (s)	6.5	7.0	7.0	6.5	7.0	7.0	6.0	6.0		7.0	7.0	7.0
Lane Util. Factor	1.00	0.91	0.88	1.00	0.91	1.00	0.97	1.00		1.00	1.00	1.00
Fr't	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	2787	1770	5085	1583	3433	1723		1593	1676	1478
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	2787	1770	5085	1583	3433	1723		1593	1676	1478
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	2252	1712	142	1835	22	99	11	11	113	61	60
RTOR Reduction (vph)	0	0	0	0	0	8	0	10	0	0	0	54
Lane Group Flow (vph)	16	2252	1712	142	1835	14	99	12	0	113	61	6
Turn Type	Prot		Perm	Prot		Perm	Split			Split		Perm
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			2			6						3
Actuated Green, G (s)	4.6	103.2	103.2	19.4	118.0	118.0	11.8	11.8		19.1	19.1	19.1
Effective Green, g (s)	4.6	103.2	103.2	19.4	118.0	118.0	11.8	11.8		19.1	19.1	19.1
Actuated g/C Ratio	0.03	0.57	0.57	0.11	0.66	0.66	0.07	0.07		0.11	0.11	0.11
Clearance Time (s)	6.5	7.0	7.0	6.5	7.0	7.0	6.0	6.0		7.0	7.0	7.0
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)	45	2915	1598	191	3334	1038	225	113		169	178	157
v/s Ratio Prot	0.01	0.44		c0.08	0.36		c0.03	0.01		c0.07	0.04	
v/s Ratio Perm			c0.61			0.01						0.00
v/c Ratio	0.36	0.77	1.07	0.74	0.55	0.01	0.44	0.10		0.67	0.34	0.04
Uniform Delay, d1	86.2	29.4	38.4	77.9	16.7	10.8	80.9	79.1		77.4	74.6	72.2
Progression Factor	1.02	0.78	0.80	1.43	0.04	0.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.3	1.0	39.0	11.5	0.5	0.0	1.9	0.6		10.5	1.6	0.1
Delay (s)	90.8	24.1	69.6	122.6	1.1	0.0	82.8	79.7		87.9	76.2	72.4
Level of Service	F	C	E	F	A	A	F	E		F	E	E
Approach Delay (s)		43.9			9.8			82.2			80.9	
Approach LOS		D			A			F			F	

Intersection Summary		
HCM Average Control Delay	35.2	HCM Level of Service D
HCM Volume to Capacity ratio	0.93	
Actuated Cycle Length (s)	180.0	Sum of lost time (s) 26.5
Intersection Capacity Utilization	87.8%	ICU Level of Service E
Analysis Period (min)	15	

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 28: Richmond Hwy & Fairfax Co Pkwy

1/26/2012



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	216	2860	1092	742	802	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	6.5	6.5	6.5	7.0	7.0
Lane Util. Factor	0.97	0.91	0.91	0.88	0.94	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	5085	5085	2787	4990	2787
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	5085	5085	2787	4990	2787
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	235	3109	1187	807	872	14
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	235	3109	1187	807	872	14
Turn Type	Prot			pt+ov		pm+ov
Protected Phases	1	6	2	2 4	4	1
Permitted Phases						4
Actuated Green, G (s)	16.9	127.8	103.9	149.1	38.7	55.6
Effective Green, g (s)	16.9	127.8	103.9	149.1	38.7	55.6
Actuated g/C Ratio	0.09	0.71	0.58	0.83	0.22	0.31
Clearance Time (s)	7.0	6.5	6.5		7.0	7.0
Vehicle Extension (s)	3.0	5.0	5.0		3.5	3.0
Lane Grp Cap (vph)	322	3610	2935	2309	1073	969
v/s Ratio Prot	0.07	c0.61	0.23	0.29	c0.17	0.00
v/s Ratio Perm						0.00
v/c Ratio	0.73	0.86	0.40	0.35	0.81	0.01
Uniform Delay, d1	79.3	19.5	21.0	3.7	67.2	43.2
Progression Factor	1.00	1.00	0.24	0.77	1.00	1.00
Incremental Delay, d2	8.0	3.0	0.4	0.1	4.9	0.0
Delay (s)	87.4	22.4	5.5	3.0	72.1	43.2
Level of Service	F	C	A	A	E	D
Approach Delay (s)		27.0	4.5		71.7	
Approach LOS		C	A		E	
Intersection Summary						
HCM Average Control Delay			26.1		HCM Level of Service	C
HCM Volume to Capacity ratio			0.85			
Actuated Cycle Length (s)			180.0		Sum of lost time (s)	13.5
Intersection Capacity Utilization			81.8%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis

27: Richmond Hwy & Backlick Rd

1/26/2012

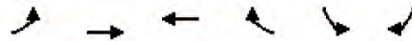
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	1558	305	10	2266	161	792	48	15	48	10	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	9	9	10
Total Lost time (s)	6.5	7.0	7.0	6.5	7.0	7.0	6.0	6.0		7.0	7.0	7.0
Lane Util. Factor	1.00	0.91	0.88	1.00	0.91	1.00	0.97	1.00		1.00	1.00	1.00
Fr't	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	2787	1770	5085	1583	3433	1797		1593	1676	1478
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	2787	1770	5085	1583	3433	1797		1593	1676	1478
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	92	1693	332	11	2463	175	861	52	16	52	11	16
RTOR Reduction (vph)	0	0	0	0	0	81	0	6	0	0	0	13
Lane Group Flow (vph)	92	1693	332	11	2463	94	861	62	0	52	11	3
Turn Type	Prot		Perm	Prot		Perm	Split			Split		Perm
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases			2			6						3
Actuated Green, G (s)	8.8	80.4	80.4	2.1	73.7	73.7	38.0	38.0		33.0	33.0	33.0
Effective Green, g (s)	8.8	80.4	80.4	2.1	73.7	73.7	38.0	38.0		33.0	33.0	33.0
Actuated g/C Ratio	0.05	0.45	0.45	0.01	0.41	0.41	0.21	0.21		0.18	0.18	0.18
Clearance Time (s)	6.5	7.0	7.0	6.5	7.0	7.0	6.0	6.0		7.0	7.0	7.0
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Grp Cap (vph)	87	2271	1245	21	2082	648	725	379		292	307	271
v/s Ratio Prot	c0.05	c0.33		0.01	c0.48		c0.25	0.03		c0.03	0.01	
v/s Ratio Perm			0.12			0.06						0.00
v/c Ratio	1.06	0.75	0.27	0.52	1.18	0.14	1.19	0.16		0.18	0.04	0.01
Uniform Delay, d1	85.6	41.3	31.3	88.5	53.1	33.4	71.0	58.0		62.1	60.4	60.1
Progression Factor	1.12	0.97	1.02	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	107.9	2.1	0.5	27.4	87.6	0.5	98.0	0.3		1.3	0.2	0.1
Delay (s)	203.9	42.3	32.4	115.9	140.8	33.8	169.0	58.3		63.4	60.6	60.2
Level of Service	F	D	C	F	F	C	F	E		E	E	E
Approach Delay (s)		47.7			133.6			160.9			62.4	
Approach LOS		D			F			F			E	

Intersection Summary		
HCM Average Control Delay	105.5	HCM Level of Service F
HCM Volume to Capacity ratio	1.01	
Actuated Cycle Length (s)	180.0	Sum of lost time (s) 33.5
Intersection Capacity Utilization	94.0%	ICU Level of Service F
Analysis Period (min)	15	

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 28: Richmond Hwy & Fairfax Co Pkwy

1/26/2012



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↑↑↑	↑↑↑	↔	↔	↔
Volume (vph)	131	1517	2598	475	431	975
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	6.5	6.5	6.5	7.0	7.0
Lane Util. Factor	0.97	0.91	0.91	0.88	0.94	0.88
Fr't	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	5085	5085	2787	4990	2787
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	5085	5085	2787	4990	2787
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	142	1649	2824	516	468	1060
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	142	1649	2824	516	468	1060
Turn Type	Prot			pt+ov		pm+ov
Protected Phases	1	6	2	2 4	4	1
Permitted Phases						4
Actuated Green, G (s)	9.0	115.5	99.5	157.0	51.0	60.0
Effective Green, g (s)	9.0	115.5	99.5	157.0	51.0	60.0
Actuated g/C Ratio	0.05	0.64	0.55	0.87	0.28	0.33
Clearance Time (s)	7.0	6.5	6.5		7.0	7.0
Vehicle Extension (s)	3.0	5.0	5.0		3.5	3.0
Lane Grp Cap (vph)	172	3263	2811	2431	1414	1037
v/s Ratio Prot	0.04	0.32	c0.56	0.19	0.09	c0.05
v/s Ratio Perm						0.33
v/c Ratio	0.83	0.51	1.00	0.21	0.33	1.02
Uniform Delay, d1	84.7	17.1	40.2	1.8	51.0	60.0
Progression Factor	1.11	0.72	0.19	1.30	1.00	1.00
Incremental Delay, d2	25.3	0.5	6.2	0.0	0.2	33.7
Delay (s)	119.1	12.9	13.8	2.3	51.2	93.7
Level of Service	F	B	B	A	D	F
Approach Delay (s)		21.3	12.0		80.7	
Approach LOS		C	B		F	
Intersection Summary						
HCM Average Control Delay			30.3		HCM Level of Service	C
HCM Volume to Capacity ratio			1.01			
Actuated Cycle Length (s)			180.0		Sum of lost time (s)	13.5
Intersection Capacity Utilization			95.6%		ICU Level of Service	F
Analysis Period (min)			15			
c	Critical Lane Group					

Build 2040 PM Peak Hour
 %user_name%

Synchro 7 - Report
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Appendix B Turning Movement Summary Spreadsheet

Turning Movements

#	Intersection Name (N/S & E/W)	Year	Scenario	Constrained?	Prd.	Start Hour	Movements												Totals by Leg												Misc. Vols.					
							NB			SB			EB			WB			N			S			E			W			Averages		Totals			
							L	T	R	L	T	R	L	T	R	L	T	R	IN	OUT	TTL	IN	OUT	TTL	IN	OUT	TTL	IN	OUT	TTL	N-S	E-W	In	Out		
#27	Richmond Hwy & Backlick Rd	2012	Existing	Y	AM	7:00	110	5	5	210	165	5	0	1695	1065	215	1330	45	380	50	430	120	1445	1565	1590	1910	3500	2760	1445	4205	998	3853	4850	4850		
							PM	16:00	1000	15	35	115	15	10	5	1280	135	65	1645	155	140	175	315	1050	215	1265	1865	1430	3295	1420	2655	4075	790	3685	4475	4475
							PM	17:00	1040	15	25	140	25	10	5	1535	120	65	1710	90	175	110	285	1080	210	1290	1865	1700	3565	1660	2760	4420	788	3993	4780	4780
		2020	No Build		AM	85	10	9	149	116	55	15	1576	1310	123	1403	20	320	45	365	104	1549	1653	1546	1734	3280	2901	1543	4444	1009	3862	4871	4871			
						PM	686	73	11	78	17	15	85	1227	285	7	1715	204	110	362	472	770	309	1079	1926	1316	3242	1597	2416	4013	776	3628	4403	4403		
		2020	Build		AM	86	10	9	108	56	55	15	2039	1499	118	1668	20	219	45	264	105	1673	1778	1806	2156	3962	3553	1809	5362	1021	4662	5683	5683			
						PM	720	47	14	51	11	15	85	1529	289	9	2149	162	77	294	371	781	309	1090	2320	1594	3914	1903	2884	4787	731	4351	5081	5081		
		2040	No Build		AM	87	10	9	159	131	55	15	1583	1451	127	1416	20	345	45	390	106	1709	1815	1563	1751	3314	3049	1558	4607	1103	3961	5063	5063			
						PM	734	76	11	85	19	15	85	1235	295	8	1782	207	119	368	487	821	322	1143	1997	1331	3328	1615	2531	4146	815	3737	4552	4552		
		2040	Build		AM	91	10	10	104	56	55	15	2072	1575	131	1688	20	215	45	260	111	1762	1873	1839	2186	4025	3662	1834	5496	1067	4761	5827	5827			
						PM	792	48	15	48	10	15	85	1558	305	10	2266	161	73	294	367	855	325	1180	2437	1621	4058	1948	3073	5021	774	4540	5313	5313		
		#28	Richmond Hwy & Fairfax Co Pkwy	2012	Existing	Y	AM	7:00	830			15	285	1930			595	850	845	1135	1980	0	0	0	1445	2760	4205	2215	610	2825	990	3515	4505	4505		
PM	16:00								735			655	40	685			2020	635	1390	675	2065	0	0	0	2655	1420	4075	725	2675	3400	1033	3738	4770	4770		
PM	17:00								785			555	50	875			2035	725	1340	775	2115	0	0	0	2760	1660	4420	925	2590	3515	1058	3968	5025	5025		
2020	No Build				AM	786			7	135	2215			798	745	793	880	1673	0	0	0	1543	3001	4544	2350	805	3155	837	3850	4686	4686					
						PM	528			713	76	1069			1909	507	1241	583	1824	0	0	0	2416	1597	4013	1145	2622	3767	912	3890	4802	4802				
2020	Build				AM	992			19	299	2561			978	831	1011	1130	2141	0	0	0	1809	3553	5362	2860	997	3857	1071	4610	5680	5680					
						PM	586			1065	132	1317			2267	617	1651	749	2400	0	0	0	2884	1903	4787	1449	3332	4781	1200	4784	5984	5984				
2040	No Build				AM	690			6	107	2359			866	692	696	799	1495	0	0	0	1558	3049	4607	2466	872	3338	748	3973	4720	4720					
						PM	444			687	76	1171			2096	435	1131	511	1642	0	0	0	2531	1615	4146	1247	2783	4030	821	4088	4909	4909				
2040	Build				AM	802			13	216	2860			1092	742	815	958	1773	0	0	0	1834	3662	5496	3076	1105	4181	887	4839	5725	5725					
						PM	431			975	131	1517			2598	475	1406	606	2012	0	0	0	3073	1948	5021	1648	3573	5221	1006	5121	6127	6127				

Appendix C Estimated/Predicted Travel Speeds

Environmental traffic

Date:	4/19/2012	Prepared by:	PTG
Project:	Environmental Assessment for Route 1 Widening at Fort Belvoir		

Location Info	Display Code:	M5	Type:	Segment	Distance (mi):	0.86
	Facility: Route 1 NB					
	From: Pohick Rd			To: Belvoir Rd		

		2011	2020		2040	
		No Build	No Build	Build	No Build	Build
		2011 No Build	2020 No Build	2020 Build	2040 No Build	2040 Build
Speed (mph)	12 AM	50	50	50	50	50
	1 AM	50	50	50	50	50
	2 AM	50	50	50	50	50
	3 AM	50	50	50	50	50
	4 AM	50	50	50	50	50
	5 AM	49	49	50	49	50
	6 AM	40	43	45	43	45
	7 AM	35	38	42	38	42
	8 AM	40	42	45	42	45
	9 AM	43	43	45	43	45
	10 AM	46	46	48	46	47
	11 AM	46	46	48	46	48
	12 PM	45	45	47	45	47
	1 PM	46	46	47	46	47
	2 PM	45	45	47	45	47
	3 PM	44	44	46	44	46
	4 PM	43	44	46	43	46
	5 PM	40	41	44	40	44
6 PM	43	44	46	43	46	
7 PM	47	47	48	47	48	
8 PM	49	48	49	48	49	
9 PM	49	48	49	48	49	
10 PM	49	49	50	49	50	
11 PM	50	50	50	50	50	

Environmental traffic

Date:	4/19/2012	Prepared by:	PTG
Project:	Environmental Assessment for Route 1 Widening at Fort Belvoir		

Location Info	Display Code:	M6	Type:	Segment	Distance (mi):	0.86
	Facility: Route 1 SB					
	From: Belvoir Rd			To: Pohick Rd		

		2011	2020		2040	
		No Build	No Build	Build	No Build	Build
		2011 No Build	2020 No Build	2020 Build	2040 No Build	2040 Build
Speed (mph)	12 AM	50	50	50	50	50
	1 AM	50	50	50	50	50
	2 AM	50	50	50	50	50
	3 AM	50	50	50	50	50
	4 AM	50	50	50	50	50
	5 AM	49	49	49	49	49
	6 AM	43	44	46	43	46
	7 AM	41	41	45	41	45
	8 AM	43	43	46	43	46
	9 AM	46	46	48	46	48
	10 AM	46	46	48	46	48
	11 AM	46	46	48	46	48
	12 PM	45	45	47	45	47
	1 PM	45	45	47	44	47
	2 PM	43	43	46	43	46
	3 PM	39	39	43	38	43
	4 PM	35	36	41	35	40
5 PM	40	41	45	41	44	
6 PM	40	41	45	40	44	
7 PM	46	46	47	45	47	
8 PM	48	48	49	48	49	
9 PM	48	48	49	48	49	
10 PM	50	50	50	50	50	
11 PM	50	50	50	50	50	

Environmental traffic

Date:	4/19/2012	Prepared by:	PTG
Project:	Environmental Assessment for Route 1 Widening at Fort Belvoir		

Location Info	Display Code:	M7	Type:	Segment	Distance (mi):	0.24
	Facility: Route 1 NB					
	From: Fairfax County Pkwy			To: Pohick Rd		

		2011	2020		2040	
		No Build	No Build	Build	No Build	Build
		2011 No Build	2020 No Build	2020 Build	2040 No Build	2040 Build
Speed (mph)	12 AM	55	55	55	55	55
	1 AM	55	55	55	55	55
	2 AM	55	55	55	55	55
	3 AM	55	55	55	55	55
	4 AM	55	55	55	55	55
	5 AM	47	48	51	48	51
	6 AM	30	31	39	30	38
	7 AM	24	25	33	24	32
	8 AM	29	30	38	29	37
	9 AM	37	38	44	38	44
	10 AM	45	46	50	46	49
	11 AM	46	47	50	47	50
	12 PM	45	46	49	45	49
	1 PM	46	47	50	47	50
	2 PM	45	46	50	46	49
	3 PM	46	47	50	47	50
	4 PM	47	45	49	45	49
5 PM	43	41	46	41	46	
6 PM	46	44	48	44	48	
7 PM	51	52	53	51	53	
8 PM	53	53	54	53	54	
9 PM	53	53	54	53	54	
10 PM	54	54	55	54	55	
11 PM	55	55	55	55	55	

Environmental traffic

Date:	4/19/2012	Prepared by:	PTG
Project:	Environmental Assessment for Route 1 Widening at Fort Belvoir		

Location Info	Display Code:	M8	Type:	Segment	Distance (mi):	0.24
	Facility: Route 1 SB					
	From: Pohick Rd			To: Fairfax County Pkwy		

		2011	2020		2040	
		No Build	No Build	Build	No Build	Build
		2011 No Build	2020 No Build	2020 Build	2040 No Build	2040 Build
Speed (mph)	12 AM	55	55	55	55	55
	1 AM	55	55	55	55	55
	2 AM	55	55	55	55	55
	3 AM	55	55	55	55	55
	4 AM	55	55	55	55	55
	5 AM	54	54	54	54	54
	6 AM	50	49	52	49	52
	7 AM	47	45	49	45	49
	8 AM	48	46	50	46	50
	9 AM	49	49	52	49	51
	10 AM	49	49	52	49	51
	11 AM	47	47	51	47	50
	12 PM	46	46	50	46	50
	1 PM	45	46	50	45	49
	2 PM	39	41	46	40	46
	3 PM	33	34	42	33	41
	4 PM	28	32	39	30	37
5 PM	32	38	44	37	43	
6 PM	38	43	48	42	47	
7 PM	48	48	51	48	51	
8 PM	52	52	53	52	53	
9 PM	52	53	54	52	54	
10 PM	54	54	55	54	55	
11 PM	55	55	55	55	55	

Environmental traffic

Date:	4/19/2012	Prepared by:	PTG
Project:	Environmental Assessment for Route 1 Widening at Fort Belvoir		

Location Info	Display Code:	M9	Type:	Segment	Distance (mi):	1.55
	Facility:	Route 1 NB				
	From:	Telegraph Rd		To:	Fairfax County Pkwy	

		2011	2020		2040	
		No Build	No Build	Build	No Build	Build
		2011 No Build	2020 No Build	2020 Build	2040 No Build	2040 Build
Speed (mph)	12 AM	55	55	55	55	55
	1 AM	55	55	55	55	55
	2 AM	55	55	55	55	55
	3 AM	55	55	55	55	55
	4 AM	55	55	55	55	55
	5 AM	46	40	44	38	41
	6 AM	28	27	34	25	32
	7 AM	25	24	31	22	28
	8 AM	32	31	37	29	35
	9 AM	46	40	44	38	41
	10 AM	51	48	50	47	49
	11 AM	51	48	50	47	49
	12 PM	51	47	50	46	48
	1 PM	52	49	51	48	50
	2 PM	51	49	51	48	49
	3 PM	52	50	52	50	51
	4 PM	52	46	49	44	46
5 PM	50	40	44	37	41	
6 PM	51	43	47	41	44	
7 PM	54	53	54	53	54	
8 PM	54	54	54	54	54	
9 PM	55	54	55	54	54	
10 PM	55	55	55	55	55	
11 PM	55	55	55	55	55	

Environmental traffic

Date:	4/19/2012	Prepared by:	PTG
Project:	Environmental Assessment for Route 1 Widening at Fort Belvoir		

Location Info	Display Code:	S11	Type:	Segment	Distance (mi):	0.1
	Facility:	Pohick Rd (Tulley Gate) EB				
	From:	N/A		To:	N/A	

		2011	2020		2040	
		No Build	No Build	Build	No Build	Build
		2011 No Build	2020 No Build	2020 Build	2040 No Build	2040 Build
Speed (mph)	12 AM	35	35	35	35	35
	1 AM	35	35	35	35	35
	2 AM	35	35	35	35	35
	3 AM	35	35	35	35	35
	4 AM	32	32	32	32	32
	5 AM	13	15	15	14	14
	6 AM	14	13	13	13	12
	7 AM	11	11	11	10	10
	8 AM	14	13	13	13	12
	9 AM	16	18	18	17	17
	10 AM	24	26	26	25	25
	11 AM	26	28	28	27	27
	12 PM	24	26	26	25	25
	1 PM	26	28	28	27	27
	2 PM	29	30	30	30	30
	3 PM	31	32	32	32	32
	4 PM	34	33	33	33	33
5 PM	34	33	33	33	33	
6 PM	34	33	33	33	33	
7 PM	33	33	33	33	33	
8 PM	34	34	34	34	34	
9 PM	32	32	32	32	32	
10 PM	34	34	34	34	34	
11 PM	35	35	35	35	35	

Environmental traffic

Date:	4/19/2012	Prepared by:	PTG
Project:	Environmental Assessment for Route 1 Widening at Fort Belvoir		

Location Info	Display Code:	S12	Type:	Segment	Distance (mi):	0.1
	Facility:	Pohick Rd (Tulley Gate) WB				
	From:	N/A		To:	N/A	

		2011	2020		2040	
		No Build	No Build	Build	No Build	Build
		2011 No Build	2020 No Build	2020 Build	2040 No Build	2040 Build
Speed (mph)	12 AM	35	35	35	35	35
	1 AM	35	35	35	35	35
	2 AM	35	35	35	35	35
	3 AM	35	35	35	35	35
	4 AM	35	35	35	35	35
	5 AM	35	35	35	35	35
	6 AM	35	35	35	35	35
	7 AM	35	35	35	35	35
	8 AM	34	34	34	34	34
	9 AM	34	34	34	33	33
	10 AM	33	33	33	32	32
	11 AM	30	30	30	30	30
	12 PM	30	30	30	30	30
	1 PM	30	31	30	30	30
	2 PM	26	26	26	26	25
	3 PM	23	23	23	22	22
	4 PM	18	24	24	23	22
5 PM	22	27	27	26	25	
6 PM	29	31	31	31	31	
7 PM	33	33	33	33	32	
8 PM	34	34	34	34	34	
9 PM	32	32	32	31	31	
10 PM	34	34	34	34	34	
11 PM	35	35	35	35	35	

Environmental traffic

Date:	4/19/2012	Prepared by:	PTG
Project:	Environmental Assessment for Route 1 Widening at Fort Belvoir		

Location Info	Display Code:	S13	Type:	Segment	Distance (mi):	0.1
	Facility: Fairfax County Pkwy EB					
	From: N/A			To: N/A		

		2011	2020		2040	
		No Build	No Build	Build	No Build	Build
		2011 No Build	2020 No Build	2020 Build	2040 No Build	2040 Build
Speed (mph)	12 AM	55	55	55	55	55
	1 AM	55	55	55	55	55
	2 AM	55	55	55	55	55
	3 AM	55	55	55	55	55
	4 AM	55	55	55	55	55
	5 AM	54	54	54	55	54
	6 AM	54	54	54	54	54
	7 AM	52	53	52	54	53
	8 AM	53	54	52	54	54
	9 AM	53	54	53	54	54
	10 AM	53	54	53	54	54
	11 AM	53	54	53	54	54
	12 PM	53	54	53	54	54
	1 PM	53	54	53	54	54
	2 PM	52	54	52	54	53
	3 PM	49	53	50	53	52
	4 PM	47	50	45	51	48
5 PM	48	50	46	51	49	
6 PM	51	53	50	53	52	
7 PM	54	54	54	55	54	
8 PM	54	55	55	55	55	
9 PM	55	55	55	55	55	
10 PM	55	55	55	55	55	
11 PM	55	55	55	55	55	

Environmental traffic

Date:	4/19/2012	Prepared by:	PTG
Project:	Environmental Assessment for Route 1 Widening at Fort Belvoir		

Location Info	Display Code: S14	Type: Segment	Distance (mi): 0.1
	Facility: Fairfax County Pkwy WB		
	From: N/A	To: N/A	

		2011	2020		2040	
		No Build	No Build	Build	No Build	Build
		2011 No Build	2020 No Build	2020 Build	2040 No Build	2040 Build
Speed (mph)	12 AM	55	55	55	55	55
	1 AM	55	55	55	55	55
	2 AM	55	55	55	55	55
	3 AM	55	55	55	55	55
	4 AM	55	55	55	55	55
	5 AM	53	54	53	54	54
	6 AM	50	53	50	53	52
	7 AM	49	52	50	53	52
	8 AM	51	53	52	54	53
	9 AM	51	54	52	54	53
	10 AM	53	54	53	54	54
	11 AM	52	54	53	54	53
	12 PM	52	54	52	54	53
	1 PM	52	54	52	54	53
	2 PM	49	53	51	53	52
	3 PM	49	53	51	53	52
	4 PM	53	54	53	54	54
5 PM	53	54	53	54	54	
6 PM	53	54	53	54	54	
7 PM	54	55	54	55	55	
8 PM	55	55	55	55	55	
9 PM	55	55	55	55	55	
10 PM	55	55	55	55	55	
11 PM	55	55	55	55	55	

Appendix D Relevant Project Listings in Regional Planning Documents

2012 CLRP FY2013-2018 TIP AIR QUALITY CONFORMITY INPUTS
(Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility				Under Const. or ROW acquired?	Compt. Date or Status
						from	to	from	to		
VDOT	VP1a	Widen	US 1	Telegraph Rd.	VA 235 South	2	2	4	6	No	2020
VDOT	VP1u	Widen	US 1	VA 235 South	VA 235 North	2	2	4	6	No	2025
VDOT	VP1p	Widen	US 1 (part of 1/123 interchange)	Occoquan Rd.	Annapolis Way	2	2	4	6	Yes	2017
VDOT	VP2ja	Widen	VA 7 Bypass	VA 7 West	US 15 South (South King St)	5	1	4	6	No	2040
VDOT	VP2j	Widen	VA 7 Bypass	US 15 South (South King St)	VA 7/US 15 East	5	1	4	6	No	2040
VDOT		Construct	VA 7 WB Truck Climbing Lane	VA 9	Business 7 West	5	1	4	5	No	2014 2020
VDOT	VP2m	Widen	VA 7	Reston Avenue	Lewinsville Rd - West Approach to Bridge over	2	2	4	6	No	2025
VDOT	nrs	Construct	VA 7	Bridge over Dulles Toll Road				4	6	No	2030
VDOT	VP2ma		VA 7	Rolling Holly Drive	Reston Avenue			4	6	No	2014
VDOT	VP2L	Widen	VA 7	Dulles Toll Rd.	I-495	2	2	6	8	Yes	2014
VDOT	VP2b	Widen	VA 7	Seven Corners	Bailey's Crossroads	2	2	4	6	No	2025
VDOT	New	Construct	VA 7/15/ Bypass	Overpass at Sycolin Road		1	1	4	4	No	2014
VDOT	New	Construct	VA 7	Overpass at Lexington Drive		1	1	6	6	No	2020
VDOT		Construct	VA 7 interchange	@ VA 659 (Belmont Ridge Rd.)		-	-	-	-	No	2020 2015
VDOT	VP4e	Widen	US 15 (James Madison Highway)	US 29	I-66	2	2	2	4	No	2040
VDOT	VP6h	Widen	VA 28	Fauquier County Line	VA 652 (Fitzwater Dr.)	3	3	2	4	No	2030 2025
VDOT	VP6ka	Widen	VA 28	VA 652 (Fitzwater Dr.)	VA 215 (Vint Hill Rd.) Relocated	3	3	2	4	No	2020 2016
VDOT	VP6kb	Widen	VA 28	VA 215 (Vint Hill Rd.) Relocated	VA 619 (Linton Hall Road)	3	3	2	6	No	2013 2016

Yellow-
NOTE: Shaded areas represent
changes from the 2011 CLRP



U.S. Department
of Transportation

Federal Transit Administration
Region III
1760 Market Street, Suite 500
Philadelphia, PA 19103
215-656-7100
215-656-7260 (fax)

Federal Highway Administration
DC Division
1990 K Street, N.W., Suite 510
Washington, DC 20006
202-219-3570
202-219-3545 (fax)

February 17, 2012

The Honorable Tom M. Turner, Chairman
National Capital Region Transportation Planning Board
c/o Mr. Ronald Kirby, Director of Transportation Planning
Metropolitan Washington Council of Governments
777 North Capital Street, NW, Suite 300
Washington, D.C. 20002-4201

Dear Chairman Turner:

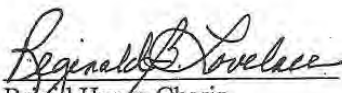
The Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) have completed our review of the 2011 Constrained Long Range Plan (CLRP) for the Washington Metropolitan Region.

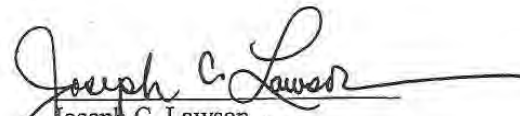
The Environmental Protection Agency (EPA), in a letter to FHWA's District of Columbia Division dated February 13, 2012 for the review of the 1997 8-hour Ozone, Carbon Monoxide and Fine Particulate Matter (PM 2.5) conformity (enclosure), acknowledges its review and includes technical documentation that supports the conformity finding of the region's 2011 CLRP. It is our finding that the analytical results provided by the TPB to demonstrate conformity is consistent with EPA's Transportation Conformity Rule (40 CFR Part 93), as amended.

We find that the 2011 CLRP conform to the region's State Implementation Plans, and that the conformity determination has been performed in accordance with the Transportation Conformity Rule (40 CFR Part 93), as amended.

Any questions concerning this approval action should be directed to Sandra Jackson, of the FHWA District of Columbia Division, at (202) 219-3521 or Melissa Barlow, of the FTA DC Metropolitan Office, at (202) 219-3565.

Sincerely,

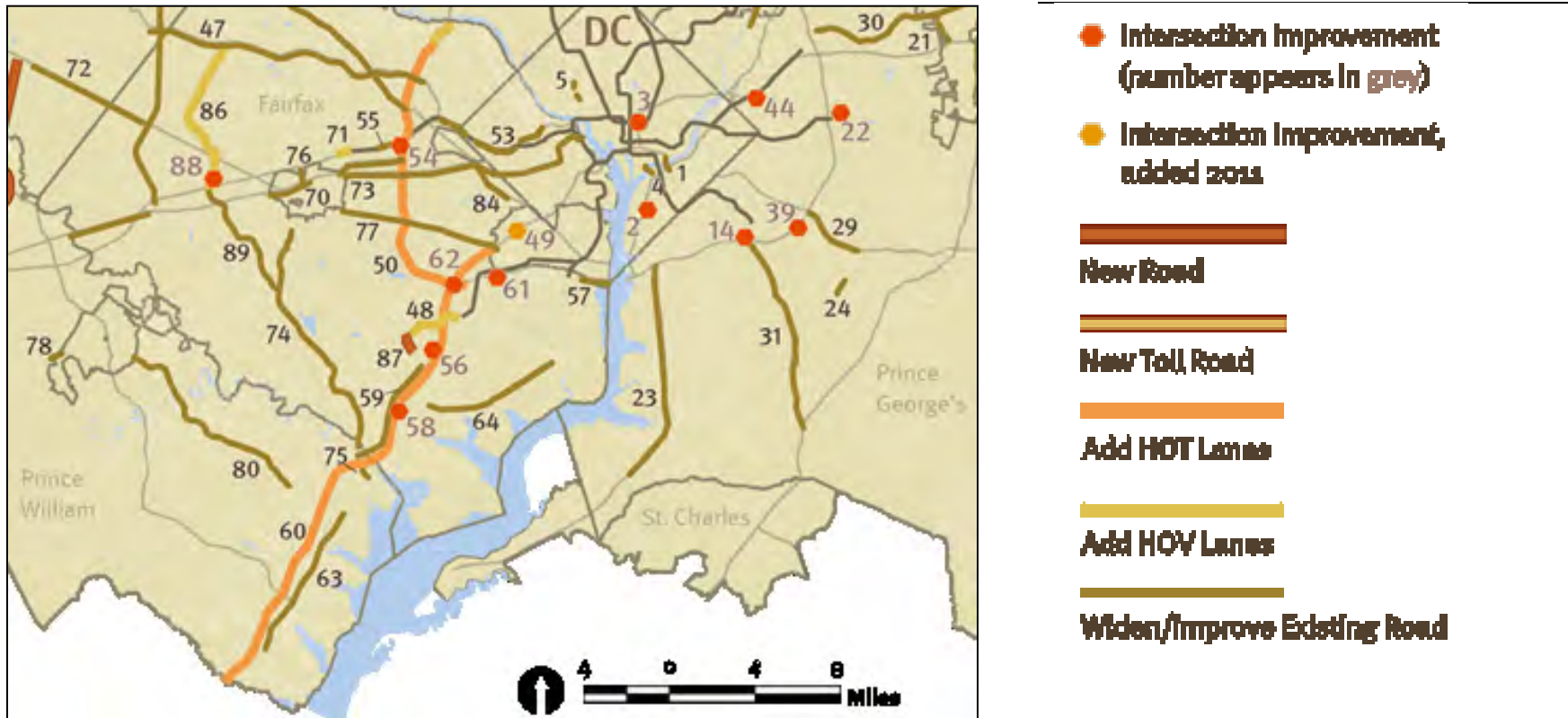

Bridget Hynes-Cherin
Regional Administrator
Federal Transit Administration


Joseph C. Lawson
Division Administrator
Federal Highway Administration

Enclosure

MAJOR HIGHWAY IMPROVEMENTS

The projects shown here reflect the 2011 Update to the CLRP, as it was approved on November 16, 2011.



Virginia

64. US 1, widen to 6 lanes, 2020, 2025

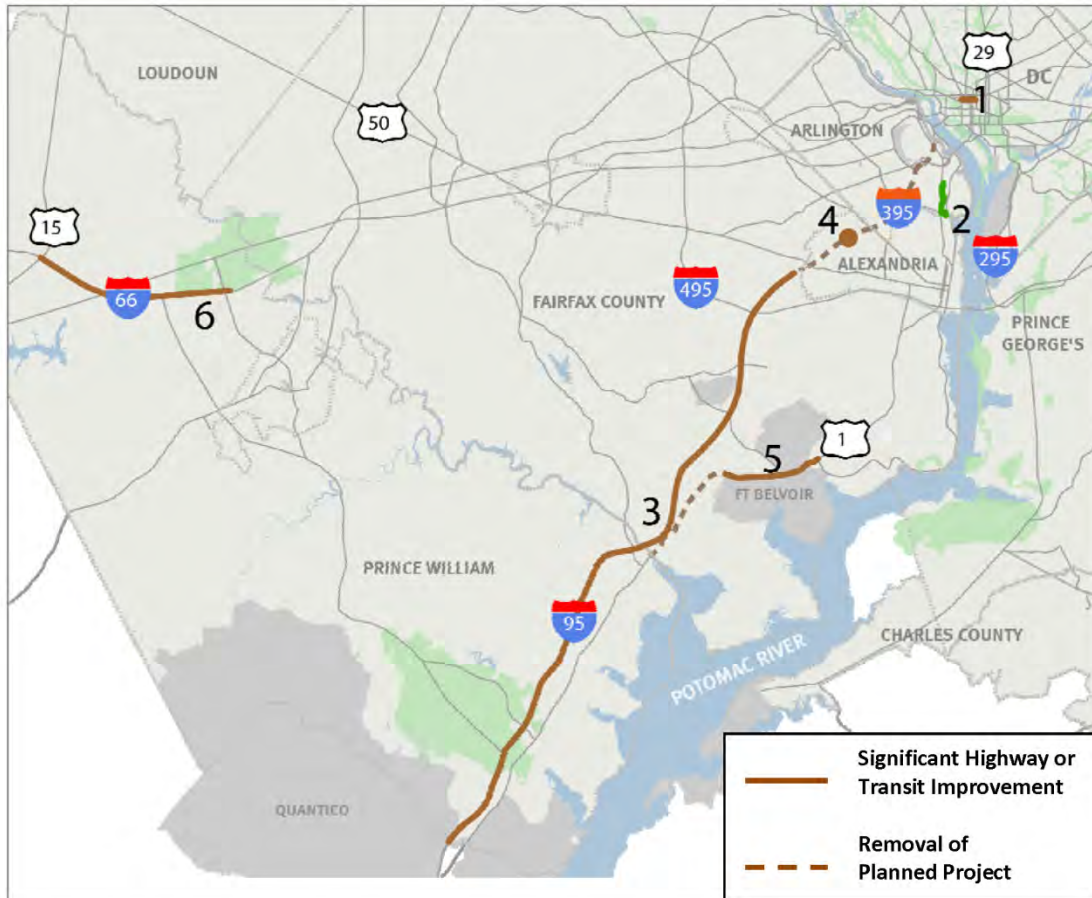
AIR QUALITY CONFORMITY DETERMINATION
OF THE 2011 CONSTRAINED LONG RANGE PLAN
FOR THE
WASHINGTON METROPOLITAN REGION

November 16, 2011

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NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD
METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS

Significant Additions and Changes to The 2011 Update to the Financially Constrained Long-Range Transportation Plan



Significant Additions and Changes to the CLRP

1. H STREET, NW PEAK PERIOD BUS-ONLY LANE
2. CRYSTAL CITY – POTOMAC YARD STREETCAR
3. I-395/I-95 HOV AND HOT LANES PROJECT LIMIT CHANGES
4. I-395 HOV LANES REVERSIBLE RAMP FROM/TO SEMINARY ROAD
5. WIDENING OF US 1 PROJECT LIMIT CHANGE
6. WIDEN I-66 GENERAL PURPOSE AND HOV LANES

DRAFT

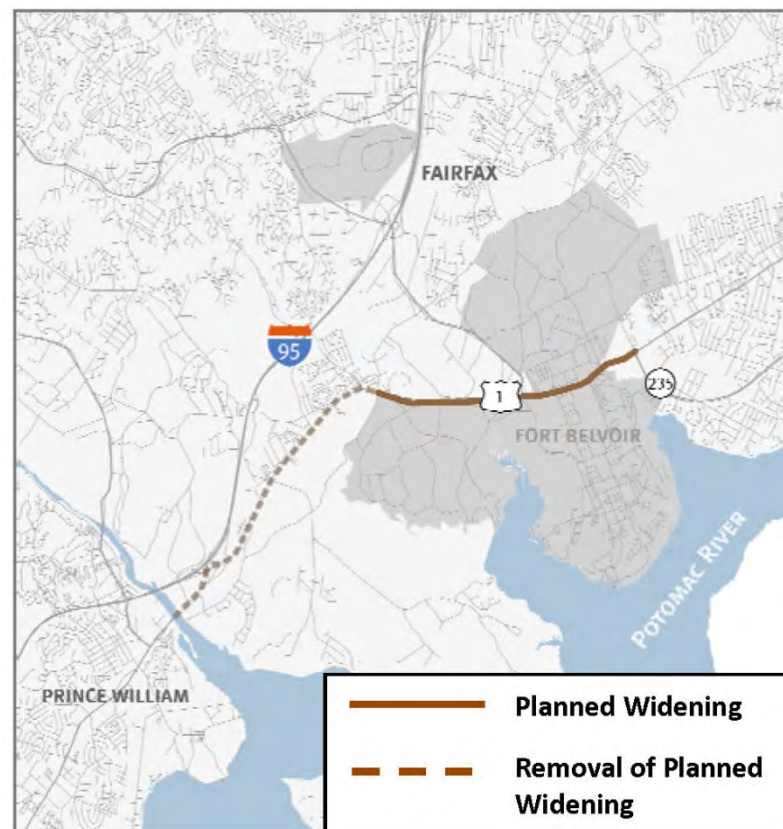
B-5

2/8/2011

5. Widening of US 1 – Project Limit Change from VA 235 South to VA 611

This project is currently included in the CLRP as a widening of US 1 (Richmond Highway) from 4 to 6 lanes from VA 235 South (Mt. Vernon Memorial Highway) to the Occoquan River/Prince William County Line. VDOT is proposing to remove approximately 4 miles of widening from the southern end of the project and change the southern limit to VA 611 (Telegraph Road).

Complete: 2020
Length: 3.5 miles
Funding: Federal and state



2011 CLRP AIR QUALITY CONFORMITY INPUTS (Highway and HOV)

Agency	Project ID	Improv.	Facility	From	To	Facility		Lanes		Under Const. or ROW acquired?	Complt. Date or Status
						from	to	from	to		
						VDOT	part of VI4IHOT	Construct	I-495 HOT Lanes Interchange		
VDOT	part of VI4IHOT	Construct	I-495 HOT Lanes Interchange	EB to NB, WB to NB, SB to EB, and SB to WB	@ VA 620 (Braddock Road)	1	1	-	-	Yes	2013
VDOT	part of VI4IHOTa	Construct	I-495 HOT Lanes Interchange	NB to EB, NB to WB, EB to SB, and WB to SB	@ VA 620 (Braddock Road)	1	1	-	-	Yes	2030
VDOT	MW1	Widen	Dulles Airport Access Road	Dulles Airport	VA 123	1	1	4	6	No	2017
VDOT Primary											
VDOT	VP1ab	Widen	US 1	Joplin Rd.	Brady's Hill Road	2	2	4	6	Yes	2011
VDOT	VP1ad	Widen	US 1	Brady's Hill Road	Cardinal Drive	2	2	4	6	No	2025
VDOT	VP1ae	Widen	US 1	Blackburn Dr/Neabsco Mills Rd	Featherstone Road	2	2	4	6	No	2025
VDOT	VP1a	Widen	US 1	Telegraph Rd.	VA 235 South	2	2	4	6	No	2020
VDOT	VP1u	Widen	US 1	VA 235 South	VA 235 North	2	2	4	6	No	2025
VDOT	VP1p	Widen	US 1 (part of 1/123 interchange)	Occoquan Rd.	Annapolis Way	2	2	4	6	Yes	2017
VDOT	VP2ja	Widen	VA 7 Bypass	VA 7 West	US 15 South (South King St)	5	1	4	6	No	2040
VDOT	VP2j	Widen	VA 7 Bypass	US 15 South (South King St)	VA 7/US 15 East	5	1	4	6	No	2040
VDOT		Construct	VA 7 WB Truck Climbing Lane	VA 9	Business 7 West	5	1	4	5	No	2020
VDOT	VP2m	Widen	VA 7	Reston Avenue	Lewinsville Road	2	2	4	6	No	2025
VDOT	nrs	Construct	VA 7	Bridge over Dulles Toll Road				4	6	No	2030
VDOT	VP2ma		VA 7	Rolling Holly Drive	Reston Avenue			4	6	No	2014
VDOT	VP2L	Widen	VA 7	Dulles Toll Rd.	I-495	2	2	6	8	No	2014

Yellow-

Note: Shaded areas represent changes from the 2010 CLRP and FY2011-2016 TIP Amendments

Appendix E EMIT/MOBILE6.2 Inputs and Outputs

*EMIT Data File
*Rte. 1 Ft. Belvoir
*Base Year: 2012
*
*

MOBILE6 INPUT FILE :
POLLUTANTS : CO
RUN DATA :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT FRACTIONS :
.380 .096 .32 .099 .044 .02 .002 .001
.001 .004 .005 .006 .007 .007 .004 .004
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2012; Month - January; Speed - 2.5
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2012
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 2.5 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT FRACTIONS :
.380 .096 .32 .099 .044 .02 .002 .001
.001 .004 .005 .006 .007 .007 .004 .004
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D

START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2012; Month - January; Speed - 5.0
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2012
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 5.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT FRACTIONS :
.380 .096 .32 .099 .044 .02 .002 .001
.001 .004 .005 .006 .007 .007 .004 .004
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2012; Month - January; Speed - 10.0
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2012
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 10.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT FRACTIONS :
.380 .096 .32 .099 .044 .02 .002 .001
.001 .004 .005 .006 .007 .007 .004 .004
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D

FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2012; Month - January; Speed - 15.0 mph, ARTERIAL

MPG ESTIMATES : MPG.CSV

CALENDAR YEAR : 2012

EVALUATION MONTH : 1

ALTITUDE : 1

MIN/MAX TEMP : 22 22

ABSOLUTE HUMIDITY : 75.0

AVERAGE SPEED : 15.0 ARTERIAL

FUEL RVP : 13.5

END OF RUN :

NO REFUELING :

EXPAND EXHAUST :

REG DIST : REGDATA.D

MILE ACCUM RATE : MILEDAT.D

VMT FRACTIONS :

.380 .096 .32 .099 .044 .02 .002 .001

.001 .004 .005 .006 .007 .007 .004 .004

VMT BY HOUR : HVMT.DEF

STARTS PER DAY : STPERDAY.D

START DIST : SDIST.D

FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2012; Month - January; Speed - 20.0 mph, ARTERIAL

MPG ESTIMATES : MPG.CSV

CALENDAR YEAR : 2012

EVALUATION MONTH : 1

ALTITUDE : 1

MIN/MAX TEMP : 22 22

ABSOLUTE HUMIDITY : 75.0

AVERAGE SPEED : 20.0 ARTERIAL

FUEL RVP : 13.5

END OF RUN :

NO REFUELING :

EXPAND EXHAUST :

REG DIST : REGDATA.D

MILE ACCUM RATE : MILEDAT.D

VMT FRACTIONS :

.380 .096 .32 .099 .044 .02 .002 .001

.001 .004 .005 .006 .007 .007 .004 .004

VMT BY HOUR : HVMT.DEF

STARTS PER DAY : STPERDAY.D

START DIST : SDIST.D

FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2012; Month - January; Speed - 25.0
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2012
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 25.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT FRACTIONS :
.380 .096 .32 .099 .044 .02 .002 .001
.001 .004 .005 .006 .007 .007 .004 .004
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2012; Month - January; Speed - 30.0
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2012
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 30.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT FRACTIONS :
.380 .096 .32 .099 .044 .02 .002 .001
.001 .004 .005 .006 .007 .007 .004 .004
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2012; Month - January; Speed - 35.0
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2012
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 35.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT FRACTIONS :
.380 .096 .32 .099 .044 .02 .002 .001
.001 .004 .005 .006 .007 .007 .004 .004
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2012; Month - January; Speed - 40.0
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2012
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 40.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT FRACTIONS :
.380 .096 .32 .099 .044 .02 .002 .001
.001 .004 .005 .006 .007 .007 .004 .004
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2012; Month - January; Speed - 45.0
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2012
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 45.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT FRACTIONS :
.380 .096 .32 .099 .044 .02 .002 .001
.001 .004 .005 .006 .007 .007 .004 .004
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2012; Month - January; Speed - 50.0
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2012
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 50.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

*EMIT Data File
*Rte. 1 Ft. Belvoir
*Base Year: 2020
*
*

MOBILE6 INPUT FILE :
POLLUTANTS : CO
RUN DATA :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2020; Month - January; Speed - 2.5
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2020
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 2.5 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2020; Month - January; Speed - 5.0
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2020
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 5.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2020; Month - January; Speed - 10.0
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2020
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 10.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2020; Month - January; Speed - 15.0
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2020
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 15.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT BY HOUR : HVMT.DEF

STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2020; Month - January; Speed - 20.0
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2020
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 20.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2020; Month - January; Speed - 25.0
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2020
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 25.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2020; Month - January; Speed - 30.0
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV

CALENDAR YEAR : 2020
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 30.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2020; Month - January; Speed - 35.0
mph, ARTERIAL

MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2020
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 35.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2020; Month - January; Speed - 40.0
mph, ARTERIAL

MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2020
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 40.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2020; Month - January; Speed - 45.0
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2020
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 45.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2020; Month - January; Speed - 50.0
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2020
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 50.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

*EMIT Data File
*Rte. 1 Ft. Belvoir
*Base Year: 2020
*
*

MOBILE6 INPUT FILE :
POLLUTANTS : CO
RUN DATA :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2040; Month - January; Speed - 2.5
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2040
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 2.5 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2040; Month - January; Speed - 5.0
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2040
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 5.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2040; Month - January; Speed - 10.0
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2040
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 10.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2040; Month - January; Speed - 15.0
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2040
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 15.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT BY HOUR : HVMT.DEF

STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2040; Month - January; Speed - 20.0
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2040
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 20.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2040; Month - January; Speed - 25.0
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2040
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 25.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2040; Month - January; Speed - 30.0
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV

CALENDAR YEAR : 2040
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 30.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2040; Month - January; Speed - 35.0
mph, ARTERIAL

MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2040
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 35.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2040; Month - January; Speed - 40.0
mph, ARTERIAL

MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2040
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 40.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2040; Month - January; Speed - 45.0
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2040
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 45.0 ARTERIAL
FUEL RVP : 13.5

END OF RUN :

NO REFUELING :
EXPAND EXHAUST :
REG DIST : REGDATA.D
MILE ACCUM RATE : MILEDAT.D
VMT BY HOUR : HVMT.DEF
STARTS PER DAY : STPERDAY.D
START DIST : SDIST.D
FUEL PROGRAM : 1

SCENARIO RECORD : EMIT | Calendar Year - 2040; Month - January; Speed - 50.0
mph, ARTERIAL
MPG ESTIMATES : MPG.CSV
CALENDAR YEAR : 2040
EVALUATION MONTH : 1
ALTITUDE : 1
MIN/MAX TEMP : 22 22
ABSOLUTE HUMIDITY : 75.0
AVERAGE SPEED : 50.0 ARTERIAL
FUEL RVP : 13.5

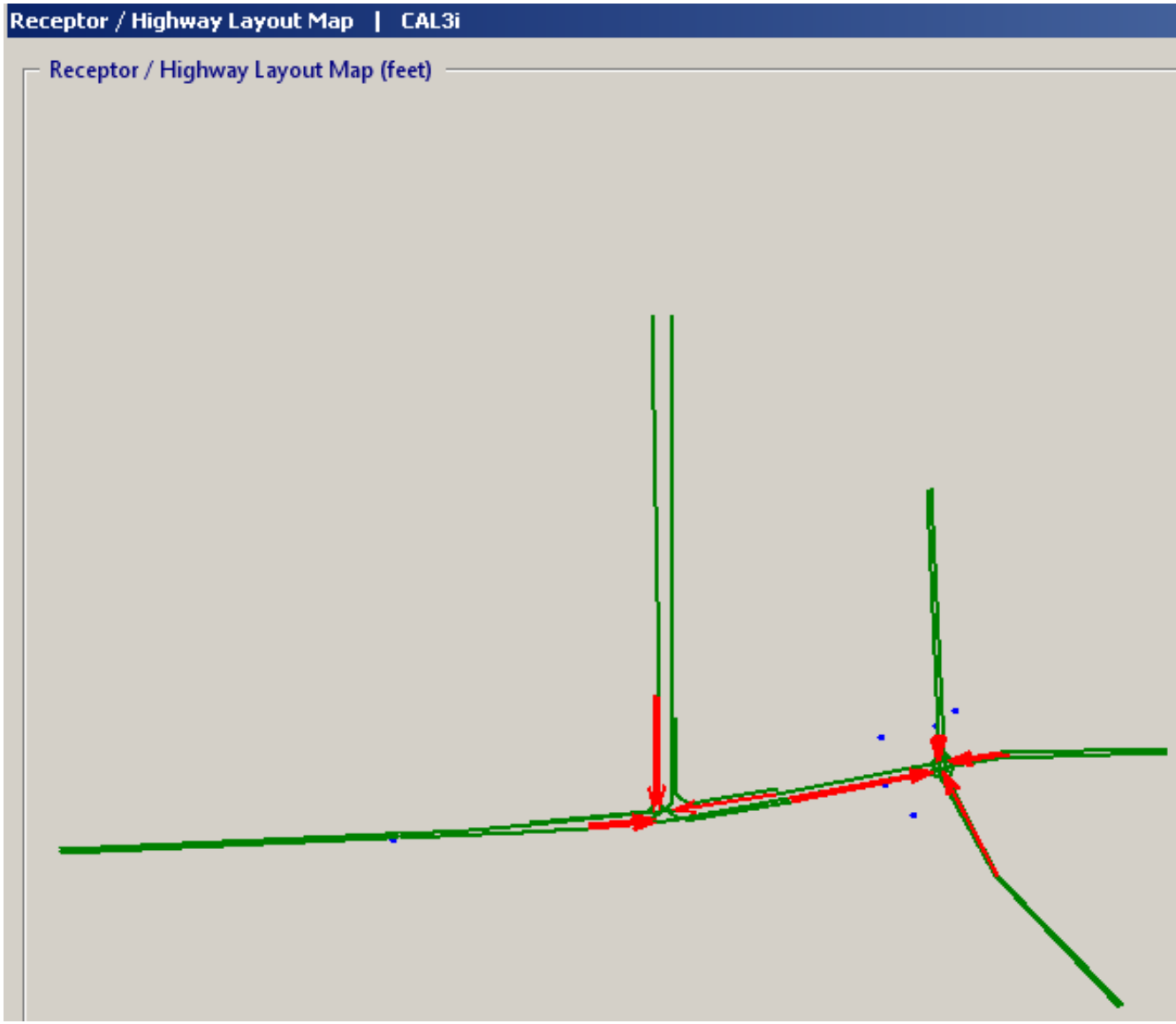
END OF RUN :

Rte. 1 Ft. Belvoir			
Base Year: 2012			
	Calendar	Speed	(g/VMT)
Pollutant	Year	(mph)	Arterial
CO	2012	Idle*	116.128
CO	2012	5	31.0892
CO	2012	10	23.4982
CO	2012	15	21.0435
CO	2012	20	19.7962
CO	2012	25	19.1095
CO	2012	30	18.7906
CO	2012	35	18.8147
CO	2012	40	19.3379
CO	2012	45	19.8728
CO	2012	50	20.4187
* Idle emission factors in units of (g/veh-hr)			

Rte. 1 Ft. Belvoir			
Base Year: 2020			
	Calendar	Speed	(g/VMT)
Pollutant	Year	(mph)	Arterial
CO	2020	Idle*	88.9581
CO	2020	5	24.0845
CO	2020	10	18.1726
CO	2020	15	16.1688
CO	2020	20	15.1365
CO	2020	25	14.5524
CO	2020	30	14.281
CO	2020	35	14.2689
CO	2020	40	14.6599
CO	2020	45	15.0687
CO	2020	50	15.4941
* Idle emission factors in units of (g/veh-hr)			

Rte. 1 Ft. Belvoir			
Base Year: 2040			
	Calendar	Speed	(g/VMT)
Pollutant	Year	(mph)	Arterial
CO	2040	Idle*	83.2205
CO	2040	5	22.5418
CO	2040	10	17.0138
CO	2040	15	15.1403
CO	2040	20	14.1764
CO	2040	25	13.6291
CO	2040	30	13.3782
CO	2040	35	13.3665
CO	2040	40	13.7378
CO	2040	45	14.1254
CO	2040	50	14.5285
* Idle emission factors in units of (g/veh-hr)			

Appendix F CAL3QHC/CAL3i Inputs and Outputs



'Rte. 1 Ft. Belvoir',60,11.4,0,0,6,0.3048,1,0
'1: 9140 Richmond Hwy',11865556.75,6944171.42,5
'2: 9136 Backlick Rd.',11865461.31,6944097.204,5
'3: 9135 Anderson Ln.',11865185.29,6944043.604,5
'4: Bus Stop @Rte. 1',11865210.63,6943809.932,5
'5: E.K. HmlsShelter',11865345.82,6943660.265,5
'6: Accotink Creek',11862781.25,6943530.096,5
'FCP to Backlick: 2012: No Build: AM',72,1,1,'CO'
1
'Rte 1 EB W of Bridge', 'AG',11861128.64,6943466.12,11862742.25,6943540.275,2215,19.11,0,44
1
'Rte 1 EB Accotink Br', 'BR',11862742.25,6943540.275,11862806.05,6943543.207,2215,19.11,7.5,44
1
'Rte 1 EB E of Bridge', 'AG',11862806.05,6943543.207,11863416.10,6943571.242,2215,19.11,0,44
1
'Rte 1 EB E of Br 3ln', 'AG',11863416.1,6943571.242,11863737.50,6943593.859,2215,19.11,0,56
1
'Rte 1 EB FCP ApprThr', 'AG',11863737.50,6943593.859,11864058.05,6943617.166,1930,19.11,0,44
1
'Rte 1 EB FCP IntThru', 'AG',11864058.05,6943617.166,11864188.06,6943639.571,1930,19.8,0,44
1
'Rte 1 EB FCP Dptr', 'AG',11864188.06,6943639.571,11864725.38,6943739.26,1695,19.8,0,44
1
'Rte 1 EB E Bklk Thru', 'AG',11864725.38,6943739.26,11865419.65,6943875.974,1695,19.8,0,44
1
'Rte 1 EB E Bklk IntT', 'AG',11865419.65,6943875.974,11865544.88,6943898.070,1695,18.81,0,44
1
'Rte 1 EB Bklk Dprtr', 'AG',11865544.88,6943898.07,11865761.25,6943936.248,1910,18.81,0,44
1
'Rte 1 EB E Bklk Dpt2', 'AG',11865761.25,6943936.248,11866598.63,6943961.42,1910,18.81,0,44
1
'Rte 1 EB W FCP L AD1', 'AG',11863737.06,6943609.947,11864055,6943638.565,285,21,0,32
1

'Rte 1 EB W FCP L AD2', 'AG', 11864055, 6943638.565, 11864154.70, 6943719.973, 285, 21, 0, 32
1
'FCP NB N Rte 1 L Dpt', 'AG', 11864154.7, 6943719.973, 11864153.39, 6944136.644, 285, 21, 0, 32
1
'Rte 1 EB E FCR R Dpt', 'AG', 11864214.31, 6943623.759, 11864737.56, 6943725.453, 1065, 19.8, 0, 32
1
'Rte 1 EB W Bklk R Ap', 'AG', 11864737.56, 6943725.453, 11865427.04, 6943859.456, 1065, 31.09, 0, 32
1
'Rte 1 EB @Bklk R Int', 'AG', 11865427.04, 6943859.456, 11865476.96, 6943844.283, 1065, 31.09, 0, 32
1
'Rte 1 WB E Bklk', 'AG', 11866597.68, 6943983.311, 11865777.29, 6943968.055, 1590, 19.3, 0, 44
1
'Rte 1 WB E Bklk Thru', 'AG', 11865777.29, 6943968.055, 11865536.69, 6943932.493, 1330, 19.3, 0, 32
1
'Rte 1 WB @Bklk Int', 'AG', 11865536.69, 6943932.493, 11865430.13, 6943912.235, 1330, 19.87, 0, 44
1
'Rte 1 WB W Bklk Dptr', 'AG', 11865430.13, 6943912.235, 11864659.04, 6943761.47, 1445, 19.87, 0, 44
1
'Rte 1 WB E FCP Thru', 'AG', 11864659.04, 6943761.47, 11864177.82, 6943685.307, 595, 19.87, 0, 44
1
'Rte 1 WB W FCP Thru', 'AG', 11864177.82, 6943685.307, 11863453.83, 6943613.537, 595, 20.42, 0, 44
1
'Rte 1 WB FCP-Br All', 'AG', 11863453.83, 6943613.537, 11863144.98, 6943582.636, 610, 20.42, 0, 44
1
'Rte 1 WB E Br All', 'AG', 11863144.98, 6943582.636, 11862805.3, 6943566.529, 610, 20.42, 0, 44
1
'Rte 1 WB @Br All', 'BR', 11862805.3, 6943566.529, 11862739.6, 6943563.754, 610, 20.42, 7.5, 44
1
'Rte 1 WB W Br All', 'AG', 11862739.60, 6943563.754, 11861126.17, 6943489.495, 610, 20.42, 0, 44
1
'Rte 1 WB E Bklk L Ap', 'AG', 11865816.74, 6943959.185, 11865539.92, 6943914.541, 215, 31.09, 0, 32
1
'Rte 1 WB @Bklk L Int', 'AG', 11865539.92, 6943914.541, 11865476.96, 6943844.283, 215, 31.09, 0, 32
1

'Rte 1 WB E FCP R Apr', 'AG', 11864669.03, 6943783.117, 11864234.05, 6943716.116, 850, 21.04, 0, 32
1
'Rte 1 WB @FCP R Int', 'AG', 11864234.05, 6943716.116, 11864174.14, 6943761.197, 850, 21.04, 0, 32
1
'FCP NB N Rte 1 Mrg', 'AG', 11864174.14, 6943761.197, 11864167.14, 6944139.352, 850, 21.04, 0, 32
1
'FCP SB N Rte 1 All', 'AG', 11864058.5, 6946128.75, 11864087.48, 6944232.866, 845, 20.42, 0, 44
1
'FCP SB N Rte 1 L Apr', 'AG', 11864087.48, 6944232.866, 11864088.79, 6943716.405, 830, 21.04, 0, 44
1
'FCP SB @Rte 1 L Int', 'AG', 11864088.79, 6943716.405, 11864186.79, 6943640.719, 830, 21.04, 0, 44
1
'FCP N Rte 1 SB R Apr', 'AG', 11864075.67, 6944253.437, 11864065.61, 6943704.588, 15, 21.04, 0, 32
1
'FCP @Rte 1 SB R Int', 'AG', 11864065.61, 6943704.588, 11864032.38, 6943678.764, 15, 21.04, 0, 32
1
'Rte 1 WB W FCP R Mrg', 'AG', 11864032.38, 6943678.764, 11863448.21, 6943622.59, 15, 21.04, 0, 32
1
'FCP NB N Rte 1 All', 'AG', 11864153.39, 6944136.644, 11864146, 6946133, 1135, 20.42, 0, 44
1
'Phck NB S Rte 1 All', 'AG', 11866378.38, 6942718.386, 11865761.58, 6943360.797, 120, 18.81, 0, 32
1
'Phck NB S Rte 1 T-R', 'AG', 11865761.58, 6943360.797, 11865529.37, 6943811.457, 10, 18.81, 0, 32
1
'Phck NB S Rte 1 Thru', 'AG', 11865529.37, 6943811.457, 11865506.52, 6943855.812, 5, 18.81, 0, 32
1
'Bklk NB @Rte 1 Thru', 'AG', 11865506.52, 6943855.812, 11865501, 6943962.146, 5, 18.81, 0, 32
1
'Bklk NB N Rte 1 All', 'AG', 11865501, 6943962.146, 11865432.72, 6945277.292, 50, 18.81, 0, 32
1
'Rte 1 WB @Bklk R Int', 'AG', 11865536.69, 6943932.493, 11865501, 6943962.146, 45, 21.04, 0, 32
1
'Phck NB S Rte 1 L Ap', 'AG', 11865758.06, 6943359.111, 11865496.19, 6943851.734, 110, 21.04, 0, 32
1

'Phck NB @Rte 1 L Int', 'AG', 11865496.19, 6943851.734, 11865430.23, 6943912.254, 110, 21.04, 0, 32
1

'Phck NB S Rte 1 R Ap', 'AG', 11865529.37, 6943811.457, 11865522.73, 6943855.352, 5, 21.04, 0, 32
1

'Phck NB @Rte 1 R Int', 'AG', 11865522.73, 6943855.352, 11865544.88, 6943898.07, 5, 21.04, 0, 32
1

'Bklk N Rte 1 SB All', 'AG', 11865413.52, 6945271.373, 11865468.11, 6944043.266, 380, 23.5, 0, 32
1

'Bklk N Rte 1 SB Thru', 'AG', 11865468.11, 6944043.266, 11865472.19, 6943951.495, 165, 23.5, 0, 32
1

'Bklk SB @Rte 1 Int', 'AG', 11865472.19, 6943951.495, 11865476.96, 6943844.283, 165, 23.5, 0, 32
1

'Bklk SB S Rte 1 All1', 'AG', 11865476.96, 6943844.283, 11865749.55, 6943353.851, 1445, 23.5, 0, 32
1

'Bklk SB S Rte 1 All2', 'AG', 11865749.55, 6943353.851, 11866363.31, 6942706.632, 1445, 23.5, 0, 32
1

'Bklk SB N Rte 1 R Ap', 'AG', 11865459.57, 6944045.386, 11865462.44, 6943950.769, 5, 21.04, 0, 32
1

'Bklk SB N Rte 1 R In', 'AG', 11865462.44, 6943950.769, 11865430.23, 6943912.254, 5, 21.04, 0, 32
1

'Bklk SB N Rte 1 L Ap', 'AG', 11865475.55, 6944044.993, 11865482.3, 6943952.705, 210, 21.04, 0, 32
1

'Bklk SB N Rte 1 L In', 'AG', 11865482.3, 6943952.705, 11865544.88, 6943898.07, 210, 21.04, 0, 32
2

'Q Rte 1 WB E FCP Thr', 'AG', 11864058.05, 6943617.166, 11863737.50, 6943593.859, 0, 24, 2
180, 57, 6.5, 1930, 116.13, 1769, 2, 3
2

'Q Rte 1 WB E FCP L', 'AG', 11864055, 6943638.565, 11863737.06, 6943609.947, 0, 24, 2
180, 159.4, 7, 285, 116.13, 1716, 2, 3
2

'Q Rte 1 WB E FCP Thr', 'AG', 11864177.82, 6943685.307, 11864659.04, 6943761.47, 0, 24, 2
180, 84.6, 6.5, 595, 116.13, 1769, 2, 3
2

'Q FCP SB N Rte 1 L', 'AG', 11864088.79, 6943716.405, 11864087.48, 6944232.866, 0, 24, 2

180,136.5,7,830,116.13,1716,2,3
2
'Q FCP SB N Rte 1 R', 'AG',11864065.61,6943704.588,11864075.67,6944253.437,0,12,1
180,115.9,7,15,116.13,1583,2,3
2
'Q Rte 1 EB W Bklk R', 'AG',11865427.04,6943859.456,11864737.56,6943725.453,0,12,1
180,78.5,7,1065,116.13,1583,2,3
2
'Q Rte 1 EB W Bklk T', 'AG',11865419.65,6943875.974,11864725.38,6943739.26,0,24,2
180,78.5,7,1695,116.13,1769,2,3
2
'Q Rte 1 WB E Bklk Th', 'AG',11865536.69,6943932.493,11865777.29,6943968.055,0,24,2
180,55.7,7,1330,116.13,1761,2,3
2
'Q Rte 1 WB E Bklk L', 'AG',11865539.92,6943914.541,11865816.74,6943959.185,0,12,1
180,55.7,6.5,215,116.13,69,2,3
2
'Q Phck NB S Rte 1 TR', 'AG',11865506.52,6943855.812,11865529.37,6943811.457,0,12,1
180,167.3,6,10,116.13,1678,2,3
2
'Q Phck NB S Rte 1 L', 'AG',11865496.19,6943851.734,11865758.06,6943359.111,0,12,1
180,167.3,6,110,116.13,1681,2,3
2
'Q Bklk SB N Rte 1 L', 'AG',11865482.3,6943952.705,11865475.55,6944044.993,0,12,1
180,157,7,210,116.13,1593,2,3
2
'Q Bklk SB N Rte 1 T', 'AG',11865472.19,6943951.495,11865468.11,6944043.266,0,12,1
180,157,7,165,116.13,1676,2,3
2
'Q Bklk SB N Rte 1 R', 'AG',11865462.44,6943950.769,11865459.57,6944045.386,0,12,1
180,157,7,5,116.13,1478,2,3
1,0,5,1000,1.9, 'Y',5,0,355

'Rte. 1 Ft. Belvoir',60,11.4,0,0,6,0.3048,1,0
'1: 9140 Richmond Hwy',11865556.75,6944171.42,5
'2: 9136 Backlick Rd.',11865461.31,6944097.204,5
'3: 9135 Anderson Ln.',11865185.29,6944043.604,5
'4: Bus Stop @Rte. 1',11865210.63,6943809.932,5
'5: E.K. HmlsShelter',11865345.82,6943660.265,5
'6: Accotink Creek',11862781.25,6943530.096,5
'FCP to Backlick: 2012: No Build: PM',75,1,1,'CO'
1
'Rte 1 EB W of Bridge','AG',11861128.64,6943466.12,11862742.25,6943540.275,925,20.42,0,44
1
'Rte 1 EB Accotink Br','BR',11862742.25,6943540.275,11862806.05,6943543.207,925,20.42,7.5,44
1
'Rte 1 EB E of Bridge','AG',11862806.05,6943543.207,11863416.10,6943571.242,925,20.42,0,44
1
'Rte 1 EB E of Br 3ln','AG',11863416.1,6943571.242,11863737.50,6943593.859,925,20.42,0,56
1
'Rte 1 EB FCP ApprThr','AG',11863737.50,6943593.859,11864058.05,6943617.166,875,20.42,0,44
1
'Rte 1 EB FCP IntThru','AG',11864058.05,6943617.166,11864188.06,6943639.571,875,19.87,0,44
1
'Rte 1 EB FCP Dptr','AG',11864188.06,6943639.571,11864725.38,6943739.26,1535,19.87,0,44
1
'Rte 1 EB W Bklk Thru','AG',11864725.38,6943739.26,11865419.65,6943875.974,1535,19.87,0,44
1
'Rte 1 EB W Bklk IntT','AG',11865419.65,6943875.974,11865544.88,6943898.070,1695,19.34,0,44
1
'Rte 1 EB Bklk Dprtr','AG',11865544.88,6943898.07,11865761.25,6943936.248,1700,19.34,0,44
1
'Rte 1 EB E Bklk Dpt2','AG',11865761.25,6943936.248,11866598.63,6943961.42,1700,19.34,0,44
1
'Rte 1 EB W FCP L AD1','AG',11863737.06,6943609.947,11864055,6943638.565,50,21.04,0,32
1
'Rte 1 EB W FCP L AD2','AG',11864055,6943638.565,11864154.70,6943719.973,50,21.04,0,32

1
 'FCP NB N Rte 1 L Dpt', 'AG', 11864154.7, 6943719.973, 11864153.39, 6944136.644, 50, 21.04, 0, 32
 1
 'Rte 1 EB E FCR R Dpt', 'AG', 11864214.31, 6943623.759, 11864737.56, 6943725.453, 120, 19.87, 0, 32
 1
 'Rte 1 EB W Bklk R Ap', 'AG', 11864737.56, 6943725.453, 11865427.04, 6943859.456, 120, 21.04, 0, 32
 1
 'Rte 1 EB @Bklk R Int', 'AG', 11865427.04, 6943859.456, 11865476.96, 6943844.283, 120, 21.04, 0, 32
 1
 'Rte 1 EB W Bklk L Ap', 'AG', 11864730.9941, 6943753.1738, 11865421.4283, 6943890.6159, 5, 21.04, 0, 32
 1
 'Rte 1 EB @Bklk L Int', 'AG', 11865421.4283, 6943890.6159, 11865500.9967, 6943962.1455, 5, 21.04, 0, 32
 1
 'Rte 1 WB E Bklk', 'AG', 11866597.68, 6943983.311, 11865777.29, 6943968.055, 1865, 18.81, 0, 44
 1
 'Rte 1 WB E Bklk Thru', 'AG', 11865777.29, 6943968.055, 11865536.69, 6943932.493, 1710, 18.81, 0, 32
 1
 'Rte 1 WB @Bklk Int', 'AG', 11865536.69, 6943932.493, 11865430.13, 6943912.235, 1710, 19.11, 0, 44
 1
 'Rte 1 WB W Bklk Dptr', 'AG', 11865430.13, 6943912.235, 11864659.04, 6943761.47, 2760, 19.11, 0, 44
 1
 'Rte 1 WB E FCP Thru', 'AG', 11864659.04, 6943761.47, 11864177.82, 6943685.307, 2035, 19.11, 0, 44
 1
 'Rte 1 WB W FCP Thru', 'AG', 11864177.82, 6943685.307, 11863453.83, 6943613.537, 2035, 21.04, 0, 44
 1
 'Rte 1 WB FCP-Br All', 'AG', 11863453.83, 6943613.537, 11863144.98, 6943582.636, 2590, 21.04, 0, 44
 1
 'Rte 1 WB E Br All', 'AG', 11863144.98, 6943582.636, 11862805.3, 6943566.529, 2590, 21.04, 0, 44
 1
 'Rte 1 WB @Br All', 'BR', 11862805.3, 6943566.529, 11862739.6, 6943563.754, 2590, 21.04, 7.5, 44
 1
 'Rte 1 WB W Br All', 'AG', 11862739.60, 6943563.754, 11861126.17, 6943489.495, 2590, 21.04, 0, 44
 1
 'Rte 1 WB E Bklk L Ap', 'AG', 11865816.74, 6943959.185, 11865539.92, 6943914.541, 65, 21.04, 0, 32

1
'Rte 1 WB @Bklk L Int', 'AG', 11865539.92, 6943914.541, 11865476.96, 6943844.283, 65, 21.04, 0, 32
1
'Rte 1 WB E FCP R Apr', 'AG', 11864669.03, 6943783.117, 11864234.05, 6943716.116, 725, 21.04, 0, 32
1
'Rte 1 WB @FCP R Int', 'AG', 11864234.05, 6943716.116, 11864174.14, 6943761.197, 725, 21.04, 0, 32
1
'FCP NB N Rte 1 Mrg', 'AG', 11864174.14, 6943761.197, 11864167.14, 6944139.352, 725, 21.04, 0, 32
1
'FCP SB N Rte 1 All', 'AG', 11864058.5, 6946128.75, 11864087.48, 6944232.866, 1340, 19.87, 0, 44
1
'FCP SB N Rte 1 L Apr', 'AG', 11864087.48, 6944232.866, 11864088.79, 6943716.405, 785, 21.04, 0, 44
1
'FCP SB @Rte 1 L Int', 'AG', 11864088.79, 6943716.405, 11864186.79, 6943640.719, 785, 21.04, 0, 44
1
'FCP N Rte 1 SB R Apr', 'AG', 11864075.67, 6944253.437, 11864065.61, 6943704.588, 555, 23.5, 0, 32
1
'FCP @Rte 1 SB R Int', 'AG', 11864065.61, 6943704.588, 11864032.38, 6943678.764, 555, 23.5, 0, 32
1
'Rte 1 WB W FCP R Mrg', 'AG', 11864032.38, 6943678.764, 11863448.21, 6943622.59, 555, 23.5, 0, 32
1
'FCP NB N Rte 1 All', 'AG', 11864153.39, 6944136.644, 11864146, 6946133, 775, 20.42, 0, 44
1
'Phck NB S Rte 1 All', 'AG', 11866378.38, 6942718.386, 11865761.58, 6943360.797, 1080, 21.04, 0, 32
1
'Phck NB S Rte 1 T-R', 'AG', 11865761.58, 6943360.797, 11865529.37, 6943811.457, 40, 21.04, 0, 32
1
'Phck NB S Rte 1 Thru', 'AG', 11865529.37, 6943811.457, 11865506.52, 6943855.812, 15, 21.04, 0, 32
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'Bklk NB @Rte 1 Thru', 'AG', 11865506.52, 6943855.812, 11865501, 6943962.146, 15, 21.04, 0, 32
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'Bklk NB N Rte 1 All', 'AG', 11865501, 6943962.146, 11865432.72, 6945277.292, 110, 21.04, 0, 32
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'Rte 1 WB @Bklk R Int', 'AG', 11865536.69, 6943932.493, 11865501, 6943962.146, 90, 23.5, 0, 32

1
 'Phck NB S Rte 1 L Ap', 'AG', 11865758.06, 6943359.111, 11865496.19, 6943851.734, 1040, 23.5, 0, 32
 1
 'Phck NB @Rte 1 L Int', 'AG', 11865496.19, 6943851.734, 11865430.23, 6943912.254, 1040, 23.5, 0, 32
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 'Phck NB S Rte 1 R Ap', 'AG', 11865529.37, 6943811.457, 11865522.73, 6943855.352, 25, 23.5, 0, 32
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 'Phck NB @Rte 1 R Int', 'AG', 11865522.73, 6943855.352, 11865544.88, 6943898.07, 25, 23.5, 0, 32
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 'Bklk N Rte 1 SB All', 'AG', 11865413.52, 6945271.373, 11865468.11, 6944043.266, 175, 18.79, 0, 32
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 'Bklk N Rte 1 SB Thru', 'AG', 11865468.11, 6944043.266, 11865472.19, 6943951.495, 25, 18.79, 0, 32
 1
 'Bklk SB @Rte 1 Int', 'AG', 11865472.19, 6943951.495, 11865476.96, 6943844.283, 25, 18.79, 0, 32
 1
 'Bklk SB S Rte 1 All1', 'AG', 11865476.96, 6943844.283, 11865749.55, 6943353.851, 210, 18.79, 0, 32
 1
 'Bklk SB S Rte 1 All2', 'AG', 11865749.55, 6943353.851, 11866363.31, 6942706.632, 210, 18.79, 0, 32
 1
 'Bklk SB N Rte 1 R Ap', 'AG', 11865459.57, 6944045.386, 11865462.44, 6943950.769, 10, 21.04, 0, 32
 1
 'Bklk SB N Rte 1 R In', 'AG', 11865462.44, 6943950.769, 11865430.23, 6943912.254, 10, 21.04, 0, 32
 1
 'Bklk SB N Rte 1 L Ap', 'AG', 11865475.55, 6944044.993, 11865482.3, 6943952.705, 140, 21.04, 0, 32
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 'Bklk SB N Rte 1 L In', 'AG', 11865482.3, 6943952.705, 11865544.88, 6943898.07, 140, 21.04, 0, 32
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 'Q Rte 1 EB W FCP Thr', 'AG', 11864058.05, 6943617.166, 11863737.50, 6943593.859, 0, 24, 2
 180, 52, 6.5, 875, 116.13, 1769, 2, 3
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 'Q Rte 1 EB W FCP L', 'AG', 11864055, 6943638.565, 11863737.06, 6943609.947, 0, 24, 2
 180, 173, 7, 50, 116.13, 1716, 2, 3
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 'Q Rte 1 WB E FCP Thr', 'AG', 11864177.82, 6943685.307, 11864659.04, 6943761.47, 0, 24, 2

180,66,6.5,2035,116.13,1769,2,3
2
'Q FCP SB N Rte 1 L', 'AG',11864088.79,6943716.405,11864087.48,6944232.866,0,24,2
180,141.5,7,785,116.13,1716,2,3
2
'Q FCP SB N Rte 1 R', 'AG',11864065.61,6943704.588,11864075.67,6944253.437,0,12,1
180,134.5,7,555,116.13,1583,2,3
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'Q Rte 1 EB W Bklk R', 'AG',11865427.04,6943859.456,11864737.56,6943725.453,0,12,1
180,97.2,7,120,116.13,1583,2,3
2
'Q Rte 1 EB W Bklk T', 'AG',11865419.65,6943875.974,11864725.38,6943739.26,0,24,2
180,97.2,7,1535,116.13,1769,2,3
2
'Q Rte 1 EB W Bklk L', 'AG',11865421.4283,6943890.6159,11864730.9941,6943753.1738,0,24,1
180,75.7,6.5,5,116.13,90,2,3
2
'Q Rte 1 WB E Bklk Th', 'AG',11865536.69,6943932.493,11865777.29,6943968.055,0,24,2
180,89,7,1710,116.13,1761,2,3
2
'Q Rte 1 WB E Bklk L', 'AG',11865539.92,6943914.541,11865816.74,6943959.185,0,12,1
180,81,6.5,65,116.13,69,2,3
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'Q Phck NB S Rte 1 TR', 'AG',11865506.52,6943855.812,11865529.37,6943811.457,0,12,1
180,136,6,40,116.13,1678,2,3
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'Q Phck NB S Rte 1 L', 'AG',11865496.19,6943851.734,11865758.06,6943359.111,0,12,1
180,136,6,1040,116.13,1681,2,3
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'Q Bklk SB N Rte 1 L', 'AG',11865482.3,6943952.705,11865475.55,6944044.993,0,12,1
180,163,7,140,116.13,1593,2,3
2
'Q Bklk SB N Rte 1 T', 'AG',11865472.19,6943951.495,11865468.11,6944043.266,0,12,1
180,163,7,25,116.13,1676,2,3

2

'Q Bklk SB N Rte 1 R', 'AG', 11865462.44, 6943950.769, 11865459.57, 6944045.386, 0, 12, 1
180, 163, 7, 10, 116.13, 1478, 2, 3
1, 0, 5, 1000, 1.9, 'Y', 5, 0, 355

'Rte. 1 Ft. Belvoir',60,11.4,0,0,6,0.3048,1,0
'1: 9140 Richmond Hwy',11865556.75,6944171.42,5
'2: 9136 Backlick Rd.',11865461.31,6944097.204,5
'3: 9135 Anderson Ln.',11865185.29,6944043.604,5
'4: Bus Stop @Rte. 1',11865210.63,6943809.932,5
'5: E.K. HmlsShelter',11865345.82,6943660.265,5
'6: Accotink Creek',11862781.25,6943530.096,5
'FCP to Backlick: 2020: No Build: AM',75,1,1,'CO'
1
'Rte 1 EB W of Bridge','AG',11861128.64,6943466.12,11862742.25,6943540.275,2350,15.14,0,44
1
'Rte 1 EB Accotink Br','BR',11862742.25,6943540.275,11862806.05,6943543.207,2350,15.14,7.5,44
1
'Rte 1 EB E of Bridge','AG',11862806.05,6943543.207,11863416.10,6943571.242,2350,15.14,0,44
1
'Rte 1 EB E of Br 3ln','AG',11863416.1,6943571.242,11863737.50,6943593.859,2350,15.14,0,56
1
'Rte 1 EB FCP ApprThr','AG',11863737.50,6943593.859,11864058.05,6943617.166,2215,15.14,0,44
1
'Rte 1 EB FCP IntThru','AG',11864058.05,6943617.166,11864188.06,6943639.571,2215,15.14,0,44
1
'Rte 1 EB FCP Dptr','AG',11864188.06,6943639.571,11864725.38,6943739.26,1576,15.14,0,44
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'Rte 1 EB E Bklk Thru','AG',11864725.38,6943739.26,11865419.65,6943875.974,1576,15.14,0,44
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'Rte 1 EB E Bklk IntT','AG',11865419.65,6943875.974,11865544.88,6943898.070,1576,14.27,0,44
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'Rte 1 EB E Bklk Dprt','AG',11865544.88,6943898.07,11865761.25,6943936.248,1734,14.27,0,44
1
'Rte 1 EB E Bklk Dpt2','AG',11865761.25,6943936.248,11866598.63,6943961.42,1734,14.27,0,44
1
'Rte 1 EB W FCP L AD1','AG',11863737.06,6943609.947,11864055,6943638.565,135,18.17,0,32
1
'Rte 1 EB W FCP L AD2','AG',11864055,6943638.565,11864154.70,6943719.973,135,18.17,0,32

1
 'FCP NB N Rte 1 L Dpt', 'AG', 11864154.7, 6943719.973, 11864153.39, 6944136.644, 135, 18.17, 0, 32
 1
 'Rte 1 EB E FCR R Dpt', 'AG', 11864214.31, 6943623.759, 11864737.56, 6943725.453, 1310, 15.14, 0, 32
 1
 'Rte 1 EB W Bklk R Ap', 'AG', 11864737.56, 6943725.453, 11865427.04, 6943859.456, 1310, 24.08, 0, 32
 1
 'Rte 1 EB @Bklk R Int', 'AG', 11865427.04, 6943859.456, 11865476.96, 6943844.283, 1310, 24.08, 0, 32
 1
 'Rte 1 EB W Bklk L Ap', 'AG', 11864730.9941, 6943753.1738, 11865421.4283, 6943890.6159, 15, 16.17, 0, 32
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 'Rte 1 EB @Bklk L Int', 'AG', 11865421.4283, 6943890.6159, 11865500.9967, 6943962.1455, 15, 16.17, 0, 32
 1
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 'Rte 1 WB E Bklk Thru', 'AG', 11865777.29, 6943968.055, 11865536.69, 6943932.493, 1403, 14.66, 0, 32
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 'Rte 1 WB W Bklk Dptr', 'AG', 11865430.13, 6943912.235, 11864659.04, 6943761.47, 1543, 15.07, 0, 44
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 'Rte 1 WB FCP-Br All', 'AG', 11863453.83, 6943613.537, 11863144.98, 6943582.636, 805, 15.49, 0, 44
 1
 'Rte 1 WB E Br All', 'AG', 11863144.98, 6943582.636, 11862805.3, 6943566.529, 805, 15.49, 0, 44
 1
 'Rte 1 WB @Br All', 'BR', 11862805.3, 6943566.529, 11862739.6, 6943563.754, 805, 15.49, 7.5, 44
 1
 'Rte 1 WB W Br All', 'AG', 11862739.60, 6943563.754, 11861126.17, 6943489.495, 805, 15.49, 0, 44
 1
 'Rte 1 WB E Bklk L Ap', 'AG', 11865816.74, 6943959.185, 11865539.92, 6943914.541, 123, 24.09, 0, 32

1
'Rte 1 WB @Bklk L Int', 'AG', 11865539.92, 6943914.541, 11865476.96, 6943844.283, 123, 24.09, 0, 32
1
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1
'Rte 1 WB @FCP R Int', 'AG', 11864234.05, 6943716.116, 11864174.14, 6943761.197, 745, 16.17, 0, 32
1
'FCP NB N Rte 1 Mrg', 'AG', 11864174.14, 6943761.197, 11864167.14, 6944139.352, 745, 16.17, 0, 32
1
'FCP SB N Rte 1 All', 'AG', 11864058.5, 6946128.75, 11864087.48, 6944232.866, 793, 15.49, 0, 44
1
'FCP SB N Rte 1 L Apr', 'AG', 11864087.48, 6944232.866, 11864088.79, 6943716.405, 786, 16.17, 0, 44
1
'FCP SB @Rte 1 L Int', 'AG', 11864088.79, 6943716.405, 11864186.79, 6943640.719, 786, 16.17, 0, 44
1
'FCP N Rte 1 SB R Apr', 'AG', 11864075.67, 6944253.437, 11864065.61, 6943704.588, 7, 16.17, 0, 32
1
'FCP @Rte 1 SB R Int', 'AG', 11864065.61, 6943704.588, 11864032.38, 6943678.764, 7, 16.17, 0, 32
1
'Rte 1 WB W FCP R Mrg', 'AG', 11864032.38, 6943678.764, 11863448.21, 6943622.59, 7, 16.17, 0, 32
1
'FCP NB N Rte 1 All', 'AG', 11864153.39, 6944136.644, 11864146, 6946133, 880, 14.27, 0, 44
1
'Phck NB S Rte 1 All', 'AG', 11866378.38, 6942718.386, 11865761.58, 6943360.797, 104, 14.27, 0, 32
1
'Phck NB S Rte 1 T-R', 'AG', 11865761.58, 6943360.797, 11865529.37, 6943811.457, 19, 14.27, 0, 32
1
'Phck NB S Rte 1 Thru', 'AG', 11865529.37, 6943811.457, 11865506.52, 6943855.812, 10, 14.27, 0, 32
1
'Bklk NB @Rte 1 Thru', 'AG', 11865506.52, 6943855.812, 11865501, 6943962.146, 10, 14.27, 0, 32
1
'Bklk NB N Rte 1 All', 'AG', 11865501, 6943962.146, 11865432.72, 6945277.292, 45, 14.27, 0, 32
1
'Rte 1 WB @Bklk R Int', 'AG', 11865536.69, 6943932.493, 11865501, 6943962.146, 20, 16.17, 0, 32

1
 'Phck NB S Rte 1 L Ap', 'AG', 11865758.06, 6943359.111, 11865496.19, 6943851.734, 85, 16.17, 0, 44
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 'Phck NB @Rte 1 L Int', 'AG', 11865496.19, 6943851.734, 11865430.23, 6943912.254, 85, 16.17, 0, 44
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 'Phck NB S Rte 1 R Ap', 'AG', 11865529.37, 6943811.457, 11865522.73, 6943855.352, 9, 16.17, 0, 32
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 'Phck NB @Rte 1 R Int', 'AG', 11865522.73, 6943855.352, 11865544.88, 6943898.07, 9, 16.17, 0, 32
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 'Bklk N Rte 1 SB All', 'AG', 11865413.52, 6945271.373, 11865468.11, 6944043.266, 320, 18.17, 0, 32
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 'Bklk N Rte 1 SB Thru', 'AG', 11865468.11, 6944043.266, 11865472.19, 6943951.495, 116, 18.17, 0, 32
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 'Bklk SB @Rte 1 Int', 'AG', 11865472.19, 6943951.495, 11865476.96, 6943844.283, 116, 18.17, 0, 32
 1
 'Bklk SB S Rte 1 All1', 'AG', 11865476.96, 6943844.283, 11865749.55, 6943353.851, 1549, 18.17, 0, 32
 1
 'Bklk SB S Rte 1 All2', 'AG', 11865749.55, 6943353.851, 11866363.31, 6942706.632, 1549, 18.17, 0, 32
 1
 'Bklk SB N Rte 1 R Ap', 'AG', 11865459.57, 6944045.386, 11865462.44, 6943950.769, 55, 24.08, 0, 32
 1
 'Bklk SB N Rte 1 R In', 'AG', 11865462.44, 6943950.769, 11865430.23, 6943912.254, 55, 24.08, 0, 32
 1
 'Bklk SB N Rte 1 L Ap', 'AG', 11865475.55, 6944044.993, 11865482.3, 6943952.705, 149, 24.08, 0, 32
 1
 'Bklk SB N Rte 1 L In', 'AG', 11865482.3, 6943952.705, 11865544.88, 6943898.07, 149, 24.08, 0, 32
 2
 'Q Rte 1 EB W FCP Thr', 'AG', 11864058.05, 6943617.166, 11863737.50, 6943593.859, 0, 24, 2
 180, 59.5, 6.5, 2215, 88.96, 1769, 2, 3
 2
 'Q Rte 1 EB W FCP L', 'AG', 11864055, 6943638.565, 11863737.06, 6943609.947, 0, 24, 2
 180, 168.6, 7, 135, 88.96, 1716, 2, 3
 2
 'Q Rte 1 WB E FCP Thr', 'AG', 11864177.82, 6943685.307, 11864659.04, 6943761.47, 0, 24, 2

180,77.9,6.5,798,88.96,1769,2,3
2
'Q FCP SB N Rte 1 L', 'AG', 11864088.79,6943716.405,11864087.48,6944232.866,0,24,2
180,134,7,786,88.96,1716,2,3
2
'Q FCP SB N Rte 1 R', 'AG', 11864065.61,6943704.588,11864075.67,6944253.437,0,12,1
180,122.6,7,7,88.96,1583,2,3
2
'Q Rte 1 EB W Bklk R', 'AG', 11865427.04,6943859.456,11864737.56,6943725.453,0,12,1
180,69.9,7,1310,88.96,1583,2,3
2
'Q Rte 1 EB W Bklk T', 'AG', 11865419.65,6943875.974,11864725.38,6943739.26,0,24,2
180,69.9,7,1576,88.96,1769,2,3
2
'Q Rte 1 EB W Bklk L', 'AG', 11865421.4283,6943890.6159,11864730.9941,6943753.1738,0,24,1
180,66.7,6.5,15,88.96,195,2,3
2
'Q Rte 1 WB E Bklk Th', 'AG', 11865536.69,6943932.493,11865777.29,6943968.055,0,24,2
180,64.3,7,1403,88.96,1761,2,3
2
'Q Rte 1 WB E Bklk L', 'AG', 11865539.92,6943914.541,11865816.74,6943959.185,0,12,1
180,55.5,6.5,123,88.96,105,2,3
2
'Q Phck NB S Rte 1 TR', 'AG', 11865506.52,6943855.812,11865529.37,6943811.457,0,12,1
180,170,6,19,88.96,1730,2,3
2
'Q Phck NB S Rte 1 L', 'AG', 11865496.19,6943851.734,11865758.06,6943359.111,0,24,2
180,170,6,85,88.96,1716,2,3
2
'Q Bklk SB N Rte 1 L', 'AG', 11865482.3,6943952.705,11865475.55,6944044.993,0,12,1
180,155.4,7,149,88.96,1593,2,3
2
'Q Bklk SB N Rte 1 T', 'AG', 11865472.19,6943951.495,11865468.11,6944043.266,0,12,1
180,155.4,7,116,88.96,1676,2,3

2

'Q Bklk SB N Rte 1 R', 'AG', 11865462.44, 6943950.769, 11865459.57, 6944045.386, 0, 12, 1
180, 155.4, 7, 55, 88.96, 1478, 2, 3
1, 0, 5, 1000, 1.9, 'Y', 5, 0, 355

'Rte. 1 Ft. Belvoir',60,11.4,0,0,6,0.3048,1,0
'1: 9140 Richmond Hwy',11865556.75,6944171.42,5
'2: 9136 Backlick Rd.',11865461.31,6944097.204,5
'3: 9135 Anderson Ln.',11865185.29,6944043.604,5
'4: Bus Stop @Rte. 1',11865210.63,6943809.932,5
'5: E.K. HmlsShelter',11865345.82,6943660.265,5
'6: Accotink Creek',11862781.25,6943530.096,5
'FCP to Backlick: 2020: No Build: PM',75,1,1,'CO'
1
'Rte 1 EB W of Bridge','AG',11861128.64,6943466.12,11862742.25,6943540.275,1145,15.49,0,44
1
'Rte 1 EB Accotink Br','BR',11862742.25,6943540.275,11862806.05,6943543.207,1145,15.49,7.5,44
1
'Rte 1 EB E of Bridge','AG',11862806.05,6943543.207,11863416.10,6943571.242,1145,15.49,0,44
1
'Rte 1 EB E of Br 3ln','AG',11863416.1,6943571.242,11863737.50,6943593.859,1145,15.49,0,56
1
'Rte 1 EB FCP ApprThr','AG',11863737.50,6943593.859,11864058.05,6943617.166,1069,15.49,0,44
1
'Rte 1 EB FCP IntThru','AG',11864058.05,6943617.166,11864188.06,6943639.571,1069,15.07,0,44
1
'Rte 1 EB FCP Dptr','AG',11864188.06,6943639.571,11864725.38,6943739.26,1312,15.07,0,44
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'Rte 1 EB W Bklk Thru','AG',11864725.38,6943739.26,11865419.65,6943875.974,1227,15.07,0,44
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'Rte 1 EB E Bklk IntT','AG',11865419.65,6943875.974,11865544.88,6943898.070,1227,14.66,0,44
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'Rte 1 EB E Bklk Dprt','AG',11865544.88,6943898.07,11865761.25,6943936.248,1316,14.66,0,44
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'Rte 1 EB E Bklk Dpt2','AG',11865761.25,6943936.248,11866598.63,6943961.42,1316,14.66,0,44
1
'Rte 1 EB W FCP L AD1','AG',11863737.06,6943609.947,11864055,6943638.565,76,16.17,0,32
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'Rte 1 EB W FCP L AD2','AG',11864055,6943638.565,11864154.70,6943719.973,76,16.17,0,32

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 'FCP NB N Rte 1 L Dpt', 'AG', 11864154.7, 6943719.973, 11864153.39, 6944136.644, 76, 16.17, 0, 32
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 'Rte 1 EB W Bklk R Ap', 'AG', 11864737.56, 6943725.453, 11865427.04, 6943859.456, 285, 16.17, 0, 32
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 'Rte 1 EB @Bklk R Int', 'AG', 11865427.04, 6943859.456, 11865476.96, 6943844.283, 285, 16.17, 0, 32
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 'Rte 1 EB W Bklk L Ap', 'AG', 11864730.9941, 6943753.1738, 11865421.4283, 6943890.6159, 85, 16.17, 0, 32
 1
 'Rte 1 EB @Bklk L Int', 'AG', 11865421.4283, 6943890.6159, 11865500.9967, 6943962.1455, 85, 16.17, 0, 32
 1
 'Rte 1 WB E Bklk', 'AG', 11866597.68, 6943983.311, 11865777.29, 6943968.055, 1926, 14.27, 0, 44
 1
 'Rte 1 WB E Bklk Thru', 'AG', 11865777.29, 6943968.055, 11865536.69, 6943932.493, 1715, 14.27, 0, 32
 1
 'Rte 1 WB @Bklk Int', 'AG', 11865536.69, 6943932.493, 11865430.13, 6943912.235, 1715, 14.28, 0, 44
 1
 'Rte 1 WB W Bklk Dptr', 'AG', 11865430.13, 6943912.235, 11864659.04, 6943761.47, 2416, 14.28, 0, 44
 1
 'Rte 1 WB E FCP Thru', 'AG', 11864659.04, 6943761.47, 11864177.82, 6943685.307, 1909, 14.28, 0, 44
 1
 'Rte 1 WB W FCP Thru', 'AG', 11864177.82, 6943685.307, 11863453.83, 6943613.537, 1909, 16.17, 0, 44
 1
 'Rte 1 WB FCP-Br All', 'AG', 11863453.83, 6943613.537, 11863144.98, 6943582.636, 2622, 16.17, 0, 44
 1
 'Rte 1 WB E Br All', 'AG', 11863144.98, 6943582.636, 11862805.3, 6943566.529, 2622, 16.17, 0, 44
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 'Rte 1 WB @Br All', 'BR', 11862805.3, 6943566.529, 11862739.6, 6943563.754, 2622, 16.17, 7.5, 44
 1
 'Rte 1 WB W Br All', 'AG', 11862739.60, 6943563.754, 11861126.17, 6943489.495, 2622, 16.17, 0, 44
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 'Rte 1 WB E Bklk L Ap', 'AG', 11865816.74, 6943959.185, 11865539.92, 6943914.541, 7, 16.17, 0, 32

1
'Rte 1 WB @Bklk L Int', 'AG', 11865539.92, 6943914.541, 11865476.96, 6943844.283, 7, 16.17, 0, 32
1
'Rte 1 WB E FCP R Apr', 'AG', 11864669.03, 6943783.117, 11864234.05, 6943716.116, 507, 16.17, 0, 32
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'Rte 1 WB @FCP R Int', 'AG', 11864234.05, 6943716.116, 11864174.14, 6943761.197, 507, 16.17, 0, 32
1
'FCP NB N Rte 1 Mrg', 'AG', 11864174.14, 6943761.197, 11864167.14, 6944139.352, 507, 16.17, 0, 32
1
'FCP SB N Rte 1 All', 'AG', 11864058.5, 6946128.75, 11864087.48, 6944232.866, 1241, 15.49, 0, 44
1
'FCP SB N Rte 1 L Apr', 'AG', 11864087.48, 6944232.866, 11864088.79, 6943716.405, 528, 16.17, 0, 44
1
'FCP SB @Rte 1 L Int', 'AG', 11864088.79, 6943716.405, 11864186.79, 6943640.719, 528, 16.17, 0, 44
1
'FCP N Rte 1 SB R Apr', 'AG', 11864075.67, 6944253.437, 11864065.61, 6943704.588, 713, 18.17, 0, 32
1
'FCP @Rte 1 SB R Int', 'AG', 11864065.61, 6943704.588, 11864032.38, 6943678.764, 713, 18.17, 0, 32
1
'Rte 1 WB W FCP R Mrg', 'AG', 11864032.38, 6943678.764, 11863448.21, 6943622.59, 713, 18.17, 0, 32
1
'FCP NB N Rte 1 All', 'AG', 11864153.39, 6944136.644, 11864146, 6946133, 583, 15.49, 0, 44
1
'Phck NB S Rte 1 All', 'AG', 11866378.38, 6942718.386, 11865761.58, 6943360.797, 770, 15.14, 0, 32
1
'Phck NB S Rte 1 T-R', 'AG', 11865761.58, 6943360.797, 11865529.37, 6943811.457, 84, 15.14, 0, 32
1
'Phck NB S Rte 1 Thru', 'AG', 11865529.37, 6943811.457, 11865506.52, 6943855.812, 73, 15.14, 0, 32
1
'Bklk NB @Rte 1 Thru', 'AG', 11865506.52, 6943855.812, 11865501, 6943962.146, 73, 15.14, 0, 32
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'Bklk NB N Rte 1 All', 'AG', 11865501, 6943962.146, 11865432.72, 6945277.292, 362, 15.14, 0, 32
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'Rte 1 WB @Bklk R Int', 'AG', 11865536.69, 6943932.493, 11865501, 6943962.146, 204, 16.17, 0, 32

1
 'Phck NB S Rte 1 L Ap', 'AG', 11865758.06, 6943359.111, 11865496.19, 6943851.734, 686, 16.17, 0, 44
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 'Phck NB @Rte 1 L Int', 'AG', 11865496.19, 6943851.734, 11865430.23, 6943912.254, 686, 16.17, 0, 44
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 'Phck NB S Rte 1 R Ap', 'AG', 11865529.37, 6943811.457, 11865522.73, 6943855.352, 11, 16.17, 0, 32
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 'Phck NB @Rte 1 R Int', 'AG', 11865522.73, 6943855.352, 11865544.88, 6943898.07, 11, 16.17, 0, 32
 1
 'Bklk N Rte 1 SB All', 'AG', 11865413.52, 6945271.373, 11865468.11, 6944043.266, 110, 14.28, 0, 32
 1
 'Bklk N Rte 1 SB Thru', 'AG', 11865468.11, 6944043.266, 11865472.19, 6943951.495, 17, 14.28, 0, 32
 1
 'Bklk SB @Rte 1 Int', 'AG', 11865472.19, 6943951.495, 11865476.96, 6943844.283, 17, 14.28, 0, 32
 1
 'Bklk SB S Rte 1 All1', 'AG', 11865476.96, 6943844.283, 11865749.55, 6943353.851, 309, 14.28, 0, 32
 1
 'Bklk SB S Rte 1 All2', 'AG', 11865749.55, 6943353.851, 11866363.31, 6942706.632, 309, 14.28, 0, 32
 1
 'Bklk SB N Rte 1 R Ap', 'AG', 11865459.57, 6944045.386, 11865462.44, 6943950.769, 15, 16.17, 0, 32
 1
 'Bklk SB N Rte 1 R In', 'AG', 11865462.44, 6943950.769, 11865430.23, 6943912.254, 15, 16.17, 0, 32
 1
 'Bklk SB N Rte 1 L Ap', 'AG', 11865475.55, 6944044.993, 11865482.3, 6943952.705, 78, 16.17, 0, 32
 1
 'Bklk SB N Rte 1 L In', 'AG', 11865482.3, 6943952.705, 11865544.88, 6943898.07, 78, 16.17, 0, 32
 2
 'Q Rte 1 EB W FCP Thr', 'AG', 11864058.05, 6943617.166, 11863737.50, 6943593.859, 0, 24, 2
 180, 73.5, 6.5, 1069, 88.96, 1769, 2, 3
 2
 'Q Rte 1 EB W FCP L', 'AG', 11864055, 6943638.565, 11863737.06, 6943609.947, 0, 24, 2
 180, 175, 5, 76, 88.96, 1716, 2, 3
 2
 'Q Rte 1 WB E FCP Thr', 'AG', 11864177.82, 6943685.307, 11864659.04, 6943761.47, 0, 24, 2

180,85.5,6.5,1909,88.96,1769,2,3
2
'Q FCP SB N Rte 1 L', 'AG', 11864088.79, 6943716.405, 11864087.48, 6944232.866, 0, 24, 2
180,120,7,528,88.96,1716,2,3
2
'Q FCP SB N Rte 1 R', 'AG', 11864065.61, 6943704.588, 11864075.67, 6944253.437, 0, 12, 1
180,115,7,713,88.96,1583,2,3
2
'Q Rte 1 EB W Bklk R', 'AG', 11865427.04, 6943859.456, 11864737.56, 6943725.453, 0, 12, 1
180,91.5,7,285,88.96,1583,2,3
2
'Q Rte 1 EB W Bklk T', 'AG', 11865419.65, 6943875.974, 11864725.38, 6943739.26, 0, 24, 2
180,91.5,7,1227,88.96,1769,2,3
2
'Q Rte 1 EB W Bklk L', 'AG', 11865421.4283, 6943890.6159, 11864730.9941, 6943753.1738, 0, 24, 1
180,86.5,6.5,85,88.96,195,2,3
2
'Q Rte 1 WB E Bklk Th', 'AG', 11865536.69, 6943932.493, 11865777.29, 6943968.055, 0, 24, 2
180,94.5,7,1715,88.96,1761,2,3
2
'Q Rte 1 WB E Bklk L', 'AG', 11865539.92, 6943914.541, 11865816.74, 6943959.185, 0, 12, 1
180,92.5,6.5,7,88.96,105,2,3
2
'Q Phck NB S Rte 1 TR', 'AG', 11865506.52, 6943855.812, 11865529.37, 6943811.457, 0, 12, 1
180,150,6,84,88.96,1730,2,3
2
'Q Phck NB S Rte 1 L', 'AG', 11865496.19, 6943851.734, 11865758.06, 6943359.111, 0, 24, 2
180,150,6,686,88.96,1716,2,3
2
'Q Bklk SB N Rte 1 L', 'AG', 11865482.3, 6943952.705, 11865475.55, 6944044.993, 0, 12, 1
180,147,7,78,88.96,1593,2,3
2
'Q Bklk SB N Rte 1 T', 'AG', 11865472.19, 6943951.495, 11865468.11, 6944043.266, 0, 12, 1
180,147,7,17,88.96,1676,2,3

2

'Q Bklk SB N Rte 1 R', 'AG', 11865462.44, 6943950.769, 11865459.57, 6944045.386, 0, 12, 1
180, 147, 7, 15, 88.96, 1478, 2, 3
1, 0, 5, 1000, 1.9, 'Y', 5, 0, 355

'Rte. 1 Ft. Belvoir',60,11.4,0,0,6,0.3048,1,0
'1: 9140 Richmond Hwy',11865556.75,6944171.42,5
'2: 9136 Backlick Rd.',11865461.31,6944097.204,5
'3: 9135 Anderson Ln.',11865185.29,6944043.604,5
'4: Bus Stop @Rte. 1',11865210.63,6943809.932,5
'5: E.K. HmlsShelter',11865345.82,6943660.265,5
'6: Accotink Creek',11862781.25,6943530.096,5
'FCP to Backlick: 2040: No Build: AM',75,1,1,'CO'
1
'Rte 1 EB W of Bridge','AG',11861128.64,6943466.12,11862742.25,6943540.275,2466,14.18,0,44
1
'Rte 1 EB Accotink Br','BR',11862742.25,6943540.275,11862806.05,6943543.207,2466,14.18,7.5,44
1
'Rte 1 EB E of Bridge','AG',11862806.05,6943543.207,11863416.10,6943571.242,2466,14.18,0,44
1
'Rte 1 EB E of Br 3ln','AG',11863416.1,6943571.242,11863737.50,6943593.859,2466,14.18,0,56
1
'Rte 1 EB FCP ApprThr','AG',11863737.50,6943593.859,11864058.05,6943617.166,2359,14.18,0,44
1
'Rte 1 EB FCP IntThru','AG',11864058.05,6943617.166,11864188.06,6943639.571,2359,14.18,0,44
1
'Rte 1 EB FCP Dptr TL','AG',11864188.06,6943639.571,11864725.38,6943739.26,1598,14.18,0,44
1
'Rte 1 EB E Bklk Thru','AG',11864725.38,6943739.26,11865419.65,6943875.974,1583,14.18,0,44
1
'Rte 1 EB E Bklk IntT','AG',11865419.65,6943875.974,11865544.88,6943898.070,1583,13.37,0,44
1
'Rte 1 EB E Bklk Dprt','AG',11865544.88,6943898.07,11865761.25,6943936.248,1751,13.37,0,44
1
'Rte 1 EB E Bklk Dpt2','AG',11865761.25,6943936.248,11866598.63,6943961.42,1751,13.37,0,44
1
'Rte 1 EB W FCP L AD1','AG',11863737.06,6943609.947,11864055,6943638.565,107,15.14,0,32
1
'Rte 1 EB W FCP L AD2','AG',11864055,6943638.565,11864154.70,6943719.973,107,15.14,0,32

1
 'FCP NB N Rte 1 L Dpt', 'AG', 11864154.7, 6943719.973, 11864153.39, 6944136.644, 107, 15.14, 0, 32
 1
 'Rte 1 EB E FCR R Dpt', 'AG', 11864214.31, 6943623.759, 11864737.56, 6943725.453, 1451, 14.18, 0, 32
 1
 'Rte 1 EB W Bklk R Ap', 'AG', 11864737.56, 6943725.453, 11865427.04, 6943859.456, 1451, 22.54, 0, 32
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 'Rte 1 EB @Bklk R Int', 'AG', 11865427.04, 6943859.456, 11865476.96, 6943844.283, 1451, 22.54, 0, 32
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 'Rte 1 EB W Bklk L Ap', 'AG', 11864730.9941, 6943753.1738, 11865421.4283, 6943890.6159, 15, 15.14, 0, 32
 1
 'Rte 1 EB W Bklk L In', 'AG', 11865421.4283, 6943890.6159, 11865500.9967, 6943962.1455, 15, 15.14, 0, 32
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 'Rte 1 WB E Bklk', 'AG', 11866597.68, 6943983.311, 11865777.29, 6943968.055, 1563, 13.74, 0, 44
 1
 'Rte 1 WB E Bklk Thru', 'AG', 11865777.29, 6943968.055, 11865536.69, 6943932.493, 1416, 13.74, 0, 32
 1
 'Rte 1 WB @Bklk Int', 'AG', 11865536.69, 6943932.493, 11865430.13, 6943912.235, 1416, 14.13, 0, 44
 1
 'Rte 1 WB W Bklk Dptr', 'AG', 11865430.13, 6943912.235, 11864659.04, 6943761.47, 1558, 14.13, 0, 44
 1
 'Rte 1 WB E FCP Thru', 'AG', 11864659.04, 6943761.47, 11864177.82, 6943685.307, 866, 14.13, 0, 44
 1
 'Rte 1 WB W FCP Thru', 'AG', 11864177.82, 6943685.307, 11863453.83, 6943613.537, 866, 14.53, 0, 44
 1
 'Rte 1 WB FCP-Br All', 'AG', 11863453.83, 6943613.537, 11863144.98, 6943582.636, 872, 14.53, 0, 44
 1
 'Rte 1 WB E Br All', 'AG', 11863144.98, 6943582.636, 11862805.3, 6943566.529, 872, 14.53, 0, 44
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 'Rte 1 WB @Br All', 'BR', 11862805.3, 6943566.529, 11862739.6, 6943563.754, 872, 14.53, 7.5, 44
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 'Rte 1 WB W Br All', 'AG', 11862739.60, 6943563.754, 11861126.17, 6943489.495, 872, 14.53, 0, 44
 1
 'Rte 1 WB E Bklk L Ap', 'AG', 11865816.74, 6943959.185, 11865539.92, 6943914.541, 127, 22.54, 0, 32

1
 'Rte 1 WB @Bklk L Int', 'AG', 11865539.92, 6943914.541, 11865476.96, 6943844.283, 127, 22.54, 0, 32
 1
 'Rte 1 WB E FCP R Apr', 'AG', 11864669.03, 6943783.117, 11864234.05, 6943716.116, 692, 15.14, 0, 32
 1
 'Rte 1 WB @FCP R Int', 'AG', 11864234.05, 6943716.116, 11864174.14, 6943761.197, 692, 15.14, 0, 32
 1
 'FCP NB N Rte 1 Mrg', 'AG', 11864174.14, 6943761.197, 11864167.14, 6944139.352, 692, 15.14, 0, 32
 1
 'FCP SB N Rte 1 All', 'AG', 11864058.5, 6946128.75, 11864087.48, 6944232.866, 696, 14.53, 0, 44
 1
 'FCP SB N Rte 1 L Apr', 'AG', 11864087.48, 6944232.866, 11864088.79, 6943716.405, 690, 15.14, 0, 44
 1
 'FCP SB @Rte 1 L Int', 'AG', 11864088.79, 6943716.405, 11864186.79, 6943640.719, 690, 15.14, 0, 44
 1
 'FCP N Rte 1 SB R Apr', 'AG', 11864075.67, 6944253.437, 11864065.61, 6943704.588, 6, 15.14, 0, 32
 1
 'FCP @Rte 1 SB R Int', 'AG', 11864065.61, 6943704.588, 11864032.38, 6943678.764, 6, 15.14, 0, 32
 1
 'Rte 1 WB W FCP R Mrg', 'AG', 11864032.38, 6943678.764, 11863448.21, 6943622.59, 6, 15.14, 0, 32
 1
 'FCP NB N Rte 1 All', 'AG', 11864153.39, 6944136.644, 11864146, 6946133, 799, 14.53, 0, 44
 1
 'Phck NB S Rte 1 All', 'AG', 11866378.38, 6942718.386, 11865761.58, 6943360.797, 106, 13.37, 0, 32
 1
 'Phck NB S Rte 1 T-R', 'AG', 11865761.58, 6943360.797, 11865529.37, 6943811.457, 19, 13.37, 0, 32
 1
 'Phck NB S Rte 1 Thru', 'AG', 11865529.37, 6943811.457, 11865506.52, 6943855.812, 10, 13.37, 0, 32
 1
 'Bklk NB @Rte 1 Thru', 'AG', 11865506.52, 6943855.812, 11865501, 6943962.146, 10, 13.37, 0, 32
 1
 'Bklk NB N Rte 1 All', 'AG', 11865501, 6943962.146, 11865432.72, 6945277.292, 45, 13.37, 0, 32
 1
 'Rte 1 WB @Bklk R Int', 'AG', 11865536.69, 6943932.493, 11865501, 6943962.146, 20, 15.14, 0, 32

1
 'Phck NB S Rte 1 L Ap', 'AG', 11865758.06, 6943359.111, 11865496.19, 6943851.734, 87, 15.14, 0, 44
 1
 'Phck NB @Rte 1 L Int', 'AG', 11865496.19, 6943851.734, 11865430.23, 6943912.254, 87, 15.14, 0, 44
 1
 'Phck NB S Rte 1 R Ap', 'AG', 11865529.37, 6943811.457, 11865522.73, 6943855.352, 9, 15.14, 0, 32
 1
 'Phck NB @Rte 1 R Int', 'AG', 11865522.73, 6943855.352, 11865544.88, 6943898.07, 9, 15.14, 0, 32
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 'Bklk N Rte 1 SB All', 'AG', 11865413.52, 6945271.373, 11865468.11, 6944043.266, 345, 17.01, 0, 32
 1
 'Bklk N Rte 1 SB Thru', 'AG', 11865468.11, 6944043.266, 11865472.19, 6943951.495, 131, 17.01, 0, 32
 1
 'Bklk SB @Rte 1 Int', 'AG', 11865472.19, 6943951.495, 11865476.96, 6943844.283, 131, 17.01, 0, 32
 1
 'Bklk SB S Rte 1 All1', 'AG', 11865476.96, 6943844.283, 11865749.55, 6943353.851, 1709, 17.01, 0, 32
 1
 'Bklk SB S Rte 1 All2', 'AG', 11865749.55, 6943353.851, 11866363.31, 6942706.632, 1709, 17.01, 0, 32
 1
 'Bklk SB N Rte 1 R Ap', 'AG', 11865459.57, 6944045.386, 11865462.44, 6943950.769, 55, 22.54, 0, 32
 1
 'Bklk SB N Rte 1 R In', 'AG', 11865462.44, 6943950.769, 11865430.23, 6943912.254, 55, 22.54, 0, 32
 1
 'Bklk SB N Rte 1 L Ap', 'AG', 11865475.55, 6944044.993, 11865482.3, 6943952.705, 159, 22.54, 0, 32
 1
 'Bklk SB N Rte 1 L In', 'AG', 11865482.3, 6943952.705, 11865544.88, 6943898.07, 159, 22.54, 0, 32
 2
 'Q Rte 1 EB E FCP Thr', 'AG', 11863737.50, 6943593.859, 11864058.05, 6943617.166, 0, 24, 2
 180, 52.5, 6.5, 2359, 83.22, 1769, 2, 3
 2
 'Q Rte 1 EB W FCP L', 'AG', 11864055, 6943638.565, 11863737.06, 6943609.947, 0, 24, 2
 180, 170.4, 7, 107, 83.22, 1716, 2, 3
 2
 'Q Rte 1 WB E FCP Thr', 'AG', 11864177.82, 6943685.307, 11864659.04, 6943761.47, 0, 24, 2

180,69.1,7,866,83.22,1769,2,3
2
'Q FCP SB N Rte 1 L', 'AG', 11864088.79, 6943716.405, 11864087.48, 6944232.866, 0, 24, 2
180,141,7,690,83.22,1716,2,3
2
'Q FCP SB N Rte 1 R', 'AG', 11864065.61, 6943704.588, 11864075.67, 6944253.437, 0, 12, 1
180,131.4,7,6,83.22,1583,2,3
2
'Q Rte 1 EB W Bklk R', 'AG', 11865427.04, 6943859.456, 11864737.56, 6943725.453, 0, 12, 1
180,69.5,7,1451,83.22,1583,2,3
2
'Q Rte 1 EB W Bklk T', 'AG', 11865419.65, 6943875.974, 11864725.38, 6943739.26, 0, 24, 2
180,69.5,7,1583,83.22,1769,2,3
2
'Q Rte 1 EB W Bklk L', 'AG', 11865500.9967, 6943962.1455, 11865421.4283, 6943890.6159, 0, 12, 1
180,66.5,6.5,15,83.22,185,2,3
2
'Q Rte 1 WB E Bklk Th', 'AG', 11865536.69, 6943932.493, 11865777.29, 6943968.055, 0, 24, 2
180,65,7,1416,83.22,1761,2,3
2
'Q Rte 1 WB E Bklk L', 'AG', 11865539.92, 6943914.541, 11865816.74, 6943959.185, 0, 12, 1
180,57.5,6.5,127,83.22,106,2,3
2
'Q Phck NB S Rte 1 TR', 'AG', 11865506.52, 6943855.812, 11865529.37, 6943811.457, 0, 12, 1
180,170,6,19,83.22,1730,2,3
2
'Q Phck NB S Rte 1 L', 'AG', 11865496.19, 6943851.734, 11865758.06, 6943359.111, 0, 24, 2
180,170,6,87,83.22,1716,2,3
2
'Q Bklk SB N Rte 1 L', 'AG', 11865482.3, 6943952.705, 11865475.55, 6944044.993, 0, 12, 1
180,154.5,7,159,83.22,1593,2,3
2
'Q Bklk SB N Rte 1 T', 'AG', 11865472.19, 6943951.495, 11865468.11, 6944043.266, 0, 12, 1
180,154.5,7,131,83.22,1676,2,3

2

'Q Bklk SB N Rte 1 R', 'AG', 11865462.44, 6943950.769, 11865459.57, 6944045.386, 0, 12, 1
180, 154.5, 7, 55, 83.22, 1478, 2, 3
1, 0, 5, 1000, 1.9, 'Y', 5, 0, 355

'Rte. 1 Ft. Belvoir',60,11.4,0,0,6,0.3048,1,0
'1: 9140 Richmond Hwy',11865556.75,6944171.42,5
'2: 9136 Backlick Rd.',11865461.31,6944097.204,5
'3: 9135 Anderson Ln.',11865185.29,6944043.604,5
'4: Bus Stop @Rte. 1',11865210.63,6943809.932,5
'5: E.K. HmlsShelter',11865345.82,6943660.265,5
'6: Accotink Creek',11862781.25,6943530.096,5
'FCP to Backlick: 2040: No Build: PM',75,1,1,'CO'
1
'Rte 1 EB W of Bridge','AG',11861128.64,6943466.12,11862742.25,6943540.275,1247,13.74,0,44
1
'Rte 1 EB Accotink Br','BR',11862742.25,6943540.275,11862806.05,6943543.207,1247,13.74,7.5,44
1
'Rte 1 EB E of Bridge','AG',11862806.05,6943543.207,11863416.10,6943571.242,1247,13.74,0,44
1
'Rte 1 EB E of Br 3ln','AG',11863416.1,6943571.242,11863737.50,6943593.859,1247,13.74,0,56
1
'Rte 1 EB FCP ApprThr','AG',11863737.50,6943593.859,11864058.05,6943617.166,1171,13.74,0,44
1
'Rte 1 EB FCP IntThru','AG',11864058.05,6943617.166,11864188.06,6943639.571,1171,14.13,0,44
1
'Rte 1 EB FCP Dptr TL','AG',11864188.06,6943639.571,11864725.38,6943739.26,1320,14.13,0,44
1
'Rte 1 EB E Bklk Thru','AG',11864725.38,6943739.26,11865419.65,6943875.974,1235,14.13,0,44
1
'Rte 1 EB E Bklk IntT','AG',11865419.65,6943875.974,11865544.88,6943898.070,1235,13.74,0,44
1
'Rte 1 EB E Bklk Dprt','AG',11865544.88,6943898.07,11865761.25,6943936.248,1331,13.74,0,44
1
'Rte 1 EB E Bklk Dpt2','AG',11865761.25,6943936.248,11866598.63,6943961.42,1331,13.74,0,44
1
'Rte 1 EB W FCP L AD1','AG',11863737.06,6943609.947,11864055,6943638.565,76,15.14,0,32
1
'Rte 1 EB W FCP L AD2','AG',11864055,6943638.565,11864154.70,6943719.973,76,15.14,0,32

1
'FCP NB N Rte 1 L Dpt', 'AG', 11864154.7, 6943719.973, 11864153.39, 6944136.644, 76, 15.14, 0, 32
1
'Rte 1 EB E FCR R Dpt', 'AG', 11864214.31, 6943623.759, 11864737.56, 6943725.453, 295, 14.13, 0, 32
1
'Rte 1 EB W Bklk R Ap', 'AG', 11864737.56, 6943725.453, 11865427.04, 6943859.456, 295, 15.14, 0, 32
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'Rte 1 EB @Bklk R Int', 'AG', 11865427.04, 6943859.456, 11865476.96, 6943844.283, 295, 15.14, 0, 32
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'Rte 1 EB W Bklk L Ap', 'AG', 11864730.9941, 6943753.1738, 11865421.4283, 6943890.6159, 85, 15.14, 0, 32
1
'Rte 1 EB W Bklk L In', 'AG', 11865421.4283, 6943890.6159, 11865500.9967, 6943962.1455, 85, 15.14, 0, 32
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'Rte 1 WB E Bklk', 'AG', 11866597.68, 6943983.311, 11865777.29, 6943968.055, 1997, 13.37, 0, 44
1
'Rte 1 WB E Bklk Thru', 'AG', 11865777.29, 6943968.055, 11865536.69, 6943932.493, 1782, 13.37, 0, 32
1
'Rte 1 WB @Bklk Int', 'AG', 11865536.69, 6943932.493, 11865430.13, 6943912.235, 1782, 13.38, 0, 44
1
'Rte 1 WB W Bklk Dptr', 'AG', 11865430.13, 6943912.235, 11864659.04, 6943761.47, 2531, 13.38, 0, 44
1
'Rte 1 WB E FCP Thru', 'AG', 11864659.04, 6943761.47, 11864177.82, 6943685.307, 2096, 13.38, 0, 44
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'Rte 1 WB W FCP Thru', 'AG', 11864177.82, 6943685.307, 11863453.83, 6943613.537, 2096, 15.14, 0, 44
1
'Rte 1 WB FCP-Br All', 'AG', 11863453.83, 6943613.537, 11863144.98, 6943582.636, 2783, 15.14, 0, 44
1
'Rte 1 WB E Br All', 'AG', 11863144.98, 6943582.636, 11862805.3, 6943566.529, 2783, 15.14, 0, 44
1
'Rte 1 WB @Br All', 'BR', 11862805.3, 6943566.529, 11862739.6, 6943563.754, 2783, 15.14, 7.5, 44
1
'Rte 1 WB W Br All', 'AG', 11862739.60, 6943563.754, 11861126.17, 6943489.495, 2783, 15.14, 0, 44
1
'Rte 1 WB E Bklk L Ap', 'AG', 11865816.74, 6943959.185, 11865539.92, 6943914.541, 8, 15.14, 0, 32

1
'Rte 1 WB @Bklk L Int', 'AG', 11865539.92, 6943914.541, 11865476.96, 6943844.283, 8, 15.14, 0, 32
1
'Rte 1 WB E FCP R Apr', 'AG', 11864669.03, 6943783.117, 11864234.05, 6943716.116, 435, 15.14, 0, 32
1
'Rte 1 WB @FCP R Int', 'AG', 11864234.05, 6943716.116, 11864174.14, 6943761.197, 435, 15.14, 0, 32
1
'FCP NB N Rte 1 Mrg', 'AG', 11864174.14, 6943761.197, 11864167.14, 6944139.352, 435, 15.14, 0, 32
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'FCP SB N Rte 1 All', 'AG', 11864058.5, 6946128.75, 11864087.48, 6944232.866, 1131, 14.53, 0, 44
1
'FCP SB N Rte 1 L Apr', 'AG', 11864087.48, 6944232.866, 11864088.79, 6943716.405, 444, 15.14, 0, 44
1
'FCP SB @Rte 1 L Int', 'AG', 11864088.79, 6943716.405, 11864186.79, 6943640.719, 444, 15.14, 0, 44
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'FCP N Rte 1 SB R Apr', 'AG', 11864075.67, 6944253.437, 11864065.61, 6943704.588, 687, 17.01, 0, 32
1
'FCP @Rte 1 SB R Int', 'AG', 11864065.61, 6943704.588, 11864032.38, 6943678.764, 687, 17.01, 0, 32
1
'Rte 1 WB W FCP R Mrg', 'AG', 11864032.38, 6943678.764, 11863448.21, 6943622.59, 687, 17.01, 0, 32
1
'FCP NB N Rte 1 All', 'AG', 11864153.39, 6944136.644, 11864146, 6946133, 511, 14.53, 0, 44
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'Phck NB S Rte 1 All', 'AG', 11866378.38, 6942718.386, 11865761.58, 6943360.797, 821, 14.18, 0, 32
1
'Phck NB S Rte 1 T-R', 'AG', 11865761.58, 6943360.797, 11865529.37, 6943811.457, 87, 14.18, 0, 32
1
'Phck NB S Rte 1 Thru', 'AG', 11865529.37, 6943811.457, 11865506.52, 6943855.812, 76, 14.18, 0, 32
1
'Bklk NB @Rte 1 Thru', 'AG', 11865506.52, 6943855.812, 11865501, 6943962.146, 76, 14.18, 0, 32
1
'Bklk NB N Rte 1 All', 'AG', 11865501, 6943962.146, 11865432.72, 6945277.292, 368, 14.18, 0, 32
1
'Rte 1 WB @Bklk R Int', 'AG', 11865536.69, 6943932.493, 11865501, 6943962.146, 207, 15.14, 0, 32

1
'Phck NB S Rte 1 L Ap', 'AG', 11865758.06, 6943359.111, 11865496.19, 6943851.734, 734, 15.14, 0, 44
1
'Phck NB @Rte 1 L Int', 'AG', 11865496.19, 6943851.734, 11865430.23, 6943912.254, 734, 15.14, 0, 44
1
'Phck NB S Rte 1 R Ap', 'AG', 11865529.37, 6943811.457, 11865522.73, 6943855.352, 11, 15.14, 0, 32
1
'Phck NB @Rte 1 R Int', 'AG', 11865522.73, 6943855.352, 11865544.88, 6943898.07, 11, 15.14, 0, 32
1
'Bklk N Rte 1 SB All', 'AG', 11865413.52, 6945271.373, 11865468.11, 6944043.266, 119, 13.38, 0, 32
1
'Bklk N Rte 1 SB Thru', 'AG', 11865468.11, 6944043.266, 11865472.19, 6943951.495, 19, 13.38, 0, 32
1
'Bklk SB @Rte 1 Int', 'AG', 11865472.19, 6943951.495, 11865476.96, 6943844.283, 19, 13.38, 0, 32
1
'Bklk SB S Rte 1 All1', 'AG', 11865476.96, 6943844.283, 11865749.55, 6943353.851, 322, 13.38, 0, 32
1
'Bklk SB S Rte 1 All2', 'AG', 11865749.55, 6943353.851, 11866363.31, 6942706.632, 322, 13.38, 0, 32
1
'Bklk SB N Rte 1 R Ap', 'AG', 11865459.57, 6944045.386, 11865462.44, 6943950.769, 15, 15.14, 0, 32
1
'Bklk SB N Rte 1 R In', 'AG', 11865462.44, 6943950.769, 11865430.23, 6943912.254, 15, 15.14, 0, 32
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'Bklk SB N Rte 1 L Ap', 'AG', 11865475.55, 6944044.993, 11865482.3, 6943952.705, 85, 15.14, 0, 32
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2
'Q Rte 1 EB E FCP Thr', 'AG', 11863737.50, 6943593.859, 11864058.05, 6943617.166, 0, 24, 2
180,68.5,6.5,1171,83.22,1769,2,3
2
'Q Rte 1 EB W FCP L', 'AG', 11864055,6943638.565,11863737.06,6943609.947,0,24,2
180,175,5,76,83.22,1716,2,3
2
'Q Rte 1 WB E FCP Thr', 'AG', 11864177.82,6943685.307,11864659.04,6943761.47,0,24,2

180,80.5,7,2096,83.22,1769,2,3
2
'Q FCP SB N Rte 1 L', 'AG', 11864088.79,6943716.405,11864087.48,6944232.866,0,24,2
180,125,7,444,83.22,1716,2,3
2
'Q FCP SB N Rte 1 R', 'AG', 11864065.61,6943704.588,11864075.67,6944253.437,0,12,1
180,120,7,687,83.22,1583,2,3
2
'Q Rte 1 EB W Bklk R', 'AG', 11865427.04,6943859.456,11864737.56,6943725.453,0,12,1
180,92.5,7,295,83.22,1583,2,3
2
'Q Rte 1 EB W Bklk T', 'AG', 11865419.65,6943875.974,11864725.38,6943739.26,0,24,2
180,92.5,7,1235,83.22,1769,2,3
2
'Q Rte 1 EB W Bklk L', 'AG', 11865500.9967,6943962.1455,11865421.4283,6943890.6159,0,12,1
180,87.5,6.5,85,83.22,185,2,3
2
'Q Rte 1 WB E Bklk Th', 'AG', 11865536.69,6943932.493,11865777.29,6943968.055,0,24,2
180,95.5,7,1782,83.22,1761,2,3
2
'Q Rte 1 WB E Bklk L', 'AG', 11865539.92,6943914.541,11865816.74,6943959.185,0,12,1
180,93.5,6.5,8,83.22,106,2,3
2
'Q Phck NB S Rte 1 TR', 'AG', 11865506.52,6943855.812,11865529.37,6943811.457,0,12,1
180,149,6,87,83.22,1730,2,3
2
'Q Phck NB S Rte 1 L', 'AG', 11865496.19,6943851.734,11865758.06,6943359.111,0,24,2
180,149,6,734,83.22,1716,2,3
2
'Q Bklk SB N Rte 1 L', 'AG', 11865482.3,6943952.705,11865475.55,6944044.993,0,12,1
180,147,7,85,83.22,1593,2,3
2
'Q Bklk SB N Rte 1 T', 'AG', 11865472.19,6943951.495,11865468.11,6944043.266,0,12,1
180,147,7,19,83.22,1676,2,3

2

'Q Bklk SB N Rte 1 R', 'AG', 11865462.44, 6943950.769, 11865459.57, 6944045.386, 0, 12, 1
180, 147, 7, 15, 83.22, 1478, 2, 3
1, 0, 5, 1000, 1.9, 'Y', 5, 0, 355

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: AM

DATE : 5/18/12
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The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

 VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
 U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 1.9 PPM

LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (FT)				*	LENGTH	BRG TYPE	VPH	EF	H	W	V/C QUEUE
	*	X1	Y1	X2	Y2	*	(FT)	(DEG)	(G/MI)	(FT)	(FT)	(VEH)	
	*	-----				*	-----						
1. Rte 1 EB W of Bridge*	*****	*****	*****	*****	*****	*	1614.	87. AG	2215.	19.1	0.0	44.0	
2. Rte 1 EB Accotink Br*	*****	*****	*****	*****	*****	*	64.	88. BR	2215.	19.1	7.5	44.0	
3. Rte 1 EB E of Bridge*	*****	*****	*****	*****	*****	*	611.	87. AG	2215.	19.1	0.0	44.0	
4. Rte 1 EB E of Br 3ln*	*****	*****	*****	*****	*****	*	323.	86. AG	2215.	19.1	0.0	56.0	
5. Rte 1 EB FCP ApprThru*	*****	*****	*****	*****	*****	*	321.	86. AG	1930.	19.1	0.0	44.0	
6. Rte 1 EB FCP IntThru*	*****	*****	*****	*****	*****	*	131.	80. AG	1930.	19.8	0.0	44.0	
7. Rte 1 EB FCP Dptr *	*****	*****	*****	*****	*****	*	546.	79. AG	1695.	19.8	0.0	44.0	
8. Rte 1 EB E Bklk Thru*	*****	*****	*****	*****	*****	*	708.	79. AG	1695.	19.8	0.0	44.0	
9. Rte 1 EB E Bklk IntT*	*****	*****	*****	*****	*****	*	127.	80. AG	1695.	18.8	0.0	44.0	
10. Rte 1 EB Bklk Dptrtr *	*****	*****	*****	*****	*****	*	219.	80. AG	1910.	18.8	0.0	44.0	
11. Rte 1 EB E Bklk Dpt2*	*****	*****	*****	*****	*****	*	839.	88. AG	1910.	18.8	0.0	44.0	
12. Rte 1 EB W FCP L AD1*	*****	*****	*****	*****	*****	*	320.	85. AG	285.	21.0	0.0	32.0	
13. Rte 1 EB W FCP L AD2*	*****	*****	*****	*****	*****	*	129.	51. AG	285.	21.0	0.0	32.0	
14. FCP NB N Rte 1 L Dpt*	*****	*****	*****	*****	*****	*	416.	360. AG	285.	21.0	0.0	32.0	
15. Rte 1 EB E FCR R Dpt*	*****	*****	*****	*****	*****	*	534.	79. AG	1065.	19.8	0.0	32.0	
16. Rte 1 EB W Bklk R Ap*	*****	*****	*****	*****	*****	*	702.	79. AG	1065.	31.1	0.0	32.0	
17. Rte 1 EB @Bklk R Int*	*****	*****	*****	*****	*****	*	52.	107. AG	1065.	31.1	0.0	32.0	
18. Rte 1 WB E Bklk *	*****	*****	*****	*****	*****	*	821.	269. AG	1590.	19.3	0.0	44.0	
19. Rte 1 WB E Bklk Thru*	*****	*****	*****	*****	*****	*	242.	262. AG	1330.	19.3	0.0	32.0	
20. Rte 1 WB @Bklk Int *	*****	*****	*****	*****	*****	*	109.	259. AG	1330.	19.9	0.0	44.0	
21. Rte 1 WB W Bklk Dptr*	*****	*****	*****	*****	*****	*	786.	259. AG	1445.	19.9	0.0	44.0	
22. Rte 1 WB E FCP Thru *	*****	*****	*****	*****	*****	*	487.	261. AG	595.	19.9	0.0	44.0	
23. Rte 1 WB W FCP Thru *	*****	*****	*****	*****	*****	*	728.	264. AG	595.	20.4	0.0	44.0	
24. Rte 1 WB FCP-Br All *	*****	*****	*****	*****	*****	*	310.	264. AG	610.	20.4	0.0	44.0	
25. Rte 1 WB E Br All *	*****	*****	*****	*****	*****	*	341.	267. AG	610.	20.4	0.0	44.0	
26. Rte 1 WB @Br All *	*****	*****	*****	*****	*****	*	65.	268. BR	610.	20.4	7.5	44.0	
27. Rte 1 WB W Br All *	*****	*****	*****	*****	*****	*	1616.	267. AG	610.	20.4	0.0	44.0	
28. Rte 1 WB E Bklk L Ap*	*****	*****	*****	*****	*****	*	280.	261. AG	215.	31.1	0.0	32.0	

29.	Rte 1 WB @Bklk L Int*	*****	*****	*****	*****	95.	222.	AG	215.	31.1	0.0	32.0
30.	Rte 1 WB E FCP R Apr*	*****	*****	*****	*****	441.	261.	AG	850.	21.0	0.0	32.0
31.	Rte 1 WB @FCP R Int *	*****	*****	*****	*****	75.	307.	AG	850.	21.0	0.0	32.0
32.	FCP NB N Rte 1 Mrg *	*****	*****	*****	*****	378.	359.	AG	850.	21.0	0.0	32.0
33.	FCP SB N Rte 1 All *	*****	*****	*****	*****	1897.	179.	AG	845.	20.4	0.0	44.0
34.	FCP SB N Rte 1 L Apr*	*****	*****	*****	*****	517.	180.	AG	830.	21.0	0.0	44.0
35.	FCP SB @Rte 1 L Int *	*****	*****	*****	*****	124.	127.	AG	830.	21.0	0.0	44.0
36.	FCP N Rte 1 SB R Apr*	*****	*****	*****	*****	549.	181.	AG	15.	21.0	0.0	32.0
37.	FCP @Rte 1 SB R Int *	*****	*****	*****	*****	42.	233.	AG	15.	21.0	0.0	32.0
38.	Rte 1 WB W FCP R Mrg*	*****	*****	*****	*****	587.	264.	AG	15.	21.0	0.0	32.0
39.	FCP NB N Rte 1 All *	*****	*****	*****	*****	1996.	360.	AG	1135.	20.4	0.0	44.0
40.	Phck NB S Rte 1 All *	*****	*****	*****	*****	890.	316.	AG	120.	18.8	0.0	32.0
41.	Phck NB S Rte 1 T-R *	*****	*****	*****	*****	507.	333.	AG	10.	18.8	0.0	32.0
42.	Phck NB S Rte 1 Thru*	*****	*****	*****	*****	50.	333.	AG	5.	18.8	0.0	32.0
43.	Bklk NB @Rte 1 Thru *	*****	*****	*****	*****	107.	357.	AG	5.	18.8	0.0	32.0
44.	Bklk NB N Rte 1 All*	*****	*****	*****	*****	1317.	357.	AG	50.	18.8	0.0	32.0
45.	Rte 1 WB @Bklk R Int*	*****	*****	*****	*****	47.	309.	AG	45.	21.0	0.0	32.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: AM

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LINK VARIABLES

LINK DESCRIPTION	* X1	LINK COORDINATES (FT) Y1	X2	Y2	* LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
46. Phck NB S Rte 1 L Ap*	*****	*****	*****	*****	558.	332. AG	110.	21.0	0.0	32.0		
47. Phck NB @Rte 1 L Int*	*****	*****	*****	*****	90.	312. AG	110.	21.0	0.0	32.0		
48. Phck NB S Rte 1 R Ap*	*****	*****	*****	*****	45.	353. AG	5.	21.0	0.0	32.0		
49. Phck NB @Rte 1 R Int*	*****	*****	*****	*****	48.	27. AG	5.	21.0	0.0	32.0		
50. Bklk N Rte 1 SB All *	*****	*****	*****	*****	1229.	177. AG	380.	23.5	0.0	32.0		
51. Bklk N Rte 1 SB Thru*	*****	*****	*****	*****	92.	177. AG	165.	23.5	0.0	32.0		
52. Bklk SB @Rte 1 Int *	*****	*****	*****	*****	108.	177. AG	165.	23.5	0.0	32.0		
53. Bklk SB S Rte 1 All1*	*****	*****	*****	*****	561.	151. AG	1445.	23.5	0.0	32.0		
54. Bklk SB S Rte 1 All2*	*****	*****	*****	*****	891.	137. AG	1445.	23.5	0.0	32.0		
55. Bklk SB N Rte 1 R Ap*	*****	*****	*****	*****	94.	179. AG	5.	21.0	0.0	32.0		
56. Bklk SB N Rte 1 R In*	*****	*****	*****	*****	50.	220. AG	5.	21.0	0.0	32.0		
57. Bklk SB N Rte 1 L Ap*	*****	*****	*****	*****	93.	176. AG	210.	21.0	0.0	32.0		
58. Bklk SB N Rte 1 L In*	*****	*****	*****	*****	83.	131. AG	210.	21.0	0.0	32.0		
59. Q Rte 1 WB E FCP Thr*	*****	*****	*****	*****	301.	266. AG	197.	100.0	0.0	24.0	0.86	15.3
60. Q Rte 1 WB E FCP L *	*****	*****	*****	*****	445.	265. AG	550.	100.0	0.0	24.0	1.25	22.6
61. Q Rte 1 WB E FCP Thr*	*****	*****	*****	*****	136.	80. AG	291.	100.0	0.0	24.0	0.35	6.9
62. Q FCP SB N Rte 1 L *	*****	*****	*****	*****	1186.	360. AG	471.	100.0	0.0	24.0	1.25	60.3
63. Q FCP SB N Rte 1 R *	*****	*****	*****	*****	9.	360. AG	199.	100.0	0.0	12.0	0.03	0.5
64. Q Rte 1 EB W Bklk R *	*****	*****	*****	*****	3015.	259. AG	135.	100.0	0.0	12.0	1.30	153.1
65. Q Rte 1 EB W Bklk T *	*****	*****	*****	*****	376.	259. AG	270.	100.0	0.0	24.0	0.93	19.1
66. Q Rte 1 WB E Bklk Th*	*****	*****	*****	*****	200.	81. AG	190.	100.0	0.0	24.0	0.59	10.2
67. Q Rte 1 WB E Bklk L *	*****	*****	*****	*****	1878.	81. AG	95.	100.0	0.0	12.0	4.89	95.4
68. Q Phck NB S Rte 1 TR*	*****	*****	*****	*****	9.	153. AG	289.	100.0	0.0	12.0	0.22	0.5
69. Q Phck NB S Rte 1 L *	*****	*****	*****	*****	790.	152. AG	289.	100.0	0.0	12.0	2.39	40.1
70. Q Bklk SB N Rte 1 L *	*****	*****	*****	*****	1101.	356. AG	272.	100.0	0.0	12.0	1.71	55.9
71. Q Bklk SB N Rte 1 T *	*****	*****	*****	*****	535.	357. AG	272.	100.0	0.0	12.0	1.27	27.2
72. Q Bklk SB N Rte 1 R *	*****	*****	*****	*****	4.	360. AG	272.	100.0	0.0	12.0	0.04	0.2

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: AM

DATE : 5/18/12

TIME : 15: 8:59

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* * * *	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
59. Q Rte 1 WB E FCP Thr*		180	57	6.5	1930	1769	116.13	2	3
60. Q Rte 1 WB E FCP L *		180	159	7.0	285	1716	116.13	2	3
61. Q Rte 1 WB E FCP Thr*		180	84	6.5	595	1769	116.13	2	3
62. Q FCP SB N Rte 1 L *		180	136	7.0	830	1716	116.13	2	3
63. Q FCP SB N Rte 1 R *		180	115	7.0	15	1583	116.13	2	3
64. Q Rte 1 EB W Bklk R *		180	78	7.0	1065	1583	116.13	2	3
65. Q Rte 1 EB W Bklk T *		180	78	7.0	1695	1769	116.13	2	3
66. Q Rte 1 WB E Bklk Th*		180	55	7.0	1330	1761	116.13	2	3
67. Q Rte 1 WB E Bklk L *		180	55	6.5	215	69	116.13	2	3
68. Q Phck NB S Rte 1 TR*		180	167	6.0	10	1678	116.13	2	3
69. Q Phck NB S Rte 1 L *		180	167	6.0	110	1681	116.13	2	3
70. Q Bklk SB N Rte 1 L *		180	157	7.0	210	1593	116.13	2	3
71. Q Bklk SB N Rte 1 T *		180	157	7.0	165	1676	116.13	2	3
72. Q Bklk SB N Rte 1 R *		180	157	7.0	5	1478	116.13	2	3

RECEPTOR LOCATIONS

RECEPTOR	* * *	COORDINATES (FT)			* * *
		X	Y	Z	
1. 1: 9140 Richmond Hwy *		*****	*****	5.0	*
2. 2: 9136 Backlick Rd. *		*****	*****	5.0	*
3. 3: 9135 Anderson Ln. *		*****	*****	5.0	*
4. 4: Bus Stop @Rte. 1 *		*****	*****	5.0	*
5. 5: E.K. HmlsShelter *		*****	*****	5.0	*
6. 6: Accotink Creek *		*****	*****	5.0	*

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-****

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
0.	2.0	9.0	1.9	5.7	3.8	3.2
5.	1.9	9.0	1.9	5.9	4.2	3.2
10.	1.9	8.1	2.1	6.2	4.1	3.2
15.	1.9	6.9	2.2	6.4	4.2	3.2
20.	1.9	6.2	2.2	6.8	3.8	3.3
25.	1.9	5.7	2.2	6.9	3.4	3.3
30.	1.9	5.3	2.3	6.9	3.1	3.7
35.	1.9	5.1	2.4	7.0	3.3	3.9
40.	1.9	4.7	2.4	7.5	3.4	4.0
45.	1.9	4.6	2.4	7.8	3.5	4.3
50.	1.9	4.6	2.4	8.4	3.5	4.6
55.	1.9	4.4	2.4	9.1	3.6	4.7
60.	1.9	4.4	2.4	10.0	3.4	4.8
65.	1.9	4.2	2.4	11.3	3.3	5.2
70.	1.9	4.2	2.4	12.0	3.3	5.9
75.	1.9	4.2	2.4	12.2	3.0	6.7
80.	1.9	4.2	2.4	11.0	2.7	8.4
85.	1.9	4.3	2.7	8.2	2.5	8.9
90.	2.0	4.6	3.1	6.4	2.4	7.7
95.	2.2	5.0	3.7	4.8	2.5	5.1
100.	2.5	5.5	3.9	4.3	2.5	3.9
105.	2.8	5.6	3.4	4.0	2.6	3.3
110.	3.0	5.4	3.3	3.6	2.6	2.9
115.	3.0	5.7	3.0	3.4	2.6	2.6
120.	2.9	5.7	3.3	3.6	2.8	2.4
125.	2.7	5.8	3.5	3.6	2.9	2.4
130.	2.7	5.7	4.2	3.5	3.0	2.4
135.	2.8	5.9	4.6	3.3	2.6	2.4
140.	2.9	6.3	4.4	2.8	2.2	2.4
145.	2.9	6.6	3.9	2.5	1.9	2.3

150.	*	3.0	7.3	3.5	2.5	1.9	2.3
155.	*	3.1	8.0	3.2	2.5	1.9	2.3
160.	*	3.3	9.2	3.2	2.5	1.9	2.3
165.	*	3.5	9.8	3.3	2.6	1.9	2.3
170.	*	3.6	9.3	3.3	2.6	1.9	2.4
175.	*	3.5	8.1	3.2	2.6	1.9	2.4
180.	*	3.3	6.7	3.2	2.5	1.9	2.4
185.	*	3.1	5.4	3.2	2.5	1.9	2.4
190.	*	3.3	4.4	3.3	2.5	1.9	2.4
195.	*	3.1	4.1	3.4	2.5	1.9	2.4
200.	*	3.5	3.7	3.3	2.6	1.9	2.4
205.	*	3.9	3.9	3.4	2.6	1.9	2.4

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: AM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)						
	1	2	3	4	5	6	
210.	*	4.2	3.9	3.3	2.7	1.9	2.4
215.	*	4.0	3.9	3.3	2.9	1.9	2.4
220.	*	4.2	3.9	3.2	2.8	1.9	2.3
225.	*	4.4	4.0	3.2	2.8	1.9	2.2
230.	*	4.4	3.9	3.3	3.2	1.9	2.3
235.	*	4.1	3.9	3.3	3.5	1.9	2.3
240.	*	4.1	3.8	3.4	4.0	1.9	2.4
245.	*	4.0	3.9	3.6	4.8	1.9	2.6
250.	*	4.0	3.6	3.8	6.6	1.9	3.0
255.	*	3.6	3.4	3.1	9.5	1.9	3.6
260.	*	3.2	2.8	2.8	12.7	2.4	4.9
265.	*	2.9	2.4	2.4	13.8	3.3	6.6
270.	*	2.7	2.3	2.3	12.1	4.0	7.5
275.	*	2.8	2.3	2.2	10.8	3.8	7.1
280.	*	2.9	2.3	2.2	9.6	4.0	6.1
285.	*	2.9	2.5	2.3	8.7	4.0	5.4
290.	*	2.9	2.4	2.3	8.1	3.9	5.0
295.	*	2.9	2.4	2.3	7.7	3.7	4.6
300.	*	3.1	2.4	2.3	7.3	3.7	4.4
305.	*	3.1	2.3	2.2	6.9	3.8	4.1
310.	*	3.1	2.5	2.2	6.7	3.7	3.8
315.	*	3.1	2.5	2.1	6.6	3.7	3.6
320.	*	3.0	2.5	2.1	6.2	3.6	3.5
325.	*	3.0	2.4	2.1	6.1	3.6	3.4
330.	*	3.0	2.3	2.1	6.1	3.6	3.3
335.	*	3.0	2.5	2.0	5.8	3.5	3.3
340.	*	3.0	2.8	1.9	5.6	3.4	3.3
345.	*	2.9	3.6	1.9	5.7	3.4	3.2
350.	*	2.6	5.4	1.9	5.7	3.4	3.2
355.	*	2.2	7.6	1.9	5.7	3.5	3.2
360.	*	2.0	9.0	1.9	5.7	3.8	3.2
5.	*	1.9	9.0	1.9	5.9	4.2	3.2
10.	*	1.9	8.1	2.1	6.2	4.1	3.2
15.	*	1.9	6.9	2.2	6.4	4.2	3.2
20.	*	1.9	6.2	2.2	6.8	3.8	3.3
25.	*	1.9	5.7	2.2	6.9	3.4	3.3
30.	*	1.9	5.3	2.3	6.9	3.1	3.7
35.	*	1.9	5.1	2.4	7.0	3.3	3.9
40.	*	1.9	4.7	2.4	7.5	3.4	4.0
45.	*	1.9	4.6	2.4	7.8	3.5	4.3

50.	*	1.9	4.6	2.4	8.4	3.5	4.6
55.	*	1.9	4.4	2.4	9.1	3.6	4.7
60.	*	1.9	4.4	2.4	10.0	3.4	4.8
65.	*	1.9	4.2	2.4	11.3	3.3	5.2
70.	*	1.9	4.2	2.4	12.0	3.3	5.9
75.	*	1.9	4.2	2.4	12.2	3.0	6.7
80.	*	1.9	4.2	2.4	11.0	2.7	8.4
85.	*	1.9	4.3	2.7	8.2	2.5	8.9
90.	*	2.0	4.6	3.1	6.4	2.4	7.7
95.	*	2.2	5.0	3.7	4.8	2.5	5.1
100.	*	2.5	5.5	3.9	4.3	2.5	3.9
105.	*	2.8	5.6	3.4	4.0	2.6	3.3

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: AM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
110.	* 3.0	5.4	3.3	3.6	2.6	2.9
115.	* 3.0	5.7	3.0	3.4	2.6	2.6
120.	* 2.9	5.7	3.3	3.6	2.8	2.4
125.	* 2.7	5.8	3.5	3.6	2.9	2.4
130.	* 2.7	5.7	4.2	3.5	3.0	2.4
135.	* 2.8	5.9	4.6	3.3	2.6	2.4
140.	* 2.9	6.3	4.4	2.8	2.2	2.4
145.	* 2.9	6.6	3.9	2.5	1.9	2.3
150.	* 3.0	7.3	3.5	2.5	1.9	2.3
155.	* 3.1	8.0	3.2	2.5	1.9	2.3
160.	* 3.3	9.2	3.2	2.5	1.9	2.3
165.	* 3.5	9.8	3.3	2.6	1.9	2.3
170.	* 3.6	9.3	3.3	2.6	1.9	2.4
175.	* 3.5	8.1	3.2	2.6	1.9	2.4
180.	* 3.3	6.7	3.2	2.5	1.9	2.4
185.	* 3.1	5.4	3.2	2.5	1.9	2.4
190.	* 3.3	4.4	3.3	2.5	1.9	2.4
195.	* 3.1	4.1	3.4	2.5	1.9	2.4
200.	* 3.5	3.7	3.3	2.6	1.9	2.4
205.	* 3.9	3.9	3.4	2.6	1.9	2.4
210.	* 4.2	3.9	3.3	2.7	1.9	2.4
215.	* 4.0	3.9	3.3	2.9	1.9	2.4
220.	* 4.2	3.9	3.2	2.8	1.9	2.3
225.	* 4.4	4.0	3.2	2.8	1.9	2.2
230.	* 4.4	3.9	3.3	3.2	1.9	2.3
235.	* 4.1	3.9	3.3	3.5	1.9	2.3
240.	* 4.1	3.8	3.4	4.0	1.9	2.4
245.	* 4.0	3.9	3.6	4.8	1.9	2.6
250.	* 4.0	3.6	3.8	6.6	1.9	3.0
255.	* 3.6	3.4	3.1	9.5	1.9	3.6
260.	* 3.2	2.8	2.8	12.7	2.4	4.9
265.	* 2.9	2.4	2.4	13.8	3.3	6.6
270.	* 2.7	2.3	2.3	12.1	4.0	7.5
275.	* 2.8	2.3	2.2	10.8	3.8	7.1
280.	* 2.9	2.3	2.2	9.6	4.0	6.1
285.	* 2.9	2.5	2.3	8.7	4.0	5.4
290.	* 2.9	2.4	2.3	8.1	3.9	5.0
295.	* 2.9	2.4	2.3	7.7	3.7	4.6
300.	* 3.1	2.4	2.3	7.3	3.7	4.4
305.	* 3.1	2.3	2.2	6.9	3.8	4.1

310.	*	3.1	2.5	2.2	6.7	3.7	3.8
315.	*	3.1	2.5	2.1	6.6	3.7	3.6
320.	*	3.0	2.5	2.1	6.2	3.6	3.5
325.	*	3.0	2.4	2.1	6.1	3.6	3.4
330.	*	3.0	2.3	2.1	6.1	3.6	3.3
335.	*	3.0	2.5	2.0	5.8	3.5	3.3
340.	*	3.0	2.8	1.9	5.6	3.4	3.3
345.	*	2.9	3.6	1.9	5.7	3.4	3.2
350.	*	2.6	5.4	1.9	5.7	3.4	3.2
355.	*	2.2	7.6	1.9	5.7	3.5	3.2
360.	*	2.0	9.0	1.9	5.7	3.8	3.2
365.	*	1.9	9.0	1.9	5.9	4.2	3.2

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: AM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)						
	1	2	3	4	5	6	
370.	*	1.9	8.1	2.1	6.2	4.1	3.2
375.	*	1.9	6.9	2.2	6.4	4.2	3.2
380.	*	1.9	6.2	2.2	6.8	3.8	3.3
385.	*	1.9	5.7	2.2	6.9	3.4	3.3
390.	*	1.9	5.3	2.3	6.9	3.1	3.7
395.	*	1.9	5.1	2.4	7.0	3.3	3.9
400.	*	1.9	4.7	2.4	7.5	3.4	4.0
405.	*	1.9	4.6	2.4	7.8	3.5	4.3
410.	*	1.9	4.6	2.4	8.4	3.5	4.6
415.	*	1.9	4.4	2.4	9.1	3.6	4.7
420.	*	1.9	4.4	2.4	10.0	3.4	4.8
425.	*	1.9	4.2	2.4	11.3	3.3	5.2
430.	*	1.9	4.2	2.4	12.0	3.3	5.9
435.	*	1.9	4.2	2.4	12.2	3.0	6.7
440.	*	1.9	4.2	2.4	11.0	2.7	8.4
445.	*	1.9	4.3	2.7	8.2	2.5	8.9
450.	*	2.0	4.6	3.1	6.4	2.4	7.7
455.	*	2.2	5.0	3.7	4.8	2.5	5.1
460.	*	2.5	5.5	3.9	4.3	2.5	3.9
465.	*	2.8	5.6	3.4	4.0	2.6	3.3
470.	*	3.0	5.4	3.3	3.6	2.6	2.9
475.	*	3.0	5.7	3.0	3.4	2.6	2.6
480.	*	2.9	5.7	3.3	3.6	2.8	2.4
485.	*	2.7	5.8	3.5	3.6	2.9	2.4
490.	*	2.7	5.7	4.2	3.5	3.0	2.4
495.	*	2.8	5.9	4.6	3.3	2.6	2.4
500.	*	2.9	6.3	4.4	2.8	2.2	2.4
505.	*	2.9	6.6	3.9	2.5	1.9	2.3
510.	*	3.0	7.3	3.5	2.5	1.9	2.3
515.	*	3.1	8.0	3.2	2.5	1.9	2.3
520.	*	3.3	9.2	3.2	2.5	1.9	2.3
525.	*	3.5	9.8	3.3	2.6	1.9	2.3
530.	*	3.6	9.3	3.3	2.6	1.9	2.4
535.	*	3.5	8.1	3.2	2.6	1.9	2.4
540.	*	3.3	6.7	3.2	2.5	1.9	2.4
545.	*	3.1	5.4	3.2	2.5	1.9	2.4
550.	*	3.3	4.4	3.3	2.5	1.9	2.4
555.	*	3.1	4.1	3.4	2.5	1.9	2.4
560.	*	3.5	3.7	3.3	2.6	1.9	2.4
565.	*	3.9	3.9	3.4	2.6	1.9	2.4

570.	*	4.2	3.9	3.3	2.7	1.9	2.4
575.	*	4.0	3.9	3.3	2.9	1.9	2.4
580.	*	4.2	3.9	3.2	2.8	1.9	2.3
585.	*	4.4	4.0	3.2	2.8	1.9	2.2
590.	*	4.4	3.9	3.3	3.2	1.9	2.3
595.	*	4.1	3.9	3.3	3.5	1.9	2.3
600.	*	4.1	3.8	3.4	4.0	1.9	2.4
605.	*	4.0	3.9	3.6	4.8	1.9	2.6
610.	*	4.0	3.6	3.8	6.6	1.9	3.0
615.	*	3.6	3.4	3.1	9.5	1.9	3.6
620.	*	3.2	2.8	2.8	12.7	2.4	4.9
625.	*	2.9	2.4	2.4	13.8	3.3	6.6

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: AM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
630.	* 2.7	2.3	2.3	12.1	4.0	7.5
635.	* 2.8	2.3	2.2	10.8	3.8	7.1
640.	* 2.9	2.3	2.2	9.6	4.0	6.1
645.	* 2.9	2.5	2.3	8.7	4.0	5.4
650.	* 2.9	2.4	2.3	8.1	3.9	5.0
655.	* 2.9	2.4	2.3	7.7	3.7	4.6
660.	* 3.1	2.4	2.3	7.3	3.7	4.4
665.	* 3.1	2.3	2.2	6.9	3.8	4.1
670.	* 3.1	2.5	2.2	6.7	3.7	3.8
675.	* 3.1	2.5	2.1	6.6	3.7	3.6
680.	* 3.0	2.5	2.1	6.2	3.6	3.5
685.	* 3.0	2.4	2.1	6.1	3.6	3.4
690.	* 3.0	2.3	2.1	6.1	3.6	3.3
695.	* 3.0	2.5	2.0	5.8	3.5	3.3
700.	* 3.0	2.8	1.9	5.6	3.4	3.3
705.	* 2.9	3.6	1.9	5.7	3.4	3.2
710.	* 2.6	5.4	1.9	5.7	3.4	3.2
715.	* 2.2	7.6	1.9	5.7	3.5	3.2
720.	* 2.0	9.0	1.9	5.6	3.8	3.2
725.	* 1.9	9.0	1.9	5.8	4.2	3.2
730.	* 1.9	8.1	2.1	6.1	4.2	3.2
735.	* 1.9	6.9	2.2	6.3	4.3	3.2
740.	* 1.9	6.2	2.2	6.6	4.0	3.3
745.	* 1.9	5.7	2.2	6.6	3.6	3.2
750.	* 1.9	5.3	2.3	6.5	3.4	3.5
755.	* 1.9	5.1	2.4	6.5	3.5	3.5
760.	* 1.9	4.7	2.4	6.8	3.6	3.5
765.	* 1.9	4.6	2.4	6.8	3.6	3.6
770.	* 1.9	4.6	2.4	6.9	3.7	3.8
775.	* 1.9	4.4	2.4	7.2	3.8	3.8
780.	* 1.9	4.4	2.4	7.5	3.7	3.7
785.	* 1.9	4.2	2.4	7.9	3.6	3.6
790.	* 1.9	4.2	2.4	7.7	3.6	3.9
795.	* 1.9	4.2	2.4	7.6	3.5	4.0
800.	* 1.9	4.5	3.1	5.9	2.6	4.4
805.	* 2.5	4.5	3.2	4.4	2.5	4.4
810.	* 2.5	4.7	3.4	3.8	2.5	3.3
815.	* 2.6	4.9	3.6	3.3	2.5	2.6
820.	* 2.8	5.1	3.7	3.1	2.5	2.5
825.	* 2.9	5.2	3.3	3.0	2.5	2.5

830.	*	3.1	5.0	3.2	2.9	2.4	2.5
835.	*	3.1	5.2	3.0	2.8	2.4	2.4
840.	*	3.0	5.2	3.1	2.8	2.4	2.4
845.	*	2.9	5.3	3.1	2.7	2.4	2.4
850.	*	2.9	5.3	3.3	2.7	2.4	2.4
855.	*	3.0	5.5	3.4	2.7	2.4	2.4
860.	*	3.0	5.7	3.4	2.6	2.4	2.4
865.	*	2.9	5.9	3.3	2.6	2.4	2.4
870.	*	2.9	6.3	3.3	2.6	2.4	2.4
875.	*	2.9	6.6	3.2	2.6	1.9	2.4
880.	*	2.9	7.2	3.2	2.6	1.9	2.4
885.	*	2.9	7.7	3.3	2.6	1.9	2.4

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: AM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
890.	2.9	7.6	3.3	2.6	1.9	2.4
895.	2.9	6.9	3.3	2.6	1.9	2.4
900.	3.0	5.6	3.4	2.7	1.9	2.4
905.	3.0	4.4	3.4	2.7	1.9	2.4
910.	3.1	3.5	3.4	2.7	1.9	2.4
915.	3.3	3.1	3.4	2.7	1.9	2.4
920.	3.5	3.0	3.4	2.7	1.9	2.4
925.	3.7	2.9	3.4	2.7	1.9	2.4
930.	3.8	2.9	3.4	2.7	1.9	2.4
935.	3.8	2.9	3.4	2.7	1.9	2.4
940.	3.8	2.9	3.4	2.7	1.9	2.4
945.	3.8	2.9	3.4	2.7	1.9	2.4
950.	3.8	2.8	3.4	2.7	1.9	2.4
955.	3.8	2.8	3.4	2.7	1.9	2.4
960.	3.6	2.8	3.4	2.7	1.9	2.4
965.	3.6	2.8	3.4	2.7	1.9	2.4
970.	3.6	2.8	3.5	2.7	1.9	2.4
975.	3.7	2.8	3.5	2.7	1.9	2.4
980.	3.7	2.2	2.2	5.2	3.4	2.3
985.	2.8	2.3	2.3	5.9	3.4	2.3
990.	2.8	2.3	2.3	5.9	3.5	3.2
995.	2.8	2.3	2.3	5.9	3.5	3.2
****	2.8	2.3	2.3	5.9	3.5	3.2
****	2.8	2.3	2.3	5.9	3.5	3.2
****	2.7	2.3	2.3	5.9	3.6	3.2
****	2.7	2.3	2.3	5.9	3.6	3.2
****	2.7	2.3	2.3	5.9	3.6	3.2
****	2.7	2.3	2.3	5.9	3.6	3.2
****	2.7	2.3	2.3	5.9	3.6	3.2
****	2.7	2.3	2.3	5.9	3.6	3.2
****	2.7	2.3	2.3	5.9	3.6	3.2
****	2.7	2.3	2.3	5.9	3.6	3.2
****	2.7	2.3	2.3	5.9	4.1	3.2
****	2.7	2.3	2.3	5.9	4.1	3.2
****	2.7	2.3	2.3	5.9	4.1	3.2
****	2.7	2.3	2.3	5.9	4.1	3.2
****	2.7	2.3	2.3	5.9	4.1	3.2
****	2.7	2.3	2.3	5.9	4.1	3.2
****	1.9	4.2	2.3	5.7	4.0	3.2
****	1.9	4.2	2.3	5.7	4.0	3.2

****	*	1.9	4.2	2.3	5.7	4.0	3.2
****	*	1.9	4.2	2.3	5.7	4.0	3.2
****	*	1.9	4.2	2.3	5.7	4.0	3.2
****	*	1.9	4.2	2.3	5.7	4.0	3.2
****	*	1.9	4.2	2.3	5.7	4.0	3.2
****	*	1.9	4.2	2.3	5.7	4.0	3.2
****	*	1.9	4.2	2.3	5.7	4.0	3.2
****	*	1.9	4.2	2.3	5.7	4.0	3.2
****	*	1.9	4.2	2.3	5.7	4.0	3.2
****	*	1.9	4.2	2.3	5.7	4.0	3.2
****	*	1.9	4.2	2.3	5.7	4.0	3.2
****	*	1.9	4.2	2.3	5.7	4.0	3.2

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: AM

WIND ANGLE (DEGR) *	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
**** *	1.9	4.2	2.3	5.7	4.0	3.2
**** *	1.9	4.2	2.3	5.7	4.0	3.2
**** *	1.9	4.8	3.7	3.2	2.5	3.3
**** *	2.8	4.8	3.7	2.6	2.5	3.3
**** *	2.8	4.8	3.7	2.6	2.5	2.4
**** *	2.8	4.8	3.7	2.6	2.5	2.4
**** *	2.8	4.8	3.7	2.6	2.5	2.4
**** *	2.8	4.8	3.7	2.6	2.5	2.4
**** *	2.8	4.8	3.7	2.6	2.5	2.4
**** *	2.9	4.8	3.7	2.6	2.4	2.4
**** *	2.9	4.8	3.7	2.6	2.4	2.4
**** *	2.9	4.8	3.7	2.6	2.4	2.4
**** *	2.9	4.8	3.7	2.6	2.4	2.4
**** *	2.9	4.8	3.7	2.6	2.4	2.4
**** *	2.9	4.8	3.7	2.6	2.4	2.4
**** *	2.9	4.8	3.7	2.6	2.4	2.4
**** *	2.9	4.8	3.7	2.6	1.9	2.4
**** *	2.9	4.8	3.7	2.6	1.9	2.4
**** *	2.9	4.8	3.7	2.6	1.9	2.4
**** *	2.9	4.8	3.7	2.6	1.9	2.4
**** *	2.9	4.8	3.7	2.6	1.9	2.4
**** *	2.9	4.8	3.7	2.6	1.9	2.4
**** *	3.7	2.9	3.7	2.8	2.0	2.4
**** *	3.7	2.9	3.7	2.8	2.0	2.4
**** *	3.7	2.9	3.7	2.8	2.0	2.4
**** *	3.7	2.9	3.7	2.8	2.0	2.4
**** *	3.7	2.9	3.7	2.8	2.0	2.4
**** *	3.7	2.9	3.7	2.8	2.0	2.4
**** *	3.7	2.9	3.7	2.8	2.0	2.4
**** *	3.7	2.9	3.7	2.8	2.0	2.4
**** *	3.7	2.9	3.7	2.8	2.0	2.4
**** *	3.7	2.9	3.7	2.8	2.0	2.4
**** *	3.7	2.9	3.7	2.8	2.0	2.4
**** *	3.7	2.9	3.7	2.8	2.0	2.4
**** *	3.7	2.3	2.3	5.3	3.5	2.3
**** *	2.8	2.3	2.3	5.9	3.5	2.3

****	*	2.8	2.3	2.3	5.9	3.5	3.2
****	*	2.8	2.3	2.3	5.9	3.5	3.2
****	*	2.8	2.3	2.3	5.9	3.5	3.2
****	*	2.8	2.3	2.3	5.9	3.5	3.2
****	*	2.7	2.3	2.3	5.9	3.6	3.2
****	*	2.7	2.3	2.3	5.9	3.6	3.2
****	*	2.7	2.3	2.3	5.9	3.6	3.2
****	*	2.7	2.3	2.3	5.9	3.6	3.2
****	*	2.7	2.3	2.3	5.9	3.6	3.2
****	*	2.7	2.3	2.3	5.9	3.6	3.2
****	*	2.7	2.3	2.3	5.9	3.6	3.2
****	*	2.7	2.3	2.3	5.9	3.6	3.2

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: AM

WIND ANGLE (DEGR)	* CONCENTRATION (PPM)					
*	1	2	3	4	5	6
****	2.7	2.3	2.3	5.9	3.6	3.2
****	2.7	2.3	2.3	5.9	4.1	3.2
MAX	4.4	9.8	4.6	13.8	4.3	8.9
DEGR.	225	165	135	265	735	85

THE HIGHEST CONCENTRATION OF 13.80 PPM OCCURRED AT RECEPTOR 4.

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: AM

DATE : 5/18/12

TIME : 15: 8:59

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

LINK #	*	CO/LINK (PPM)					
		1	2	3	4	5	6
		ANGLE (DEGREES)					
		225	165	135	265	735	85
1	*	0.0	0.0	0.0	0.2	0.0	0.0
2	*	0.0	0.0	0.0	0.0	0.0	0.8
3	*	0.0	0.0	0.0	0.1	0.0	3.6
4	*	0.0	0.0	0.0	0.1	0.0	0.3
5	*	0.0	0.0	0.0	0.1	0.0	0.2
6	*	0.0	0.0	0.0	0.1	0.0	0.1
7	*	0.0	0.0	0.0	0.4	0.0	0.1
8	*	0.4	0.0	0.4	2.5	0.4	0.1
9	*	0.0	0.3	0.0	0.0	0.0	0.0
10	*	0.0	0.1	0.0	0.0	0.0	0.0
11	*	0.0	0.0	0.0	0.0	0.0	0.1
12	*	0.0	0.0	0.0	0.0	0.0	0.0
13	*	0.0	0.0	0.0	0.0	0.0	0.0
14	*	0.0	0.0	0.0	0.0	0.0	0.0
15	*	0.0	0.0	0.0	0.2	0.0	0.1
16	*	0.4	0.0	0.3	3.8	0.4	0.1
17	*	0.0	0.0	0.1	0.0	0.1	0.0
18	*	0.0	0.0	0.0	0.0	0.0	0.1
19	*	0.0	0.0	0.0	0.0	0.0	0.0
20	*	0.0	0.3	0.0	0.0	0.1	0.0
21	*	0.4	0.0	0.4	0.7	0.2	0.1
22	*	0.0	0.0	0.0	0.1	0.0	0.0
23	*	0.0	0.0	0.0	0.1	0.0	0.1
24	*	0.0	0.0	0.0	0.0	0.0	0.2
25	*	0.0	0.0	0.0	0.0	0.0	0.3
26	*	0.0	0.0	0.0	0.0	0.0	0.0
27	*	0.0	0.0	0.0	0.1	0.0	0.0
28	*	0.0	0.0	0.0	0.0	0.0	0.0
29	*	0.0	0.1	0.0	0.0	0.0	0.0
30	*	0.0	0.0	0.0	0.2	0.0	0.1
31	*	0.0	0.0	0.0	0.0	0.0	0.0
32	*	0.0	0.0	0.0	0.0	0.0	0.0

33	*	0.0	0.0	0.0	0.0	0.0	0.0
34	*	0.0	0.0	0.0	0.0	0.0	0.0
35	*	0.0	0.0	0.0	0.0	0.0	0.0
36	*	0.0	0.0	0.0	0.0	0.0	0.0
37	*	0.0	0.0	0.0	0.0	0.0	0.0
38	*	0.0	0.0	0.0	0.0	0.0	0.0
39	*	0.0	0.0	0.0	0.0	0.0	0.0
40	*	0.0	0.0	0.0	0.0	0.0	0.0
41	*	0.0	0.0	0.0	0.0	0.0	0.0
42	*	0.0	0.0	0.0	0.0	0.0	0.0
43	*	0.0	0.0	0.0	0.0	0.0	0.0
44	*	0.0	0.0	0.0	0.0	0.0	0.0
45	*	0.0	0.0	0.0	0.0	0.0	0.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: AM

LINK #	CO/LINK (PPM)					
	1	2	3	4	5	6
	225	165	135	265	735	85
46	0.0	0.1	0.0	0.0	0.0	0.0
47	0.0	0.0	0.0	0.0	0.0	0.0
48	0.0	0.0	0.0	0.0	0.0	0.0
49	0.0	0.0	0.0	0.0	0.0	0.0
50	0.1	0.5	0.0	0.0	0.1	0.0
51	0.0	0.1	0.0	0.0	0.0	0.0
52	0.0	0.0	0.0	0.0	0.0	0.0
53	0.0	0.7	0.5	0.0	0.0	0.0
54	0.0	0.1	0.2	0.0	0.0	0.0
55	0.0	0.0	0.0	0.0	0.0	0.0
56	0.0	0.0	0.0	0.0	0.0	0.0
57	0.0	0.1	0.0	0.0	0.0	0.0
58	0.0	0.1	0.0	0.0	0.0	0.0
59	0.0	0.0	0.0	0.1	0.0	0.1
60	0.0	0.0	0.0	0.2	0.0	0.3
61	0.0	0.0	0.0	0.1	0.0	0.0
62	0.0	0.0	0.0	0.1	0.0	0.0
63	0.0	0.0	0.0	0.0	0.0	0.0
64	0.1	0.0	0.1	2.1	0.1	0.2
65	0.3	0.0	0.3	0.6	0.2	0.0
66	0.0	0.0	0.0	0.0	0.0	0.0
67	0.0	0.0	0.0	0.0	0.0	0.0
68	0.0	0.0	0.0	0.0	0.0	0.0
69	0.0	0.6	0.4	0.0	0.0	0.0
70	0.4	1.8	0.0	0.0	0.4	0.0
71	0.4	3.0	0.0	0.0	0.4	0.0
72	0.0	0.0	0.0	0.0	0.0	0.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: PM

DATE : 5/18/12
 TIME : 15:16:24

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
 U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 1.9 PPM

LINK VARIABLES

LINK DESCRIPTION	* X1	LINK COORDINATES (FT) Y1	X2	Y2	* LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)	W (FT)	V/C QUEUE (VEH)
1. Rte 1 EB W of Bridge*	*****	*****	*****	*****	*	1614.	87. AG	925.	20.4	0.0	44.0
2. Rte 1 EB Accotink Br*	*****	*****	*****	*****	*	64.	88. BR	925.	20.4	7.5	44.0
3. Rte 1 EB E of Bridge*	*****	*****	*****	*****	*	611.	87. AG	925.	20.4	0.0	44.0
4. Rte 1 EB E of Br 3ln*	*****	*****	*****	*****	*	323.	86. AG	925.	20.4	0.0	56.0
5. Rte 1 EB FCP ApprThru*	*****	*****	*****	*****	*	321.	86. AG	875.	20.4	0.0	44.0
6. Rte 1 EB FCP IntThru*	*****	*****	*****	*****	*	131.	80. AG	875.	19.9	0.0	44.0
7. Rte 1 EB FCP Dptr *	*****	*****	*****	*****	*	546.	79. AG	1535.	19.9	0.0	44.0
8. Rte 1 EB W Bklk Thru*	*****	*****	*****	*****	*	708.	79. AG	1535.	19.9	0.0	44.0
9. Rte 1 EB W Bklk IntT*	*****	*****	*****	*****	*	127.	80. AG	1695.	19.3	0.0	44.0
10. Rte 1 EB Bklk Dptrtr *	*****	*****	*****	*****	*	219.	80. AG	1700.	19.3	0.0	44.0
11. Rte 1 EB E Bklk Dpt2*	*****	*****	*****	*****	*	839.	88. AG	1700.	19.3	0.0	44.0
12. Rte 1 EB W FCP L AD1*	*****	*****	*****	*****	*	320.	85. AG	50.	21.0	0.0	32.0
13. Rte 1 EB W FCP L AD2*	*****	*****	*****	*****	*	129.	51. AG	50.	21.0	0.0	32.0
14. FCP NB N Rte 1 L Dpt*	*****	*****	*****	*****	*	416.	360. AG	50.	21.0	0.0	32.0
15. Rte 1 EB E FCR R Dpt*	*****	*****	*****	*****	*	534.	79. AG	120.	19.9	0.0	32.0
16. Rte 1 EB W Bklk R Ap*	*****	*****	*****	*****	*	702.	79. AG	120.	21.0	0.0	32.0
17. Rte 1 EB @Bklk R Int*	*****	*****	*****	*****	*	52.	107. AG	120.	21.0	0.0	32.0
18. Rte 1 EB W Bklk L Ap*	*****	*****	*****	*****	*	703.	79. AG	5.	21.0	0.0	32.0
19. Rte 1 EB @Bklk L Int*	*****	*****	*****	*****	*	108.	48. AG	5.	21.0	0.0	32.0
20. Rte 1 WB E Bklk *	*****	*****	*****	*****	*	821.	269. AG	1865.	18.8	0.0	44.0
21. Rte 1 WB E Bklk Thru*	*****	*****	*****	*****	*	242.	262. AG	1710.	18.8	0.0	32.0
22. Rte 1 WB @Bklk Int *	*****	*****	*****	*****	*	109.	259. AG	1710.	19.1	0.0	44.0
23. Rte 1 WB W Bklk Dptrtr*	*****	*****	*****	*****	*	786.	259. AG	2760.	19.1	0.0	44.0
24. Rte 1 WB E FCP Thru *	*****	*****	*****	*****	*	487.	261. AG	2035.	19.1	0.0	44.0
25. Rte 1 WB W FCP Thru *	*****	*****	*****	*****	*	728.	264. AG	2035.	21.0	0.0	44.0
26. Rte 1 WB FCP-Br All *	*****	*****	*****	*****	*	310.	264. AG	2590.	21.0	0.0	44.0
27. Rte 1 WB E Br All *	*****	*****	*****	*****	*	341.	267. AG	2590.	21.0	0.0	44.0
28. Rte 1 WB @Br All *	*****	*****	*****	*****	*	65.	268. BR	2590.	21.0	7.5	44.0

29.	Rte 1 WB W Br All	*	*****	*****	*****	*****	*	1616.	267.	AG	2590.	21.0	0.0	44.0
30.	Rte 1 WB E Bklk L Ap*	*	*****	*****	*****	*****	*	280.	261.	AG	65.	21.0	0.0	32.0
31.	Rte 1 WB @Bklk L Int*	*	*****	*****	*****	*****	*	95.	222.	AG	65.	21.0	0.0	32.0
32.	Rte 1 WB E FCP R Apr*	*	*****	*****	*****	*****	*	441.	261.	AG	725.	21.0	0.0	32.0
33.	Rte 1 WB @FCP R Int	*	*****	*****	*****	*****	*	75.	307.	AG	725.	21.0	0.0	32.0
34.	FCP NB N Rte 1 Mrg	*	*****	*****	*****	*****	*	378.	359.	AG	725.	21.0	0.0	32.0
35.	FCP SB N Rte 1 All	*	*****	*****	*****	*****	*	1897.	179.	AG	1340.	19.9	0.0	44.0
36.	FCP SB N Rte 1 L Apr*	*	*****	*****	*****	*****	*	517.	180.	AG	785.	21.0	0.0	44.0
37.	FCP SB @Rte 1 L Int	*	*****	*****	*****	*****	*	124.	127.	AG	785.	21.0	0.0	44.0
38.	FCP N Rte 1 SB R Apr*	*	*****	*****	*****	*****	*	549.	181.	AG	555.	23.5	0.0	32.0
39.	FCP @Rte 1 SB R Int	*	*****	*****	*****	*****	*	42.	233.	AG	555.	23.5	0.0	32.0
40.	Rte 1 WB W FCP R Mrg*	*	*****	*****	*****	*****	*	587.	264.	AG	555.	23.5	0.0	32.0
41.	FCP NB N Rte 1 All	*	*****	*****	*****	*****	*	1996.	360.	AG	775.	20.4	0.0	44.0
42.	Phck NB S Rte 1 All	*	*****	*****	*****	*****	*	890.	316.	AG	1080.	21.0	0.0	32.0
43.	Phck NB S Rte 1 T-R	*	*****	*****	*****	*****	*	507.	333.	AG	40.	21.0	0.0	32.0
44.	Phck NB S Rte 1 Thru*	*	*****	*****	*****	*****	*	50.	333.	AG	15.	21.0	0.0	32.0
45.	Bklk NB @Rte 1 Thru	*	*****	*****	*****	*****	*	107.	357.	AG	15.	21.0	0.0	32.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: PM

DATE : 5/18/12

TIME : 15:16:24

LINK VARIABLES

LINK DESCRIPTION	* X1	LINK COORDINATES (FT) Y1	X2	Y2	* LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
46. Bklk NB N Rte 1 All*	*****	*****	*****	*****	*	1317.	357. AG	110.	21.0	0.0	32.0	
47. Rte 1 WB @Bklk R Int*	*****	*****	*****	*****	*	47.	309. AG	90.	23.5	0.0	32.0	
48. Phck NB S Rte 1 L Ap*	*****	*****	*****	*****	*	558.	332. AG	1040.	23.5	0.0	32.0	
49. Phck NB @Rte 1 L Int*	*****	*****	*****	*****	*	90.	312. AG	1040.	23.5	0.0	32.0	
50. Phck NB S Rte 1 R Ap*	*****	*****	*****	*****	*	45.	353. AG	25.	23.5	0.0	32.0	
51. Phck NB @Rte 1 R Int*	*****	*****	*****	*****	*	48.	27. AG	25.	23.5	0.0	32.0	
52. Bklk N Rte 1 SB All *	*****	*****	*****	*****	*	1229.	177. AG	175.	18.8	0.0	32.0	
53. Bklk N Rte 1 SB Thru*	*****	*****	*****	*****	*	92.	177. AG	25.	18.8	0.0	32.0	
54. Bklk SB @Rte 1 Int *	*****	*****	*****	*****	*	108.	177. AG	25.	18.8	0.0	32.0	
55. Bklk SB S Rte 1 All1*	*****	*****	*****	*****	*	561.	151. AG	210.	18.8	0.0	32.0	
56. Bklk SB S Rte 1 All2*	*****	*****	*****	*****	*	891.	137. AG	210.	18.8	0.0	32.0	
57. Bklk SB N Rte 1 R Ap*	*****	*****	*****	*****	*	94.	179. AG	10.	21.0	0.0	32.0	
58. Bklk SB N Rte 1 R In*	*****	*****	*****	*****	*	50.	220. AG	10.	21.0	0.0	32.0	
59. Bklk SB N Rte 1 L Ap*	*****	*****	*****	*****	*	93.	176. AG	140.	21.0	0.0	32.0	
60. Bklk SB N Rte 1 L In*	*****	*****	*****	*****	*	83.	131. AG	140.	21.0	0.0	32.0	
61. Q Rte 1 EB W FCP Thr*	*****	*****	*****	*****	*	124.	265. AG	180.	100.0	0.0	24.0	0.37 6.3
62. Q Rte 1 EB W FCP L *	*****	*****	*****	*****	*	31.	267. AG	599.	100.0	0.0	24.0	**** 1.6
63. Q Rte 1 WB E FCP Thr*	*****	*****	*****	*****	*	442.	81. AG	228.	100.0	0.0	24.0	0.98 22.4
64. Q FCP SB N Rte 1 L *	*****	*****	*****	*****	*	1418.	360. AG	488.	100.0	0.0	24.0	1.37 72.0
65. Q FCP SB N Rte 1 R *	*****	*****	*****	*****	*	2767.	1. AG	232.	100.0	0.0	12.0	1.71 140.5
66. Q Rte 1 EB W Bklk R *	*****	*****	*****	*****	*	64.	258. AG	168.	100.0	0.0	12.0	0.18 3.2
67. Q Rte 1 EB W Bklk T *	*****	*****	*****	*****	*	887.	259. AG	336.	100.0	0.0	24.0	1.06 45.1
68. Q Rte 1 EB W Bklk L *	*****	*****	*****	*****	*	2.	233. AG	130.	100.0	0.0	24.0	0.10 0.1
69. Q Rte 1 WB E Bklk Th*	*****	*****	*****	*****	*	1031.	82. AG	308.	100.0	0.0	24.0	1.07 52.4
70. Q Rte 1 WB E Bklk L *	*****	*****	*****	*****	*	378.	81. AG	140.	100.0	0.0	12.0	1.91 19.2
71. Q Phck NB S Rte 1 TR*	*****	*****	*****	*****	*	30.	154. AG	235.	100.0	0.0	12.0	0.12 1.5
72. Q Phck NB S Rte 1 L *	*****	*****	*****	*****	*	7878.	152. AG	235.	100.0	0.0	12.0	3.10 400.2
73. Q Bklk SB N Rte 1 L *	*****	*****	*****	*****	*	874.	356. AG	282.	100.0	0.0	12.0	2.00 44.4
74. Q Bklk SB N Rte 1 T *	*****	*****	*****	*****	*	22.	358. AG	282.	100.0	0.0	12.0	0.34 1.1
75. Q Bklk SB N Rte 1 R *	*****	*****	*****	*****	*	9.	360. AG	282.	100.0	0.0	12.0	0.15 0.5

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: PM

DATE : 5/18/12
 TIME : 15:16:24

 ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* * * *	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
61. Q Rte 1 EB W FCP Thr*		180	52	6.5	875	1769	116.13	2	3
62. Q Rte 1 EB W FCP L *		180	173	7.0	50	1716	116.13	2	3
63. Q Rte 1 WB E FCP Thr*		180	66	6.5	2035	1769	116.13	2	3
64. Q FCP SB N Rte 1 L *		180	141	7.0	785	1716	116.13	2	3
65. Q FCP SB N Rte 1 R *		180	134	7.0	555	1583	116.13	2	3
66. Q Rte 1 EB W Bklk R *		180	97	7.0	120	1583	116.13	2	3
67. Q Rte 1 EB W Bklk T *		180	97	7.0	1535	1769	116.13	2	3
68. Q Rte 1 EB W Bklk L *		180	75	6.5	5	90	116.13	2	3
69. Q Rte 1 WB E Bklk Th*		180	89	7.0	1710	1761	116.13	2	3
70. Q Rte 1 WB E Bklk L *		180	81	6.5	65	69	116.13	2	3
71. Q Phck NB S Rte 1 TR*		180	136	6.0	40	1678	116.13	2	3
72. Q Phck NB S Rte 1 L *		180	136	6.0	1040	1681	116.13	2	3
73. Q Bklk SB N Rte 1 L *		180	163	7.0	140	1593	116.13	2	3
74. Q Bklk SB N Rte 1 T *		180	163	7.0	25	1676	116.13	2	3
75. Q Bklk SB N Rte 1 R *		180	163	7.0	10	1478	116.13	2	3

 RECEPTOR LOCATIONS

RECEPTOR	* * * *	COORDINATES (FT)			* * * *
		X	Y	Z	
1. 1: 9140 Richmond Hwy *		*****	*****	5.0	*
2. 2: 9136 Backlick Rd. *		*****	*****	5.0	*
3. 3: 9135 Anderson Ln. *		*****	*****	5.0	*
4. 4: Bus Stop @Rte. 1 *		*****	*****	5.0	*
5. 5: E.K. HmlsShelter *		*****	*****	5.0	*
6. 6: Accotink Creek *		*****	*****	5.0	*

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-****

WIND ANGLE (DEGR)*	* 1	* 2	* 3	* 4	* 5	* 6
0.	1.9	4.7	1.9	5.0	3.2	3.7
5.	1.9	4.8	1.9	5.1	3.5	3.6
10.	1.9	4.5	1.9	5.3	3.6	3.7
15.	1.9	4.1	2.0	5.5	3.6	3.8
20.	1.9	3.9	2.1	5.8	3.4	3.8
25.	1.9	3.7	2.1	5.8	3.2	4.1
30.	1.9	3.6	2.1	5.8	3.0	4.2
35.	1.9	3.4	2.1	5.9	3.2	4.5
40.	1.9	3.3	2.1	6.1	3.4	4.8
45.	1.9	3.3	2.1	6.4	3.5	4.9
50.	1.9	3.2	2.1	6.6	3.6	5.1
55.	1.9	3.2	2.1	7.2	3.7	5.3
60.	1.9	3.1	2.1	7.7	3.7	5.6
65.	1.9	3.1	2.1	8.3	3.6	5.9
70.	1.9	3.0	2.1	8.4	3.4	6.4
75.	1.9	3.0	2.1	8.0	3.0	7.5
80.	1.9	3.0	2.2	6.5	2.6	8.6
85.	1.9	3.2	2.6	4.3	2.3	7.8
90.	2.0	3.7	3.3	2.9	2.3	5.6
95.	2.3	4.2	4.0	2.5	2.3	3.6
100.	2.7	4.7	4.0	2.5	2.4	2.8
105.	3.2	5.1	3.6	2.4	2.4	2.5
110.	3.2	4.8	3.5	2.3	2.4	2.4
115.	3.1	4.6	3.2	2.4	2.4	2.2
120.	3.2	4.7	3.6	2.5	2.5	2.2
125.	3.1	4.5	3.8	2.5	2.7	2.2
130.	3.0	4.6	4.3	2.6	2.8	2.2
135.	3.1	4.6	4.2	2.5	2.6	2.1
140.	3.1	4.6	4.0	2.3	2.4	2.1
145.	3.0	4.9	3.8	2.3	2.3	2.1

150.	*	3.2	5.6	3.5	2.2	2.2	2.1
155.	*	3.5	6.1	3.3	2.0	2.0	2.0
160.	*	3.6	6.4	3.1	1.9	1.9	2.0
165.	*	3.6	6.2	3.1	1.9	1.9	2.0
170.	*	3.6	5.7	3.1	1.9	1.9	2.1
175.	*	3.4	4.9	3.1	1.9	1.9	2.1
180.	*	3.4	4.2	3.1	1.9	1.9	2.1
185.	*	3.0	3.6	3.1	1.9	1.9	2.1
190.	*	3.2	3.5	3.1	1.9	1.9	2.1
195.	*	3.0	3.4	3.2	1.9	1.9	2.1
200.	*	3.4	3.3	3.2	1.9	1.9	2.1
205.	*	3.6	3.2	3.2	1.9	1.9	2.1

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: PM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)						
	1	2	3	4	5	6	
210.	*	3.5	3.5	3.4	1.9	1.9	2.1
215.	*	3.5	3.5	3.4	1.9	1.9	2.1
220.	*	3.6	3.6	3.5	1.9	1.9	2.0
225.	*	4.0	3.6	3.5	1.9	1.9	2.0
230.	*	3.9	3.6	3.6	1.9	1.9	2.0
235.	*	3.9	3.6	3.7	2.1	1.9	2.1
240.	*	4.0	3.8	3.6	2.1	1.9	2.1
245.	*	4.0	3.8	3.5	2.1	1.9	2.3
250.	*	3.5	3.5	3.5	2.8	1.9	2.3
255.	*	3.4	3.4	3.4	4.7	1.9	2.8
260.	*	3.1	2.9	3.2	8.2	2.1	3.8
265.	*	2.6	2.7	2.7	10.1	3.2	5.5
270.	*	2.6	2.3	2.4	9.9	4.2	7.1
275.	*	2.7	2.3	2.3	8.7	3.9	7.4
280.	*	2.8	2.5	2.4	7.9	4.1	6.8
285.	*	2.9	2.4	2.4	7.3	3.9	6.0
290.	*	2.9	2.4	2.4	6.7	3.7	5.5
295.	*	2.8	2.4	2.4	6.6	3.8	5.1
300.	*	2.8	2.4	2.4	6.4	3.8	4.9
305.	*	2.8	2.4	2.4	6.1	3.8	4.6
310.	*	2.8	2.4	2.4	6.0	3.7	4.4
315.	*	2.8	2.3	2.3	6.0	3.7	4.2
320.	*	2.8	2.3	2.2	5.8	3.6	4.1
325.	*	2.7	2.2	2.2	5.6	3.5	4.0
330.	*	2.6	2.0	2.2	5.5	3.3	3.9
335.	*	2.7	2.0	2.0	5.2	3.1	3.8
340.	*	2.7	2.1	1.9	5.0	3.0	3.7
345.	*	2.6	2.3	1.9	5.2	3.0	3.7
350.	*	2.4	3.0	1.9	5.2	3.0	3.7
355.	*	2.0	4.0	1.9	5.0	3.0	3.6
360.	*	1.9	4.7	1.9	5.0	3.2	3.7
5.	*	1.9	4.8	1.9	5.1	3.5	3.6
10.	*	1.9	4.5	1.9	5.3	3.6	3.7
15.	*	1.9	4.1	2.0	5.5	3.6	3.8
20.	*	1.9	3.9	2.1	5.8	3.4	3.8
25.	*	1.9	3.7	2.1	5.8	3.2	4.1
30.	*	1.9	3.6	2.1	5.8	3.0	4.2
35.	*	1.9	3.4	2.1	5.9	3.2	4.5
40.	*	1.9	3.3	2.1	6.1	3.4	4.8
45.	*	1.9	3.3	2.1	6.4	3.5	4.9

50.	*	1.9	3.2	2.1	6.6	3.6	5.1
55.	*	1.9	3.2	2.1	7.2	3.7	5.3
60.	*	1.9	3.1	2.1	7.7	3.7	5.6
65.	*	1.9	3.1	2.1	8.3	3.6	5.9
70.	*	1.9	3.0	2.1	8.4	3.4	6.4
75.	*	1.9	3.0	2.1	8.0	3.0	7.5
80.	*	1.9	3.0	2.2	6.5	2.6	8.6
85.	*	1.9	3.2	2.6	4.3	2.3	7.8
90.	*	2.0	3.7	3.3	2.9	2.3	5.6
95.	*	2.3	4.2	4.0	2.5	2.3	3.6
100.	*	2.7	4.7	4.0	2.5	2.4	2.8
105.	*	3.2	5.1	3.6	2.4	2.4	2.5

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: PM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
110.	* 3.2	4.8	3.5	2.3	2.4	2.4
115.	* 3.1	4.6	3.2	2.4	2.4	2.2
120.	* 3.2	4.7	3.6	2.5	2.5	2.2
125.	* 3.1	4.5	3.8	2.5	2.7	2.2
130.	* 3.0	4.6	4.3	2.6	2.8	2.2
135.	* 3.1	4.6	4.2	2.5	2.6	2.1
140.	* 3.1	4.6	4.0	2.3	2.4	2.1
145.	* 3.0	4.9	3.8	2.3	2.3	2.1
150.	* 3.2	5.6	3.5	2.2	2.2	2.1
155.	* 3.5	6.1	3.3	2.0	2.0	2.0
160.	* 3.6	6.4	3.1	1.9	1.9	2.0
165.	* 3.6	6.2	3.1	1.9	1.9	2.0
170.	* 3.6	5.7	3.1	1.9	1.9	2.1
175.	* 3.4	4.9	3.1	1.9	1.9	2.1
180.	* 3.4	4.2	3.1	1.9	1.9	2.1
185.	* 3.0	3.6	3.1	1.9	1.9	2.1
190.	* 3.2	3.5	3.1	1.9	1.9	2.1
195.	* 3.0	3.4	3.2	1.9	1.9	2.1
200.	* 3.4	3.3	3.2	1.9	1.9	2.1
205.	* 3.6	3.2	3.2	1.9	1.9	2.1
210.	* 3.5	3.5	3.4	1.9	1.9	2.1
215.	* 3.5	3.5	3.4	1.9	1.9	2.1
220.	* 3.6	3.6	3.5	1.9	1.9	2.0
225.	* 4.0	3.6	3.5	1.9	1.9	2.0
230.	* 3.9	3.6	3.6	1.9	1.9	2.0
235.	* 3.9	3.6	3.7	2.1	1.9	2.1
240.	* 4.0	3.8	3.6	2.1	1.9	2.1
245.	* 4.0	3.8	3.5	2.1	1.9	2.3
250.	* 3.5	3.5	3.5	2.8	1.9	2.3
255.	* 3.4	3.4	3.4	4.7	1.9	2.8
260.	* 3.1	2.9	3.2	8.2	2.1	3.8
265.	* 2.6	2.7	2.7	10.1	3.2	5.5
270.	* 2.6	2.3	2.4	9.9	4.2	7.1
275.	* 2.7	2.3	2.3	8.7	3.9	7.4
280.	* 2.8	2.5	2.4	7.9	4.1	6.8
285.	* 2.9	2.4	2.4	7.3	3.9	6.0
290.	* 2.9	2.4	2.4	6.7	3.7	5.5
295.	* 2.8	2.4	2.4	6.6	3.8	5.1
300.	* 2.8	2.4	2.4	6.4	3.8	4.9
305.	* 2.8	2.4	2.4	6.1	3.8	4.6

310.	*	2.8	2.4	2.4	6.0	3.7	4.4
315.	*	2.8	2.3	2.3	6.0	3.7	4.2
320.	*	2.8	2.3	2.2	5.8	3.6	4.1
325.	*	2.7	2.2	2.2	5.6	3.5	4.0
330.	*	2.6	2.0	2.2	5.5	3.3	3.9
335.	*	2.7	2.0	2.0	5.2	3.1	3.8
340.	*	2.7	2.1	1.9	5.0	3.0	3.7
345.	*	2.6	2.3	1.9	5.2	3.0	3.7
350.	*	2.4	3.0	1.9	5.2	3.0	3.7
355.	*	2.0	4.0	1.9	5.0	3.0	3.6
360.	*	1.9	4.7	1.9	5.0	3.2	3.7
365.	*	1.9	4.8	1.9	5.1	3.5	3.6

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: PM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)						
	1	2	3	4	5	6	
370.	*	1.9	4.5	1.9	5.3	3.6	3.7
375.	*	1.9	4.1	2.0	5.5	3.6	3.8
380.	*	1.9	3.9	2.1	5.8	3.4	3.8
385.	*	1.9	3.7	2.1	5.8	3.2	4.1
390.	*	1.9	3.6	2.1	5.8	3.0	4.2
395.	*	1.9	3.4	2.1	5.9	3.2	4.5
400.	*	1.9	3.3	2.1	6.1	3.4	4.8
405.	*	1.9	3.3	2.1	6.4	3.5	4.9
410.	*	1.9	3.2	2.1	6.6	3.6	5.1
415.	*	1.9	3.2	2.1	7.2	3.7	5.3
420.	*	1.9	3.1	2.1	7.7	3.7	5.6
425.	*	1.9	3.1	2.1	8.3	3.6	5.9
430.	*	1.9	3.0	2.1	8.4	3.4	6.4
435.	*	1.9	3.0	2.1	8.0	3.0	7.5
440.	*	1.9	3.0	2.2	6.5	2.6	8.6
445.	*	1.9	3.2	2.6	4.3	2.3	7.8
450.	*	2.0	3.7	3.3	2.9	2.3	5.6
455.	*	2.3	4.2	4.0	2.5	2.3	3.6
460.	*	2.7	4.7	4.0	2.5	2.4	2.8
465.	*	3.2	5.1	3.6	2.4	2.4	2.5
470.	*	3.2	4.8	3.5	2.3	2.4	2.4
475.	*	3.1	4.6	3.2	2.4	2.4	2.2
480.	*	3.2	4.7	3.6	2.5	2.5	2.2
485.	*	3.1	4.5	3.8	2.5	2.7	2.2
490.	*	3.0	4.6	4.3	2.6	2.8	2.2
495.	*	3.1	4.6	4.2	2.5	2.6	2.1
500.	*	3.1	4.6	4.0	2.3	2.4	2.1
505.	*	3.0	4.9	3.8	2.3	2.3	2.1
510.	*	3.2	5.6	3.5	2.2	2.2	2.1
515.	*	3.5	6.1	3.3	2.0	2.0	2.0
520.	*	3.6	6.4	3.1	1.9	1.9	2.0
525.	*	3.6	6.2	3.1	1.9	1.9	2.0
530.	*	3.6	5.7	3.1	1.9	1.9	2.1
535.	*	3.4	4.9	3.1	1.9	1.9	2.1
540.	*	3.4	4.2	3.1	1.9	1.9	2.1
545.	*	3.0	3.6	3.1	1.9	1.9	2.1
550.	*	3.2	3.5	3.1	1.9	1.9	2.1
555.	*	3.0	3.4	3.2	1.9	1.9	2.1
560.	*	3.4	3.3	3.2	1.9	1.9	2.1
565.	*	3.6	3.2	3.2	1.9	1.9	2.1

570.	*	3.5	3.5	3.4	1.9	1.9	2.1
575.	*	3.5	3.5	3.4	1.9	1.9	2.1
580.	*	3.6	3.6	3.5	1.9	1.9	2.0
585.	*	4.0	3.6	3.5	1.9	1.9	2.0
590.	*	3.9	3.6	3.6	1.9	1.9	2.0
595.	*	3.9	3.6	3.7	2.1	1.9	2.1
600.	*	4.0	3.8	3.6	2.1	1.9	2.1
605.	*	4.0	3.8	3.5	2.1	1.9	2.3
610.	*	3.5	3.5	3.5	2.8	1.9	2.3
615.	*	3.4	3.4	3.4	4.7	1.9	2.8
620.	*	3.1	2.9	3.2	8.2	2.1	3.8
625.	*	2.6	2.7	2.7	10.1	3.2	5.5

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: PM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)						
	1	2	3	4	5	6	
630.	*	2.6	2.3	2.4	9.9	4.2	7.1
635.	*	2.7	2.3	2.3	8.7	3.9	7.4
640.	*	2.8	2.5	2.4	7.9	4.0	6.8
645.	*	2.9	2.4	2.4	7.3	3.8	6.0
650.	*	2.9	2.4	2.4	6.7	3.6	5.5
655.	*	2.8	2.4	2.4	6.6	3.7	5.1
660.	*	2.8	2.4	2.4	6.4	3.7	4.9
665.	*	2.8	2.4	2.4	6.1	3.7	4.6
670.	*	2.8	2.4	2.4	6.0	3.6	4.4
675.	*	2.8	2.3	2.3	6.0	3.6	4.2
680.	*	2.8	2.3	2.2	5.8	3.5	4.1
685.	*	2.7	2.2	2.2	5.6	3.4	4.0
690.	*	2.7	2.1	2.2	5.5	3.2	3.9
695.	*	2.8	2.1	2.0	5.2	3.0	3.8
700.	*	2.8	2.2	2.0	5.1	3.0	3.7
705.	*	2.7	2.4	2.0	5.3	3.0	3.7
710.	*	2.5	3.1	2.0	5.3	3.0	3.7
715.	*	2.1	4.1	2.0	5.1	3.0	3.6
720.	*	2.0	4.8	2.0	5.1	3.2	3.7
725.	*	1.9	4.8	1.9	5.1	3.5	3.6
730.	*	1.9	4.5	1.9	5.3	3.6	3.6
735.	*	1.9	4.1	2.0	5.5	3.5	3.7
740.	*	1.9	3.9	2.1	5.7	3.3	3.7
745.	*	1.9	3.7	2.1	5.7	3.1	3.9
750.	*	1.9	3.6	2.1	5.6	2.9	4.0
755.	*	1.9	3.4	2.1	5.7	2.9	4.2
760.	*	1.9	3.3	2.1	5.8	3.0	4.4
765.	*	1.9	3.3	2.1	6.0	3.0	4.5
770.	*	1.9	3.2	2.1	6.1	3.0	4.6
775.	*	1.9	3.2	2.1	6.4	3.0	4.8
780.	*	1.9	3.1	2.1	6.5	3.0	4.9
785.	*	1.9	3.1	2.1	6.5	3.0	5.0
790.	*	1.9	3.0	2.1	6.1	3.0	5.4
795.	*	1.9	3.0	2.1	5.3	2.9	6.2
800.	*	1.9	3.3	2.4	3.7	2.4	6.5
805.	*	2.6	3.4	2.6	2.7	2.3	5.6
810.	*	2.6	3.6	2.9	2.2	2.3	3.9
815.	*	2.7	3.8	3.1	2.1	2.3	2.5
820.	*	2.9	4.0	3.1	2.1	2.4	2.1
825.	*	3.1	4.2	2.9	2.1	2.4	2.1

830.	*	3.1	4.0	3.0	2.1	2.4	2.1
835.	*	3.1	3.9	3.0	2.2	2.4	2.1
840.	*	3.1	4.0	3.3	2.3	2.5	2.1
845.	*	3.0	3.9	3.5	2.3	2.6	2.1
850.	*	3.0	4.0	3.8	2.3	2.6	2.1
855.	*	3.0	4.0	3.8	2.2	2.4	2.1
860.	*	3.0	4.1	3.6	2.0	2.2	2.1
865.	*	2.9	4.2	3.3	1.9	2.1	2.1
870.	*	3.0	4.7	3.1	1.9	2.1	2.1
875.	*	3.1	5.0	3.1	1.9	1.9	2.1
880.	*	3.2	5.3	3.1	1.9	1.9	2.1
885.	*	3.2	5.4	3.1	1.9	1.9	2.1

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: PM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
890.	* 3.3	5.0	3.1	1.9	1.9	2.1
895.	* 3.2	4.4	3.1	1.9	1.9	2.1
900.	* 3.3	3.8	3.2	2.0	1.9	2.1
905.	* 3.3	3.3	3.3	2.1	1.9	2.1
910.	* 3.5	3.1	3.3	2.1	1.9	2.1
915.	* 3.5	3.0	3.3	2.1	1.9	2.1
920.	* 3.8	2.8	3.3	2.1	1.9	2.1
925.	* 3.8	2.8	3.3	2.1	1.9	2.1
930.	* 3.7	2.8	3.3	2.1	1.9	2.1
935.	* 3.6	2.8	3.3	2.1	1.9	2.1
940.	* 3.6	2.8	3.3	2.1	1.9	2.1
945.	* 3.6	2.8	3.3	2.1	1.9	2.1
950.	* 3.5	2.8	3.3	2.1	1.9	2.1
955.	* 3.5	2.8	3.3	2.1	1.9	2.1
960.	* 3.5	2.8	3.3	2.1	1.9	2.1
965.	* 3.5	2.8	3.3	2.1	1.9	2.1
970.	* 3.4	2.8	3.4	2.1	1.9	2.1
975.	* 3.5	2.9	3.4	2.1	1.9	2.1
980.	* 3.5	2.2	2.4	5.3	3.0	2.1
985.	* 2.5	2.3	2.4	5.5	3.0	2.1
990.	* 2.6	2.3	2.4	5.5	3.1	3.7
995.	* 2.6	2.3	2.4	5.5	3.1	3.7
****	* 2.6	2.3	2.4	5.5	3.1	3.7
****	* 2.6	2.3	2.4	5.5	3.1	3.7
****	* 2.6	2.3	2.4	5.5	3.1	3.7
****	* 2.6	2.3	2.4	5.5	3.1	3.7
****	* 2.6	2.3	2.4	5.5	3.1	3.7
****	* 2.6	2.3	2.4	5.5	3.1	3.7
****	* 2.6	2.3	2.4	5.5	3.1	3.7
****	* 2.6	2.3	2.4	5.5	3.2	3.7
****	* 2.6	2.3	2.4	5.5	3.2	3.7
****	* 2.6	2.3	2.4	5.5	3.2	3.7
****	* 2.6	2.3	2.4	5.5	3.2	3.7
****	* 2.6	2.3	2.4	5.5	3.6	3.7
****	* 2.6	2.3	2.4	5.5	3.6	3.7
****	* 2.6	2.3	2.4	5.5	3.6	3.7
****	* 2.6	2.3	2.4	5.5	3.6	3.7
****	* 2.6	2.3	2.4	5.5	3.6	3.7
****	* 2.6	2.3	2.4	5.5	3.6	3.7
****	* 2.0	3.2	2.2	5.3	3.5	3.7
****	* 1.9	3.1	2.1	5.2	3.5	3.7

****	*	1.9	3.1	2.1	5.2	3.5	3.7
****	*	1.9	3.1	2.1	5.2	3.5	3.7
****	*	1.9	3.1	2.1	5.2	3.5	3.7
****	*	1.9	3.1	2.1	5.2	3.5	3.7
****	*	1.9	3.1	2.1	5.2	3.5	3.7
****	*	1.9	3.1	2.1	5.2	3.5	3.7
****	*	1.9	3.1	2.1	5.2	3.5	3.7
****	*	1.9	3.1	2.1	5.2	3.5	3.7
****	*	1.9	3.1	2.1	5.2	3.5	3.7
****	*	1.9	3.1	2.1	5.2	3.5	3.7
****	*	1.9	3.1	2.1	5.2	3.5	3.7
****	*	1.9	3.1	2.1	5.2	3.5	3.7

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: PM

WIND ANGLE (DEGR) *	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
**** *	1.9	3.1	2.1	5.2	3.5	3.7
**** *	1.9	3.1	2.1	5.2	3.5	3.7
**** *	1.9	3.8	3.3	2.0	2.4	3.7
**** *	2.9	3.8	3.3	1.9	2.4	3.7
**** *	2.9	3.8	3.3	1.9	2.4	2.1
**** *	2.9	3.8	3.3	1.9	2.4	2.1
**** *	2.9	3.8	3.3	1.9	2.4	2.1
**** *	2.9	3.8	3.3	1.9	2.4	2.1
**** *	2.9	3.8	3.3	1.9	2.4	2.1
**** *	2.9	3.8	3.3	1.9	2.4	2.1
**** *	2.9	3.8	3.3	1.9	2.4	2.1
**** *	2.9	3.8	3.3	1.9	2.4	2.1
**** *	2.9	3.8	3.3	1.9	2.4	2.1
**** *	2.9	3.8	3.3	1.9	2.3	2.1
**** *	2.9	3.8	3.3	1.9	2.3	2.1
**** *	2.9	3.8	3.3	1.9	2.3	2.1
**** *	2.9	3.8	3.3	1.9	1.9	2.1
**** *	2.9	3.8	3.3	1.9	1.9	2.1
**** *	2.9	3.8	3.3	1.9	1.9	2.1
**** *	2.9	3.8	3.3	1.9	1.9	2.1
**** *	2.9	3.8	3.3	1.9	1.9	2.1
**** *	3.5	2.9	3.5	2.1	2.0	2.1
**** *	3.6	3.0	3.6	2.2	2.0	2.1
**** *	3.6	3.0	3.6	2.2	2.0	2.1
**** *	3.6	3.0	3.6	2.2	2.0	2.1
**** *	3.6	3.0	3.6	2.2	2.0	2.1
**** *	3.6	3.0	3.6	2.2	2.0	2.1
**** *	3.6	3.0	3.6	2.2	2.0	2.1
**** *	3.6	3.0	3.6	2.2	2.0	2.1
**** *	3.6	3.0	3.6	2.2	2.0	2.1
**** *	3.6	3.0	3.6	2.2	2.0	2.1
**** *	3.6	3.0	3.6	2.2	2.0	2.1
**** *	3.6	3.0	3.6	2.2	2.0	2.1
**** *	3.6	3.0	3.6	2.2	2.0	2.1
**** *	3.6	2.3	2.4	5.4	3.1	2.1
**** *	2.6	2.3	2.4	5.5	3.1	2.1

****	*	2.6	2.3	2.4	5.5	3.1	3.7
****	*	2.6	2.3	2.4	5.5	3.1	3.7
****	*	2.6	2.3	2.4	5.5	3.1	3.7
****	*	2.6	2.3	2.4	5.5	3.1	3.7
****	*	2.6	2.3	2.4	5.5	3.1	3.7
****	*	2.6	2.3	2.4	5.5	3.1	3.7
****	*	2.6	2.3	2.4	5.5	3.1	3.7
****	*	2.6	2.3	2.4	5.5	3.1	3.7
****	*	2.6	2.3	2.4	5.5	3.1	3.7
****	*	2.6	2.3	2.4	5.5	3.2	3.7
****	*	2.6	2.3	2.4	5.5	3.2	3.7
****	*	2.6	2.3	2.4	5.5	3.2	3.7

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: PM

WIND ANGLE (DEGR) *	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
**** *	2.6	2.3	2.4	5.5	3.2	3.7
**** *	2.6	2.3	2.4	5.5	3.6	3.7
MAX *	4.0	6.4	4.3	10.1	4.2	8.6
DEGR. *	225	160	130	265	270	80

THE HIGHEST CONCENTRATION OF 10.10 PPM OCCURRED AT RECEPTOR 4.

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: PM

DATE : 5/18/12

TIME : 15:16:24

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

		* CO/LINK (PPM)					
		* ANGLE (DEGREES)					
		1	2	3	4	5	6
LINK #	*	225	160	130	265	270	80
1	*	0.0	0.0	0.0	0.1	0.1	0.0
2	*	0.0	0.0	0.0	0.0	0.0	0.4
3	*	0.0	0.0	0.0	0.1	0.1	1.5
4	*	0.0	0.0	0.0	0.0	0.0	0.1
5	*	0.0	0.0	0.0	0.0	0.0	0.0
6	*	0.0	0.0	0.0	0.0	0.0	0.0
7	*	0.0	0.0	0.0	0.4	0.3	0.1
8	*	0.4	0.0	0.3	2.3	0.1	0.1
9	*	0.0	0.2	0.1	0.0	0.0	0.0
10	*	0.0	0.1	0.0	0.0	0.0	0.0
11	*	0.0	0.0	0.0	0.0	0.0	0.1
12	*	0.0	0.0	0.0	0.0	0.0	0.0
13	*	0.0	0.0	0.0	0.0	0.0	0.0
14	*	0.0	0.0	0.0	0.0	0.0	0.0
15	*	0.0	0.0	0.0	0.0	0.0	0.0
16	*	0.0	0.0	0.0	0.3	0.0	0.0
17	*	0.0	0.0	0.0	0.0	0.0	0.0
18	*	0.0	0.0	0.0	0.0	0.0	0.0
19	*	0.0	0.0	0.0	0.0	0.0	0.0
20	*	0.0	0.0	0.0	0.0	0.0	0.1
21	*	0.0	0.1	0.0	0.0	0.0	0.0
22	*	0.0	0.3	0.0	0.0	0.0	0.0
23	*	0.7	0.0	0.7	1.3	0.1	0.2
24	*	0.0	0.0	0.0	0.4	0.3	0.1
25	*	0.0	0.0	0.0	0.3	0.3	0.4
26	*	0.0	0.0	0.0	0.1	0.1	0.7
27	*	0.0	0.0	0.0	0.1	0.1	2.4
28	*	0.0	0.0	0.0	0.0	0.0	0.0
29	*	0.0	0.0	0.0	0.3	0.2	0.0
30	*	0.0	0.0	0.0	0.0	0.0	0.0
31	*	0.0	0.0	0.0	0.0	0.0	0.0
32	*	0.0	0.0	0.0	0.2	0.1	0.0

33	*	0.0	0.0	0.0	0.0	0.0	0.0
34	*	0.0	0.0	0.0	0.0	0.0	0.0
35	*	0.0	0.0	0.0	0.0	0.0	0.0
36	*	0.0	0.0	0.0	0.0	0.0	0.0
37	*	0.0	0.0	0.0	0.0	0.0	0.0
38	*	0.0	0.0	0.0	0.0	0.0	0.0
39	*	0.0	0.0	0.0	0.0	0.0	0.0
40	*	0.0	0.0	0.0	0.1	0.1	0.1
41	*	0.0	0.0	0.0	0.0	0.0	0.0
42	*	0.0	0.1	0.1	0.0	0.0	0.0
43	*	0.0	0.0	0.0	0.0	0.0	0.0
44	*	0.0	0.0	0.0	0.0	0.0	0.0
45	*	0.0	0.0	0.0	0.0	0.0	0.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2012: No Build: PM

LINK #	CO/LINK (PPM)					
	1	2	3	4	5	6
	225	160	130	265	270	80
46	0.1	0.1	0.0	0.0	0.0	0.0
47	0.0	0.0	0.0	0.0	0.0	0.0
48	0.0	0.5	0.3	0.0	0.0	0.0
49	0.0	0.0	0.1	0.0	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0
51	0.0	0.0	0.0	0.0	0.0	0.0
52	0.1	0.2	0.0	0.0	0.0	0.0
53	0.0	0.0	0.0	0.0	0.0	0.0
54	0.0	0.0	0.0	0.0	0.0	0.0
55	0.0	0.1	0.1	0.0	0.0	0.0
56	0.0	0.0	0.0	0.0	0.0	0.0
57	0.0	0.0	0.0	0.0	0.0	0.0
58	0.0	0.0	0.0	0.0	0.0	0.0
59	0.0	0.1	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0
61	0.0	0.0	0.0	0.0	0.0	0.0
62	0.0	0.0	0.0	0.0	0.0	0.0
63	0.0	0.0	0.0	0.2	0.1	0.1
64	0.0	0.0	0.0	0.1	0.1	0.1
65	0.0	0.0	0.0	0.0	0.0	0.0
66	0.0	0.0	0.1	0.0	0.0	0.0
67	0.4	0.0	0.3	1.9	0.2	0.1
68	0.0	0.0	0.0	0.0	0.0	0.0
69	0.0	0.1	0.0	0.0	0.0	0.1
70	0.0	0.0	0.0	0.0	0.0	0.0
71	0.0	0.0	0.0	0.0	0.0	0.0
72	0.0	0.7	0.3	0.0	0.0	0.0
73	0.4	1.9	0.0	0.0	0.0	0.0
74	0.0	0.0	0.0	0.0	0.0	0.0
75	0.0	0.0	0.0	0.0	0.0	0.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: AM

DATE : 5/18/12
 TIME : 15:17:37

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
 U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 1.9 PPM

LINK VARIABLES

LINK DESCRIPTION	* X1	LINK COORDINATES (FT) Y1	X2	Y2	* LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)	W (FT)	V/C QUEUE (VEH)
1. Rte 1 EB W of Bridge*	*****	*****	*****	*****	1614.	87. AG	2350.	15.1	0.0	44.0	
2. Rte 1 EB Accotink Br*	*****	*****	*****	*****	64.	88. BR	2350.	15.1	7.5	44.0	
3. Rte 1 EB E of Bridge*	*****	*****	*****	*****	611.	87. AG	2350.	15.1	0.0	44.0	
4. Rte 1 EB E of Br 3ln*	*****	*****	*****	*****	323.	86. AG	2350.	15.1	0.0	56.0	
5. Rte 1 EB FCP ApprThru*	*****	*****	*****	*****	321.	86. AG	2215.	15.1	0.0	44.0	
6. Rte 1 EB FCP IntThru*	*****	*****	*****	*****	131.	80. AG	2215.	15.1	0.0	44.0	
7. Rte 1 EB FCP Dptr *	*****	*****	*****	*****	546.	79. AG	1576.	15.1	0.0	44.0	
8. Rte 1 EB E Bklk Thru*	*****	*****	*****	*****	708.	79. AG	1576.	15.1	0.0	44.0	
9. Rte 1 EB E Bklk IntT*	*****	*****	*****	*****	127.	80. AG	1576.	14.3	0.0	44.0	
10. Rte 1 EB E Bklk Dprt*	*****	*****	*****	*****	219.	80. AG	1734.	14.3	0.0	44.0	
11. Rte 1 EB E Bklk Dpt2*	*****	*****	*****	*****	839.	88. AG	1734.	14.3	0.0	44.0	
12. Rte 1 EB W FCP L AD1*	*****	*****	*****	*****	320.	85. AG	135.	18.2	0.0	32.0	
13. Rte 1 EB W FCP L AD2*	*****	*****	*****	*****	129.	51. AG	135.	18.2	0.0	32.0	
14. FCP NB N Rte 1 L Dpt*	*****	*****	*****	*****	416.	360. AG	135.	18.2	0.0	32.0	
15. Rte 1 EB E FCR R Dpt*	*****	*****	*****	*****	534.	79. AG	1310.	15.1	0.0	32.0	
16. Rte 1 EB W Bklk R Ap*	*****	*****	*****	*****	702.	79. AG	1310.	24.1	0.0	32.0	
17. Rte 1 EB @Bklk R Int*	*****	*****	*****	*****	52.	107. AG	1310.	24.1	0.0	32.0	
18. Rte 1 EB W Bklk L Ap*	*****	*****	*****	*****	703.	79. AG	15.	16.2	0.0	32.0	
19. Rte 1 EB @Bklk L Int*	*****	*****	*****	*****	108.	48. AG	15.	16.2	0.0	32.0	
20. Rte 1 WB E Bklk *	*****	*****	*****	*****	821.	269. AG	1546.	14.7	0.0	44.0	
21. Rte 1 WB E Bklk Thru*	*****	*****	*****	*****	242.	262. AG	1403.	14.7	0.0	32.0	
22. Rte 1 WB @Bklk Int *	*****	*****	*****	*****	109.	259. AG	1403.	15.1	0.0	44.0	
23. Rte 1 WB W Bklk Dptr*	*****	*****	*****	*****	786.	259. AG	1543.	15.1	0.0	44.0	
24. Rte 1 WB E FCP Thru *	*****	*****	*****	*****	487.	261. AG	798.	15.1	0.0	44.0	
25. Rte 1 WB W FCP Thru *	*****	*****	*****	*****	728.	264. AG	798.	15.5	0.0	44.0	
26. Rte 1 WB FCP-Br All *	*****	*****	*****	*****	310.	264. AG	805.	15.5	0.0	44.0	
27. Rte 1 WB E Br All *	*****	*****	*****	*****	341.	267. AG	805.	15.5	0.0	44.0	
28. Rte 1 WB @Br All *	*****	*****	*****	*****	65.	268. BR	805.	15.5	7.5	44.0	

29.	Rte 1 WB W Br All	*	*****	*****	*****	*****	*****	*	1616.	267.	AG	805.	15.5	0.0	44.0
30.	Rte 1 WB E Bklk L Ap*	*	*****	*****	*****	*****	*****	*	280.	261.	AG	123.	24.1	0.0	32.0
31.	Rte 1 WB @Bklk L Int*	*	*****	*****	*****	*****	*****	*	95.	222.	AG	123.	24.1	0.0	32.0
32.	Rte 1 WB E FCP R Apr*	*	*****	*****	*****	*****	*****	*	441.	261.	AG	745.	16.2	0.0	32.0
33.	Rte 1 WB @FCP R Int	*	*****	*****	*****	*****	*****	*	75.	307.	AG	745.	16.2	0.0	32.0
34.	FCP NB N Rte 1 Mrg	*	*****	*****	*****	*****	*****	*	378.	359.	AG	745.	16.2	0.0	32.0
35.	FCP SB N Rte 1 All	*	*****	*****	*****	*****	*****	*	1897.	179.	AG	793.	15.5	0.0	44.0
36.	FCP SB N Rte 1 L Apr*	*	*****	*****	*****	*****	*****	*	517.	180.	AG	786.	16.2	0.0	44.0
37.	FCP SB @Rte 1 L Int	*	*****	*****	*****	*****	*****	*	124.	127.	AG	786.	16.2	0.0	44.0
38.	FCP N Rte 1 SB R Apr*	*	*****	*****	*****	*****	*****	*	549.	181.	AG	7.	16.2	0.0	32.0
39.	FCP @Rte 1 SB R Int	*	*****	*****	*****	*****	*****	*	42.	233.	AG	7.	16.2	0.0	32.0
40.	Rte 1 WB W FCP R Mrg*	*	*****	*****	*****	*****	*****	*	587.	264.	AG	7.	16.2	0.0	32.0
41.	FCP NB N Rte 1 All	*	*****	*****	*****	*****	*****	*	1996.	360.	AG	880.	14.3	0.0	44.0
42.	Phck NB S Rte 1 All	*	*****	*****	*****	*****	*****	*	890.	316.	AG	104.	14.3	0.0	32.0
43.	Phck NB S Rte 1 T-R	*	*****	*****	*****	*****	*****	*	507.	333.	AG	19.	14.3	0.0	32.0
44.	Phck NB S Rte 1 Thru*	*	*****	*****	*****	*****	*****	*	50.	333.	AG	10.	14.3	0.0	32.0
45.	Bklk NB @Rte 1 Thru	*	*****	*****	*****	*****	*****	*	107.	357.	AG	10.	14.3	0.0	32.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: AM

DATE : 5/18/12

TIME : 15:17:37

LINK VARIABLES

LINK DESCRIPTION	* X1	LINK COORDINATES (FT) Y1	X2	Y2	* LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
46. Bklk NB N Rte 1 All*	*****	*****	*****	*****	*	1317.	357.	AG	45.	14.3	0.0	32.0	
47. Rte 1 WB @Bklk R Int*	*****	*****	*****	*****	*	47.	309.	AG	20.	16.2	0.0	32.0	
48. Phck NB S Rte 1 L Ap*	*****	*****	*****	*****	*	558.	332.	AG	85.	16.2	0.0	44.0	
49. Phck NB @Rte 1 L Int*	*****	*****	*****	*****	*	90.	312.	AG	85.	16.2	0.0	44.0	
50. Phck NB S Rte 1 R Ap*	*****	*****	*****	*****	*	45.	353.	AG	9.	16.2	0.0	32.0	
51. Phck NB @Rte 1 R Int*	*****	*****	*****	*****	*	48.	27.	AG	9.	16.2	0.0	32.0	
52. Bklk N Rte 1 SB All *	*****	*****	*****	*****	*	1229.	177.	AG	320.	18.2	0.0	32.0	
53. Bklk N Rte 1 SB Thru*	*****	*****	*****	*****	*	92.	177.	AG	116.	18.2	0.0	32.0	
54. Bklk SB @Rte 1 Int *	*****	*****	*****	*****	*	108.	177.	AG	116.	18.2	0.0	32.0	
55. Bklk SB S Rte 1 All1*	*****	*****	*****	*****	*	561.	151.	AG	1549.	18.2	0.0	32.0	
56. Bklk SB S Rte 1 All2*	*****	*****	*****	*****	*	891.	137.	AG	1549.	18.2	0.0	32.0	
57. Bklk SB N Rte 1 R Ap*	*****	*****	*****	*****	*	94.	179.	AG	55.	24.1	0.0	32.0	
58. Bklk SB N Rte 1 R In*	*****	*****	*****	*****	*	50.	220.	AG	55.	24.1	0.0	32.0	
59. Bklk SB N Rte 1 L Ap*	*****	*****	*****	*****	*	93.	176.	AG	149.	24.1	0.0	32.0	
60. Bklk SB N Rte 1 L In*	*****	*****	*****	*****	*	83.	131.	AG	149.	24.1	0.0	32.0	
61. Q Rte 1 EB W FCP Thr*	*****	*****	*****	*****	*	487.	266.	AG	156.	100.0	0.0	24.0	1.00 24.8
62. Q Rte 1 EB W FCP L *	*****	*****	*****	*****	*	493.	265.	AG	445.	100.0	0.0	24.0	2.39 25.1
63. Q Rte 1 WB E FCP Thr*	*****	*****	*****	*****	*	168.	80.	AG	204.	100.0	0.0	24.0	0.43 8.5
64. Q FCP SB N Rte 1 L *	*****	*****	*****	*****	*	756.	360.	AG	355.	100.0	0.0	24.0	1.12 38.4
65. Q FCP SB N Rte 1 R *	*****	*****	*****	*****	*	5.	360.	AG	162.	100.0	0.0	12.0	0.02 0.2
66. Q Rte 1 EB W Bklk R *	*****	*****	*****	*****	*	4703.	259.	AG	91.	100.0	0.0	12.0	1.46 238.9
67. Q Rte 1 EB W Bklk T *	*****	*****	*****	*****	*	297.	259.	AG	183.	100.0	0.0	24.0	0.79 15.1
68. Q Rte 1 EB W Bklk L *	*****	*****	*****	*****	*	5.	245.	AG	87.	100.0	0.0	24.0	0.13 0.3
69. Q Rte 1 WB E Bklk Th*	*****	*****	*****	*****	*	245.	82.	AG	170.	100.0	0.0	24.0	0.67 12.5
70. Q Rte 1 WB E Bklk L *	*****	*****	*****	*****	*	648.	81.	AG	73.	100.0	0.0	12.0	1.84 32.9
71. Q Phck NB S Rte 1 TR*	*****	*****	*****	*****	*	34.	153.	AG	225.	100.0	0.0	12.0	1.00 1.8
72. Q Phck NB S Rte 1 L*	*****	*****	*****	*****	*	303.	152.	AG	451.	100.0	0.0	24.0	2.21 15.4
73. Q Bklk SB N Rte 1 L *	*****	*****	*****	*****	*	247.	356.	AG	205.	100.0	0.0	12.0	1.06 12.6
74. Q Bklk SB N Rte 1 T *	*****	*****	*****	*****	*	100.	358.	AG	205.	100.0	0.0	12.0	0.78 5.1
75. Q Bklk SB N Rte 1 R *	*****	*****	*****	*****	*	47.	359.	AG	205.	100.0	0.0	12.0	0.42 2.4

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: AM

DATE : 5/18/12
 TIME : 15:17:37

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* * * *	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
61. Q Rte 1 EB W FCP Thr*		180	59	6.5	2215	1769	88.96	2	3
62. Q Rte 1 EB W FCP L *		180	168	7.0	135	1716	88.96	2	3
63. Q Rte 1 WB E FCP Thr*		180	77	6.5	798	1769	88.96	2	3
64. Q FCP SB N Rte 1 L *		180	134	7.0	786	1716	88.96	2	3
65. Q FCP SB N Rte 1 R *		180	122	7.0	7	1583	88.96	2	3
66. Q Rte 1 EB W Bklk R *		180	69	7.0	1310	1583	88.96	2	3
67. Q Rte 1 EB W Bklk T *		180	69	7.0	1576	1769	88.96	2	3
68. Q Rte 1 EB W Bklk L *		180	66	6.5	15	195	88.96	2	3
69. Q Rte 1 WB E Bklk Th*		180	64	7.0	1403	1761	88.96	2	3
70. Q Rte 1 WB E Bklk L *		180	55	6.5	123	105	88.96	2	3
71. Q Phck NB S Rte 1 TR*		180	170	6.0	19	1730	88.96	2	3
72. Q Phck NB S Rte 1 L*		180	170	6.0	85	1716	88.96	2	3
73. Q Bklk SB N Rte 1 L *		180	155	7.0	149	1593	88.96	2	3
74. Q Bklk SB N Rte 1 T *		180	155	7.0	116	1676	88.96	2	3
75. Q Bklk SB N Rte 1 R *		180	155	7.0	55	1478	88.96	2	3

RECEPTOR LOCATIONS

RECEPTOR	* * *	COORDINATES (FT)			* *
		X	Y	Z	
1. 1: 9140 Richmond Hwy *		*****	*****	5.0	*
2. 2: 9136 Backlick Rd. *		*****	*****	5.0	*
3. 3: 9135 Anderson Ln. *		*****	*****	5.0	*
4. 4: Bus Stop @Rte. 1 *		*****	*****	5.0	*
5. 5: E.K. HmlsShelter *		*****	*****	5.0	*
6. 6: Accotink Creek *		*****	*****	5.0	*

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-****

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
0.	1.9	3.3	1.9	5.0	3.1	3.0
5.	1.9	3.5	1.9	5.0	3.1	3.0
10.	1.9	3.5	1.9	5.1	3.1	3.0
15.	1.9	3.5	2.0	5.5	3.4	3.1
20.	1.9	3.4	2.0	5.5	3.2	3.2
25.	1.9	3.2	2.0	5.6	2.9	3.1
30.	1.9	3.1	2.0	5.8	2.9	3.3
35.	1.9	3.0	2.0	5.8	2.9	3.7
40.	1.9	2.9	2.0	6.3	3.4	3.8
45.	1.9	2.9	2.0	6.7	3.4	4.0
50.	1.9	2.9	2.0	7.2	3.5	4.0
55.	1.9	2.9	2.0	7.7	3.3	4.1
60.	1.9	2.8	2.1	8.5	3.3	4.3
65.	1.9	2.8	2.0	9.0	3.3	4.6
70.	1.9	2.8	2.1	9.7	3.1	5.1
75.	1.9	2.7	2.0	9.5	3.0	6.0
80.	1.9	2.8	2.0	8.5	2.8	7.5
85.	1.9	2.8	2.2	6.5	2.6	7.7
90.	1.9	3.0	2.6	4.7	2.6	6.6
95.	2.1	3.2	3.1	3.9	2.6	4.4
100.	2.3	3.6	3.5	3.5	2.5	3.6
105.	2.5	3.7	3.3	3.3	2.4	3.0
110.	2.6	3.8	2.8	3.1	2.3	2.7
115.	2.6	3.9	2.6	2.9	2.2	2.5
120.	2.6	3.9	3.0	2.8	2.3	2.4
125.	2.6	3.9	3.4	2.9	2.5	2.3
130.	2.7	3.8	4.0	2.8	2.5	2.3
135.	2.6	3.7	4.2	2.6	2.3	2.3
140.	2.5	3.8	3.9	2.3	2.1	2.3
145.	2.7	4.2	3.6	2.2	1.9	2.3

150.	*	2.6	4.3	3.1	2.2	1.9	2.3
155.	*	2.8	4.7	3.0	2.2	1.9	2.3
160.	*	2.8	5.6	3.1	2.2	1.9	2.3
165.	*	3.0	5.9	3.1	2.3	1.9	2.3
170.	*	3.1	5.7	3.1	2.3	1.9	2.3
175.	*	3.2	5.1	3.1	2.2	1.9	2.3
180.	*	3.2	4.5	3.1	2.2	1.9	2.3
185.	*	3.1	4.0	3.0	2.2	1.9	2.3
190.	*	2.9	3.3	3.0	2.2	1.9	2.3
195.	*	2.8	3.2	3.0	2.2	1.9	2.3
200.	*	3.2	3.2	2.9	2.2	1.9	2.3
205.	*	3.3	3.2	2.9	2.2	1.9	2.4

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: AM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)						
	1	2	3	4	5	6	
210.	*	3.6	3.2	2.9	2.3	1.9	2.4
215.	*	3.5	3.3	2.9	2.3	1.9	2.3
220.	*	3.6	3.3	3.0	2.3	1.9	2.2
225.	*	3.5	3.3	3.0	2.3	1.9	2.2
230.	*	3.4	3.3	3.2	2.5	1.9	2.2
235.	*	3.4	3.3	2.9	2.7	1.9	2.3
240.	*	3.3	3.3	3.1	2.9	1.9	2.4
245.	*	3.4	3.3	3.0	3.6	1.9	2.6
250.	*	3.4	3.2	3.3	5.0	1.9	2.8
255.	*	3.2	3.3	3.2	7.2	1.9	3.5
260.	*	2.6	2.5	2.7	9.6	2.2	4.5
265.	*	2.5	2.2	2.1	11.0	3.0	5.9
270.	*	2.3	2.1	2.0	9.8	3.9	6.7
275.	*	2.3	2.1	2.0	8.3	3.4	6.5
280.	*	2.3	2.1	2.0	7.8	3.4	5.6
285.	*	2.2	2.1	2.0	7.3	3.1	4.9
290.	*	2.1	2.0	2.1	6.7	3.1	4.6
295.	*	2.0	2.0	2.1	6.3	3.1	4.2
300.	*	2.0	2.0	2.1	6.1	3.1	4.1
305.	*	2.0	2.0	2.1	5.7	3.1	3.8
310.	*	2.0	2.1	2.1	5.8	3.2	3.5
315.	*	2.0	2.1	2.1	5.7	3.2	3.4
320.	*	2.0	2.0	2.1	5.6	3.3	3.3
325.	*	2.0	2.0	2.1	5.5	3.3	3.2
330.	*	2.0	2.1	2.0	5.1	3.1	3.2
335.	*	2.0	2.1	1.9	5.0	3.0	3.1
340.	*	2.1	2.2	1.9	5.0	3.0	3.1
345.	*	2.1	2.3	1.9	5.0	3.0	3.1
350.	*	2.0	2.6	1.9	5.1	3.0	3.1
355.	*	2.0	2.9	1.9	5.0	3.0	3.0
360.	*	1.9	3.3	1.9	5.0	3.1	3.0
5.	*	1.9	3.5	1.9	5.0	3.1	3.0
10.	*	1.9	3.5	1.9	5.1	3.1	3.0
15.	*	1.9	3.5	2.0	5.5	3.4	3.1
20.	*	1.9	3.4	2.0	5.5	3.2	3.2
25.	*	1.9	3.2	2.0	5.6	2.9	3.1
30.	*	1.9	3.1	2.0	5.8	2.9	3.3
35.	*	1.9	3.0	2.0	5.8	2.9	3.7
40.	*	1.9	2.9	2.0	6.3	3.4	3.8
45.	*	1.9	2.9	2.0	6.7	3.4	4.0

50.	*	1.9	2.9	2.0	7.2	3.5	4.0
55.	*	1.9	2.9	2.0	7.7	3.3	4.1
60.	*	1.9	2.8	2.1	8.5	3.3	4.3
65.	*	1.9	2.8	2.0	9.0	3.3	4.6
70.	*	1.9	2.8	2.1	9.7	3.1	5.1
75.	*	1.9	2.7	2.0	9.5	3.0	6.0
80.	*	1.9	2.8	2.0	8.5	2.8	7.5
85.	*	1.9	2.8	2.2	6.5	2.6	7.7
90.	*	1.9	3.0	2.6	4.7	2.6	6.6
95.	*	2.1	3.2	3.1	3.9	2.6	4.4
100.	*	2.3	3.6	3.5	3.5	2.5	3.6
105.	*	2.5	3.7	3.3	3.3	2.4	3.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: AM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
110.	* 2.6	3.8	2.8	3.1	2.3	2.7
115.	* 2.6	3.9	2.6	2.9	2.2	2.5
120.	* 2.6	3.9	3.0	2.8	2.3	2.4
125.	* 2.6	3.9	3.4	2.9	2.5	2.3
130.	* 2.7	3.8	4.0	2.8	2.5	2.3
135.	* 2.6	3.7	4.2	2.6	2.3	2.3
140.	* 2.5	3.8	3.9	2.3	2.1	2.3
145.	* 2.7	4.2	3.6	2.2	1.9	2.3
150.	* 2.6	4.3	3.1	2.2	1.9	2.3
155.	* 2.8	4.7	3.0	2.2	1.9	2.3
160.	* 2.8	5.6	3.1	2.2	1.9	2.3
165.	* 3.0	5.9	3.1	2.3	1.9	2.3
170.	* 3.1	5.7	3.1	2.3	1.9	2.3
175.	* 3.2	5.1	3.1	2.2	1.9	2.3
180.	* 3.2	4.5	3.1	2.2	1.9	2.3
185.	* 3.1	4.0	3.0	2.2	1.9	2.3
190.	* 2.9	3.3	3.0	2.2	1.9	2.3
195.	* 2.8	3.2	3.0	2.2	1.9	2.3
200.	* 3.2	3.2	2.9	2.2	1.9	2.3
205.	* 3.3	3.2	2.9	2.2	1.9	2.4
210.	* 3.6	3.2	2.9	2.3	1.9	2.4
215.	* 3.5	3.3	2.9	2.3	1.9	2.3
220.	* 3.6	3.3	3.0	2.3	1.9	2.2
225.	* 3.5	3.3	3.0	2.3	1.9	2.2
230.	* 3.4	3.3	3.2	2.5	1.9	2.2
235.	* 3.4	3.3	2.9	2.7	1.9	2.3
240.	* 3.3	3.3	3.1	2.9	1.9	2.4
245.	* 3.4	3.3	3.0	3.6	1.9	2.6
250.	* 3.4	3.2	3.3	5.0	1.9	2.8
255.	* 3.2	3.3	3.2	7.2	1.9	3.5
260.	* 2.6	2.5	2.7	9.6	2.2	4.5
265.	* 2.5	2.2	2.1	11.0	3.0	5.9
270.	* 2.3	2.1	2.0	9.8	3.9	6.7
275.	* 2.3	2.1	2.0	8.3	3.4	6.5
280.	* 2.3	2.1	2.0	7.8	3.4	5.6
285.	* 2.2	2.1	2.0	7.3	3.1	4.9
290.	* 2.1	2.0	2.1	6.7	3.1	4.6
295.	* 2.0	2.0	2.1	6.3	3.1	4.2
300.	* 2.0	2.0	2.1	6.1	3.1	4.1
305.	* 2.0	2.0	2.1	5.7	3.1	3.8

310.	*	2.0	2.1	2.1	5.8	3.2	3.5
315.	*	2.0	2.1	2.1	5.7	3.2	3.4
320.	*	2.0	2.0	2.1	5.6	3.3	3.3
325.	*	2.0	2.0	2.1	5.5	3.3	3.2
330.	*	2.0	2.1	2.0	5.1	3.1	3.2
335.	*	2.0	2.1	1.9	5.0	3.0	3.1
340.	*	2.1	2.2	1.9	5.0	3.0	3.1
345.	*	2.1	2.3	1.9	5.0	3.0	3.1
350.	*	2.0	2.6	1.9	5.1	3.0	3.1
355.	*	2.0	2.9	1.9	5.0	3.0	3.0
360.	*	1.9	3.3	1.9	5.0	3.1	3.0
365.	*	1.9	3.5	1.9	5.0	3.1	3.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: AM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)						
	1	2	3	4	5	6	
370.	*	1.9	3.5	1.9	5.1	3.1	3.0
375.	*	1.9	3.5	2.0	5.5	3.4	3.1
380.	*	1.9	3.4	2.0	5.5	3.2	3.2
385.	*	1.9	3.2	2.0	5.6	2.9	3.1
390.	*	1.9	3.1	2.0	5.8	2.9	3.3
395.	*	1.9	3.0	2.0	5.8	2.9	3.7
400.	*	1.9	2.9	2.0	6.3	3.4	3.8
405.	*	1.9	2.9	2.0	6.7	3.4	4.0
410.	*	1.9	2.9	2.0	7.2	3.5	4.0
415.	*	1.9	2.9	2.0	7.7	3.3	4.1
420.	*	1.9	2.8	2.1	8.5	3.3	4.3
425.	*	1.9	2.8	2.0	9.0	3.3	4.6
430.	*	1.9	2.8	2.1	9.7	3.1	5.1
435.	*	1.9	2.7	2.0	9.5	3.0	6.0
440.	*	1.9	2.8	2.0	8.5	2.8	7.5
445.	*	1.9	2.8	2.2	6.5	2.6	7.7
450.	*	1.9	3.0	2.6	4.7	2.6	6.6
455.	*	2.1	3.2	3.1	3.9	2.6	4.4
460.	*	2.3	3.6	3.5	3.5	2.5	3.6
465.	*	2.5	3.7	3.3	3.3	2.4	3.0
470.	*	2.6	3.8	2.8	3.1	2.3	2.7
475.	*	2.6	3.9	2.6	2.9	2.2	2.5
480.	*	2.6	3.9	3.0	2.8	2.3	2.4
485.	*	2.6	3.9	3.4	2.9	2.5	2.3
490.	*	2.7	3.8	4.0	2.8	2.5	2.3
495.	*	2.6	3.7	4.2	2.6	2.3	2.3
500.	*	2.5	3.8	3.9	2.3	2.1	2.3
505.	*	2.7	4.2	3.6	2.2	1.9	2.3
510.	*	2.6	4.3	3.1	2.2	1.9	2.3
515.	*	2.8	4.7	3.0	2.2	1.9	2.3
520.	*	2.8	5.6	3.1	2.2	1.9	2.3
525.	*	3.0	5.9	3.1	2.3	1.9	2.3
530.	*	3.1	5.7	3.1	2.3	1.9	2.3
535.	*	3.2	5.1	3.1	2.2	1.9	2.3
540.	*	3.2	4.5	3.1	2.2	1.9	2.3
545.	*	3.1	4.0	3.0	2.2	1.9	2.3
550.	*	2.9	3.3	3.0	2.2	1.9	2.3
555.	*	2.8	3.2	3.0	2.2	1.9	2.3
560.	*	3.2	3.2	2.9	2.2	1.9	2.3
565.	*	3.3	3.2	2.9	2.2	1.9	2.4

570.	*	3.6	3.2	2.9	2.3	1.9	2.4
575.	*	3.5	3.3	2.9	2.3	1.9	2.3
580.	*	3.6	3.3	3.0	2.3	1.9	2.2
585.	*	3.5	3.3	3.0	2.3	1.9	2.2
590.	*	3.4	3.3	3.2	2.5	1.9	2.2
595.	*	3.4	3.3	2.9	2.7	1.9	2.3
600.	*	3.3	3.3	3.1	2.9	1.9	2.4
605.	*	3.4	3.3	3.0	3.6	1.9	2.6
610.	*	3.4	3.2	3.3	5.0	1.9	2.8
615.	*	3.2	3.3	3.2	7.2	1.9	3.5
620.	*	2.6	2.5	2.7	9.6	2.2	4.5
625.	*	2.5	2.2	2.1	11.0	3.0	5.9

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: AM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)						
	1	2	3	4	5	6	
630.	*	2.3	2.1	2.0	9.8	3.9	6.7
635.	*	2.3	2.1	2.0	8.3	3.4	6.5
640.	*	2.3	2.1	2.0	7.8	3.4	5.6
645.	*	2.2	2.1	2.0	7.3	3.1	4.9
650.	*	2.1	2.0	2.1	6.7	3.1	4.6
655.	*	2.0	2.0	2.1	6.3	3.1	4.2
660.	*	2.0	2.0	2.1	6.1	3.1	4.1
665.	*	2.0	2.0	2.1	5.7	3.1	3.8
670.	*	2.0	2.1	2.1	5.8	3.2	3.5
675.	*	2.0	2.1	2.1	5.7	3.2	3.4
680.	*	2.0	2.0	2.1	5.6	3.3	3.3
685.	*	2.0	2.0	2.1	5.5	3.3	3.2
690.	*	2.0	2.1	2.0	5.1	3.1	3.2
695.	*	2.0	2.1	1.9	5.0	3.0	3.1
700.	*	2.1	2.2	1.9	5.0	3.0	3.1
705.	*	2.1	2.3	1.9	5.0	3.0	3.1
710.	*	2.0	2.6	1.9	5.1	3.0	3.1
715.	*	2.0	2.9	1.9	5.0	3.0	3.0
720.	*	1.9	3.3	1.9	5.0	3.1	3.0
725.	*	1.9	3.5	1.9	5.0	3.1	3.0
730.	*	1.9	3.5	1.9	5.1	3.2	3.0
735.	*	1.9	3.5	2.0	5.4	3.4	3.0
740.	*	1.9	3.4	2.0	5.4	3.4	3.1
745.	*	1.9	3.2	2.0	5.4	3.0	3.0
750.	*	1.9	3.1	2.0	5.5	3.1	3.1
755.	*	1.9	3.0	2.0	5.5	3.0	3.3
760.	*	1.9	2.9	2.0	5.7	3.5	3.3
765.	*	1.9	2.9	2.0	5.8	3.5	3.3
770.	*	1.9	2.9	2.0	6.0	3.6	3.3
775.	*	1.9	2.9	2.0	6.2	3.5	3.3
780.	*	1.9	2.8	2.1	6.4	3.6	3.3
785.	*	1.9	2.8	2.0	6.3	3.6	3.3
790.	*	1.9	2.8	2.1	6.1	3.5	3.4
795.	*	1.9	2.7	2.0	5.7	3.5	3.7
800.	*	1.9	3.0	2.6	4.2	2.8	4.2
805.	*	2.3	3.0	2.7	2.9	2.7	3.9
810.	*	2.3	3.1	3.0	2.5	2.7	3.2
815.	*	2.4	3.2	3.1	2.3	2.7	2.4
820.	*	2.5	3.3	3.3	2.3	2.7	2.3
825.	*	2.6	3.4	3.2	2.3	2.7	2.3

830.	*	2.7	3.4	3.0	2.3	2.6	2.3
835.	*	2.7	3.4	2.8	2.3	2.6	2.3
840.	*	2.7	3.4	2.8	2.3	2.6	2.3
845.	*	2.7	3.4	2.9	2.3	2.6	2.3
850.	*	2.7	3.4	3.0	2.3	2.6	2.3
855.	*	2.6	3.3	3.1	2.3	2.6	2.3
860.	*	2.6	3.4	3.1	2.3	2.6	2.3
865.	*	2.6	3.5	3.1	2.3	2.6	2.3
870.	*	2.6	3.6	3.1	2.3	2.6	2.3
875.	*	2.6	3.6	3.1	2.3	1.9	2.3
880.	*	2.6	4.0	3.1	2.3	1.9	2.3
885.	*	2.6	4.1	3.1	2.3	1.9	2.3

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: AM

WIND ANGLE (DEGR) *	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
890. *	2.6	4.1	3.1	2.3	1.9	2.3
895. *	2.6	4.1	3.1	2.3	1.9	2.3
900. *	2.7	3.6	3.1	2.3	1.9	2.3
905. *	2.7	3.2	3.1	2.3	1.9	2.3
910. *	2.7	2.7	3.1	2.3	1.9	2.3
915. *	2.9	2.5	3.1	2.3	1.9	2.3
920. *	3.2	2.4	3.1	2.3	1.9	2.3
925. *	3.3	2.4	3.1	2.3	1.9	2.3
930. *	3.3	2.4	3.1	2.3	1.9	2.3
935. *	3.2	2.4	3.1	2.3	1.9	2.3
940. *	3.1	2.4	3.1	2.3	1.9	2.3
945. *	3.0	2.4	3.1	2.3	1.9	2.3
950. *	3.0	2.4	3.1	2.3	1.9	2.3
955. *	3.0	2.4	3.1	2.3	1.9	2.3
960. *	3.0	2.4	3.1	2.3	1.9	2.3
965. *	3.0	2.4	3.1	2.3	1.9	2.3
970. *	3.0	2.4	3.1	2.3	1.9	2.3
975. *	3.1	2.5	3.2	2.3	1.9	2.3
980. *	3.1	2.1	2.0	4.1	3.0	2.2
985. *	2.5	2.1	2.0	5.2	3.0	2.2
990. *	2.5	2.1	2.0	5.2	3.0	3.0
995. *	2.5	2.1	2.0	5.2	3.0	3.0
**** *	2.5	2.1	2.0	5.2	3.0	3.0
**** *	2.5	2.1	2.0	5.2	3.0	3.0
**** *	2.4	2.1	2.0	5.2	3.1	3.0
**** *	2.4	2.1	2.0	5.2	3.1	3.0
**** *	2.4	2.1	2.0	5.2	3.1	3.0
**** *	2.4	2.1	2.0	5.2	3.1	3.0
**** *	2.4	2.1	2.0	5.2	3.1	3.0
**** *	2.4	2.1	2.0	5.2	3.1	3.0
**** *	2.4	2.1	2.0	5.2	3.1	3.0
**** *	2.4	2.1	2.0	5.2	3.1	3.0
**** *	2.4	2.1	2.0	5.2	3.1	3.0
**** *	2.4	2.1	2.0	5.2	3.8	3.0
**** *	2.4	2.1	2.0	5.2	3.8	3.0
**** *	2.4	2.1	2.0	5.2	3.8	3.0
**** *	2.4	2.1	2.0	5.2	3.8	3.0
**** *	2.4	2.1	2.0	5.2	3.8	3.0
**** *	2.4	2.1	2.0	5.2	3.8	3.0
**** *	2.4	2.1	2.0	5.2	3.8	3.0
**** *	1.9	2.8	2.1	5.1	3.8	3.0
**** *	1.9	2.8	2.1	5.1	3.8	3.0

****	*	1.9	2.8	2.1	5.1	3.8	3.0
****	*	1.9	2.8	2.1	5.1	3.8	3.0
****	*	1.9	2.8	2.1	5.1	3.8	3.0
****	*	1.9	2.8	2.1	5.1	3.8	3.0
****	*	1.9	2.8	2.1	5.1	3.8	3.0
****	*	1.9	2.8	2.1	5.1	3.8	3.0
****	*	1.9	2.8	2.1	5.1	3.8	3.0
****	*	1.9	2.8	2.1	5.1	3.8	3.0
****	*	1.9	2.8	2.1	5.1	3.8	3.0
****	*	1.9	2.8	2.1	5.1	3.8	3.0
****	*	1.9	2.8	2.1	5.1	3.8	3.0
****	*	1.9	2.8	2.1	5.1	3.8	3.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: AM

WIND	* CONCENTRATION						
ANGLE	* (PPM)						
(DEGR)	* 1	* 2	* 3	* 4	* 5	* 6	
****	*	1.9	2.8	2.1	5.1	3.8	3.0
****	*	1.9	2.8	2.1	5.1	3.8	3.0
****	*	1.9	3.2	3.3	3.3	2.7	3.1
****	*	2.5	3.2	3.3	2.3	2.7	3.1
****	*	2.5	3.2	3.3	2.3	2.7	2.3
****	*	2.5	3.2	3.3	2.3	2.7	2.3
****	*	2.5	3.2	3.3	2.3	2.7	2.3
****	*	2.5	3.2	3.3	2.3	2.7	2.3
****	*	2.6	3.2	3.3	2.3	2.6	2.3
****	*	2.6	3.2	3.3	2.3	2.6	2.3
****	*	2.6	3.2	3.3	2.3	2.6	2.3
****	*	2.6	3.2	3.3	2.3	2.6	2.3
****	*	2.6	3.2	3.3	2.3	2.6	2.3
****	*	2.6	3.2	3.3	2.3	2.6	2.3
****	*	2.6	3.2	3.3	2.3	2.6	2.3
****	*	2.6	3.2	3.3	2.3	2.6	2.3
****	*	2.6	3.2	3.3	2.3	1.9	2.3
****	*	2.6	3.2	3.3	2.3	1.9	2.3
****	*	2.6	3.2	3.3	2.3	1.9	2.3
****	*	2.6	3.2	3.3	2.3	1.9	2.3
****	*	2.6	3.2	3.3	2.3	1.9	2.3
****	*	2.6	3.2	3.3	2.3	1.9	2.3
****	*	2.6	3.2	3.3	2.3	1.9	2.3
****	*	2.6	3.2	3.3	2.3	1.9	2.3
****	*	2.6	3.2	3.3	2.3	1.9	2.3
****	*	2.6	3.2	3.3	2.3	1.9	2.3
****	*	2.6	3.2	3.3	2.3	1.9	2.3
****	*	3.1	2.5	3.2	2.4	1.9	2.3
****	*	3.1	2.5	3.2	2.4	1.9	2.3
****	*	3.1	2.5	3.2	2.4	1.9	2.3
****	*	3.1	2.5	3.2	2.4	1.9	2.3
****	*	3.1	2.5	3.2	2.4	1.9	2.3
****	*	3.1	2.5	3.2	2.4	1.9	2.3
****	*	3.1	2.5	3.2	2.4	1.9	2.3
****	*	3.1	2.5	3.2	2.4	1.9	2.3
****	*	3.1	2.5	3.2	2.4	1.9	2.3
****	*	3.1	2.5	3.2	2.4	1.9	2.3
****	*	3.1	2.5	3.2	2.4	1.9	2.3
****	*	3.1	2.5	3.2	2.4	1.9	2.3
****	*	3.1	2.1	2.0	4.2	3.0	2.2
****	*	2.5	2.1	2.0	5.2	3.0	2.2

****	*	2.5	2.1	2.0	5.2	3.0	3.0
****	*	2.5	2.1	2.0	5.2	3.0	3.0
****	*	2.5	2.1	2.0	5.2	3.0	3.0
****	*	2.5	2.1	2.0	5.2	3.0	3.0
****	*	2.4	2.1	2.0	5.2	3.1	3.0
****	*	2.4	2.1	2.0	5.2	3.1	3.0
****	*	2.4	2.1	2.0	5.2	3.1	3.0
****	*	2.4	2.1	2.0	5.2	3.1	3.0
****	*	2.4	2.1	2.0	5.2	3.1	3.0
****	*	2.4	2.1	2.0	5.2	3.1	3.0
****	*	2.4	2.1	2.0	5.2	3.1	3.0
****	*	2.4	2.1	2.0	5.2	3.1	3.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: AM

WIND ANGLE (DEGR) *	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
**** *	2.4	2.1	2.0	5.2	3.1	3.0
**** *	2.4	2.1	2.0	5.2	3.8	3.0
MAX *	3.6	5.9	4.2	11.0	3.9	7.7
DEGR. *	210	165	135	265	270	85

THE HIGHEST CONCENTRATION OF 11.00 PPM OCCURRED AT RECEPTOR 4.

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: AM

DATE : 5/18/12

TIME : 15:17:37

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

LINK #	*	CO/LINK (PPM)					
		1	2	3	4	5	6
		ANGLE (DEGREES)					
		210	165	135	265	270	85
1	*	0.0	0.0	0.0	0.2	0.1	0.0
2	*	0.0	0.0	0.0	0.0	0.0	0.7
3	*	0.0	0.0	0.0	0.1	0.1	3.0
4	*	0.0	0.0	0.0	0.1	0.1	0.3
5	*	0.0	0.0	0.0	0.1	0.1	0.1
6	*	0.0	0.0	0.0	0.0	0.1	0.0
7	*	0.0	0.0	0.0	0.3	0.2	0.1
8	*	0.2	0.0	0.3	1.8	0.1	0.1
9	*	0.1	0.2	0.0	0.0	0.0	0.0
10	*	0.0	0.0	0.0	0.0	0.0	0.0
11	*	0.0	0.0	0.0	0.0	0.0	0.1
12	*	0.0	0.0	0.0	0.0	0.0	0.0
13	*	0.0	0.0	0.0	0.0	0.0	0.0
14	*	0.0	0.0	0.0	0.0	0.0	0.0
15	*	0.0	0.0	0.0	0.2	0.2	0.1
16	*	0.3	0.0	0.3	3.6	0.1	0.1
17	*	0.0	0.0	0.1	0.0	0.0	0.0
18	*	0.0	0.0	0.0	0.0	0.0	0.0
19	*	0.0	0.0	0.0	0.0	0.0	0.0
20	*	0.0	0.0	0.0	0.0	0.0	0.0
21	*	0.0	0.0	0.0	0.0	0.0	0.0
22	*	0.1	0.2	0.0	0.0	0.0	0.0
23	*	0.2	0.0	0.3	0.6	0.0	0.1
24	*	0.0	0.0	0.0	0.1	0.1	0.0
25	*	0.0	0.0	0.0	0.1	0.1	0.1
26	*	0.0	0.0	0.0	0.0	0.0	0.2
27	*	0.0	0.0	0.0	0.0	0.0	0.3
28	*	0.0	0.0	0.0	0.0	0.0	0.0
29	*	0.0	0.0	0.0	0.1	0.1	0.0
30	*	0.0	0.0	0.0	0.0	0.0	0.0
31	*	0.0	0.0	0.0	0.0	0.0	0.0
32	*	0.0	0.0	0.0	0.1	0.1	0.0

33	*	0.0	0.0	0.0	0.0	0.0	0.0
34	*	0.0	0.0	0.0	0.0	0.0	0.0
35	*	0.0	0.0	0.0	0.0	0.0	0.0
36	*	0.0	0.0	0.0	0.0	0.0	0.0
37	*	0.0	0.0	0.0	0.0	0.0	0.0
38	*	0.0	0.0	0.0	0.0	0.0	0.0
39	*	0.0	0.0	0.0	0.0	0.0	0.0
40	*	0.0	0.0	0.0	0.0	0.0	0.0
41	*	0.0	0.0	0.0	0.0	0.0	0.0
42	*	0.0	0.0	0.0	0.0	0.0	0.0
43	*	0.0	0.0	0.0	0.0	0.0	0.0
44	*	0.0	0.0	0.0	0.0	0.0	0.0
45	*	0.0	0.0	0.0	0.0	0.0	0.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: AM

LINK #	CO/LINK (PPM)					
	ANGLE (DEGREES)					
	1	2	3	4	5	6
	210	165	135	265	270	85
46	0.0	0.0	0.0	0.0	0.0	0.0
47	0.0	0.0	0.0	0.0	0.0	0.0
48	0.0	0.0	0.0	0.0	0.0	0.0
49	0.0	0.0	0.0	0.0	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0
51	0.0	0.0	0.0	0.0	0.0	0.0
52	0.0	0.3	0.0	0.0	0.0	0.0
53	0.0	0.1	0.0	0.0	0.0	0.0
54	0.0	0.0	0.0	0.0	0.0	0.0
55	0.0	0.6	0.4	0.0	0.0	0.0
56	0.0	0.1	0.2	0.0	0.0	0.0
57	0.0	0.0	0.0	0.0	0.0	0.0
58	0.0	0.0	0.0	0.0	0.0	0.0
59	0.0	0.1	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0
61	0.0	0.0	0.0	0.1	0.1	0.1
62	0.0	0.0	0.0	0.2	0.2	0.3
63	0.0	0.0	0.0	0.1	0.0	0.0
64	0.0	0.0	0.0	0.1	0.0	0.0
65	0.0	0.0	0.0	0.0	0.0	0.0
66	0.1	0.0	0.1	1.1	0.2	0.1
67	0.1	0.0	0.2	0.1	0.0	0.0
68	0.0	0.0	0.0	0.0	0.0	0.0
69	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0
71	0.0	0.1	0.0	0.0	0.0	0.0
72	0.0	0.7	0.4	0.0	0.0	0.0
73	0.3	1.2	0.0	0.0	0.0	0.0
74	0.2	0.4	0.0	0.0	0.0	0.0
75	0.1	0.0	0.0	0.0	0.0	0.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: PM

DATE : 5/18/12
TIME : 15:18:35

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 1.9 PPM

LINK VARIABLES

LINK DESCRIPTION	* X1	LINK COORDINATES (FT)	* Y1	X2	* Y2	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)	W (FT)	V/C QUEUE (VEH)
1. Rte 1 EB W of Bridge*	*****	*****	*****	*****	*****	1614.	87. AG	1145.	15.5	0.0	44.0	
2. Rte 1 EB Accotink Br*	*****	*****	*****	*****	*****	64.	88. BR	1145.	15.5	7.5	44.0	
3. Rte 1 EB E of Bridge*	*****	*****	*****	*****	*****	611.	87. AG	1145.	15.5	0.0	44.0	
4. Rte 1 EB E of Br 3ln*	*****	*****	*****	*****	*****	323.	86. AG	1145.	15.5	0.0	56.0	
5. Rte 1 EB FCP ApprThru*	*****	*****	*****	*****	*****	321.	86. AG	1069.	15.5	0.0	44.0	
6. Rte 1 EB FCP IntThru*	*****	*****	*****	*****	*****	131.	80. AG	1069.	15.1	0.0	44.0	
7. Rte 1 EB FCP Dptr *	*****	*****	*****	*****	*****	546.	79. AG	1312.	15.1	0.0	44.0	
8. Rte 1 EB W Bklk Thru*	*****	*****	*****	*****	*****	708.	79. AG	1227.	15.1	0.0	44.0	
9. Rte 1 EB E Bklk IntT*	*****	*****	*****	*****	*****	127.	80. AG	1227.	14.7	0.0	44.0	
10. Rte 1 EB E Bklk Dprt*	*****	*****	*****	*****	*****	219.	80. AG	1316.	14.7	0.0	44.0	
11. Rte 1 EB E Bklk Dpt2*	*****	*****	*****	*****	*****	839.	88. AG	1316.	14.7	0.0	44.0	
12. Rte 1 EB W FCP L AD1*	*****	*****	*****	*****	*****	320.	85. AG	76.	16.2	0.0	32.0	
13. Rte 1 EB W FCP L AD2*	*****	*****	*****	*****	*****	129.	51. AG	76.	16.2	0.0	32.0	
14. FCP NB N Rte 1 L Dpt*	*****	*****	*****	*****	*****	416.	360. AG	76.	16.2	0.0	32.0	
15. Rte 1 EB E FCR R Dpt*	*****	*****	*****	*****	*****	534.	79. AG	285.	15.1	0.0	32.0	
16. Rte 1 EB W Bklk R Ap*	*****	*****	*****	*****	*****	702.	79. AG	285.	16.2	0.0	32.0	
17. Rte 1 EB @Bklk R Int*	*****	*****	*****	*****	*****	52.	107. AG	285.	16.2	0.0	32.0	
18. Rte 1 EB W Bklk L Ap*	*****	*****	*****	*****	*****	703.	79. AG	85.	16.2	0.0	32.0	
19. Rte 1 EB @Bklk L Int*	*****	*****	*****	*****	*****	108.	48. AG	85.	16.2	0.0	32.0	
20. Rte 1 WB E Bklk *	*****	*****	*****	*****	*****	821.	269. AG	1926.	14.3	0.0	44.0	
21. Rte 1 WB E Bklk Thru*	*****	*****	*****	*****	*****	242.	262. AG	1715.	14.3	0.0	32.0	
22. Rte 1 WB @Bklk Int *	*****	*****	*****	*****	*****	109.	259. AG	1715.	14.3	0.0	44.0	
23. Rte 1 WB W Bklk Dptr*	*****	*****	*****	*****	*****	786.	259. AG	2416.	14.3	0.0	44.0	
24. Rte 1 WB E FCP Thru *	*****	*****	*****	*****	*****	487.	261. AG	1909.	14.3	0.0	44.0	
25. Rte 1 WB W FCP Thru *	*****	*****	*****	*****	*****	728.	264. AG	1909.	16.2	0.0	44.0	
26. Rte 1 WB FCP-Br All *	*****	*****	*****	*****	*****	310.	264. AG	2622.	16.2	0.0	44.0	
27. Rte 1 WB E Br All *	*****	*****	*****	*****	*****	341.	267. AG	2622.	16.2	0.0	44.0	
28. Rte 1 WB @Br All *	*****	*****	*****	*****	*****	65.	268. BR	2622.	16.2	7.5	44.0	

29.	Rte 1 WB W Br All	*	*****	*****	*****	*****	*****	*	1616.	267.	AG	2622.	16.2	0.0	44.0
30.	Rte 1 WB E Bklk L Ap*	*	*****	*****	*****	*****	*****	*	280.	261.	AG	7.	16.2	0.0	32.0
31.	Rte 1 WB @Bklk L Int*	*	*****	*****	*****	*****	*****	*	95.	222.	AG	7.	16.2	0.0	32.0
32.	Rte 1 WB E FCP R Apr*	*	*****	*****	*****	*****	*****	*	441.	261.	AG	507.	16.2	0.0	32.0
33.	Rte 1 WB @FCP R Int	*	*****	*****	*****	*****	*****	*	75.	307.	AG	507.	16.2	0.0	32.0
34.	FCP NB N Rte 1 Mrg	*	*****	*****	*****	*****	*****	*	378.	359.	AG	507.	16.2	0.0	32.0
35.	FCP SB N Rte 1 All	*	*****	*****	*****	*****	*****	*	1897.	179.	AG	1241.	15.5	0.0	44.0
36.	FCP SB N Rte 1 L Apr*	*	*****	*****	*****	*****	*****	*	517.	180.	AG	528.	16.2	0.0	44.0
37.	FCP SB @Rte 1 L Int	*	*****	*****	*****	*****	*****	*	124.	127.	AG	528.	16.2	0.0	44.0
38.	FCP N Rte 1 SB R Apr*	*	*****	*****	*****	*****	*****	*	549.	181.	AG	713.	18.2	0.0	32.0
39.	FCP @Rte 1 SB R Int	*	*****	*****	*****	*****	*****	*	42.	233.	AG	713.	18.2	0.0	32.0
40.	Rte 1 WB W FCP R Mrg*	*	*****	*****	*****	*****	*****	*	587.	264.	AG	713.	18.2	0.0	32.0
41.	FCP NB N Rte 1 All	*	*****	*****	*****	*****	*****	*	1996.	360.	AG	583.	15.5	0.0	44.0
42.	Phck NB S Rte 1 All	*	*****	*****	*****	*****	*****	*	890.	316.	AG	770.	15.1	0.0	32.0
43.	Phck NB S Rte 1 T-R	*	*****	*****	*****	*****	*****	*	507.	333.	AG	84.	15.1	0.0	32.0
44.	Phck NB S Rte 1 Thru*	*	*****	*****	*****	*****	*****	*	50.	333.	AG	73.	15.1	0.0	32.0
45.	Bklk NB @Rte 1 Thru	*	*****	*****	*****	*****	*****	*	107.	357.	AG	73.	15.1	0.0	32.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: PM

DATE : 5/18/12

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LINK VARIABLES

LINK DESCRIPTION	* X1	LINK COORDINATES (FT) Y1	X2	Y2	* LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
46. Bklk NB N Rte 1 All*	*****	*****	*****	*****	*	1317.	357.	AG	362.	15.1	0.0	32.0	
47. Rte 1 WB @Bklk R Int*	*****	*****	*****	*****	*	47.	309.	AG	204.	16.2	0.0	32.0	
48. Phck NB S Rte 1 L Ap*	*****	*****	*****	*****	*	558.	332.	AG	686.	16.2	0.0	44.0	
49. Phck NB @Rte 1 L Int*	*****	*****	*****	*****	*	90.	312.	AG	686.	16.2	0.0	44.0	
50. Phck NB S Rte 1 R Ap*	*****	*****	*****	*****	*	45.	353.	AG	11.	16.2	0.0	32.0	
51. Phck NB @Rte 1 R Int*	*****	*****	*****	*****	*	48.	27.	AG	11.	16.2	0.0	32.0	
52. Bklk N Rte 1 SB All *	*****	*****	*****	*****	*	1229.	177.	AG	110.	14.3	0.0	32.0	
53. Bklk N Rte 1 SB Thru*	*****	*****	*****	*****	*	92.	177.	AG	17.	14.3	0.0	32.0	
54. Bklk SB @Rte 1 Int *	*****	*****	*****	*****	*	108.	177.	AG	17.	14.3	0.0	32.0	
55. Bklk SB S Rte 1 All1*	*****	*****	*****	*****	*	561.	151.	AG	309.	14.3	0.0	32.0	
56. Bklk SB S Rte 1 All2*	*****	*****	*****	*****	*	891.	137.	AG	309.	14.3	0.0	32.0	
57. Bklk SB N Rte 1 R Ap*	*****	*****	*****	*****	*	94.	179.	AG	15.	16.2	0.0	32.0	
58. Bklk SB N Rte 1 R In*	*****	*****	*****	*****	*	50.	220.	AG	15.	16.2	0.0	32.0	
59. Bklk SB N Rte 1 L Ap*	*****	*****	*****	*****	*	93.	176.	AG	78.	16.2	0.0	32.0	
60. Bklk SB N Rte 1 L In*	*****	*****	*****	*****	*	83.	131.	AG	78.	16.2	0.0	32.0	
61. Q Rte 1 EB W FCP Thr*	*****	*****	*****	*****	*	213.	265.	AG	194.	100.0	0.0	24.0	0.55 10.8
62. Q Rte 1 EB W FCP L *	*****	*****	*****	*****	*	75.	265.	AG	464.	100.0	0.0	24.0	**** 3.8
63. Q Rte 1 WB E FCP Thr*	*****	*****	*****	*****	*	1568.	81.	AG	225.	100.0	0.0	24.0	1.12 79.7
64. Q FCP SB N Rte 1 L *	*****	*****	*****	*****	*	173.	360.	AG	318.	100.0	0.0	24.0	0.54 8.8
65. Q FCP SB N Rte 1 R *	*****	*****	*****	*****	*	2722.	1.	AG	152.	100.0	0.0	12.0	1.45 138.3
66. Q Rte 1 EB W Bklk R *	*****	*****	*****	*****	*	142.	259.	AG	121.	100.0	0.0	12.0	0.41 7.2
67. Q Rte 1 EB W Bklk T *	*****	*****	*****	*****	*	305.	259.	AG	241.	100.0	0.0	24.0	0.78 15.5
68. Q Rte 1 EB W Bklk L *	*****	*****	*****	*****	*	61.	261.	AG	114.	100.0	0.0	24.0	0.92 3.1
69. Q Rte 1 WB E Bklk Th*	*****	*****	*****	*****	*	1559.	82.	AG	249.	100.0	0.0	24.0	1.14 79.2
70. Q Rte 1 WB E Bklk L *	*****	*****	*****	*****	*	4.	69.	AG	122.	100.0	0.0	12.0	0.15 0.2
71. Q Phck NB S Rte 1 TR*	*****	*****	*****	*****	*	69.	153.	AG	199.	100.0	0.0	12.0	0.40 3.5
72. Q Phck NB S Rte 1 L*	*****	*****	*****	*****	*	1677.	152.	AG	398.	100.0	0.0	24.0	1.64 85.2
73. Q Bklk SB N Rte 1 L *	*****	*****	*****	*****	*	63.	356.	AG	195.	100.0	0.0	12.0	0.37 3.2
74. Q Bklk SB N Rte 1 T *	*****	*****	*****	*****	*	14.	357.	AG	195.	100.0	0.0	12.0	0.08 0.7
75. Q Bklk SB N Rte 1 R *	*****	*****	*****	*****	*	12.	360.	AG	195.	100.0	0.0	12.0	0.08 0.6

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: PM

DATE : 5/18/12

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 ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* * * *	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
61. Q Rte 1 EB W FCP Thr*	*	180	73	6.5	1069	1769	88.96	2	3
62. Q Rte 1 EB W FCP L *	*	180	175	5.0	76	1716	88.96	2	3
63. Q Rte 1 WB E FCP Thr*	*	180	85	6.5	1909	1769	88.96	2	3
64. Q FCP SB N Rte 1 L *	*	180	120	7.0	528	1716	88.96	2	3
65. Q FCP SB N Rte 1 R *	*	180	115	7.0	713	1583	88.96	2	3
66. Q Rte 1 EB W Bklk R *	*	180	91	7.0	285	1583	88.96	2	3
67. Q Rte 1 EB W Bklk T *	*	180	91	7.0	1227	1769	88.96	2	3
68. Q Rte 1 EB W Bklk L *	*	180	86	6.5	85	195	88.96	2	3
69. Q Rte 1 WB E Bklk Th*	*	180	94	7.0	1715	1761	88.96	2	3
70. Q Rte 1 WB E Bklk L *	*	180	92	6.5	7	105	88.96	2	3
71. Q Phck NB S Rte 1 TR*	*	180	150	6.0	84	1730	88.96	2	3
72. Q Phck NB S Rte 1 L*	*	180	150	6.0	686	1716	88.96	2	3
73. Q Bklk SB N Rte 1 L *	*	180	147	7.0	78	1593	88.96	2	3
74. Q Bklk SB N Rte 1 T *	*	180	147	7.0	17	1676	88.96	2	3
75. Q Bklk SB N Rte 1 R *	*	180	147	7.0	15	1478	88.96	2	3

 RECEPTOR LOCATIONS

RECEPTOR	* * *	COORDINATES (FT)			* *
		X	Y	Z	
1. 1: 9140 Richmond Hwy *	*	*****	*****	5.0	*
2. 2: 9136 Backlick Rd. *	*	*****	*****	5.0	*
3. 3: 9135 Anderson Ln. *	*	*****	*****	5.0	*
4. 4: Bus Stop @Rte. 1 *	*	*****	*****	5.0	*
5. 5: E.K. HmlsShelter *	*	*****	*****	5.0	*
6. 6: Accotink Creek *	*	*****	*****	5.0	*

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-****

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
0.	1.9	2.4	1.9	4.5	2.9	3.4
5.	1.9	2.4	1.9	4.7	3.0	3.3
10.	1.9	2.3	1.9	4.8	3.1	3.3
15.	1.9	2.3	2.0	4.9	3.3	3.4
20.	1.9	2.2	2.0	5.0	3.2	3.5
25.	1.9	2.2	2.0	5.1	3.0	3.4
30.	1.9	2.2	2.0	5.1	2.8	3.8
35.	1.9	2.2	2.0	5.2	2.9	4.0
40.	1.9	2.2	2.0	5.5	3.2	4.1
45.	1.9	2.2	1.9	5.5	3.3	4.2
50.	1.9	2.2	1.9	5.9	3.4	4.3
55.	1.9	2.1	1.9	6.4	3.5	4.4
60.	1.9	2.1	1.9	7.0	3.4	4.5
65.	1.9	2.1	1.9	7.5	3.2	4.8
70.	1.9	2.0	1.9	7.9	3.2	5.3
75.	1.9	2.0	1.9	7.5	3.0	6.3
80.	1.9	2.1	2.0	6.2	2.7	7.3
85.	2.0	2.2	2.4	4.4	2.4	7.1
90.	2.1	2.7	2.9	3.2	2.4	5.2
95.	2.3	3.0	3.6	2.6	2.4	3.6
100.	2.6	3.2	3.4	2.4	2.5	2.7
105.	2.8	3.3	3.2	2.5	2.5	2.5
110.	2.9	3.3	2.9	2.5	2.5	2.2
115.	2.9	3.1	3.2	2.5	2.5	2.1
120.	2.8	3.1	3.4	2.5	2.7	2.1
125.	2.7	3.3	3.8	2.6	2.6	2.1
130.	2.6	3.2	4.0	2.7	2.7	2.0
135.	2.6	3.2	4.3	2.5	2.7	2.1
140.	2.6	3.2	4.0	2.4	2.4	2.1
145.	2.6	3.3	3.8	2.2	2.2	2.0

150.	*	2.8	3.7	3.3	2.0	2.0	2.0
155.	*	3.1	4.1	3.0	1.9	1.9	2.0
160.	*	3.3	4.8	2.9	1.9	1.9	2.0
165.	*	3.5	4.6	2.9	2.0	1.9	2.0
170.	*	3.4	4.3	2.9	2.0	1.9	2.1
175.	*	3.6	3.7	2.9	2.0	1.9	2.1
180.	*	3.6	3.2	2.9	1.9	1.9	2.1
185.	*	3.2	2.9	2.9	1.9	1.9	2.1
190.	*	3.1	3.0	2.9	1.9	1.9	2.1
195.	*	2.9	3.3	2.8	1.9	1.9	2.1
200.	*	2.8	3.1	2.8	1.9	1.9	2.1
205.	*	3.1	3.1	2.7	1.9	1.9	2.1

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: PM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)						
	1	2	3	4	5	6	
210.	*	3.1	3.2	2.8	2.0	1.9	2.1
215.	*	3.0	3.2	3.0	2.0	1.9	2.1
220.	*	3.0	3.3	3.0	2.0	1.9	2.0
225.	*	3.0	3.3	3.0	2.0	1.9	2.0
230.	*	3.2	3.3	2.9	2.0	1.9	2.0
235.	*	3.1	3.3	3.1	2.0	1.9	2.0
240.	*	3.1	3.2	3.1	2.0	1.9	2.1
245.	*	3.0	2.9	3.1	2.2	1.9	2.3
250.	*	2.6	2.9	2.9	2.5	1.9	2.3
255.	*	2.6	2.8	2.9	3.7	1.9	2.7
260.	*	2.4	2.5	2.6	6.1	2.0	3.6
265.	*	2.1	2.0	2.1	7.5	2.8	5.1
270.	*	2.0	1.9	1.9	7.4	3.4	6.3
275.	*	2.0	1.9	1.9	6.9	3.3	6.5
280.	*	2.1	2.0	1.9	6.3	3.2	6.0
285.	*	2.1	2.0	2.0	6.1	3.0	5.5
290.	*	2.1	2.0	2.0	5.7	3.0	4.9
295.	*	2.1	2.0	2.1	5.7	2.9	4.5
300.	*	2.1	2.0	2.1	5.6	3.1	4.3
305.	*	2.1	2.0	2.1	5.3	3.0	4.1
310.	*	2.1	2.0	2.1	5.2	3.1	3.9
315.	*	2.1	2.1	2.1	5.2	3.2	3.7
320.	*	2.1	2.1	2.1	5.1	3.2	3.7
325.	*	2.0	1.9	2.1	5.0	3.2	3.6
330.	*	2.0	1.9	2.1	5.0	3.0	3.6
335.	*	2.1	2.0	1.9	4.7	2.8	3.5
340.	*	2.1	2.0	1.9	4.5	2.8	3.4
345.	*	2.1	2.0	1.9	4.6	3.0	3.3
350.	*	2.1	2.1	1.9	4.6	3.0	3.3
355.	*	2.0	2.3	1.9	4.5	2.9	3.3
360.	*	1.9	2.4	1.9	4.5	2.9	3.4
5.	*	1.9	2.4	1.9	4.7	3.0	3.3
10.	*	1.9	2.3	1.9	4.8	3.1	3.3
15.	*	1.9	2.3	2.0	4.9	3.3	3.4
20.	*	1.9	2.2	2.0	5.0	3.2	3.5
25.	*	1.9	2.2	2.0	5.1	3.0	3.4
30.	*	1.9	2.2	2.0	5.1	2.8	3.8
35.	*	1.9	2.2	2.0	5.2	2.9	4.0
40.	*	1.9	2.2	2.0	5.5	3.2	4.1
45.	*	1.9	2.2	1.9	5.5	3.3	4.2

50.	*	1.9	2.2	1.9	5.9	3.4	4.3
55.	*	1.9	2.1	1.9	6.4	3.5	4.4
60.	*	1.9	2.1	1.9	7.0	3.4	4.5
65.	*	1.9	2.1	1.9	7.5	3.2	4.8
70.	*	1.9	2.0	1.9	7.9	3.2	5.3
75.	*	1.9	2.0	1.9	7.5	3.0	6.3
80.	*	1.9	2.1	2.0	6.2	2.7	7.3
85.	*	2.0	2.2	2.4	4.4	2.4	7.1
90.	*	2.1	2.7	2.9	3.2	2.4	5.2
95.	*	2.3	3.0	3.6	2.6	2.4	3.6
100.	*	2.6	3.2	3.4	2.4	2.5	2.7
105.	*	2.8	3.3	3.2	2.5	2.5	2.5

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: PM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
110.	2.9	3.3	2.9	2.5	2.5	2.2
115.	2.9	3.1	3.2	2.5	2.5	2.1
120.	2.8	3.1	3.4	2.5	2.7	2.1
125.	2.7	3.3	3.8	2.6	2.6	2.1
130.	2.6	3.2	4.0	2.7	2.7	2.0
135.	2.6	3.2	4.3	2.5	2.7	2.1
140.	2.6	3.2	4.0	2.4	2.4	2.1
145.	2.6	3.3	3.8	2.2	2.2	2.0
150.	2.8	3.7	3.3	2.0	2.0	2.0
155.	3.1	4.1	3.0	1.9	1.9	2.0
160.	3.3	4.8	2.9	1.9	1.9	2.0
165.	3.5	4.6	2.9	2.0	1.9	2.0
170.	3.4	4.3	2.9	2.0	1.9	2.1
175.	3.6	3.7	2.9	2.0	1.9	2.1
180.	3.6	3.2	2.9	1.9	1.9	2.1
185.	3.2	2.9	2.9	1.9	1.9	2.1
190.	3.1	3.0	2.9	1.9	1.9	2.1
195.	2.9	3.3	2.8	1.9	1.9	2.1
200.	2.8	3.1	2.8	1.9	1.9	2.1
205.	3.1	3.1	2.7	1.9	1.9	2.1
210.	3.1	3.2	2.8	2.0	1.9	2.1
215.	3.0	3.2	3.0	2.0	1.9	2.1
220.	3.0	3.3	3.0	2.0	1.9	2.0
225.	3.0	3.3	3.0	2.0	1.9	2.0
230.	3.2	3.3	2.9	2.0	1.9	2.0
235.	3.1	3.3	3.1	2.0	1.9	2.0
240.	3.1	3.2	3.1	2.0	1.9	2.1
245.	3.0	2.9	3.1	2.2	1.9	2.3
250.	2.6	2.9	2.9	2.5	1.9	2.3
255.	2.6	2.8	2.9	3.7	1.9	2.7
260.	2.4	2.5	2.6	6.1	2.0	3.6
265.	2.1	2.0	2.1	7.5	2.8	5.1
270.	2.0	1.9	1.9	7.4	3.4	6.3
275.	2.0	1.9	1.9	6.9	3.3	6.5
280.	2.1	2.0	1.9	6.3	3.2	6.0
285.	2.1	2.0	2.0	6.1	3.0	5.5
290.	2.1	2.0	2.0	5.7	3.0	4.9
295.	2.1	2.0	2.1	5.7	2.9	4.5
300.	2.1	2.0	2.1	5.6	3.1	4.3
305.	2.1	2.0	2.1	5.3	3.0	4.1

310.	*	2.1	2.0	2.1	5.2	3.1	3.9
315.	*	2.1	2.1	2.1	5.2	3.2	3.7
320.	*	2.1	2.1	2.1	5.1	3.2	3.7
325.	*	2.0	1.9	2.1	5.0	3.2	3.6
330.	*	2.0	1.9	2.1	5.0	3.0	3.6
335.	*	2.1	2.0	1.9	4.7	2.8	3.5
340.	*	2.1	2.0	1.9	4.5	2.8	3.4
345.	*	2.1	2.0	1.9	4.6	3.0	3.3
350.	*	2.1	2.1	1.9	4.6	3.0	3.3
355.	*	2.0	2.3	1.9	4.5	2.9	3.3
360.	*	1.9	2.4	1.9	4.5	2.9	3.4
365.	*	1.9	2.4	1.9	4.7	3.0	3.3

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: PM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
370.	* 1.9	2.3	1.9	4.8	3.1	3.3
375.	* 1.9	2.3	2.0	4.9	3.3	3.4
380.	* 1.9	2.2	2.0	5.0	3.2	3.5
385.	* 1.9	2.2	2.0	5.1	3.0	3.4
390.	* 1.9	2.2	2.0	5.1	2.8	3.8
395.	* 1.9	2.2	2.0	5.2	2.9	4.0
400.	* 1.9	2.2	2.0	5.5	3.2	4.1
405.	* 1.9	2.2	1.9	5.5	3.3	4.2
410.	* 1.9	2.2	1.9	5.9	3.4	4.3
415.	* 1.9	2.1	1.9	6.4	3.5	4.4
420.	* 1.9	2.1	1.9	7.0	3.4	4.5
425.	* 1.9	2.1	1.9	7.5	3.2	4.8
430.	* 1.9	2.0	1.9	7.9	3.2	5.3
435.	* 1.9	2.0	1.9	7.5	3.0	6.3
440.	* 1.9	2.1	2.0	6.2	2.7	7.3
445.	* 2.0	2.2	2.4	4.4	2.4	7.1
450.	* 2.1	2.7	2.9	3.2	2.4	5.2
455.	* 2.3	3.0	3.6	2.6	2.4	3.6
460.	* 2.6	3.2	3.4	2.4	2.5	2.7
465.	* 2.8	3.3	3.2	2.5	2.5	2.5
470.	* 2.9	3.3	2.9	2.5	2.5	2.2
475.	* 2.9	3.1	3.2	2.5	2.5	2.1
480.	* 2.8	3.1	3.4	2.5	2.7	2.1
485.	* 2.7	3.3	3.8	2.6	2.6	2.1
490.	* 2.6	3.2	4.0	2.7	2.7	2.0
495.	* 2.6	3.2	4.3	2.5	2.7	2.1
500.	* 2.6	3.2	4.0	2.4	2.4	2.1
505.	* 2.6	3.3	3.8	2.2	2.2	2.0
510.	* 2.8	3.7	3.3	2.0	2.0	2.0
515.	* 3.1	4.1	3.0	1.9	1.9	2.0
520.	* 3.3	4.8	2.9	1.9	1.9	2.0
525.	* 3.5	4.6	2.9	2.0	1.9	2.0
530.	* 3.4	4.3	2.9	2.0	1.9	2.1
535.	* 3.6	3.7	2.9	2.0	1.9	2.1
540.	* 3.6	3.2	2.9	1.9	1.9	2.1
545.	* 3.2	2.9	2.9	1.9	1.9	2.1
550.	* 3.1	3.0	2.9	1.9	1.9	2.1
555.	* 2.9	3.3	2.8	1.9	1.9	2.1
560.	* 2.8	3.1	2.8	1.9	1.9	2.1
565.	* 3.1	3.1	2.7	1.9	1.9	2.1

570.	*	3.1	3.2	2.8	2.0	1.9	2.1
575.	*	3.0	3.2	3.0	2.0	1.9	2.1
580.	*	3.0	3.3	3.0	2.0	1.9	2.0
585.	*	3.0	3.3	3.0	2.0	1.9	2.0
590.	*	3.2	3.3	2.9	2.0	1.9	2.0
595.	*	3.1	3.3	3.1	2.0	1.9	2.0
600.	*	3.1	3.2	3.1	2.0	1.9	2.1
605.	*	3.0	2.9	3.1	2.2	1.9	2.3
610.	*	2.6	2.9	2.9	2.5	1.9	2.3
615.	*	2.6	2.8	2.9	3.7	1.9	2.7
620.	*	2.4	2.5	2.6	6.1	2.0	3.6
625.	*	2.1	2.0	2.1	7.5	2.8	5.1

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: PM

WIND ANGLE (DEGR)	* CONCENTRATION * (PPM)						
	1	2	3	4	5	6	
630.	*	2.0	1.9	1.9	7.4	3.4	6.3
635.	*	2.0	1.9	1.9	6.9	3.3	6.5
640.	*	2.1	2.0	1.9	6.3	3.2	6.0
645.	*	2.1	2.0	2.0	6.1	3.0	5.5
650.	*	2.1	2.0	2.0	5.7	3.0	4.9
655.	*	2.1	2.0	2.0	5.6	2.9	4.5
660.	*	2.1	2.0	2.0	5.5	3.1	4.3
665.	*	2.1	2.0	2.0	5.2	3.0	4.1
670.	*	2.1	2.0	2.0	5.1	3.1	3.9
675.	*	2.1	2.0	2.0	5.1	3.1	3.7
680.	*	2.1	2.0	2.0	5.0	3.1	3.7
685.	*	2.0	1.9	2.0	4.9	3.1	3.6
690.	*	2.0	1.9	2.0	4.9	2.9	3.6
695.	*	2.1	2.0	1.9	4.7	2.8	3.5
700.	*	2.1	2.0	1.9	4.5	2.8	3.4
705.	*	2.1	2.0	1.9	4.6	3.0	3.3
710.	*	2.1	2.1	1.9	4.6	3.0	3.3
715.	*	2.0	2.3	1.9	4.5	3.0	3.3
720.	*	1.9	2.4	1.9	4.5	3.0	3.4
725.	*	1.9	2.4	1.9	4.6	3.1	3.3
730.	*	1.9	2.3	1.9	4.6	3.2	3.3
735.	*	1.9	2.3	2.0	4.7	3.3	3.4
740.	*	1.9	2.2	2.0	4.8	3.3	3.5
745.	*	1.9	2.2	2.0	4.8	3.1	3.4
750.	*	1.9	2.2	2.0	4.8	2.8	3.6
755.	*	1.9	2.2	2.0	4.9	2.8	3.7
760.	*	1.9	2.2	2.0	5.0	3.1	3.8
765.	*	1.9	2.2	1.9	5.0	3.1	3.8
770.	*	1.9	2.2	1.9	5.1	3.2	3.9
775.	*	1.9	2.1	1.9	5.4	3.3	4.0
780.	*	1.9	2.1	1.9	5.6	3.2	4.0
785.	*	1.9	2.1	1.9	5.7	3.2	4.2
790.	*	1.9	2.0	1.9	5.6	3.2	4.5
795.	*	1.9	2.0	1.9	5.2	3.1	5.1
800.	*	1.9	2.2	2.1	3.9	2.7	5.3
805.	*	2.5	2.4	2.4	2.8	2.4	4.9
810.	*	2.5	2.6	2.7	2.3	2.4	3.3
815.	*	2.6	2.8	3.0	2.1	2.4	2.5
820.	*	2.8	2.9	3.0	2.1	2.4	2.1
825.	*	2.9	3.0	2.8	2.1	2.4	2.1

830.	*	2.9	3.0	2.7	2.1	2.4	2.1
835.	*	2.9	2.9	2.9	2.1	2.4	2.1
840.	*	2.9	2.9	3.0	2.1	2.5	2.1
845.	*	2.8	2.8	3.2	2.2	2.5	2.1
850.	*	2.8	2.8	3.3	2.2	2.5	2.1
855.	*	2.8	2.8	3.5	2.1	2.4	2.1
860.	*	2.8	2.8	3.2	2.1	2.3	2.1
865.	*	2.7	2.9	3.2	2.0	2.3	2.1
870.	*	2.8	3.0	3.0	2.0	2.3	2.1
875.	*	2.8	3.0	2.9	2.0	1.9	2.1
880.	*	2.8	3.3	2.9	2.0	1.9	2.1
885.	*	2.9	3.3	2.9	2.0	1.9	2.1

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: PM

WIND ANGLE (DEGR) *	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
890. *	2.8	3.3	2.9	2.0	1.9	2.1
895. *	2.9	3.1	2.9	2.0	1.9	2.1
900. *	2.8	3.0	2.9	2.0	1.9	2.1
905. *	2.8	2.7	2.9	2.0	1.9	2.1
910. *	2.8	2.7	2.9	2.0	1.9	2.1
915. *	3.0	2.6	2.9	2.0	1.9	2.1
920. *	3.0	2.6	2.9	2.0	1.9	2.1
925. *	3.0	2.6	2.9	2.0	1.9	2.1
930. *	2.9	2.6	2.9	2.0	1.9	2.1
935. *	2.8	2.6	2.9	2.0	1.9	2.1
940. *	2.8	2.6	2.9	2.0	1.9	2.1
945. *	2.8	2.6	2.9	2.0	1.9	2.1
950. *	2.8	2.6	2.9	2.0	1.9	2.1
955. *	2.8	2.6	2.9	2.0	1.9	2.1
960. *	2.8	2.6	2.9	2.0	1.9	2.1
965. *	2.8	2.6	2.9	2.0	1.9	2.1
970. *	2.8	2.6	2.9	2.0	1.9	2.1
975. *	2.8	2.6	3.0	2.0	1.9	2.1
980. *	2.8	2.1	2.2	4.1	2.8	2.1
985. *	2.0	1.9	1.9	4.6	3.0	2.1
990. *	2.0	1.9	1.9	4.7	3.0	3.4
995. *	2.0	1.9	1.9	4.7	3.0	3.4
**** *	2.0	1.9	1.9	4.7	3.0	3.4
**** *	2.0	1.9	1.9	4.7	3.0	3.4
**** *	2.0	1.9	1.9	4.7	3.0	3.4
**** *	2.0	1.9	1.9	4.7	3.0	3.4
**** *	2.0	1.9	1.9	4.7	3.0	3.4
**** *	2.0	1.9	1.9	4.7	3.0	3.4
**** *	2.0	1.9	1.9	4.7	3.0	3.4
**** *	2.0	1.9	1.9	4.7	3.0	3.4
**** *	2.0	1.9	1.9	4.7	3.0	3.4
**** *	2.0	1.9	1.9	4.7	3.0	3.4
**** *	2.0	1.9	1.9	4.7	3.5	3.4
**** *	2.0	1.9	1.9	4.7	3.5	3.4
**** *	2.0	1.9	1.9	4.7	3.5	3.4
**** *	2.0	1.9	1.9	4.7	3.5	3.4
**** *	2.0	1.9	1.9	4.7	3.5	3.4
**** *	2.0	1.9	1.9	4.7	3.5	3.4
**** *	1.9	2.1	1.9	4.6	3.5	3.4
**** *	1.9	2.1	1.9	4.6	3.5	3.4

****	*	1.9	2.1	1.9	4.6	3.5	3.4
****	*	1.9	2.1	1.9	4.6	3.5	3.4
****	*	1.9	2.1	1.9	4.6	3.5	3.4
****	*	1.9	2.1	1.9	4.6	3.5	3.4
****	*	1.9	2.1	1.9	4.6	3.5	3.4
****	*	1.9	2.1	1.9	4.6	3.5	3.4
****	*	1.9	2.1	1.9	4.6	3.5	3.4
****	*	1.9	2.1	1.9	4.6	3.5	3.4
****	*	1.9	2.1	1.9	4.6	3.5	3.4
****	*	1.9	2.1	1.9	4.6	3.5	3.4
****	*	1.9	2.1	1.9	4.6	3.5	3.4
****	*	1.9	2.1	1.9	4.6	3.5	3.4

****	*	2.0	1.9	1.9	4.7	3.0	3.4
****	*	2.0	1.9	1.9	4.7	3.0	3.4
****	*	2.0	1.9	1.9	4.7	3.0	3.4
****	*	2.0	1.9	1.9	4.7	3.0	3.4
****	*	2.0	1.9	1.9	4.7	3.0	3.4
****	*	2.0	1.9	1.9	4.7	3.0	3.4
****	*	2.0	1.9	1.9	4.7	3.0	3.4
****	*	2.0	1.9	1.9	4.7	3.0	3.4
****	*	2.0	1.9	1.9	4.7	3.0	3.4
****	*	2.0	1.9	1.9	4.7	3.0	3.4
****	*	2.0	1.9	1.9	4.7	3.0	3.4

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: PM

WIND ANGLE (DEGR) *	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
**** *	2.0	1.9	1.9	4.7	3.0	3.4
**** *	2.0	1.9	1.9	4.7	3.5	3.4
MAX *	3.6	4.8	4.3	7.9	3.5	7.3
DEGR. *	175	160	135	70	55	80

THE HIGHEST CONCENTRATION OF 7.90 PPM OCCURRED AT RECEPTOR 4.

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: PM

DATE : 5/18/12

TIME : 15:18:35

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

		* CO/LINK (PPM)					
		* ANGLE (DEGREES)					
		1	2	3	4	5	6
LINK #	*	175	160	135	70	55	80
1	*	0.0	0.0	0.0	0.0	0.0	0.0
2	*	0.0	0.0	0.0	0.0	0.0	0.4
3	*	0.0	0.0	0.0	0.0	0.0	1.4
4	*	0.0	0.0	0.0	0.0	0.0	0.1
5	*	0.0	0.0	0.0	0.0	0.0	0.0
6	*	0.0	0.0	0.0	0.0	0.0	0.0
7	*	0.0	0.0	0.0	0.0	0.0	0.1
8	*	0.0	0.0	0.2	1.2	0.0	0.1
9	*	0.0	0.1	0.0	0.2	0.0	0.0
10	*	0.2	0.1	0.0	0.1	0.2	0.0
11	*	0.0	0.0	0.0	0.1	0.1	0.0
12	*	0.0	0.0	0.0	0.0	0.0	0.0
13	*	0.0	0.0	0.0	0.0	0.0	0.0
14	*	0.0	0.0	0.0	0.0	0.0	0.0
15	*	0.0	0.0	0.0	0.0	0.0	0.0
16	*	0.0	0.0	0.0	0.4	0.0	0.0
17	*	0.0	0.0	0.0	0.0	0.0	0.0
18	*	0.0	0.0	0.0	0.0	0.0	0.0
19	*	0.0	0.0	0.0	0.0	0.0	0.0
20	*	0.0	0.0	0.0	0.2	0.2	0.1
21	*	0.2	0.1	0.0	0.3	0.1	0.0
22	*	0.0	0.2	0.0	0.2	0.0	0.0
23	*	0.0	0.0	0.5	0.4	0.0	0.1
24	*	0.0	0.0	0.0	0.0	0.0	0.1
25	*	0.0	0.0	0.0	0.0	0.0	0.3
26	*	0.0	0.0	0.0	0.0	0.0	0.5
27	*	0.0	0.0	0.0	0.0	0.0	1.8
28	*	0.0	0.0	0.0	0.0	0.0	0.0
29	*	0.0	0.0	0.0	0.0	0.0	0.0
30	*	0.0	0.0	0.0	0.0	0.0	0.0
31	*	0.0	0.0	0.0	0.0	0.0	0.0
32	*	0.0	0.0	0.0	0.0	0.0	0.0

33	*	0.0	0.0	0.0	0.0	0.0	0.0
34	*	0.0	0.0	0.0	0.0	0.0	0.0
35	*	0.0	0.0	0.0	0.0	0.0	0.0
36	*	0.0	0.0	0.0	0.0	0.0	0.0
37	*	0.0	0.0	0.0	0.0	0.0	0.0
38	*	0.0	0.0	0.0	0.0	0.0	0.0
39	*	0.0	0.0	0.0	0.0	0.0	0.0
40	*	0.0	0.0	0.0	0.0	0.0	0.1
41	*	0.0	0.0	0.0	0.0	0.0	0.0
42	*	0.0	0.1	0.1	0.0	0.0	0.0
43	*	0.0	0.0	0.0	0.0	0.0	0.0
44	*	0.0	0.0	0.0	0.0	0.0	0.0
45	*	0.0	0.0	0.0	0.0	0.0	0.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: No Build: PM

PAGE 13

LINK #	CO/LINK (PPM)					
	ANGLE (DEGREES)					
	1	2	3	4	5	6
	175	160	135	70	55	80
46	0.0	0.2	0.0	0.0	0.0	0.0
47	0.0	0.0	0.0	0.0	0.0	0.0
48	0.2	0.2	0.2	0.0	0.1	0.0
49	0.0	0.0	0.0	0.1	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0
51	0.0	0.0	0.0	0.0	0.0	0.0
52	0.0	0.1	0.0	0.0	0.0	0.0
53	0.0	0.0	0.0	0.0	0.0	0.0
54	0.0	0.0	0.0	0.0	0.0	0.0
55	0.1	0.1	0.1	0.0	0.0	0.0
56	0.0	0.0	0.0	0.0	0.0	0.0
57	0.0	0.0	0.0	0.0	0.0	0.0
58	0.0	0.0	0.0	0.0	0.0	0.0
59	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0
61	0.0	0.0	0.0	0.0	0.0	0.0
62	0.0	0.0	0.0	0.0	0.0	0.0
63	0.2	0.2	0.2	1.0	0.1	0.2
64	0.0	0.0	0.0	0.0	0.0	0.0
65	0.0	0.0	0.0	0.0	0.0	0.0
66	0.0	0.0	0.1	0.2	0.0	0.0
67	0.0	0.0	0.2	1.0	0.0	0.0
68	0.0	0.0	0.1	0.1	0.0	0.0
69	0.2	0.1	0.0	0.5	0.3	0.1
70	0.0	0.0	0.0	0.0	0.0	0.0
71	0.0	0.1	0.0	0.0	0.1	0.0
72	0.6	1.1	0.7	0.0	0.4	0.0
73	0.0	0.2	0.0	0.0	0.0	0.0
74	0.0	0.0	0.0	0.0	0.0	0.0
75	0.0	0.0	0.0	0.0	0.0	0.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: No Build: AM

DATE : 5/18/12
 TIME : 15:19:20

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

 VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
 U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 1.9 PPM

LINK VARIABLES

LINK DESCRIPTION	* *	X1	LINK COORDINATES (FT) Y1	X2	Y2	* *	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)	W (FT)	V/C QUEUE (VEH)
1. Rte 1 EB W of Bridge*	*****		*****	*****	*****	*	1614.	87. AG	2466.	14.2	0.0	44.0	
2. Rte 1 EB Accotink Br*	*****		*****	*****	*****	*	64.	88. BR	2466.	14.2	7.5	44.0	
3. Rte 1 EB E of Bridge*	*****		*****	*****	*****	*	611.	87. AG	2466.	14.2	0.0	44.0	
4. Rte 1 EB E of Br 3ln*	*****		*****	*****	*****	*	323.	86. AG	2466.	14.2	0.0	56.0	
5. Rte 1 EB FCP ApprThru*	*****		*****	*****	*****	*	321.	86. AG	2359.	14.2	0.0	44.0	
6. Rte 1 EB FCP IntThru*	*****		*****	*****	*****	*	131.	80. AG	2359.	14.2	0.0	44.0	
7. Rte 1 EB FCP Dptr TL*	*****		*****	*****	*****	*	546.	79. AG	1598.	14.2	0.0	44.0	
8. Rte 1 EB E Bklk Thru*	*****		*****	*****	*****	*	708.	79. AG	1583.	14.2	0.0	44.0	
9. Rte 1 EB E Bklk IntT*	*****		*****	*****	*****	*	127.	80. AG	1583.	13.4	0.0	44.0	
10. Rte 1 EB E Bklk Dprt*	*****		*****	*****	*****	*	219.	80. AG	1751.	13.4	0.0	44.0	
11. Rte 1 EB E Bklk Dpt2*	*****		*****	*****	*****	*	839.	88. AG	1751.	13.4	0.0	44.0	
12. Rte 1 EB W FCP L AD1*	*****		*****	*****	*****	*	320.	85. AG	107.	15.1	0.0	32.0	
13. Rte 1 EB W FCP L AD2*	*****		*****	*****	*****	*	129.	51. AG	107.	15.1	0.0	32.0	
14. FCP NB N Rte 1 L Dpt*	*****		*****	*****	*****	*	416.	360. AG	107.	15.1	0.0	32.0	
15. Rte 1 EB E FCR R Dpt*	*****		*****	*****	*****	*	534.	79. AG	1451.	14.2	0.0	32.0	
16. Rte 1 EB W Bklk R Ap*	*****		*****	*****	*****	*	702.	79. AG	1451.	22.5	0.0	32.0	
17. Rte 1 EB @Bklk R Int*	*****		*****	*****	*****	*	52.	107. AG	1451.	22.5	0.0	32.0	
18. Rte 1 EB W Bklk L Ap*	*****		*****	*****	*****	*	703.	79. AG	15.	15.1	0.0	32.0	
19. Rte 1 EB W Bklk L In*	*****		*****	*****	*****	*	108.	48. AG	15.	15.1	0.0	32.0	
20. Rte 1 WB E Bklk	*****		*****	*****	*****	*	821.	269. AG	1563.	13.7	0.0	44.0	
21. Rte 1 WB E Bklk Thru*	*****		*****	*****	*****	*	242.	262. AG	1416.	13.7	0.0	32.0	
22. Rte 1 WB @Bklk Int	*****		*****	*****	*****	*	109.	259. AG	1416.	14.1	0.0	44.0	
23. Rte 1 WB W Bklk Dptr*	*****		*****	*****	*****	*	786.	259. AG	1558.	14.1	0.0	44.0	
24. Rte 1 WB E FCP Thru	*****		*****	*****	*****	*	487.	261. AG	866.	14.1	0.0	44.0	
25. Rte 1 WB W FCP Thru	*****		*****	*****	*****	*	728.	264. AG	866.	14.5	0.0	44.0	
26. Rte 1 WB FCP-Br All	*****		*****	*****	*****	*	310.	264. AG	872.	14.5	0.0	44.0	
27. Rte 1 WB E Br All	*****		*****	*****	*****	*	341.	267. AG	872.	14.5	0.0	44.0	
28. Rte 1 WB @Br All	*****		*****	*****	*****	*	65.	268. BR	872.	14.5	7.5	44.0	

29.	Rte 1 WB W Br All	*	*****	*****	*****	*****	*	1616.	267.	AG	872.	14.5	0.0	44.0
30.	Rte 1 WB E Bklk L Ap*	*	*****	*****	*****	*****	*	280.	261.	AG	127.	22.5	0.0	32.0
31.	Rte 1 WB @Bklk L Int*	*	*****	*****	*****	*****	*	95.	222.	AG	127.	22.5	0.0	32.0
32.	Rte 1 WB E FCP R Apr*	*	*****	*****	*****	*****	*	441.	261.	AG	692.	15.1	0.0	32.0
33.	Rte 1 WB @FCP R Int	*	*****	*****	*****	*****	*	75.	307.	AG	692.	15.1	0.0	32.0
34.	FCP NB N Rte 1 Mrg	*	*****	*****	*****	*****	*	378.	359.	AG	692.	15.1	0.0	32.0
35.	FCP SB N Rte 1 All	*	*****	*****	*****	*****	*	1897.	179.	AG	696.	14.5	0.0	44.0
36.	FCP SB N Rte 1 L Apr*	*	*****	*****	*****	*****	*	517.	180.	AG	690.	15.1	0.0	44.0
37.	FCP SB @Rte 1 L Int	*	*****	*****	*****	*****	*	124.	127.	AG	690.	15.1	0.0	44.0
38.	FCP N Rte 1 SB R Apr*	*	*****	*****	*****	*****	*	549.	181.	AG	6.	15.1	0.0	32.0
39.	FCP @Rte 1 SB R Int	*	*****	*****	*****	*****	*	42.	233.	AG	6.	15.1	0.0	32.0
40.	Rte 1 WB W FCP R Mrg*	*	*****	*****	*****	*****	*	587.	264.	AG	6.	15.1	0.0	32.0
41.	FCP NB N Rte 1 All	*	*****	*****	*****	*****	*	1996.	360.	AG	799.	14.5	0.0	44.0
42.	Phck NB S Rte 1 All	*	*****	*****	*****	*****	*	890.	316.	AG	106.	13.4	0.0	32.0
43.	Phck NB S Rte 1 T-R	*	*****	*****	*****	*****	*	507.	333.	AG	19.	13.4	0.0	32.0
44.	Phck NB S Rte 1 Thru*	*	*****	*****	*****	*****	*	50.	333.	AG	10.	13.4	0.0	32.0
45.	Bklk NB @Rte 1 Thru	*	*****	*****	*****	*****	*	107.	357.	AG	10.	13.4	0.0	32.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: No Build: AM

DATE : 5/18/12

TIME : 15:19:20

LINK VARIABLES

LINK DESCRIPTION	* X1	LINK COORDINATES (FT) Y1	X2	Y2	* LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
46. Bklk NB N Rte 1 All*	*****	*****	*****	*****	*	1317.	357. AG	45.	13.4	0.0	32.0	
47. Rte 1 WB @Bklk R Int*	*****	*****	*****	*****	*	47.	309. AG	20.	15.1	0.0	32.0	
48. Phck NB S Rte 1 L Ap*	*****	*****	*****	*****	*	558.	332. AG	87.	15.1	0.0	44.0	
49. Phck NB @Rte 1 L Int*	*****	*****	*****	*****	*	90.	312. AG	87.	15.1	0.0	44.0	
50. Phck NB S Rte 1 R Ap*	*****	*****	*****	*****	*	45.	353. AG	9.	15.1	0.0	32.0	
51. Phck NB @Rte 1 R Int*	*****	*****	*****	*****	*	48.	27. AG	9.	15.1	0.0	32.0	
52. Bklk N Rte 1 SB All *	*****	*****	*****	*****	*	1229.	177. AG	345.	17.0	0.0	32.0	
53. Bklk N Rte 1 SB Thru*	*****	*****	*****	*****	*	92.	177. AG	131.	17.0	0.0	32.0	
54. Bklk SB @Rte 1 Int *	*****	*****	*****	*****	*	108.	177. AG	131.	17.0	0.0	32.0	
55. Bklk SB S Rte 1 All1*	*****	*****	*****	*****	*	561.	151. AG	1709.	17.0	0.0	32.0	
56. Bklk SB S Rte 1 All2*	*****	*****	*****	*****	*	891.	137. AG	1709.	17.0	0.0	32.0	
57. Bklk SB N Rte 1 R Ap*	*****	*****	*****	*****	*	94.	179. AG	55.	22.5	0.0	32.0	
58. Bklk SB N Rte 1 R In*	*****	*****	*****	*****	*	50.	220. AG	55.	22.5	0.0	32.0	
59. Bklk SB N Rte 1 L Ap*	*****	*****	*****	*****	*	93.	176. AG	159.	22.5	0.0	32.0	
60. Bklk SB N Rte 1 L In*	*****	*****	*****	*****	*	83.	131. AG	159.	22.5	0.0	32.0	
61. Q Rte 1 EB E FCP Thr*	*****	*****	*****	*****	*	501.	86. AG	129.	100.0	0.0	24.0	1.00 25.5
62. Q Rte 1 EB W FCP L *	*****	*****	*****	*****	*	552.	265. AG	422.	100.0	0.0	24.0	5.89 28.1
63. Q Rte 1 WB E FCP Thr*	*****	*****	*****	*****	*	163.	82. AG	171.	100.0	0.0	24.0	0.43 8.3
64. Q FCP SB N Rte 1 L *	*****	*****	*****	*****	*	911.	360. AG	350.	100.0	0.0	24.0	1.21 46.3
65. Q FCP SB N Rte 1 R *	*****	*****	*****	*****	*	4.	360. AG	162.	100.0	0.0	12.0	0.02 0.2
66. Q Rte 1 EB W Bklk R *	*****	*****	*****	*****	*	6159.	259. AG	86.	100.0	0.0	12.0	1.62 312.9
67. Q Rte 1 EB W Bklk T *	*****	*****	*****	*****	*	298.	259. AG	171.	100.0	0.0	24.0	0.79 15.2
68. Q Rte 1 EB W Bklk L *	*****	*****	*****	*****	*	5.	229. AG	82.	100.0	0.0	12.0	0.14 0.3
69. Q Rte 1 WB E Bklk Th*	*****	*****	*****	*****	*	252.	82. AG	161.	100.0	0.0	24.0	0.68 12.8
70. Q Rte 1 WB E Bklk L *	*****	*****	*****	*****	*	692.	81. AG	71.	100.0	0.0	12.0	1.90 35.1
71. Q Phck NB S Rte 1 TR*	*****	*****	*****	*****	*	34.	153. AG	211.	100.0	0.0	12.0	1.00 1.8
72. Q Phck NB S Rte 1 L*	*****	*****	*****	*****	*	314.	152. AG	422.	100.0	0.0	24.0	2.26 16.0
73. Q Bklk SB N Rte 1 L *	*****	*****	*****	*****	*	266.	356. AG	191.	100.0	0.0	12.0	1.06 13.5
74. Q Bklk SB N Rte 1 T *	*****	*****	*****	*****	*	116.	358. AG	191.	100.0	0.0	12.0	0.83 5.9
75. Q Bklk SB N Rte 1 R *	*****	*****	*****	*****	*	46.	359. AG	191.	100.0	0.0	12.0	0.40 2.4

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: No Build: AM

DATE : 5/18/12
 TIME : 15:19:20

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* * * *	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
61. Q Rte 1 EB E FCP Thr*		180	52	6.5	2359	1769	83.22	2	3
62. Q Rte 1 EB W FCP L *		180	170	7.0	107	1716	83.22	2	3
63. Q Rte 1 WB E FCP Thr*		180	69	7.0	866	1769	83.22	2	3
64. Q FCP SB N Rte 1 L *		180	141	7.0	690	1716	83.22	2	3
65. Q FCP SB N Rte 1 R *		180	131	7.0	6	1583	83.22	2	3
66. Q Rte 1 EB W Bklk R *		180	69	7.0	1451	1583	83.22	2	3
67. Q Rte 1 EB W Bklk T *		180	69	7.0	1583	1769	83.22	2	3
68. Q Rte 1 EB W Bklk L *		180	66	6.5	15	185	83.22	2	3
69. Q Rte 1 WB E Bklk Th*		180	65	7.0	1416	1761	83.22	2	3
70. Q Rte 1 WB E Bklk L *		180	57	6.5	127	106	83.22	2	3
71. Q Phck NB S Rte 1 TR*		180	170	6.0	19	1730	83.22	2	3
72. Q Phck NB S Rte 1 L*		180	170	6.0	87	1716	83.22	2	3
73. Q Bklk SB N Rte 1 L *		180	154	7.0	159	1593	83.22	2	3
74. Q Bklk SB N Rte 1 T *		180	154	7.0	131	1676	83.22	2	3
75. Q Bklk SB N Rte 1 R *		180	154	7.0	55	1478	83.22	2	3

RECEPTOR LOCATIONS

RECEPTOR	* * *	COORDINATES (FT)			* *
		X	Y	Z	
1. 1: 9140 Richmond Hwy *		*****	*****	5.0	*
2. 2: 9136 Backlick Rd. *		*****	*****	5.0	*
3. 3: 9135 Anderson Ln. *		*****	*****	5.0	*
4. 4: Bus Stop @Rte. 1 *		*****	*****	5.0	*
5. 5: E.K. HmlsShelter *		*****	*****	5.0	*
6. 6: Accotink Creek *		*****	*****	5.0	*

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: No Build: AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-****

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
0.	1.9	3.3	1.9	4.9	3.1	3.0
5.	1.9	3.5	1.9	5.0	3.0	3.0
10.	1.9	3.4	1.9	5.1	3.2	3.0
15.	1.9	3.3	2.0	5.1	3.5	3.0
20.	1.9	3.2	2.0	5.3	3.1	3.2
25.	1.9	3.1	2.0	5.4	2.9	3.2
30.	1.9	3.0	2.0	5.6	2.8	3.3
35.	1.9	2.9	2.0	5.9	2.9	3.5
40.	1.9	2.8	2.0	6.1	3.1	3.6
45.	1.9	2.8	2.0	6.4	3.3	3.8
50.	1.9	2.8	2.0	6.8	3.4	4.0
55.	1.9	2.8	2.0	7.5	3.3	4.1
60.	1.9	2.7	2.1	8.1	3.3	4.2
65.	1.9	2.7	2.0	8.5	3.2	4.7
70.	1.9	2.7	2.1	9.3	3.1	5.0
75.	1.9	2.7	2.0	9.3	3.0	6.0
80.	1.9	2.7	2.0	7.9	2.8	7.4
85.	1.9	2.7	2.3	6.2	2.6	7.7
90.	1.9	2.9	2.6	4.7	2.6	6.5
95.	2.1	3.2	3.1	3.9	2.6	4.5
100.	2.3	3.6	3.4	3.4	2.6	3.5
105.	2.5	3.6	3.2	3.3	2.4	3.0
110.	2.6	3.7	2.6	3.1	2.3	2.7
115.	2.6	3.7	2.6	2.9	2.3	2.5
120.	2.6	3.8	3.0	2.8	2.3	2.3
125.	2.5	3.6	3.3	3.0	2.5	2.3
130.	2.6	3.6	3.9	2.8	2.5	2.3
135.	2.6	3.6	4.0	2.6	2.4	2.3
140.	2.5	3.8	3.9	2.4	2.1	2.3
145.	2.6	4.0	3.5	2.2	1.9	2.3

150.	*	2.6	4.3	3.0	2.2	1.9	2.3
155.	*	2.6	4.9	3.0	2.2	1.9	2.3
160.	*	2.8	5.7	3.0	2.2	1.9	2.3
165.	*	3.0	6.4	3.0	2.3	1.9	2.3
170.	*	3.0	6.2	3.0	2.3	1.9	2.3
175.	*	3.2	5.1	3.0	2.3	1.9	2.3
180.	*	3.3	4.5	3.0	2.2	1.9	2.3
185.	*	3.1	3.9	2.9	2.2	1.9	2.3
190.	*	2.9	3.4	2.9	2.2	1.9	2.3
195.	*	2.8	3.3	3.0	2.2	1.9	2.3
200.	*	3.2	3.3	2.9	2.2	1.9	2.3
205.	*	3.3	3.2	2.8	2.2	1.9	2.4

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: No Build: AM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
210.	* 3.7	3.2	2.9	2.3	1.9	2.3
215.	* 3.6	3.3	3.0	2.3	1.9	2.3
220.	* 3.6	3.3	3.0	2.3	1.9	2.2
225.	* 3.5	3.3	3.0	2.3	1.9	2.2
230.	* 3.5	3.2	3.1	2.5	1.9	2.2
235.	* 3.3	3.3	2.9	2.7	1.9	2.3
240.	* 3.2	3.3	3.0	3.0	1.9	2.4
245.	* 3.1	3.2	2.9	3.6	1.9	2.6
250.	* 3.2	3.3	3.3	4.9	1.9	2.8
255.	* 3.0	3.4	3.1	7.2	1.9	3.5
260.	* 2.6	2.6	2.6	9.8	2.2	4.5
265.	* 2.4	2.2	2.1	10.7	3.1	5.8
270.	* 2.3	2.1	2.0	9.5	3.9	6.6
275.	* 2.3	2.1	2.0	8.0	3.4	6.3
280.	* 2.3	2.1	2.0	7.5	3.3	5.5
285.	* 2.3	2.1	2.0	7.0	3.2	4.9
290.	* 2.2	2.1	2.0	6.6	3.2	4.6
295.	* 2.2	2.0	2.1	6.1	3.1	4.2
300.	* 2.1	2.0	2.0	5.9	3.1	4.1
305.	* 2.0	2.0	1.9	5.7	3.2	3.8
310.	* 2.0	2.0	2.0	5.4	3.0	3.5
315.	* 2.0	2.0	2.0	5.4	3.2	3.4
320.	* 2.0	2.0	2.0	5.2	3.2	3.3
325.	* 2.0	2.0	2.0	5.1	3.2	3.2
330.	* 2.0	2.1	1.9	5.1	2.9	3.1
335.	* 2.0	2.1	1.9	5.0	2.9	3.1
340.	* 2.1	2.2	1.9	4.9	3.0	3.1
345.	* 2.1	2.3	1.9	5.0	3.0	3.1
350.	* 2.0	2.6	1.9	5.0	3.0	3.0
355.	* 2.0	3.1	1.9	4.9	3.0	3.0
360.	* 1.9	3.3	1.9	4.9	3.1	3.0
5.	* 1.9	3.5	1.9	5.0	3.0	3.0
10.	* 1.9	3.4	1.9	5.1	3.2	3.0
15.	* 1.9	3.3	2.0	5.1	3.5	3.0
20.	* 1.9	3.2	2.0	5.3	3.1	3.2
25.	* 1.9	3.1	2.0	5.4	2.9	3.2
30.	* 1.9	3.0	2.0	5.6	2.8	3.3
35.	* 1.9	2.9	2.0	5.9	2.9	3.5
40.	* 1.9	2.8	2.0	6.1	3.1	3.6
45.	* 1.9	2.8	2.0	6.4	3.3	3.8

50.	*	1.9	2.8	2.0	6.8	3.4	4.0
55.	*	1.9	2.8	2.0	7.5	3.3	4.1
60.	*	1.9	2.7	2.1	8.1	3.3	4.2
65.	*	1.9	2.7	2.0	8.5	3.2	4.7
70.	*	1.9	2.7	2.1	9.3	3.1	5.0
75.	*	1.9	2.7	2.0	9.3	3.0	6.0
80.	*	1.9	2.7	2.0	7.9	2.8	7.4
85.	*	1.9	2.7	2.3	6.2	2.6	7.7
90.	*	1.9	2.9	2.6	4.7	2.6	6.5
95.	*	2.1	3.2	3.1	3.9	2.6	4.5
100.	*	2.3	3.6	3.4	3.4	2.6	3.5
105.	*	2.5	3.6	3.2	3.3	2.4	3.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: No Build: AM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
110.	2.6	3.7	2.6	3.1	2.3	2.7
115.	2.6	3.7	2.6	2.9	2.3	2.5
120.	2.6	3.8	3.0	2.8	2.3	2.3
125.	2.5	3.6	3.3	3.0	2.5	2.3
130.	2.6	3.6	3.9	2.8	2.5	2.3
135.	2.6	3.6	4.0	2.6	2.4	2.3
140.	2.5	3.8	3.9	2.4	2.1	2.3
145.	2.6	4.0	3.5	2.2	1.9	2.3
150.	2.6	4.3	3.0	2.2	1.9	2.3
155.	2.6	4.9	3.0	2.2	1.9	2.3
160.	2.8	5.7	3.0	2.2	1.9	2.3
165.	3.0	6.4	3.0	2.3	1.9	2.3
170.	3.0	6.2	3.0	2.3	1.9	2.3
175.	3.2	5.1	3.0	2.3	1.9	2.3
180.	3.3	4.5	3.0	2.2	1.9	2.3
185.	3.1	3.9	2.9	2.2	1.9	2.3
190.	2.9	3.4	2.9	2.2	1.9	2.3
195.	2.8	3.3	3.0	2.2	1.9	2.3
200.	3.2	3.3	2.9	2.2	1.9	2.3
205.	3.3	3.2	2.8	2.2	1.9	2.4
210.	3.7	3.2	2.9	2.3	1.9	2.3
215.	3.6	3.3	3.0	2.3	1.9	2.3
220.	3.6	3.3	3.0	2.3	1.9	2.2
225.	3.5	3.3	3.0	2.3	1.9	2.2
230.	3.5	3.2	3.1	2.5	1.9	2.2
235.	3.3	3.3	2.9	2.7	1.9	2.3
240.	3.2	3.3	3.0	3.0	1.9	2.4
245.	3.1	3.2	2.9	3.6	1.9	2.6
250.	3.2	3.3	3.3	4.9	1.9	2.8
255.	3.0	3.4	3.1	7.2	1.9	3.5
260.	2.6	2.6	2.6	9.8	2.2	4.5
265.	2.4	2.2	2.1	10.7	3.1	5.8
270.	2.3	2.1	2.0	9.5	3.9	6.6
275.	2.3	2.1	2.0	8.0	3.4	6.3
280.	2.3	2.1	2.0	7.5	3.3	5.5
285.	2.3	2.1	2.0	7.0	3.2	4.9
290.	2.2	2.1	2.0	6.6	3.2	4.6
295.	2.2	2.0	2.1	6.1	3.1	4.2
300.	2.1	2.0	2.0	5.9	3.1	4.1
305.	2.0	2.0	1.9	5.7	3.2	3.8

310.	*	2.0	2.0	2.0	5.4	3.0	3.5
315.	*	2.0	2.0	2.0	5.4	3.2	3.4
320.	*	2.0	2.0	2.0	5.2	3.2	3.3
325.	*	2.0	2.0	2.0	5.1	3.2	3.2
330.	*	2.0	2.1	1.9	5.1	2.9	3.1
335.	*	2.0	2.1	1.9	5.0	2.9	3.1
340.	*	2.1	2.2	1.9	4.9	3.0	3.1
345.	*	2.1	2.3	1.9	5.0	3.0	3.1
350.	*	2.0	2.6	1.9	5.0	3.0	3.0
355.	*	2.0	3.1	1.9	4.9	3.0	3.0
360.	*	1.9	3.3	1.9	4.9	3.1	3.0
365.	*	1.9	3.5	1.9	5.0	3.0	3.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: No Build: AM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
370.	* 1.9	3.4	1.9	5.1	3.2	3.0
375.	* 1.9	3.3	2.0	5.1	3.5	3.0
380.	* 1.9	3.2	2.0	5.3	3.1	3.2
385.	* 1.9	3.1	2.0	5.4	2.9	3.2
390.	* 1.9	3.0	2.0	5.6	2.8	3.3
395.	* 1.9	2.9	2.0	5.9	2.9	3.5
400.	* 1.9	2.8	2.0	6.1	3.1	3.6
405.	* 1.9	2.8	2.0	6.4	3.3	3.8
410.	* 1.9	2.8	2.0	6.8	3.4	4.0
415.	* 1.9	2.8	2.0	7.5	3.3	4.1
420.	* 1.9	2.7	2.1	8.1	3.3	4.2
425.	* 1.9	2.7	2.0	8.5	3.2	4.7
430.	* 1.9	2.7	2.1	9.3	3.1	5.0
435.	* 1.9	2.7	2.0	9.3	3.0	6.0
440.	* 1.9	2.7	2.0	7.9	2.8	7.4
445.	* 1.9	2.7	2.3	6.2	2.6	7.7
450.	* 1.9	2.9	2.6	4.7	2.6	6.5
455.	* 2.1	3.2	3.1	3.9	2.6	4.5
460.	* 2.3	3.6	3.4	3.4	2.6	3.5
465.	* 2.5	3.6	3.2	3.3	2.4	3.0
470.	* 2.6	3.7	2.6	3.1	2.3	2.7
475.	* 2.6	3.7	2.6	2.9	2.3	2.5
480.	* 2.6	3.8	3.0	2.8	2.3	2.3
485.	* 2.5	3.6	3.3	3.0	2.5	2.3
490.	* 2.6	3.6	3.9	2.8	2.5	2.3
495.	* 2.6	3.6	4.0	2.6	2.4	2.3
500.	* 2.5	3.8	3.9	2.4	2.1	2.3
505.	* 2.6	4.0	3.5	2.2	1.9	2.3
510.	* 2.6	4.3	3.0	2.2	1.9	2.3
515.	* 2.6	4.9	3.0	2.2	1.9	2.3
520.	* 2.8	5.7	3.0	2.2	1.9	2.3
525.	* 3.0	6.4	3.0	2.3	1.9	2.3
530.	* 3.0	6.2	3.0	2.3	1.9	2.3
535.	* 3.2	5.1	3.0	2.3	1.9	2.3
540.	* 3.3	4.5	3.0	2.2	1.9	2.3
545.	* 3.1	3.9	2.9	2.2	1.9	2.3
550.	* 2.9	3.4	2.9	2.2	1.9	2.3
555.	* 2.8	3.3	3.0	2.2	1.9	2.3
560.	* 3.2	3.3	2.9	2.2	1.9	2.3
565.	* 3.3	3.2	2.8	2.2	1.9	2.4

570.	*	3.7	3.2	2.9	2.3	1.9	2.3
575.	*	3.6	3.3	3.0	2.3	1.9	2.3
580.	*	3.6	3.3	3.0	2.3	1.9	2.2
585.	*	3.5	3.3	3.0	2.3	1.9	2.2
590.	*	3.5	3.2	3.1	2.5	1.9	2.2
595.	*	3.3	3.3	2.9	2.7	1.9	2.3
600.	*	3.2	3.3	3.0	3.0	1.9	2.4
605.	*	3.1	3.2	2.9	3.6	1.9	2.6
610.	*	3.2	3.3	3.3	4.9	1.9	2.8
615.	*	3.0	3.4	3.1	7.2	1.9	3.5
620.	*	2.6	2.6	2.6	9.8	2.2	4.5
625.	*	2.4	2.2	2.1	10.7	3.1	5.8

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: No Build: AM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
630.	* 2.3	2.1	2.0	9.5	3.9	6.6
635.	* 2.3	2.1	2.0	8.0	3.4	6.3
640.	* 2.3	2.1	2.0	7.5	3.3	5.5
645.	* 2.3	2.1	2.0	7.0	3.2	4.9
650.	* 2.2	2.1	2.0	6.6	3.2	4.6
655.	* 2.2	2.0	2.1	6.1	3.1	4.2
660.	* 2.1	2.0	2.0	5.9	3.1	4.1
665.	* 2.0	2.0	1.9	5.7	3.2	3.8
670.	* 2.0	2.0	2.0	5.4	3.0	3.5
675.	* 2.0	2.0	2.0	5.4	3.2	3.4
680.	* 2.0	2.0	2.0	5.2	3.2	3.3
685.	* 2.0	2.0	2.0	5.1	3.2	3.2
690.	* 2.0	2.1	1.9	5.1	2.9	3.1
695.	* 2.0	2.1	1.9	5.0	2.9	3.1
700.	* 2.1	2.2	1.9	4.9	3.0	3.1
705.	* 2.1	2.3	1.9	5.0	3.0	3.1
710.	* 2.0	2.6	1.9	5.0	3.0	3.0
715.	* 2.0	3.1	1.9	5.0	3.0	3.0
720.	* 1.9	3.3	1.9	5.0	3.1	3.0
725.	* 1.9	3.5	1.9	5.0	3.1	3.0
730.	* 1.9	3.4	1.9	5.1	3.2	3.0
735.	* 1.9	3.3	2.0	5.1	3.5	3.0
740.	* 1.9	3.2	2.0	5.2	3.3	3.1
745.	* 1.9	3.1	2.0	5.2	3.0	3.1
750.	* 1.9	3.0	2.0	5.3	3.0	3.1
755.	* 1.9	2.9	2.0	5.5	3.0	3.1
760.	* 1.9	2.8	2.0	5.5	3.4	3.1
765.	* 1.9	2.8	2.0	5.6	3.5	3.1
770.	* 1.9	2.8	2.0	5.6	3.6	3.3
775.	* 1.9	2.8	2.0	6.0	3.5	3.3
780.	* 1.9	2.7	2.1	6.0	3.5	3.3
785.	* 1.9	2.7	2.0	5.8	3.5	3.4
790.	* 1.9	2.7	2.1	5.7	3.5	3.4
795.	* 1.9	2.7	2.0	5.3	3.5	3.7
800.	* 1.9	2.9	2.5	3.8	2.8	4.0
805.	* 2.2	2.9	2.7	2.7	2.7	4.0
810.	* 2.2	3.0	2.8	2.4	2.7	3.0
815.	* 2.3	3.2	3.0	2.3	2.7	2.4
820.	* 2.4	3.3	3.1	2.3	2.7	2.3
825.	* 2.5	3.3	3.1	2.3	2.7	2.3

830.	*	2.6	3.3	2.7	2.3	2.6	2.3
835.	*	2.6	3.3	2.7	2.3	2.6	2.3
840.	*	2.6	3.3	2.7	2.3	2.6	2.3
845.	*	2.5	3.2	2.7	2.3	2.6	2.3
850.	*	2.6	3.2	2.8	2.3	2.6	2.3
855.	*	2.5	3.2	3.0	2.3	2.6	2.3
860.	*	2.5	3.3	3.0	2.3	2.6	2.3
865.	*	2.5	3.3	3.0	2.3	2.6	2.3
870.	*	2.5	3.6	2.9	2.3	2.6	2.3
875.	*	2.5	3.7	3.0	2.3	1.9	2.3
880.	*	2.5	4.3	3.0	2.3	1.9	2.3
885.	*	2.5	4.6	3.0	2.3	1.9	2.3

****	*	1.9	2.7	2.1	5.0	3.8	3.0
****	*	1.9	2.7	2.1	5.0	3.8	3.0
****	*	1.9	2.7	2.1	5.0	3.8	3.0
****	*	1.9	2.7	2.1	5.0	3.8	3.0
****	*	1.9	2.7	2.1	5.0	3.8	3.0
****	*	1.9	2.7	2.1	5.0	3.8	3.0
****	*	1.9	2.7	2.1	5.0	3.8	3.0
****	*	1.9	2.7	2.1	5.0	3.8	3.0
****	*	1.9	2.7	2.1	5.0	3.8	3.0
****	*	1.9	2.7	2.1	5.0	3.8	3.0
****	*	1.9	2.7	2.1	5.0	3.8	3.0
****	*	1.9	2.7	2.1	5.0	3.8	3.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: No Build: AM

WIND ANGLE (DEGR) *	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
**** *	1.9	2.7	2.1	5.0	3.8	3.0
**** *	1.9	2.7	2.1	5.0	3.8	3.0
**** *	1.9	3.1	3.2	2.9	2.7	3.1
**** *	2.4	3.1	3.2	2.3	2.7	3.1
**** *	2.4	3.1	3.2	2.3	2.7	2.3
**** *	2.4	3.1	3.2	2.3	2.7	2.3
**** *	2.4	3.1	3.2	2.3	2.7	2.3
**** *	2.4	3.1	3.2	2.3	2.7	2.3
**** *	2.4	3.1	3.2	2.3	2.7	2.3
**** *	2.5	3.1	3.2	2.3	2.6	2.3
**** *	2.5	3.1	3.2	2.3	2.6	2.3
**** *	2.5	3.1	3.2	2.3	2.6	2.3
**** *	2.5	3.1	3.2	2.3	2.6	2.3
**** *	2.5	3.1	3.2	2.3	2.6	2.3
**** *	2.5	3.1	3.2	2.3	2.6	2.3
**** *	2.5	3.1	3.2	2.3	2.6	2.3
**** *	2.5	3.1	3.2	2.3	2.6	2.3
**** *	2.5	3.1	3.2	2.3	1.9	2.3
**** *	2.5	3.1	3.2	2.3	1.9	2.3
**** *	2.5	3.1	3.2	2.3	1.9	2.3
**** *	2.5	3.1	3.2	2.3	1.9	2.3
**** *	2.5	2.5	3.2	2.3	1.9	2.3
**** *	2.9	2.5	3.1	2.4	1.9	2.3
**** *	2.9	2.5	3.1	2.4	1.9	2.3
**** *	2.9	2.5	3.1	2.4	1.9	2.3
**** *	2.9	2.5	3.1	2.4	1.9	2.3
**** *	2.9	2.5	3.1	2.4	1.9	2.3
**** *	2.9	2.5	3.1	2.4	1.9	2.3
**** *	2.9	2.5	3.1	2.4	1.9	2.3
**** *	2.9	2.5	3.1	2.4	1.9	2.3
**** *	2.9	2.5	3.1	2.4	1.9	2.3
**** *	2.9	2.5	3.1	2.4	1.9	2.3
**** *	2.9	2.5	3.1	2.4	1.9	2.3
**** *	2.9	2.5	3.1	2.4	1.9	2.3
**** *	2.9	2.1	2.0	4.5	3.0	2.2
**** *	2.4	2.1	2.0	5.1	3.0	2.2

****	*	2.4	2.1	2.0	5.1	3.0	3.0
****	*	2.4	2.1	2.0	5.1	3.0	3.0
****	*	2.4	2.1	2.0	5.1	3.0	3.0
****	*	2.4	2.1	2.0	5.1	3.0	3.0
****	*	2.3	2.1	2.0	5.1	3.1	3.0
****	*	2.3	2.1	2.0	5.1	3.1	3.0
****	*	2.3	2.1	2.0	5.1	3.1	3.0
****	*	2.3	2.1	2.0	5.1	3.1	3.0
****	*	2.3	2.1	2.0	5.1	3.1	3.0
****	*	2.3	2.1	2.0	5.1	3.1	3.0
****	*	2.3	2.1	2.0	5.1	3.1	3.0
****	*	2.3	2.1	2.0	5.1	3.1	3.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: No Build: AM

WIND ANGLE (DEGR) *	CONCENTRATION (PPM)					
	1	2	3	4	5	6
**** *	2.3	2.1	2.0	5.1	3.1	3.0
**** *	2.3	2.1	2.0	5.1	3.8	3.0
MAX *	3.7	6.4	4.0	10.7	3.9	7.7
DEGR. *	210	165	135	265	270	85

THE HIGHEST CONCENTRATION OF 10.70 PPM OCCURRED AT RECEPTOR 4.

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: No Build: AM

DATE : 5/18/12

TIME : 15:19:20

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

		* CO/LINK (PPM)					
		* ANGLE (DEGREES)					
		1	2	3	4	5	6
LINK #	*	210	165	135	265	270	85
1	*	0.0	0.0	0.0	0.2	0.1	0.0
2	*	0.0	0.0	0.0	0.0	0.0	0.6
3	*	0.0	0.0	0.0	0.1	0.1	3.0
4	*	0.0	0.0	0.0	0.1	0.1	0.3
5	*	0.0	0.0	0.0	0.1	0.1	0.1
6	*	0.0	0.0	0.0	0.0	0.1	0.0
7	*	0.0	0.0	0.0	0.3	0.2	0.1
8	*	0.2	0.0	0.2	1.7	0.1	0.1
9	*	0.1	0.2	0.0	0.0	0.0	0.0
10	*	0.0	0.0	0.0	0.0	0.0	0.0
11	*	0.0	0.0	0.0	0.0	0.0	0.0
12	*	0.0	0.0	0.0	0.0	0.0	0.0
13	*	0.0	0.0	0.0	0.0	0.0	0.0
14	*	0.0	0.0	0.0	0.0	0.0	0.0
15	*	0.0	0.0	0.0	0.2	0.2	0.1
16	*	0.3	0.0	0.3	3.8	0.1	0.1
17	*	0.0	0.0	0.1	0.0	0.0	0.0
18	*	0.0	0.0	0.0	0.0	0.0	0.0
19	*	0.0	0.0	0.0	0.0	0.0	0.0
20	*	0.0	0.0	0.0	0.0	0.0	0.0
21	*	0.0	0.0	0.0	0.0	0.0	0.0
22	*	0.1	0.2	0.0	0.0	0.0	0.0
23	*	0.2	0.0	0.3	0.6	0.0	0.1
24	*	0.0	0.0	0.0	0.1	0.1	0.0
25	*	0.0	0.0	0.0	0.1	0.1	0.1
26	*	0.0	0.0	0.0	0.0	0.0	0.2
27	*	0.0	0.0	0.0	0.0	0.0	0.4
28	*	0.0	0.0	0.0	0.0	0.0	0.0
29	*	0.0	0.0	0.0	0.1	0.1	0.0
30	*	0.0	0.0	0.0	0.0	0.0	0.0
31	*	0.0	0.0	0.0	0.0	0.0	0.0
32	*	0.0	0.0	0.0	0.1	0.1	0.0

33	*	0.0	0.0	0.0	0.0	0.0	0.0
34	*	0.0	0.0	0.0	0.0	0.0	0.0
35	*	0.0	0.0	0.0	0.0	0.0	0.0
36	*	0.0	0.0	0.0	0.0	0.0	0.0
37	*	0.0	0.0	0.0	0.0	0.0	0.0
38	*	0.0	0.0	0.0	0.0	0.0	0.0
39	*	0.0	0.0	0.0	0.0	0.0	0.0
40	*	0.0	0.0	0.0	0.0	0.0	0.0
41	*	0.0	0.0	0.0	0.0	0.0	0.0
42	*	0.0	0.0	0.0	0.0	0.0	0.0
43	*	0.0	0.0	0.0	0.0	0.0	0.0
44	*	0.0	0.0	0.0	0.0	0.0	0.0
45	*	0.0	0.0	0.0	0.0	0.0	0.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: No Build: AM

LINK #	CO/LINK (PPM)					
	1	2	3	4	5	6
	210	165	135	265	270	85
46	0.0	0.0	0.0	0.0	0.0	0.0
47	0.0	0.0	0.0	0.0	0.0	0.0
48	0.0	0.0	0.0	0.0	0.0	0.0
49	0.0	0.0	0.0	0.0	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0
51	0.0	0.0	0.0	0.0	0.0	0.0
52	0.0	0.3	0.0	0.0	0.0	0.0
53	0.0	0.1	0.0	0.0	0.0	0.0
54	0.0	0.0	0.0	0.0	0.0	0.0
55	0.0	0.6	0.4	0.0	0.0	0.0
56	0.0	0.1	0.2	0.0	0.0	0.0
57	0.0	0.0	0.0	0.0	0.0	0.0
58	0.0	0.0	0.0	0.0	0.0	0.0
59	0.0	0.1	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0
61	0.0	0.0	0.0	0.1	0.1	0.1
62	0.0	0.0	0.0	0.2	0.2	0.4
63	0.0	0.0	0.0	0.0	0.0	0.0
64	0.0	0.0	0.0	0.1	0.0	0.0
65	0.0	0.0	0.0	0.0	0.0	0.0
66	0.1	0.0	0.1	0.8	0.2	0.1
67	0.1	0.0	0.2	0.1	0.0	0.0
68	0.0	0.0	0.0	0.0	0.0	0.0
69	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0
71	0.0	0.1	0.0	0.0	0.0	0.0
72	0.0	0.7	0.3	0.0	0.0	0.0
73	0.3	1.1	0.0	0.0	0.0	0.0
74	0.3	0.8	0.0	0.0	0.0	0.0
75	0.1	0.2	0.0	0.0	0.0	0.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: No Build: PM

DATE : 5/18/12
 TIME : 15:20: 7

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

 VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
 U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 1.9 PPM

LINK VARIABLES

LINK DESCRIPTION	* *	X1	LINK COORDINATES (FT) Y1	X2	Y2	* *	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)	W (FT)	V/C QUEUE (VEH)
1. Rte 1 EB W of Bridge*	*****		*****	*****	*****	*	1614.	87. AG	1247.	13.7	0.0	44.0	
2. Rte 1 EB Accotink Br*	*****		*****	*****	*****	*	64.	88. BR	1247.	13.7	7.5	44.0	
3. Rte 1 EB E of Bridge*	*****		*****	*****	*****	*	611.	87. AG	1247.	13.7	0.0	44.0	
4. Rte 1 EB E of Br 3ln*	*****		*****	*****	*****	*	323.	86. AG	1247.	13.7	0.0	56.0	
5. Rte 1 EB FCP ApprThru*	*****		*****	*****	*****	*	321.	86. AG	1171.	13.7	0.0	44.0	
6. Rte 1 EB FCP IntThru*	*****		*****	*****	*****	*	131.	80. AG	1171.	14.1	0.0	44.0	
7. Rte 1 EB FCP Dptr TL*	*****		*****	*****	*****	*	546.	79. AG	1320.	14.1	0.0	44.0	
8. Rte 1 EB E Bklk Thru*	*****		*****	*****	*****	*	708.	79. AG	1235.	14.1	0.0	44.0	
9. Rte 1 EB E Bklk IntT*	*****		*****	*****	*****	*	127.	80. AG	1235.	13.7	0.0	44.0	
10. Rte 1 EB E Bklk Dprt*	*****		*****	*****	*****	*	219.	80. AG	1331.	13.7	0.0	44.0	
11. Rte 1 EB E Bklk Dpt2*	*****		*****	*****	*****	*	839.	88. AG	1331.	13.7	0.0	44.0	
12. Rte 1 EB W FCP L AD1*	*****		*****	*****	*****	*	320.	85. AG	76.	15.1	0.0	32.0	
13. Rte 1 EB W FCP L AD2*	*****		*****	*****	*****	*	129.	51. AG	76.	15.1	0.0	32.0	
14. FCP NB N Rte 1 L Dpt*	*****		*****	*****	*****	*	416.	360. AG	76.	15.1	0.0	32.0	
15. Rte 1 EB E FCR R Dpt*	*****		*****	*****	*****	*	534.	79. AG	295.	14.1	0.0	32.0	
16. Rte 1 EB W Bklk R Ap*	*****		*****	*****	*****	*	702.	79. AG	295.	15.1	0.0	32.0	
17. Rte 1 EB @Bklk R Int*	*****		*****	*****	*****	*	52.	107. AG	295.	15.1	0.0	32.0	
18. Rte 1 EB W Bklk L Ap*	*****		*****	*****	*****	*	703.	79. AG	85.	15.1	0.0	32.0	
19. Rte 1 EB W Bklk L In*	*****		*****	*****	*****	*	108.	48. AG	85.	15.1	0.0	32.0	
20. Rte 1 WB E Bklk	*****		*****	*****	*****	*	821.	269. AG	1997.	13.4	0.0	44.0	
21. Rte 1 WB E Bklk Thru*	*****		*****	*****	*****	*	242.	262. AG	1782.	13.4	0.0	32.0	
22. Rte 1 WB @Bklk Int	*****		*****	*****	*****	*	109.	259. AG	1782.	13.4	0.0	44.0	
23. Rte 1 WB W Bklk Dptr*	*****		*****	*****	*****	*	786.	259. AG	2531.	13.4	0.0	44.0	
24. Rte 1 WB E FCP Thru	*****		*****	*****	*****	*	487.	261. AG	2096.	13.4	0.0	44.0	
25. Rte 1 WB W FCP Thru	*****		*****	*****	*****	*	728.	264. AG	2096.	15.1	0.0	44.0	
26. Rte 1 WB FCP-Br All	*****		*****	*****	*****	*	310.	264. AG	2783.	15.1	0.0	44.0	
27. Rte 1 WB E Br All	*****		*****	*****	*****	*	341.	267. AG	2783.	15.1	0.0	44.0	
28. Rte 1 WB @Br All	*****		*****	*****	*****	*	65.	268. BR	2783.	15.1	7.5	44.0	

29.	Rte 1 WB W Br All	*	*****	*****	*****	*****	*****	*	1616.	267.	AG	2783.	15.1	0.0	44.0
30.	Rte 1 WB E Bklk L Ap*	*	*****	*****	*****	*****	*****	*	280.	261.	AG	8.	15.1	0.0	32.0
31.	Rte 1 WB @Bklk L Int*	*	*****	*****	*****	*****	*****	*	95.	222.	AG	8.	15.1	0.0	32.0
32.	Rte 1 WB E FCP R Apr*	*	*****	*****	*****	*****	*****	*	441.	261.	AG	435.	15.1	0.0	32.0
33.	Rte 1 WB @FCP R Int	*	*****	*****	*****	*****	*****	*	75.	307.	AG	435.	15.1	0.0	32.0
34.	FCP NB N Rte 1 Mrg	*	*****	*****	*****	*****	*****	*	378.	359.	AG	435.	15.1	0.0	32.0
35.	FCP SB N Rte 1 All	*	*****	*****	*****	*****	*****	*	1897.	179.	AG	1131.	14.5	0.0	44.0
36.	FCP SB N Rte 1 L Apr*	*	*****	*****	*****	*****	*****	*	517.	180.	AG	444.	15.1	0.0	44.0
37.	FCP SB @Rte 1 L Int	*	*****	*****	*****	*****	*****	*	124.	127.	AG	444.	15.1	0.0	44.0
38.	FCP N Rte 1 SB R Apr*	*	*****	*****	*****	*****	*****	*	549.	181.	AG	687.	17.0	0.0	32.0
39.	FCP @Rte 1 SB R Int	*	*****	*****	*****	*****	*****	*	42.	233.	AG	687.	17.0	0.0	32.0
40.	Rte 1 WB W FCP R Mrg*	*	*****	*****	*****	*****	*****	*	587.	264.	AG	687.	17.0	0.0	32.0
41.	FCP NB N Rte 1 All	*	*****	*****	*****	*****	*****	*	1996.	360.	AG	511.	14.5	0.0	44.0
42.	Phck NB S Rte 1 All	*	*****	*****	*****	*****	*****	*	890.	316.	AG	821.	14.2	0.0	32.0
43.	Phck NB S Rte 1 T-R	*	*****	*****	*****	*****	*****	*	507.	333.	AG	87.	14.2	0.0	32.0
44.	Phck NB S Rte 1 Thru*	*	*****	*****	*****	*****	*****	*	50.	333.	AG	76.	14.2	0.0	32.0
45.	Bklk NB @Rte 1 Thru	*	*****	*****	*****	*****	*****	*	107.	357.	AG	76.	14.2	0.0	32.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: No Build: PM

DATE : 5/18/12
 TIME : 15:20: 7

LINK VARIABLES

LINK DESCRIPTION	* *	X1	LINK COORDINATES (FT) Y1	X2	Y2	* *	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
46. Bklk NB N Rte 1 All*	*****		*****	*****	*****	*	1317.	357. AG	368.	14.2	0.0	32.0		
47. Rte 1 WB @Bklk R Int*	*****		*****	*****	*****	*	47.	309. AG	207.	15.1	0.0	32.0		
48. Phck NB S Rte 1 L Ap*	*****		*****	*****	*****	*	558.	332. AG	734.	15.1	0.0	44.0		
49. Phck NB @Rte 1 L Int*	*****		*****	*****	*****	*	90.	312. AG	734.	15.1	0.0	44.0		
50. Phck NB S Rte 1 R Ap*	*****		*****	*****	*****	*	45.	353. AG	11.	15.1	0.0	32.0		
51. Phck NB @Rte 1 R Int*	*****		*****	*****	*****	*	48.	27. AG	11.	15.1	0.0	32.0		
52. Bklk N Rte 1 SB All *	*****		*****	*****	*****	*	1229.	177. AG	119.	13.4	0.0	32.0		
53. Bklk N Rte 1 SB Thru*	*****		*****	*****	*****	*	92.	177. AG	19.	13.4	0.0	32.0		
54. Bklk SB @Rte 1 Int *	*****		*****	*****	*****	*	108.	177. AG	19.	13.4	0.0	32.0		
55. Bklk SB S Rte 1 All1*	*****		*****	*****	*****	*	561.	151. AG	322.	13.4	0.0	32.0		
56. Bklk SB S Rte 1 All2*	*****		*****	*****	*****	*	891.	137. AG	322.	13.4	0.0	32.0		
57. Bklk SB N Rte 1 R Ap*	*****		*****	*****	*****	*	94.	179. AG	15.	15.1	0.0	32.0		
58. Bklk SB N Rte 1 R In*	*****		*****	*****	*****	*	50.	220. AG	15.	15.1	0.0	32.0		
59. Bklk SB N Rte 1 L Ap*	*****		*****	*****	*****	*	93.	176. AG	85.	15.1	0.0	32.0		
60. Bklk SB N Rte 1 L In*	*****		*****	*****	*****	*	83.	131. AG	85.	15.1	0.0	32.0		
61. Q Rte 1 EB E FCP Thr*	*****		*****	*****	*****	*	218.	88. AG	169.	100.0	0.0	24.0	0.58	11.0
62. Q Rte 1 EB W FCP L *	*****		*****	*****	*****	*	75.	265. AG	434.	100.0	0.0	24.0	****	3.8
63. Q Rte 1 WB E FCP Thr*	*****		*****	*****	*****	*	2084.	81. AG	198.	100.0	0.0	24.0	1.17	105.9
64. Q FCP SB N Rte 1 L *	*****		*****	*****	*****	*	152.	360. AG	310.	100.0	0.0	24.0	0.51	7.7
65. Q FCP SB N Rte 1 R *	*****		*****	*****	*****	*	2903.	1. AG	149.	100.0	0.0	12.0	1.53	147.5
66. Q Rte 1 EB W Bklk R *	*****		*****	*****	*****	*	148.	260. AG	114.	100.0	0.0	12.0	0.43	7.5
67. Q Rte 1 EB W Bklk T *	*****		*****	*****	*****	*	310.	259. AG	228.	100.0	0.0	24.0	0.80	15.8
68. Q Rte 1 EB W Bklk L *	*****		*****	*****	*****	*	73.	228. AG	108.	100.0	0.0	12.0	0.99	3.7
69. Q Rte 1 WB E Bklk Th*	*****		*****	*****	*****	*	2019.	82. AG	236.	100.0	0.0	24.0	1.20	102.6
70. Q Rte 1 WB E Bklk L *	*****		*****	*****	*****	*	4.	90. AG	115.	100.0	0.0	12.0	0.17	0.2
71. Q Phck NB S Rte 1 TR*	*****		*****	*****	*****	*	71.	153. AG	185.	100.0	0.0	12.0	0.39	3.6
72. Q Phck NB S Rte 1 L*	*****		*****	*****	*****	*	1835.	152. AG	370.	100.0	0.0	24.0	1.68	93.2
73. Q Bklk SB N Rte 1 L *	*****		*****	*****	*****	*	68.	357. AG	182.	100.0	0.0	12.0	0.40	3.5
74. Q Bklk SB N Rte 1 T *	*****		*****	*****	*****	*	15.	357. AG	182.	100.0	0.0	12.0	0.09	0.8
75. Q Bklk SB N Rte 1 R *	*****		*****	*****	*****	*	12.	360. AG	182.	100.0	0.0	12.0	0.08	0.6

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: No Build: PM

DATE : 5/18/12
 TIME : 15:20: 7

 ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* * * *	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
61. Q Rte 1 EB E FCP Thr*		180	68	6.5	1171	1769	83.22	2	3
62. Q Rte 1 EB W FCP L *		180	175	5.0	76	1716	83.22	2	3
63. Q Rte 1 WB E FCP Thr*		180	80	7.0	2096	1769	83.22	2	3
64. Q FCP SB N Rte 1 L *		180	125	7.0	444	1716	83.22	2	3
65. Q FCP SB N Rte 1 R *		180	120	7.0	687	1583	83.22	2	3
66. Q Rte 1 EB W Bklk R *		180	92	7.0	295	1583	83.22	2	3
67. Q Rte 1 EB W Bklk T *		180	92	7.0	1235	1769	83.22	2	3
68. Q Rte 1 EB W Bklk L *		180	87	6.5	85	185	83.22	2	3
69. Q Rte 1 WB E Bklk Th*		180	95	7.0	1782	1761	83.22	2	3
70. Q Rte 1 WB E Bklk L *		180	93	6.5	8	106	83.22	2	3
71. Q Phck NB S Rte 1 TR*		180	149	6.0	87	1730	83.22	2	3
72. Q Phck NB S Rte 1 L*		180	149	6.0	734	1716	83.22	2	3
73. Q Bklk SB N Rte 1 L *		180	147	7.0	85	1593	83.22	2	3
74. Q Bklk SB N Rte 1 T *		180	147	7.0	19	1676	83.22	2	3
75. Q Bklk SB N Rte 1 R *		180	147	7.0	15	1478	83.22	2	3

 RECEPTOR LOCATIONS

RECEPTOR	* * * *	COORDINATES (FT)			* * * *
		X	Y	Z	
1. 1: 9140 Richmond Hwy *		*****	*****	5.0	*
2. 2: 9136 Backlick Rd. *		*****	*****	5.0	*
3. 3: 9135 Anderson Ln. *		*****	*****	5.0	*
4. 4: Bus Stop @Rte. 1 *		*****	*****	5.0	*
5. 5: E.K. HmlsShelter *		*****	*****	5.0	*
6. 6: Accotink Creek *		*****	*****	5.0	*

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: No Build: PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-****

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
0.	1.9	2.4	1.9	4.4	2.9	3.3
5.	1.9	2.4	1.9	4.6	3.0	3.3
10.	1.9	2.3	1.9	4.6	3.0	3.3
15.	1.9	2.3	1.9	4.8	3.1	3.4
20.	1.9	2.2	2.0	5.0	3.1	3.5
25.	1.9	2.2	2.0	4.9	3.0	3.4
30.	1.9	2.2	2.0	5.0	2.8	3.7
35.	1.9	2.2	2.0	5.2	2.9	4.0
40.	1.9	2.2	1.9	5.2	3.2	4.1
45.	1.9	2.2	1.9	5.3	3.3	4.2
50.	1.9	2.2	1.9	5.8	3.4	4.3
55.	1.9	2.1	1.9	6.2	3.6	4.4
60.	1.9	2.1	1.9	6.7	3.5	4.5
65.	1.9	2.0	1.9	7.3	3.3	4.8
70.	1.9	2.0	1.9	7.6	3.2	5.3
75.	1.9	2.0	1.9	7.2	2.9	6.3
80.	1.9	2.1	2.0	6.3	2.6	7.1
85.	2.0	2.2	2.5	4.3	2.3	7.1
90.	2.2	2.7	3.0	3.4	2.4	5.0
95.	2.3	3.0	3.7	2.6	2.4	3.5
100.	2.6	3.4	3.6	2.4	2.4	2.7
105.	2.9	3.6	3.2	2.4	2.4	2.5
110.	3.0	3.2	2.9	2.5	2.5	2.3
115.	3.0	3.3	3.0	2.5	2.5	2.1
120.	3.0	3.2	3.3	2.5	2.5	2.1
125.	2.8	3.3	3.6	2.6	2.6	2.0
130.	2.8	3.2	3.9	2.6	2.7	2.0
135.	2.8	3.2	4.0	2.5	2.6	2.1
140.	2.8	3.2	3.9	2.4	2.4	2.0
145.	2.6	3.2	3.7	2.2	2.2	2.0

150.	*	2.9	3.7	3.3	2.0	2.0	2.0
155.	*	3.1	4.1	3.0	1.9	1.9	2.0
160.	*	3.3	4.8	2.9	1.9	1.9	2.0
165.	*	3.5	4.6	2.9	2.0	1.9	2.0
170.	*	3.4	4.4	2.9	2.0	1.9	2.0
175.	*	3.4	3.9	2.9	1.9	1.9	2.1
180.	*	3.6	3.2	2.9	1.9	1.9	2.1
185.	*	3.2	2.9	2.9	1.9	1.9	2.1
190.	*	2.9	2.9	2.9	1.9	1.9	2.1
195.	*	2.9	3.1	2.8	1.9	1.9	2.1
200.	*	3.0	3.1	2.8	1.9	1.9	2.1
205.	*	3.1	3.0	2.7	1.9	1.9	2.1

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: No Build: PM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)						
	1	2	3	4	5	6	
210.	*	3.1	3.0	2.7	2.0	1.9	2.1
215.	*	3.0	3.0	2.8	2.0	1.9	2.1
220.	*	3.0	3.1	2.9	2.0	1.9	2.0
225.	*	3.0	3.1	2.9	2.0	1.9	2.0
230.	*	3.0	3.1	2.9	2.0	1.9	2.0
235.	*	3.0	3.2	3.1	2.0	1.9	2.0
240.	*	3.0	3.2	3.1	2.0	1.9	2.1
245.	*	2.9	2.9	3.1	2.2	1.9	2.1
250.	*	2.7	2.8	2.9	2.5	1.9	2.3
255.	*	2.6	2.7	2.9	3.5	1.9	2.7
260.	*	2.4	2.5	2.5	5.9	2.0	3.5
265.	*	2.1	2.0	2.1	7.2	2.8	5.0
270.	*	2.0	1.9	1.9	7.2	3.4	6.1
275.	*	2.0	1.9	1.9	6.6	3.0	6.4
280.	*	2.0	1.9	1.9	6.4	3.1	5.9
285.	*	2.1	2.0	2.0	5.9	3.0	5.2
290.	*	2.1	2.0	2.0	5.5	2.9	4.8
295.	*	2.1	2.0	2.0	5.5	2.8	4.5
300.	*	2.1	2.0	2.1	5.3	3.0	4.3
305.	*	2.1	2.0	2.1	5.2	3.0	4.1
310.	*	2.1	2.0	2.1	5.1	3.1	3.9
315.	*	2.1	2.0	2.1	5.0	3.0	3.7
320.	*	2.0	2.1	2.1	5.0	3.1	3.7
325.	*	2.0	2.0	2.1	4.8	3.2	3.5
330.	*	2.0	1.9	2.1	4.8	3.0	3.6
335.	*	2.1	2.0	1.9	4.5	2.8	3.4
340.	*	2.1	2.0	1.9	4.5	2.8	3.3
345.	*	2.1	2.0	1.9	4.5	2.9	3.3
350.	*	2.1	2.2	1.9	4.5	2.9	3.3
355.	*	2.0	2.2	1.9	4.5	2.9	3.3
360.	*	1.9	2.4	1.9	4.4	2.9	3.3
5.	*	1.9	2.4	1.9	4.6	3.0	3.3
10.	*	1.9	2.3	1.9	4.6	3.0	3.3
15.	*	1.9	2.3	1.9	4.8	3.1	3.4
20.	*	1.9	2.2	2.0	5.0	3.1	3.5
25.	*	1.9	2.2	2.0	4.9	3.0	3.4
30.	*	1.9	2.2	2.0	5.0	2.8	3.7
35.	*	1.9	2.2	2.0	5.2	2.9	4.0
40.	*	1.9	2.2	1.9	5.2	3.2	4.1
45.	*	1.9	2.2	1.9	5.3	3.3	4.2

50.	*	1.9	2.2	1.9	5.8	3.4	4.3
55.	*	1.9	2.1	1.9	6.2	3.6	4.4
60.	*	1.9	2.1	1.9	6.7	3.5	4.5
65.	*	1.9	2.0	1.9	7.3	3.3	4.8
70.	*	1.9	2.0	1.9	7.6	3.2	5.3
75.	*	1.9	2.0	1.9	7.2	2.9	6.3
80.	*	1.9	2.1	2.0	6.3	2.6	7.1
85.	*	2.0	2.2	2.5	4.3	2.3	7.1
90.	*	2.2	2.7	3.0	3.4	2.4	5.0
95.	*	2.3	3.0	3.7	2.6	2.4	3.5
100.	*	2.6	3.4	3.6	2.4	2.4	2.7
105.	*	2.9	3.6	3.2	2.4	2.4	2.5

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: No Build: PM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
110.	3.0	3.2	2.9	2.5	2.5	2.3
115.	3.0	3.3	3.0	2.5	2.5	2.1
120.	3.0	3.2	3.3	2.5	2.5	2.1
125.	2.8	3.3	3.6	2.6	2.6	2.0
130.	2.8	3.2	3.9	2.6	2.7	2.0
135.	2.8	3.2	4.0	2.5	2.6	2.1
140.	2.8	3.2	3.9	2.4	2.4	2.0
145.	2.6	3.2	3.7	2.2	2.2	2.0
150.	2.9	3.7	3.3	2.0	2.0	2.0
155.	3.1	4.1	3.0	1.9	1.9	2.0
160.	3.3	4.8	2.9	1.9	1.9	2.0
165.	3.5	4.6	2.9	2.0	1.9	2.0
170.	3.4	4.4	2.9	2.0	1.9	2.0
175.	3.4	3.9	2.9	1.9	1.9	2.1
180.	3.6	3.2	2.9	1.9	1.9	2.1
185.	3.2	2.9	2.9	1.9	1.9	2.1
190.	2.9	2.9	2.9	1.9	1.9	2.1
195.	2.9	3.1	2.8	1.9	1.9	2.1
200.	3.0	3.1	2.8	1.9	1.9	2.1
205.	3.1	3.0	2.7	1.9	1.9	2.1
210.	3.1	3.0	2.7	2.0	1.9	2.1
215.	3.0	3.0	2.8	2.0	1.9	2.1
220.	3.0	3.1	2.9	2.0	1.9	2.0
225.	3.0	3.1	2.9	2.0	1.9	2.0
230.	3.0	3.1	2.9	2.0	1.9	2.0
235.	3.0	3.2	3.1	2.0	1.9	2.0
240.	3.0	3.2	3.1	2.0	1.9	2.1
245.	2.9	2.9	3.1	2.2	1.9	2.1
250.	2.7	2.8	2.9	2.5	1.9	2.3
255.	2.6	2.7	2.9	3.5	1.9	2.7
260.	2.4	2.5	2.5	5.9	2.0	3.5
265.	2.1	2.0	2.1	7.2	2.8	5.0
270.	2.0	1.9	1.9	7.2	3.4	6.1
275.	2.0	1.9	1.9	6.6	3.0	6.4
280.	2.0	1.9	1.9	6.4	3.1	5.9
285.	2.1	2.0	2.0	5.9	3.0	5.2
290.	2.1	2.0	2.0	5.5	2.9	4.8
295.	2.1	2.0	2.0	5.5	2.8	4.5
300.	2.1	2.0	2.1	5.3	3.0	4.3
305.	2.1	2.0	2.1	5.2	3.0	4.1

310.	*	2.1	2.0	2.1	5.1	3.1	3.9
315.	*	2.1	2.0	2.1	5.0	3.0	3.7
320.	*	2.0	2.1	2.1	5.0	3.1	3.7
325.	*	2.0	2.0	2.1	4.8	3.2	3.5
330.	*	2.0	1.9	2.1	4.8	3.0	3.6
335.	*	2.1	2.0	1.9	4.5	2.8	3.4
340.	*	2.1	2.0	1.9	4.5	2.8	3.3
345.	*	2.1	2.0	1.9	4.5	2.9	3.3
350.	*	2.1	2.2	1.9	4.5	2.9	3.3
355.	*	2.0	2.2	1.9	4.5	2.9	3.3
360.	*	1.9	2.4	1.9	4.4	2.9	3.3
365.	*	1.9	2.4	1.9	4.6	3.0	3.3

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: No Build: PM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
370.	* 1.9	2.3	1.9	4.6	3.0	3.3
375.	* 1.9	2.3	1.9	4.8	3.1	3.4
380.	* 1.9	2.2	2.0	5.0	3.1	3.5
385.	* 1.9	2.2	2.0	4.9	3.0	3.4
390.	* 1.9	2.2	2.0	5.0	2.8	3.7
395.	* 1.9	2.2	2.0	5.2	2.9	4.0
400.	* 1.9	2.2	1.9	5.2	3.2	4.1
405.	* 1.9	2.2	1.9	5.3	3.3	4.2
410.	* 1.9	2.2	1.9	5.8	3.4	4.3
415.	* 1.9	2.1	1.9	6.2	3.6	4.4
420.	* 1.9	2.1	1.9	6.7	3.5	4.5
425.	* 1.9	2.0	1.9	7.3	3.3	4.8
430.	* 1.9	2.0	1.9	7.6	3.2	5.3
435.	* 1.9	2.0	1.9	7.2	2.9	6.3
440.	* 1.9	2.1	2.0	6.3	2.6	7.1
445.	* 2.0	2.2	2.5	4.3	2.3	7.1
450.	* 2.2	2.7	3.0	3.4	2.4	5.0
455.	* 2.3	3.0	3.7	2.6	2.4	3.5
460.	* 2.6	3.4	3.6	2.4	2.4	2.7
465.	* 2.9	3.6	3.2	2.4	2.4	2.5
470.	* 3.0	3.2	2.9	2.5	2.5	2.3
475.	* 3.0	3.3	3.0	2.5	2.5	2.1
480.	* 3.0	3.2	3.3	2.5	2.5	2.1
485.	* 2.8	3.3	3.6	2.6	2.6	2.0
490.	* 2.8	3.2	3.9	2.6	2.7	2.0
495.	* 2.8	3.2	4.0	2.5	2.6	2.1
500.	* 2.8	3.2	3.9	2.4	2.4	2.0
505.	* 2.6	3.2	3.7	2.2	2.2	2.0
510.	* 2.9	3.7	3.3	2.0	2.0	2.0
515.	* 3.1	4.1	3.0	1.9	1.9	2.0
520.	* 3.3	4.8	2.9	1.9	1.9	2.0
525.	* 3.5	4.6	2.9	2.0	1.9	2.0
530.	* 3.4	4.4	2.9	2.0	1.9	2.0
535.	* 3.4	3.9	2.9	1.9	1.9	2.1
540.	* 3.6	3.2	2.9	1.9	1.9	2.1
545.	* 3.2	2.9	2.9	1.9	1.9	2.1
550.	* 2.9	2.9	2.9	1.9	1.9	2.1
555.	* 2.9	3.1	2.8	1.9	1.9	2.1
560.	* 3.0	3.1	2.8	1.9	1.9	2.1
565.	* 3.1	3.0	2.7	1.9	1.9	2.1

570.	*	3.1	3.0	2.7	2.0	1.9	2.1
575.	*	3.0	3.0	2.8	2.0	1.9	2.1
580.	*	3.0	3.1	2.9	2.0	1.9	2.0
585.	*	3.0	3.1	2.9	2.0	1.9	2.0
590.	*	3.0	3.1	2.9	2.0	1.9	2.0
595.	*	3.0	3.2	3.1	2.0	1.9	2.0
600.	*	3.0	3.2	3.1	2.0	1.9	2.1
605.	*	2.9	2.9	3.1	2.2	1.9	2.1
610.	*	2.7	2.8	2.9	2.5	1.9	2.3
615.	*	2.6	2.7	2.9	3.5	1.9	2.7
620.	*	2.4	2.5	2.5	5.9	2.0	3.5
625.	*	2.1	2.0	2.1	7.2	2.8	5.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: No Build: PM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)						
	1	2	3	4	5	6	
630.	*	2.0	1.9	1.9	7.2	3.4	6.1
635.	*	2.0	1.9	1.9	6.6	3.0	6.4
640.	*	2.0	1.9	1.9	6.4	3.1	5.9
645.	*	2.1	2.0	2.0	5.9	3.0	5.2
650.	*	2.1	2.0	2.0	5.5	2.9	4.8
655.	*	2.1	2.0	2.0	5.5	2.8	4.5
660.	*	2.1	2.0	2.0	5.2	3.0	4.3
665.	*	2.1	2.0	2.0	5.1	3.0	4.1
670.	*	2.1	2.0	2.0	5.1	3.1	3.9
675.	*	2.1	2.0	2.0	4.9	2.9	3.7
680.	*	2.0	2.0	2.0	4.9	3.0	3.7
685.	*	2.0	1.9	2.0	4.7	3.1	3.5
690.	*	2.0	1.9	2.0	4.7	2.9	3.6
695.	*	2.1	2.0	1.9	4.4	2.8	3.4
700.	*	2.1	2.0	1.9	4.5	2.8	3.3
705.	*	2.1	2.0	1.9	4.5	2.9	3.3
710.	*	2.1	2.2	1.9	4.5	2.9	3.3
715.	*	2.0	2.2	1.9	4.5	2.9	3.3
720.	*	1.9	2.4	1.9	4.4	2.9	3.3
725.	*	1.9	2.4	1.9	4.6	3.0	3.3
730.	*	1.9	2.3	1.9	4.6	3.0	3.3
735.	*	1.9	2.3	1.9	4.7	3.1	3.4
740.	*	1.9	2.2	2.0	4.8	3.1	3.5
745.	*	1.9	2.2	2.0	4.8	3.0	3.4
750.	*	1.9	2.2	2.0	4.8	2.7	3.6
755.	*	1.9	2.2	2.0	4.9	2.7	3.7
760.	*	1.9	2.2	1.9	4.9	3.0	3.8
765.	*	1.9	2.2	1.9	4.9	3.0	3.8
770.	*	1.9	2.2	1.9	5.1	3.1	3.9
775.	*	1.9	2.1	1.9	5.4	3.1	4.0
780.	*	1.9	2.1	1.9	5.5	3.0	4.0
785.	*	1.9	2.0	1.9	5.6	3.0	4.2
790.	*	1.9	2.0	1.9	5.4	3.0	4.5
795.	*	1.9	2.0	1.9	4.9	2.9	5.0
800.	*	1.9	2.2	2.1	3.9	2.6	5.3
805.	*	2.5	2.4	2.4	2.7	2.3	4.9
810.	*	2.5	2.5	2.7	2.4	2.3	3.3
815.	*	2.6	2.7	3.0	2.2	2.3	2.5
820.	*	2.7	2.9	3.0	2.1	2.3	2.1
825.	*	2.9	3.0	2.8	2.1	2.3	2.1

830.	*	2.9	2.8	2.7	2.1	2.3	2.1
835.	*	2.9	2.9	2.9	2.1	2.3	2.1
840.	*	2.9	2.9	3.0	2.1	2.4	2.1
845.	*	2.8	2.8	3.1	2.2	2.4	2.1
850.	*	2.8	2.8	3.2	2.2	2.4	2.1
855.	*	2.8	2.8	3.3	2.1	2.3	2.1
860.	*	2.8	2.8	3.2	2.1	2.2	2.1
865.	*	2.7	2.8	3.2	2.0	2.2	2.1
870.	*	2.8	3.0	3.0	2.0	2.2	2.1
875.	*	2.8	3.0	2.9	2.0	1.9	2.1
880.	*	2.8	3.3	2.9	2.0	1.9	2.1
885.	*	2.9	3.3	2.9	2.0	1.9	2.1

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: No Build: PM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
890.	* 2.8	3.4	2.9	2.0	1.9	2.1
895.	* 2.9	3.2	2.9	2.0	1.9	2.1
900.	* 2.8	2.9	2.9	2.0	1.9	2.1
905.	* 2.8	2.7	2.9	2.0	1.9	2.1
910.	* 2.8	2.7	2.9	2.0	1.9	2.1
915.	* 3.0	2.6	2.9	2.0	1.9	2.1
920.	* 3.0	2.6	2.9	2.0	1.9	2.1
925.	* 3.0	2.6	2.9	2.0	1.9	2.1
930.	* 2.9	2.6	2.9	2.0	1.9	2.1
935.	* 2.8	2.6	2.9	2.0	1.9	2.1
940.	* 2.8	2.6	2.9	2.0	1.9	2.1
945.	* 2.8	2.6	2.9	2.0	1.9	2.1
950.	* 2.8	2.6	2.9	2.0	1.9	2.1
955.	* 2.8	2.6	2.9	2.0	1.9	2.1
960.	* 2.8	2.6	2.9	2.0	1.9	2.1
965.	* 2.8	2.6	2.9	2.0	1.9	2.1
970.	* 2.8	2.6	2.9	2.0	1.9	2.1
975.	* 2.8	2.6	3.0	2.0	1.9	2.1
980.	* 2.8	2.1	2.1	4.0	2.7	2.1
985.	* 2.0	1.9	1.9	4.5	2.9	2.1
990.	* 2.0	1.9	1.9	4.6	2.9	3.3
995.	* 2.0	1.9	1.9	4.6	2.9	3.3
****	* 2.0	1.9	1.9	4.6	2.9	3.3
****	* 2.0	1.9	1.9	4.6	2.9	3.3
****	* 2.0	1.9	1.9	4.6	2.9	3.3
****	* 2.0	1.9	1.9	4.6	2.9	3.3
****	* 2.0	1.9	1.9	4.6	2.9	3.3
****	* 2.0	1.9	1.9	4.6	2.9	3.3
****	* 2.0	1.9	1.9	4.6	2.9	3.3
****	* 2.0	1.9	1.9	4.6	2.9	3.3
****	* 2.0	1.9	1.9	4.6	2.9	3.3
****	* 2.0	1.9	1.9	4.6	2.9	3.3
****	* 2.0	1.9	1.9	4.6	2.9	3.3
****	* 2.0	1.9	1.9	4.6	3.3	3.3
****	* 2.0	1.9	1.9	4.6	3.3	3.3
****	* 2.0	1.9	1.9	4.6	3.3	3.3
****	* 2.0	1.9	1.9	4.6	3.3	3.3
****	* 2.0	1.9	1.9	4.6	3.3	3.3
****	* 2.0	1.9	1.9	4.6	3.3	3.3
****	* 2.0	1.9	1.9	4.6	3.3	3.3
****	* 1.9	2.0	1.9	4.5	3.3	3.3
****	* 1.9	2.0	1.9	4.5	3.3	3.3

****	*	1.9	2.0	1.9	4.5	3.3	3.3
****	*	1.9	2.0	1.9	4.5	3.3	3.3
****	*	1.9	2.0	1.9	4.5	3.3	3.3
****	*	1.9	2.0	1.9	4.5	3.3	3.3
****	*	1.9	2.0	1.9	4.5	3.3	3.3
****	*	1.9	2.0	1.9	4.5	3.3	3.3
****	*	1.9	2.0	1.9	4.5	3.3	3.3
****	*	1.9	2.0	1.9	4.5	3.3	3.3
****	*	1.9	2.0	1.9	4.5	3.3	3.3
****	*	1.9	2.0	1.9	4.5	3.3	3.3
****	*	1.9	2.0	1.9	4.5	3.3	3.3

****	*	2.0	1.9	1.9	4.6	2.9	3.3
****	*	2.0	1.9	1.9	4.6	2.9	3.3
****	*	2.0	1.9	1.9	4.6	2.9	3.3
****	*	2.0	1.9	1.9	4.6	2.9	3.3
****	*	2.0	1.9	1.9	4.6	2.9	3.3
****	*	2.0	1.9	1.9	4.6	2.9	3.3
****	*	2.0	1.9	1.9	4.6	2.9	3.3
****	*	2.0	1.9	1.9	4.6	2.9	3.3
****	*	2.0	1.9	1.9	4.6	2.9	3.3
****	*	2.0	1.9	1.9	4.6	2.9	3.3
****	*	2.0	1.9	1.9	4.6	2.9	3.3
****	*	2.0	1.9	1.9	4.6	2.9	3.3

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: No Build: PM

WIND ANGLE (DEGR)	* CONCENTRATION (PPM)					
	1	2	3	4	5	6
****	2.0	1.9	1.9	4.6	2.9	3.3
****	2.0	1.9	1.9	4.6	3.3	3.3
MAX	3.6	4.8	4.0	7.6	3.6	7.1
DEGR.	180	160	135	70	55	80

THE HIGHEST CONCENTRATION OF 7.60 PPM OCCURRED AT RECEPTOR 4.

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: No Build: PM

DATE : 5/18/12

TIME : 15:20: 7

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

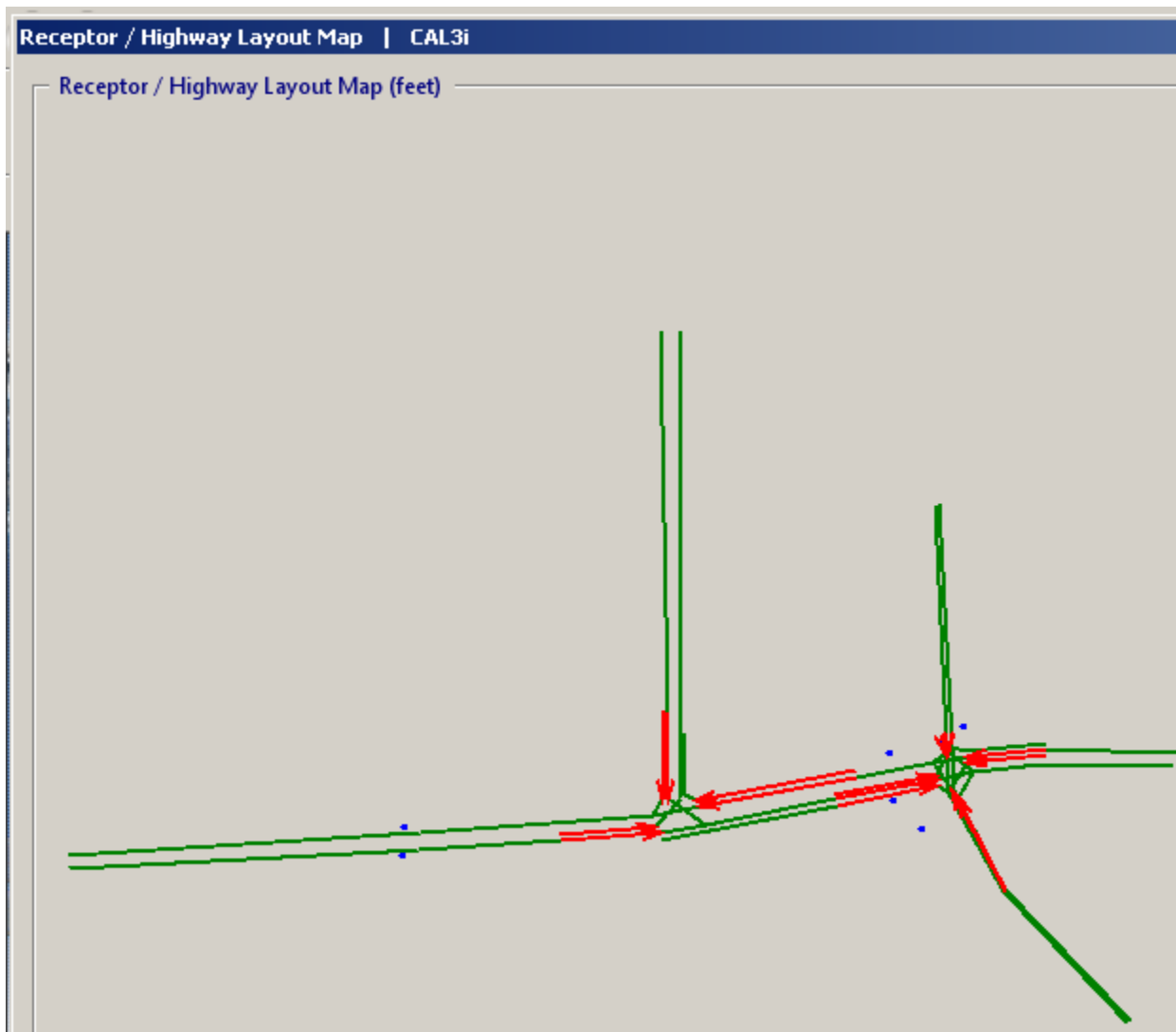
LINK #	*	CO/LINK (PPM)					
		180	160	135	70	55	80
		ANGLE (DEGREES)					
		1	2	3	4	5	6
1	*	0.0	0.0	0.0	0.0	0.0	0.0
2	*	0.0	0.0	0.0	0.0	0.0	0.3
3	*	0.0	0.0	0.0	0.0	0.0	1.4
4	*	0.0	0.0	0.0	0.0	0.0	0.1
5	*	0.0	0.0	0.0	0.0	0.0	0.0
6	*	0.0	0.0	0.0	0.0	0.0	0.0
7	*	0.0	0.0	0.0	0.0	0.0	0.1
8	*	0.0	0.0	0.2	1.1	0.0	0.0
9	*	0.1	0.1	0.0	0.2	0.0	0.0
10	*	0.1	0.1	0.0	0.1	0.2	0.0
11	*	0.0	0.0	0.0	0.1	0.1	0.0
12	*	0.0	0.0	0.0	0.0	0.0	0.0
13	*	0.0	0.0	0.0	0.0	0.0	0.0
14	*	0.0	0.0	0.0	0.0	0.0	0.0
15	*	0.0	0.0	0.0	0.0	0.0	0.0
16	*	0.0	0.0	0.0	0.4	0.0	0.0
17	*	0.0	0.0	0.0	0.0	0.0	0.0
18	*	0.0	0.0	0.0	0.0	0.0	0.0
19	*	0.0	0.0	0.0	0.0	0.0	0.0
20	*	0.0	0.0	0.0	0.1	0.2	0.1
21	*	0.2	0.1	0.0	0.3	0.1	0.0
22	*	0.1	0.2	0.0	0.2	0.0	0.0
23	*	0.0	0.0	0.4	0.4	0.0	0.1
24	*	0.0	0.0	0.0	0.0	0.0	0.1
25	*	0.0	0.0	0.0	0.0	0.0	0.3
26	*	0.0	0.0	0.0	0.0	0.0	0.5
27	*	0.0	0.0	0.0	0.0	0.0	1.8
28	*	0.0	0.0	0.0	0.0	0.0	0.0
29	*	0.0	0.0	0.0	0.0	0.0	0.0
30	*	0.0	0.0	0.0	0.0	0.0	0.0
31	*	0.0	0.0	0.0	0.0	0.0	0.0
32	*	0.0	0.0	0.0	0.0	0.0	0.0

33	*	0.0	0.0	0.0	0.0	0.0	0.0
34	*	0.0	0.0	0.0	0.0	0.0	0.0
35	*	0.0	0.0	0.0	0.0	0.0	0.0
36	*	0.0	0.0	0.0	0.0	0.0	0.0
37	*	0.0	0.0	0.0	0.0	0.0	0.0
38	*	0.0	0.0	0.0	0.0	0.0	0.0
39	*	0.0	0.0	0.0	0.0	0.0	0.0
40	*	0.0	0.0	0.0	0.0	0.0	0.1
41	*	0.0	0.0	0.0	0.0	0.0	0.0
42	*	0.0	0.1	0.1	0.0	0.0	0.0
43	*	0.0	0.0	0.0	0.0	0.0	0.0
44	*	0.0	0.0	0.0	0.0	0.0	0.0
45	*	0.0	0.0	0.0	0.0	0.0	0.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: No Build: PM

LINK #	CO/LINK (PPM)					
	ANGLE (DEGREES)					
*	1	2	3	4	5	6
*	180	160	135	70	55	80
46	0.0	0.2	0.0	0.0	0.0	0.0
47	0.0	0.0	0.0	0.0	0.0	0.0
48	0.1	0.2	0.2	0.0	0.1	0.0
49	0.0	0.0	0.0	0.1	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0
51	0.0	0.0	0.0	0.0	0.0	0.0
52	0.0	0.1	0.0	0.0	0.0	0.0
53	0.0	0.0	0.0	0.0	0.0	0.0
54	0.0	0.0	0.0	0.0	0.0	0.0
55	0.1	0.1	0.1	0.0	0.0	0.0
56	0.0	0.0	0.0	0.0	0.0	0.0
57	0.0	0.0	0.0	0.0	0.0	0.0
58	0.0	0.0	0.0	0.0	0.0	0.0
59	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0
61	0.0	0.0	0.0	0.0	0.0	0.0
62	0.0	0.0	0.0	0.0	0.0	0.0
63	0.2	0.2	0.2	1.0	0.3	0.2
64	0.0	0.0	0.0	0.0	0.0	0.0
65	0.0	0.0	0.0	0.0	0.0	0.0
66	0.0	0.0	0.1	0.2	0.0	0.0
67	0.0	0.0	0.2	1.0	0.0	0.0
68	0.0	0.0	0.0	0.0	0.0	0.0
69	0.2	0.1	0.0	0.5	0.3	0.1
70	0.0	0.0	0.0	0.0	0.0	0.0
71	0.1	0.1	0.0	0.0	0.1	0.0
72	0.5	1.1	0.6	0.0	0.3	0.0
73	0.0	0.2	0.0	0.0	0.0	0.0
74	0.0	0.0	0.0	0.0	0.0	0.0
75	0.0	0.0	0.0	0.0	0.0	0.0



'Rte. 1 Ft. Belvoir',60,11.4,0,0,8,0.3048,1,0
'1: 9140 Richmond Hwy',11865556.75,6944171.42,5
'2: 9136 Backlick Rd.',11865461.31,6944097.204,5
'3: 9135 Anderson Ln.',11865185.29,6944043.604,5
'4: Bus Stop @Rte. 1',11865210.63,6943809.932,5
'5: E.K. HmlsShelter',11865345.82,6943660.265,5
'6: Accotink Creek',11862781.25,6943530.096,5
'7: Path @Creek',11862790.72,6943671.602,12.5
'8: Sidewalk @Creek',11862781.25,6943530.096,12.5
'FCP to Backlick: 2020: Build: AM',73,1,1,'CO'
1
'Rte 1 EB W of Bridge','AG',11861128.64,6943466.12,11862702.83,6943556.885,2860,14.28,0,56
1
'Rte 1 EB Accotink Br','BR',11862702.83,6943556.885,11862854.19,6943565.992,2860,14.28,7.5,56
1
'Rte 1 EB E of Bridge','AG',11862854.19,6943565.992,11863552.7,6943610.856,2860,14.28,0,56
1
'Rte 1 EB FCP ApprThr','AG',11863552.7,6943610.856,11864054.37,6943643.078,2561,14.28,0,56
1
'Rte 1 EB FCP IntThru','AG',11864054.37,6943643.07,11864278.80,6943686.831,2561,14.28,0,56
1
'Rte 1 EB FCP Dptr TL','AG',11864278.80,6943686.831,11864915.72,6943811,2054,14.28,0,56
1
'Rte 1 EB E Bklk Thru','AG',11864915.72,6943811,11865419.3,6943907.876,2039,14.28,0,56
1
'Rte 1 EB E Bklk IntT','AG',11865419.30,6943907.876,11865600.84,6943941.864,2039,14.66,0,56
1
'Rte 1 EB E Bklk Dprt','AG',11865600.84,6943941.864,11865859.19,6943971.704,2156,14.66,0,56
1
'Rte 1 EB E Bklk Dpt2','AG',11865859.19,6943971.704,11866598.65,6943970.132,2156,14.66,0,56
1
'Rte 1 EB W FCP L AD1','AG',11863547.34,6943636.127,11864023.44,6943669.506,299,16.17,0,44
1
'Rte 1 EB W FCP L AD2','AG',11864023.44,6943669.506,11864154.4,6943817.232,299,16.17,0,44

1
'FCP NB N Rte 1 L Dpt', 'AG', 11864154, 6943817.159, 11864153.39, 6944136.644, 299, 16.17, 0, 44
1
'Rte 1 EB E FCR R Dpt', 'AG', 11864055.59, 6943611.433, 11864923.78, 6943779.19, 1499, 14.28, 0, 44
1
'Rte 1 EB W Bklk R Ap', 'AG', 11864923.78, 6943779.193, 11865423.96, 6943875.844, 1499, 24.08, 0, 44
1
'Rte 1 EB @Bklk R Int', 'AG', 11865423.96, 6943875.84, 11865476.96, 6943844.283, 1499, 24.08, 0, 44
1
'Rte 1 EB W Bklk L Ap', 'AG', 11864911.19, 6943834.264, 11865414.04, 6943931.56, 15, 16.17, 0, 32
1
'Rte 1 EB @Bklk L In', 'AG', 11865414.04, 6943931.56, 11865495.67, 6944064.775, 15, 16.17, 0, 32
1
'Rte 1 WB E Bklk', 'AG', 11866600.39, 6944040.608, 11865960.58, 6944055.74, 1806, 15.07, 0, 56
1
'Rte 1 WB E Bklk Thru', 'AG', 11865960.58, 6944055.74, 11865575.09, 6944020.857, 1668, 15.07, 0, 56
1
'Rte 1 WB @Bklk Int', 'AG', 11865575.09, 6944020.857, 11865407.07, 6943989.484, 1668, 15.07, 0, 56
1
'Rte 1 WB W Bklk Dptr', 'AG', 11865407.07, 6943989.48, 11865023.91, 6943918.288, 1809, 15.07, 0, 56
1
'Rte 1 WB E FCP Thru', 'AG', 11865023.91, 6943918.288, 11864249.4, 6943774.376, 978, 15.07, 0, 56
1
'Rte 1 WB @FCP Thru', 'AG', 11864249.4, 6943774.376, 11864015.6, 6943733.292, 978, 15.49, 0, 56
1
'Rte 1 WB FCP-Br All', 'AG', 11864015.6, 6943733.29, 11862861.268, 6943647.232, 997, 15.49, 0, 56
1
'Rte 1 WB @Br All', 'BR', 11862861.27, 6943647.232, 11862709.64, 6943635.127, 997, 15.49, 7.5, 56
1
'Rte 1 WB W Br All', 'AG', 11862709.64, 6943635.127, 11861123.04, 6943536.54, 997, 15.49, 0, 56
1
'Rte 1 WB E Bklk L Ap', 'AG', 11865956.28, 6944032.676, 11865577.72, 6943996.647, 118, 24.08, 0, 32
1
'Rte 1 WB @Bklk L Int', 'AG', 11865577.72, 6943996.64, 11865476.96, 6943844.283, 118, 24.08, 0, 32

1
'Rte 1 WB E FCP R Apr', 'AG', 11865018.73, 6943952.546, 11864236.75, 6943806.405, 831, 16.17, 0, 44
1
'Rte 1 WB @FCP R Int', 'AG', 11864236.75, 6943806.40, 11864172.73, 6943837.47, 831, 16.17, 0, 44
1
'FCP NB N Rte 1 Mrg', 'AG', 11864172.73, 6943837.47, 11864167.14, 6944139.352, 831, 16.17, 0, 44
1
'FCP SB N Rte 1 All', 'AG', 11864058.5, 6946128.75, 11864087.48, 6944232.866, 1011, 15.49, 0, 44
1
'FCP SB N Rte 1 L Apr', 'AG', 11864087.48, 6944232.866, 11864088.55, 6943810.986, 992, 16.17, 0, 56
1
'FCP SB @Rte 1 L Int', 'AG', 11864088.55, 6943810.986, 11864278.8, 6943686.831, 992, 16.17, 0, 56
1
'FCP N Rte 1 SB R Apr', 'AG', 11864075.67, 6944253.437, 11864067.57, 6943811.23, 19, 16.17, 0, 44
1
'FCP @Rte 1 SB R Int', 'AG', 11864067.57, 6943811.23, 11864015.6, 6943733.292, 19, 16.17, 0, 44
1
'FCP NB N Rte 1 All', 'AG', 11864153.39, 6944136.644, 11864146, 6946133, 1130, 15.49, 0, 44
1
'Phck NB S Rte 1 All', 'AG', 11866378.38, 6942718.386, 11865761.58, 6943360.797, 105, 14.27, 0, 32
1
'Phck NB S Rte 1 T-R', 'AG', 11865761.58, 6943360.797, 11865529.37, 6943811.457, 19, 14.27, 0, 32
1
'Phck NB S Rte 1 Thru', 'AG', 11865529.37, 6943811.457, 11865506.52, 6943855.812, 10, 14.27, 0, 32
1
'Bklk NB @Rte 1 Thru', 'AG', 11865506.52, 6943855.812, 11865495.6, 6944064.775, 10, 14.27, 0, 32
1
'Bklk NB N Rte 1 All', 'AG', 11865495.67, 6944064.775, 11865432.72, 6945277.292, 45, 14.27, 0, 32
1
'Rte 1 WB @Bklk R Apr', 'AG', 11865956.42, 6944082.398, 11865567.57, 6944046.84, 20, 16.17, 0, 32
1
'Rte 1 WB @Bklk R Int', 'AG', 11865567.57, 6944046.84, 11865495.67, 6944064.775, 20, 16.17, 0, 32
1
'Phck NB S Rte 1 L Ap', 'AG', 11865758.06, 6943359.111, 11865496.19, 6943851.734, 86, 16.17, 0, 32

1
 'Phck NB @Rte 1 L Int', 'AG', 11865496.19, 6943851.734, 11865407.07, 6943989.484, 86, 16.17, 0, 32
 1
 'Phck NB @Rte 1 R Int', 'AG', 11865529.37, 6943811.457, 11865600.84, 6943941.864, 9, 16.17, 0, 32
 1
 'Bklk N Rte 1 SB All', 'AG', 11865413.52, 6945271.373, 11865466.4, 6944080.638, 219, 18.17, 0, 32
 1
 'Bklk N Rte 1 SB Thru', 'AG', 11865466.45, 6944080.638, 11865468.11, 6944043.266, 56, 18.17, 0, 32
 1
 'Bklk @Rte 1 SB Thru', 'AG', 11865468.11, 6944043.266, 11865476.96, 6943844.283, 56, 18.17, 0, 32
 1
 'Bklk SB S Rte 1 All1', 'AG', 11865476.96, 6943844.283, 11865749.55, 6943353.851, 1673, 18.17, 0, 32
 1
 'Bklk SB S Rte 1 All2', 'AG', 11865749.55, 6943353.851, 11866363.31, 6942706.632, 1673, 18.17, 0, 32
 1
 'Bklk SB N Rte 1 R Ap', 'AG', 11865454.69, 6944081.666, 11865456.88, 6944042.956, 55, 18.17, 0, 32
 1
 'Bklk SB N Rte 1 R In', 'AG', 11865456.88, 6944042.956, 11865407.07, 6943989.484, 55, 18.17, 0, 32
 1
 'Bklk SB N Rte 1 L Ap', 'AG', 11865474.92, 6944081.575, 11865475.55, 6944044.993, 108, 18.17, 0, 32
 1
 'Bklk SB N Rte 1 L In', 'AG', 11865475.55, 6944044.993, 11865600.84, 6943941.86, 108, 18.17, 0, 32
 2
 'Q Rte 1 EB W FCP Thr', 'AG', 11864054.37, 6943643.078, 11863552.7, 6943610.856, 0, 36, 3
 180, 62.3, 6.5, 2561, 88.96, 1695, 2, 3
 2
 'Q Rte 1 EB W FCP L', 'AG', 11864023.44, 6943669.506, 11863547.34, 6943636.127, 0, 24, 2
 180, 158.3, 7, 299, 88.96, 1716, 2, 3
 2
 'Q Rte 1 WB E FCP Thr', 'AG', 11864249.4, 6943774.376, 11865023.91, 6943918.288, 0, 36, 3
 180, 91, 6.5, 978, 88.96, 1695, 2, 3
 2
 'Q FCP SB N Rte 1 L', 'AG', 11864088.55, 6943810.986, 11864087.48, 6944232.866, 0, 36, 3
 180, 131.2, 7, 992, 88.96, 1663, 2, 3

2
'Q FCP SB N Rte 1 R', 'AG', 11864067.57, 6943811.23, 11864075.67, 6944253.437, 0, 24, 2
180, 109.5, 7, 19, 88.96, 1393, 2, 3
2
'Q Rte 1 WB E FCP R', 'AG', 11864236.75, 6943806.405, 11865018.73, 6943952.546, 0, 24, 2
180, 35.7, 0, 831, 88.96, 1393, 2, 3
2
'Q Rte 1 EB W Bklk R', 'AG', 11865423.96, 6943875.844, 11864923.78, 6943779.193, 0, 24, 2
180, 75.8, 7, 1499, 88.96, 1393, 2, 3
2
'Q Rte 1 EB W Bklk T', 'AG', 11865419.3, 6943907.876, 11864915.72, 6943811, 0, 36, 3
180, 75.8, 7, 2039, 88.96, 1695, 2, 3
2
'Rte 1 EB W Bklk L Ap', 'AG', 11865414.04, 6943931.56, 11864911.19, 6943834.264, 0, 12, 1
180, 175.3, 4.7, 15, 88.96, 1770, 2, 3
2
'Q Rte 1 WB E Bklk Th', 'AG', 11865575.09, 6944020.857, 11865960.58, 6944055.74, 0, 36, 3
180, 62.1, 7, 1668, 88.96, 1695, 2, 3
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'Q Rte 1 WB E Bklk L', 'AG', 11865577.72, 6943996.647, 11865956.28, 6944032.676, 0, 12, 1
180, 161.6, 6.5, 118, 88.96, 1770, 2, 3
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'Q Phck NB S Rte 1 TR', 'AG', 11865529.37, 6943811.457, 11865761.58, 6943360.797, 0, 12, 1
180, 168.7, 6, 19, 88.96, 1730, 2, 3
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'Q Phck NB S Rte 1 L', 'AG', 11865496.19, 6943851.734, 11865758.06, 6943359.111, 0, 24, 2
180, 168.7, 6, 86, 88.96, 1716, 2, 3
2
'Q Bklk SB N Rte 1 L', 'AG', 11865475.55, 6944044.993, 11865474.92, 6944081.576, 0, 12, 1
180, 160.4, 7, 108, 88.96, 1593, 2, 3
2
'Q Bklk SB N Rte 1 T', 'AG', 11865468.11, 6944043.266, 11865466.45, 6944080.638, 0, 12, 1
180, 160.4, 7, 56, 88.96, 1676, 2, 3
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'Q Bklk SB N Rte 1 R', 'AG', 11865456.88, 6944042.956, 11865454.69, 6944081.666, 0, 12, 1
180, 160.4, 7, 55, 88.96, 1478, 2, 3
1, 0, 5, 1000, 1.9, 'Y', 5, 0, 355

'Rte. 1 Ft. Belvoir',60,11.4,0,0,8,0.3048,1,0
'1: 9140 Richmond Hwy',11865556.75,6944171.42,5
'2: 9136 Backlick Rd.',11865461.31,6944097.204,5
'3: 9135 Anderson Ln.',11865185.29,6944043.604,5
'4: Bus Stop @Rte. 1',11865210.63,6943809.932,5
'5: E.K. HmlsShelter',11865345.82,6943660.265,5
'6: Accotink Creek',11862781.25,6943530.096,5
'7: Path @Creek',11862790.72,6943671.602,12.5
'8: Sidewalk @Creek',11862781.25,6943530.096,12.5
'FCP to Backlick: 2020: Build: PM',73,1,1,'CO'
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'Rte 1 EB W of Bridge','AG',11861128.64,6943466.12,11862702.83,6943556.885,1449,15.07,0,56
1
'Rte 1 EB Accotink Br','BR',11862702.83,6943556.885,11862854.19,6943565.992,1449,15.07,7.5,56
1
'Rte 1 EB E of Bridge','AG',11862854.19,6943565.992,11863552.7,6943610.856,1449,15.07,0,56
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'Rte 1 EB FCP ApprThr','AG',11863552.7,6943610.856,11864054.37,6943643.078,1317,15.07,0,56
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'Rte 1 EB FCP IntThru','AG',11864054.37,6943643.07,11864278.80,6943686.831,1317,15.07,0,56
1
'Rte 1 EB FCP Dptr TL','AG',11864278.80,6943686.831,11864915.72,6943811,1614,15.07,0,56
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'Rte 1 EB W Bklk Thru','AG',11864915.72,6943811,11865419.3,6943907.876,1529,15.07,0,56
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'Rte 1 EB W Bklk IntT','AG',11865419.30,6943907.876,11865600.84,6943941.864,1529,14.66,0,56
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'Rte 1 EB E Bklk Dprt','AG',11865600.84,6943941.864,11865859.19,6943971.704,1594,14.66,0,56
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'Rte 1 EB E Bklk Dpt2','AG',11865859.19,6943971.704,11866598.65,6943970.132,1594,14.66,0,56
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'Rte 1 EB W FCP L AD1','AG',11863547.34,6943636.127,11864023.44,6943669.506,132,16.17,0,44
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'FCP NB N Rte 1 L Dpt', 'AG', 11864154, 6943817.159, 11864153.39, 6944136.644, 132, 16.17, 0, 44
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'Rte 1 EB E FCR R Dpt', 'AG', 11864055.59, 6943611.433, 11864923.78, 6943779.19, 289, 15.07, 0, 44
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'Rte 1 EB W Bklk R Ap', 'AG', 11864923.78, 6943779.193, 11865423.96, 6943875.844, 289, 16.17, 0, 44
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'Rte 1 EB @Bklk R Int', 'AG', 11865423.96, 6943875.84, 11865476.96, 6943844.283, 289, 16.17, 0, 44
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'Rte 1 EB W Bklk L Ap', 'AG', 11864911.19, 6943834.264, 11865414.04, 6943931.56, 85, 16.17, 0, 32
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'Rte 1 WB E Bklk', 'AG', 11866600.39, 6944040.608, 11865960.58, 6944055.74, 2320, 14.66, 0, 56
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'Rte 1 WB E Bklk Thru', 'AG', 11865960.58, 6944055.74, 11865575.09, 6944020.857, 2149, 14.66, 0, 56
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'Rte 1 WB W Bklk Dptr', 'AG', 11865407.07, 6943989.48, 11865023.91, 6943918.288, 2884, 14.27, 0, 56
1
'Rte 1 WB E FCP Thru', 'AG', 11865023.91, 6943918.288, 11864249.4, 6943774.376, 2267, 14.27, 0, 56
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'Rte 1 WB @FCP Thru', 'AG', 11864249.4, 6943774.376, 11864015.6, 6943733.292, 2267, 15.14, 0, 56
1
'Rte 1 WB FCP-Br All', 'AG', 11864015.6, 6943733.29, 11862861.268, 6943647.232, 3332, 15.14, 0, 56
1
'Rte 1 WB @Br All', 'BR', 11862861.27, 6943647.232, 11862709.64, 6943635.127, 3332, 15.14, 7.5, 56
1
'Rte 1 WB W Br All', 'AG', 11862709.64, 6943635.127, 11861123.04, 6943536.54, 3332, 15.14, 0, 56
1
'Rte 1 WB E Bklk L Ap', 'AG', 11865956.28, 6944032.676, 11865577.72, 6943996.647, 9, 16.17, 0, 32
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'Rte 1 WB @Bklk L Int', 'AG', 11865577.72, 6943996.64, 11865476.96, 6943844.283, 9, 16.17, 0, 32

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'Rte 1 WB E FCP R Apr', 'AG', 11865018.73, 6943952.546, 11864236.75, 6943806.405, 617, 16.17, 0, 44
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'Rte 1 WB @FCP R Int', 'AG', 11864236.75, 6943806.40, 11864172.73, 6943837.47, 617, 16.17, 0, 44
1
'FCP NB N Rte 1 Mrg', 'AG', 11864172.73, 6943837.47, 11864167.14, 6944139.352, 617, 16.17, 0, 44
1
'FCP SB N Rte 1 All', 'AG', 11864058.5, 6946128.75, 11864087.48, 6944232.866, 1651, 15.07, 0, 44
1
'FCP SB N Rte 1 L Apr', 'AG', 11864087.48, 6944232.866, 11864088.55, 6943810.986, 586, 16.17, 0, 56
1
'FCP SB @Rte 1 L Int', 'AG', 11864088.55, 6943810.986, 11864278.8, 6943686.831, 586, 16.17, 0, 56
1
'FCP N Rte 1 SB R Apr', 'AG', 11864075.67, 6944253.437, 11864067.57, 6943811.23, 1065, 16.17, 0, 44
1
'FCP @Rte 1 SB R Int', 'AG', 11864067.57, 6943811.23, 11864015.6, 6943733.292, 1065, 16.17, 0, 44
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'FCP NB N Rte 1 All', 'AG', 11864153.39, 6944136.644, 11864146, 6946133, 749, 15.49, 0, 44
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'Phck NB S Rte 1 All', 'AG', 11866378.38, 6942718.386, 11865761.58, 6943360.797, 781, 15.14, 0, 32
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'Phck NB S Rte 1 T-R', 'AG', 11865761.58, 6943360.797, 11865529.37, 6943811.457, 61, 15.14, 0, 32
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'Phck NB S Rte 1 Thru', 'AG', 11865529.37, 6943811.457, 11865506.52, 6943855.812, 47, 15.14, 0, 32
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'Bklk NB @Rte 1 Thru', 'AG', 11865506.52, 6943855.812, 11865495.6, 6944064.775, 47, 15.14, 0, 32
1
'Bklk NB N Rte 1 All', 'AG', 11865495.67, 6944064.775, 11865432.72, 6945277.292, 294, 15.14, 0, 32
1
'Rte 1 WB @Bklk R Apr', 'AG', 11865956.42, 6944082.398, 11865567.57, 6944046.84, 162, 16.17, 0, 32
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'Rte 1 WB @Bklk R Int', 'AG', 11865567.57, 6944046.84, 11865495.67, 6944064.775, 162, 16.17, 0, 32
1
'Phck NB S Rte 1 L Ap', 'AG', 11865758.06, 6943359.111, 11865496.19, 6943851.734, 720, 16.17, 0, 32

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 'Phck NB @Rte 1 L Int', 'AG', 11865496.19, 6943851.734, 11865407.07, 6943989.484, 720, 16.17, 0, 32
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 'Phck NB @Rte 1 R Int', 'AG', 11865529.37, 6943811.457, 11865600.84, 6943941.864, 14, 16.17, 0, 32
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 'Bklk N Rte 1 SB All', 'AG', 11865413.52, 6945271.373, 11865466.4, 6944080.638, 77, 14.28, 0, 32
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 'Bklk N Rte 1 SB Thru', 'AG', 11865466.45, 6944080.638, 11865468.11, 6944043.266, 11, 14.28, 0, 32
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 'Bklk SB S Rte 1 All2', 'AG', 11865749.55, 6943353.851, 11866363.31, 6942706.632, 309, 14.28, 0, 32
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 'Bklk SB N Rte 1 R Ap', 'AG', 11865454.69, 6944081.666, 11865456.88, 6944042.956, 15, 16.17, 0, 32
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 'Bklk SB N Rte 1 R In', 'AG', 11865456.88, 6944042.956, 11865407.07, 6943989.484, 15, 16.17, 0, 32
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 'Bklk SB N Rte 1 L Ap', 'AG', 11865474.92, 6944081.575, 11865475.55, 6944044.993, 51, 16.17, 0, 32
 1
 'Bklk SB N Rte 1 L In', 'AG', 11865475.55, 6944044.993, 11865600.84, 6943941.86, 51, 16.17, 0, 32
 2
 'Q Rte 1 EB W FCP Thr', 'AG', 11864054.37, 6943643.078, 11863552.7, 6943610.856, 0, 36, 3
 180, 73.5, 6.5, 1317, 88.96, 1695, 2, 3
 2
 'Q Rte 1 EB W FCP L', 'AG', 11864023.44, 6943669.506, 11863547.34, 6943636.127, 0, 24, 2
 180, 172, 7, 132, 88.96, 1716, 2, 3
 2
 'Q Rte 1 WB E FCP Thr', 'AG', 11864249.4, 6943774.376, 11865023.91, 6943918.288, 0, 36, 3
 180, 89.5, 6.5, 2267, 88.96, 1695, 2, 3
 2
 'Q FCP SB N Rte 1 L', 'AG', 11864088.55, 6943810.986, 11864087.48, 6944232.866, 0, 36, 3
 180, 120, 7, 586, 88.96, 1663, 2, 3

2
 'Q FCP SB N Rte 1 R', 'AG', 11864067.57, 6943811.23, 11864075.67, 6944253.437, 0, 24, 2
 180, 111, 7, 1065, 88.96, 1393, 2, 3
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 'Q Rte 1 WB E FCP R', 'AG', 11864236.75, 6943806.405, 11865018.73, 6943952.546, 0, 24, 2
 180, 23, 0, 617, 88.96, 1393, 2, 3
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 'Q Rte 1 EB W Bklk R', 'AG', 11865423.96, 6943875.844, 11864923.78, 6943779.193, 0, 24, 2
 180, 97.5, 7, 289, 88.96, 1393, 2, 3
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 'Q Rte 1 EB W Bklk T', 'AG', 11865419.3, 6943907.876, 11864915.72, 6943811, 0, 36, 3
 180, 97.5, 7, 1529, 88.96, 1695, 2, 3
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 'Rte 1 EB W Bklk L Ap', 'AG', 11865414.04, 6943931.56, 11864911.19, 6943834.264, 0, 12, 1
 180, 170.8, 6.5, 85, 88.96, 1770, 2, 3
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 'Q Rte 1 WB E Bklk Th', 'AG', 11865575.09, 6944020.857, 11865960.58, 6944055.74, 0, 36, 3
 180, 104.7, 7, 2149, 88.96, 1695, 2, 3
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 'Q Rte 1 WB E Bklk L', 'AG', 11865577.72, 6943996.647, 11865956.28, 6944032.676, 0, 12, 1
 180, 178, 2, 9, 88.96, 1770, 2, 3
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 'Q Phck NB S Rte 1 TR', 'AG', 11865529.37, 6943811.457, 11865761.58, 6943360.797, 0, 12, 1
 180, 144, 6, 61, 88.96, 1730, 2, 3
 2
 'Q Phck NB S Rte 1 L', 'AG', 11865496.19, 6943851.734, 11865758.06, 6943359.111, 0, 24, 2
 180, 144, 6, 720, 88.96, 1716, 2, 3
 2
 'Q Bklk SB N Rte 1 L', 'AG', 11865475.55, 6944044.993, 11865474.92, 6944081.576, 0, 12, 1
 180, 147, 7, 51, 88.96, 1593, 2, 3
 2
 'Q Bklk SB N Rte 1 T', 'AG', 11865468.11, 6944043.266, 11865466.45, 6944080.638, 0, 12, 1
 180, 147, 7, 11, 88.96, 1676, 2, 3
 2

'Q Bklk SB N Rte 1 R', 'AG', 11865456.88, 6944042.956, 11865454.69, 6944081.666, 0, 12, 1
180, 147, 7, 15, 88.96, 1478, 2, 3
1, 0, 5, 1000, 1.9, 'Y', 5, 0, 355

'Rte. 1 Ft. Belvoir',60,11.4,0,0,8,0.3048,1,0
'1: 9140 Richmond Hwy',11865556.75,6944171.42,5
'2: 9136 Backlick Rd.',11865461.31,6944097.204,5
'3: 9135 Anderson Ln.',11865185.29,6944043.604,5
'4: Bus Stop @Rte. 1',11865210.63,6943809.932,5
'5: E.K. HmlsShelter',11865345.82,6943660.265,5
'6: Accotink Creek',11862781.25,6943530.096,5
'7: Path @Creek',11862790.72,6943671.602,12.5
'8: Sidewalk @Creek',11862781.25,6943530.096,12.5
'FCP to Backlick: 2040: Build: AM',73,1,1,'CO'
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'Rte 1 EB W of Bridge','AG',11861128.64,6943466.12,11862702.83,6943556.885,3076,13.63,0,56
1
'Rte 1 EB Accotink Br','BR',11862702.83,6943556.885,11862854.19,6943565.992,3076,13.63,7.5,56
1
'Rte 1 EB E of Bridge','AG',11862854.19,6943565.992,11863552.7,6943610.856,3076,13.63,0,56
1
'Rte 1 EB FCP ApprThr','AG',11863552.7,6943610.856,11864054.37,6943643.078,2860,13.63,0,56
1
'Rte 1 EB FCP IntThru','AG',11864054.37,6943643.07,11864278.80,6943686.831,2860,13.38,0,56
1
'Rte 1 EB FCP Dptr TL','AG',11864278.80,6943686.831,11864915.72,6943811,2087,13.38,0,56
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'Rte 1 EB E Bklk Thru','AG',11864915.72,6943811,11865419.3,6943907.876,2072,13.38,0,56
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'Rte 1 EB E Bklk IntT','AG',11865419.30,6943907.876,11865600.84,6943941.864,2072,13.74,0,56
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'Rte 1 EB E Bklk Dprt','AG',11865600.84,6943941.864,11865859.19,6943971.704,2186,13.74,0,56
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'Rte 1 EB E Bklk Dpt2','AG',11865859.19,6943971.704,11866598.65,6943970.132,2186,13.74,0,56
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'Rte 1 EB W FCP L AD1','AG',11863547.34,6943636.127,11864023.44,6943669.506,216,15.14,0,44
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'Rte 1 EB W FCP L AD2','AG',11864023.44,6943669.506,11864154.4,6943817.232,216,15.14,0,44

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'FCP NB N Rte 1 L Dpt', 'AG', 11864154, 6943817.159, 11864153.39, 6944136.644, 216, 15.14, 0, 44
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'Rte 1 WB @FCP Thru', 'AG', 11864249.4, 6943774.376, 11864015.6, 6943733.292, 1092, 14.53, 0, 56
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'Rte 1 WB FCP-Br All', 'AG', 11864015.6, 6943733.29, 11862861.268, 6943647.232, 1105, 14.53, 0, 56
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'Rte 1 WB @Br All', 'BR', 11862861.27, 6943647.232, 11862709.64, 6943635.127, 1105, 14.53, 7.5, 56
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'Rte 1 WB E Bklk L Ap', 'AG', 11865956.28, 6944032.676, 11865577.72, 6943996.647, 131, 22.54, 0, 32
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'Rte 1 WB @FCP R Int', 'AG', 11864236.75, 6943806.40, 11864172.73, 6943837.47, 742, 15.14, 0, 44
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'FCP NB N Rte 1 Mrg', 'AG', 11864172.73, 6943837.47, 11864167.14, 6944139.352, 742, 15.14, 0, 44
1
'FCP SB N Rte 1 All', 'AG', 11864058.5, 6946128.75, 11864087.48, 6944232.866, 815, 14.53, 0, 44
1
'FCP SB N Rte 1 L Apr', 'AG', 11864087.48, 6944232.866, 11864088.55, 6943810.986, 802, 15.14, 0, 56
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'FCP SB @Rte 1 L Int', 'AG', 11864088.55, 6943810.986, 11864278.8, 6943686.831, 802, 15.14, 0, 56
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'FCP N Rte 1 SB R Apr', 'AG', 11864075.67, 6944253.437, 11864067.57, 6943811.23, 13, 15.14, 0, 44
1
'FCP @Rte 1 SB R Int', 'AG', 11864067.57, 6943811.23, 11864015.6, 6943733.292, 13, 15.14, 0, 44
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'FCP NB N Rte 1 All', 'AG', 11864153.39, 6944136.644, 11864146, 6946133, 958, 14.53, 0, 44
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'Phck NB S Rte 1 All', 'AG', 11866378.38, 6942718.386, 11865761.58, 6943360.797, 111, 13.37, 0, 32
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'Phck NB S Rte 1 T-R', 'AG', 11865761.58, 6943360.797, 11865529.37, 6943811.457, 20, 13.37, 0, 32
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'Phck NB S Rte 1 Thru', 'AG', 11865529.37, 6943811.457, 11865506.52, 6943855.812, 10, 13.37, 0, 32
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'Bklk NB @Rte 1 Thru', 'AG', 11865506.52, 6943855.812, 11865495.6, 6944064.775, 10, 13.37, 0, 32
1
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 'Phck NB @Rte 1 R Int', 'AG', 11865529.37, 6943811.457, 11865600.84, 6943941.864, 10, 15.14, 0, 32
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 'Bklk N Rte 1 SB All', 'AG', 11865413.52, 6945271.373, 11865466.4, 6944080.638, 215, 17.01, 0, 32
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 'Bklk N Rte 1 SB Thru', 'AG', 11865466.45, 6944080.638, 11865468.11, 6944043.266, 56, 17.01, 0, 32
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 'Bklk @Rte 1 SB Thru', 'AG', 11865468.11, 6944043.266, 11865476.96, 6943844.283, 56, 17.01, 0, 32
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 'Bklk SB S Rte 1 All1', 'AG', 11865476.96, 6943844.283, 11865749.55, 6943353.851, 1762, 17.01, 0, 32
 1
 'Bklk SB S Rte 1 All2', 'AG', 11865749.55, 6943353.851, 11866363.31, 6942706.632, 1762, 17.01, 0, 32
 1
 'Bklk SB N Rte 1 R Ap', 'AG', 11865454.69, 6944081.666, 11865456.88, 6944042.956, 55, 17.01, 0, 32
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 'Q Rte 1 EB W FCP Thr', 'AG', 11864054.37, 6943643.078, 11863552.7, 6943610.856, 0, 36, 3
 180, 52.2, 6.5, 2860, 83.22, 1695, 2, 3
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 'Q Rte 1 EB W FCP L', 'AG', 11864023.44, 6943669.506, 11863547.34, 6943636.127, 0, 24, 2
 180, 163.1, 7, 216, 83.22, 1716, 2, 3
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 'Q Rte 1 WB E FCP Thr', 'AG', 11864249.4, 6943774.376, 11865023.91, 6943918.288, 0, 36, 3
 180, 76.1, 6.5, 1092, 83.22, 1695, 2, 3
 2
 'Q FCP SB N Rte 1 L', 'AG', 11864088.55, 6943810.986, 11864087.48, 6944232.866, 0, 36, 3
 180, 141.3, 7, 802, 83.22, 1663, 2, 3

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'Q FCP SB N Rte 1 R', 'AG', 11864067.57, 6943811.23, 11864075.67, 6944253.437, 0, 24, 2
180,124.4, 7, 13, 83.22, 1393, 2, 3
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'Q Rte 1 WB E FCP R', 'AG', 11864236.75, 6943806.405, 11865018.73, 6943952.546, 0, 24, 2
180,30.9, 0, 742, 83.22, 1393, 2, 3
2
'Q Rte 1 EB W Bklk R', 'AG', 11865423.96, 6943875.844, 11864923.78, 6943779.193, 0, 24, 2
180,76.8, 7, 1575, 83.22, 1393, 2, 3
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'Q Rte 1 EB W Bklk T', 'AG', 11865419.3, 6943907.876, 11864915.72, 6943811, 0, 36, 3
180,76.8, 7, 2072, 83.22, 1695, 2, 3
2
'Rte 1 EB W Bklk L Ap', 'AG', 11865414.04, 6943931.56, 11864911.19, 6943834.264, 0, 12, 1
180,175.4, 4.6, 15, 83.22, 1770, 2, 3
2
'Q Rte 1 WB E Bklk Th', 'AG', 11865575.09, 6944020.857, 11865960.58, 6944055.74, 0, 36, 3
180,62, 7, 1688, 83.22, 1695, 2, 3
2
'Q Rte 1 WB E Bklk L', 'AG', 11865577.72, 6943996.647, 11865956.28, 6944032.676, 0, 12, 1
180,160.6, 6.5, 131, 83.22, 1770, 2, 3
2
'Q Phck NB S Rte 1 TR', 'AG', 11865529.37, 6943811.457, 11865761.58, 6943360.797, 0, 12, 1
180,168.2, 6, 20, 83.22, 1723, 2, 3
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'Q Phck NB S Rte 1 L', 'AG', 11865496.19, 6943851.734, 11865758.06, 6943359.111, 0, 24, 2
180,168.2, 6, 91, 83.22, 1716, 2, 3
2
'Q Bklk SB N Rte 1 L', 'AG', 11865475.55, 6944044.993, 11865474.92, 6944081.576, 0, 12, 1
180,160.9, 7, 104, 83.22, 1593, 2, 3
2
'Q Bklk SB N Rte 1 T', 'AG', 11865468.11, 6944043.266, 11865466.45, 6944080.638, 0, 12, 1
180,160.9, 7, 56, 83.22, 1676, 2, 3
2

'Q Bklk SB N Rte 1 R', 'AG', 11865456.88, 6944042.956, 11865454.69, 6944081.666, 0, 12, 1
180, 160.9, 7, 55, 83.22, 1478, 2, 3
1, 0, 5, 1000, 1.9, 'Y', 5, 0, 355

'Rte. 1 Ft. Belvoir',60,11.4,0,0,8,0.3048,1,0
'1: 9140 Richmond Hwy',11865556.75,6944171.42,5
'2: 9136 Backlick Rd.',11865461.31,6944097.204,5
'3: 9135 Anderson Ln.',11865185.29,6944043.604,5
'4: Bus Stop @Rte. 1',11865210.63,6943809.932,5
'5: E.K. HmlsShelter',11865345.82,6943660.265,5
'6: Accotink Creek',11862781.25,6943530.096,5
'7: Path @Creek',11862790.72,6943671.602,12.5
'8: Sidewalk @Creek',11862781.25,6943530.096,12.5
'FCP to Backlick: 2040: Build: PM',73,1,1,'CO'
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'Rte 1 EB W of Bridge','AG',11861128.64,6943466.12,11862702.83,6943556.885,1648,14.13,0,56
1
'Rte 1 EB Accotink Br','BR',11862702.83,6943556.885,11862854.19,6943565.992,1648,14.13,7.5,56
1
'Rte 1 EB E of Bridge','AG',11862854.19,6943565.992,11863552.7,6943610.856,1648,14.13,0,56
1
'Rte 1 EB FCP ApprThr','AG',11863552.7,6943610.856,11864054.37,6943643.078,1517,14.13,0,56
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'Rte 1 EB FCP IntThru','AG',11864054.37,6943643.07,11864278.80,6943686.831,1517,14.13,0,56
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'Rte 1 EB FCP Dptr TL','AG',11864278.80,6943686.831,11864915.72,6943811,1643,14.13,0,56
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'Rte 1 EB E Bklk Thru','AG',11864915.72,6943811,11865419.3,6943907.876,1558,14.13,0,56
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'Rte 1 EB E Bklk Dprt','AG',11865600.84,6943941.864,11865859.19,6943971.704,1621,14.13,0,56
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'Rte 1 EB W FCP L AD1','AG',11863547.34,6943636.127,11864023.44,6943669.506,131,15.14,0,44
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'Rte 1 EB W FCP L AD2','AG',11864023.44,6943669.506,11864154.4,6943817.232,131,15.14,0,44

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 'FCP NB N Rte 1 L Dpt', 'AG', 11864154, 6943817.159, 11864153.39, 6944136.644, 131, 15.14, 0, 44
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 'Rte 1 EB E FCR R Dpt', 'AG', 11864055.59, 6943611.433, 11864923.78, 6943779.19, 305, 14.13, 0, 44
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 'Rte 1 EB W Bklk R Ap', 'AG', 11864923.78, 6943779.193, 11865423.96, 6943875.844, 305, 15.14, 0, 44
 1
 'Rte 1 EB @Bklk R Int', 'AG', 11865423.96, 6943875.84, 11865476.96, 6943844.283, 305, 15.14, 0, 44
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 'Rte 1 EB W Bklk L Ap', 'AG', 11864911.19, 6943834.264, 11865414.04, 6943931.56, 85, 15.14, 0, 32
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 'Rte 1 WB E Bklk', 'AG', 11866600.39, 6944040.608, 11865960.58, 6944055.74, 2437, 13.74, 0, 56
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 'Rte 1 WB E Bklk Thru', 'AG', 11865960.58, 6944055.74, 11865575.09, 6944020.857, 2266, 13.74, 0, 56
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 'Rte 1 WB @Bklk Int', 'AG', 11865575.09, 6944020.857, 11865407.07, 6943989.484, 2266, 13.37, 0, 56
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 'Rte 1 WB W Bklk Dptr', 'AG', 11865407.07, 6943989.48, 11865023.91, 6943918.288, 3073, 13.37, 0, 56
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 'Rte 1 WB @FCP Thru', 'AG', 11864249.4, 6943774.376, 11864015.6, 6943733.292, 2598, 14.18, 0, 56
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 'Rte 1 WB FCP-Br All', 'AG', 11864015.6, 6943733.29, 11862861.268, 6943647.232, 3573, 14.18, 0, 56
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 'Rte 1 WB @Br All', 'BR', 11862861.27, 6943647.232, 11862709.64, 6943635.127, 3573, 14.18, 7.5, 56
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 'Rte 1 WB W Br All', 'AG', 11862709.64, 6943635.127, 11861123.04, 6943536.54, 3573, 14.18, 0, 56
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 'Rte 1 WB E Bklk L Ap', 'AG', 11865956.28, 6944032.676, 11865577.72, 6943996.647, 10, 15.14, 0, 32
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'Rte 1 WB @FCP R Int', 'AG', 11864236.75, 6943806.40, 11864172.73, 6943837.47, 475, 15.14, 0, 44
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'FCP NB N Rte 1 Mrg', 'AG', 11864172.73, 6943837.47, 11864167.14, 6944139.352, 475, 15.14, 0, 44
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'FCP SB N Rte 1 All', 'AG', 11864058.5, 6946128.75, 11864087.48, 6944232.866, 1406, 14.13, 0, 44
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'FCP SB N Rte 1 L Apr', 'AG', 11864087.48, 6944232.866, 11864088.55, 6943810.986, 431, 15.14, 0, 56
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'FCP N Rte 1 SB R Apr', 'AG', 11864075.67, 6944253.437, 11864067.57, 6943811.23, 975, 15.14, 0, 44
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'FCP NB N Rte 1 All', 'AG', 11864153.39, 6944136.644, 11864146, 6946133, 606, 14.18, 0, 44
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'Phck NB S Rte 1 All', 'AG', 11866378.38, 6942718.386, 11865761.58, 6943360.797, 855, 14.18, 0, 32
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'Phck NB S Rte 1 T-R', 'AG', 11865761.58, 6943360.797, 11865529.37, 6943811.457, 63, 14.18, 0, 32
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'Bklk NB N Rte 1 All', 'AG', 11865495.67, 6944064.775, 11865432.72, 6945277.292, 294, 14.18, 0, 32
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'Rte 1 WB @Bklk R Apr', 'AG', 11865956.42, 6944082.398, 11865567.57, 6944046.84, 161, 15.14, 0, 32
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 'Bklk SB S Rte 1 All1', 'AG', 11865476.96, 6943844.283, 11865749.55, 6943353.851, 325, 13.38, 0, 32
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 'Bklk SB S Rte 1 All2', 'AG', 11865749.55, 6943353.851, 11866363.31, 6942706.632, 325, 13.38, 0, 32
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 'Bklk SB N Rte 1 R In', 'AG', 11865456.88, 6944042.956, 11865407.07, 6943989.484, 15, 15.14, 0, 32
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 'Bklk SB N Rte 1 L Ap', 'AG', 11865474.92, 6944081.575, 11865475.55, 6944044.993, 48, 15.14, 0, 32
 1
 'Bklk SB N Rte 1 L In', 'AG', 11865475.55, 6944044.993, 11865600.84, 6943941.86, 48, 15.14, 0, 32
 2
 'Q Rte 1 EB W FCP Thr', 'AG', 11864054.37, 6943643.078, 11863552.7, 6943610.856, 0, 36, 3
 180, 64.5, 6.5, 1517, 83.22, 1695, 2, 3
 2
 'Q Rte 1 EB W FCP L', 'AG', 11864023.44, 6943669.506, 11863547.34, 6943636.127, 0, 24, 2
 180, 172, 7, 131, 83.22, 1716, 2, 3
 2
 'Q Rte 1 WB E FCP Thr', 'AG', 11864249.4, 6943774.376, 11865023.91, 6943918.288, 0, 36, 3
 180, 80.5, 6.5, 2598, 83.22, 1695, 2, 3
 2
 'Q FCP SB N Rte 1 L', 'AG', 11864088.55, 6943810.986, 11864087.48, 6944232.866, 0, 36, 3
 180, 129, 7, 431, 83.22, 1663, 2, 3

2
 'Q FCP SB N Rte 1 R', 'AG', 11864067.57, 6943811.23, 11864075.67, 6944253.437, 0, 24, 2
 180, 120, 7, 975, 83.22, 1393, 2, 3
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 'Q Rte 1 WB E FCP R', 'AG', 11864236.75, 6943806.405, 11865018.73, 6943952.546, 0, 24, 2
 180, 23, 0, 475, 83.22, 1393, 2, 3
 2
 'Q Rte 1 EB W Bklk R', 'AG', 11865423.96, 6943875.844, 11864923.78, 6943779.193, 0, 24, 2
 180, 99.6, 7, 305, 83.22, 1393, 2, 3
 2
 'Q Rte 1 EB W Bklk T', 'AG', 11865419.3, 6943907.876, 11864915.72, 6943811, 0, 36, 3
 180, 99.6, 7, 1558, 83.22, 1695, 2, 3
 2
 'Rte 1 EB W Bklk L Ap', 'AG', 11865414.04, 6943931.56, 11864911.19, 6943834.264, 0, 12, 1
 180, 171.2, 6.5, 85, 83.22, 1770, 2, 3
 2
 'Q Rte 1 WB E Bklk Th', 'AG', 11865575.09, 6944020.857, 11865960.58, 6944055.74, 0, 36, 3
 180, 106.3, 7, 2266, 83.22, 1695, 2, 3
 2
 'Q Rte 1 WB E Bklk L', 'AG', 11865577.72, 6943996.647, 11865956.28, 6944032.676, 0, 12, 1
 180, 177.9, 2.1, 10, 83.22, 1770, 2, 3
 2
 'Q Phck NB S Rte 1 TR', 'AG', 11865529.37, 6943811.457, 11865761.58, 6943360.797, 0, 12, 1
 180, 142, 6, 63, 83.22, 1723, 2, 3
 2
 'Q Phck NB S Rte 1 L', 'AG', 11865496.19, 6943851.734, 11865758.06, 6943359.111, 0, 24, 2
 180, 142, 6, 792, 83.22, 1716, 2, 3
 2
 'Q Bklk SB N Rte 1 L', 'AG', 11865475.55, 6944044.993, 11865474.92, 6944081.576, 0, 12, 1
 180, 147, 7, 48, 83.22, 1593, 2, 3
 2
 'Q Bklk SB N Rte 1 T', 'AG', 11865468.11, 6944043.266, 11865466.45, 6944080.638, 0, 12, 1
 180, 147, 7, 10, 83.22, 1676, 2, 3
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'Q Bklk SB N Rte 1 R', 'AG', 11865456.88, 6944042.956, 11865454.69, 6944081.666, 0, 12, 1
180, 147, 7, 15, 83.22, 1478, 2, 3
1, 0, 5, 1000, 1.9, 'Y', 5, 0, 355

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: Build: AM

DATE : 5/18/12
 TIME : 15:34:48

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

 VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
 U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 1.9 PPM

LINK VARIABLES

LINK DESCRIPTION	* *	X1	LINK COORDINATES (FT) Y1	X2	Y2	* *	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)	W (FT)	V/C QUEUE (VEH)
1. Rte 1 EB W of Bridge*	*****		*****	*****	*****	*	1577.	87. AG	2860.	14.3	0.0	56.0	
2. Rte 1 EB Accotink Br*	*****		*****	*****	*****	*	151.	87. BR	2860.	14.3	7.5	56.0	
3. Rte 1 EB E of Bridge*	*****		*****	*****	*****	*	700.	86. AG	2860.	14.3	0.0	56.0	
4. Rte 1 EB FCP ApprThru*	*****		*****	*****	*****	*	502.	86. AG	2561.	14.3	0.0	56.0	
5. Rte 1 EB FCP IntThru*	*****		*****	*****	*****	*	229.	79. AG	2561.	14.3	0.0	56.0	
6. Rte 1 EB FCP Dptr TL*	*****		*****	*****	*****	*	649.	79. AG	2054.	14.3	0.0	56.0	
7. Rte 1 EB E Bklk Thru*	*****		*****	*****	*****	*	512.	79. AG	2039.	14.3	0.0	56.0	
8. Rte 1 EB E Bklk IntT*	*****		*****	*****	*****	*	185.	80. AG	2039.	14.7	0.0	56.0	
9. Rte 1 EB E Bklk Dprt*	*****		*****	*****	*****	*	259.	83. AG	2156.	14.7	0.0	56.0	
10. Rte 1 EB E Bklk Dpt2*	*****		*****	*****	*****	*	741.	90. AG	2156.	14.7	0.0	56.0	
11. Rte 1 EB W FCP L AD1*	*****		*****	*****	*****	*	477.	86. AG	299.	16.2	0.0	44.0	
12. Rte 1 EB W FCP L AD2*	*****		*****	*****	*****	*	198.	42. AG	299.	16.2	0.0	44.0	
13. FCP NB N Rte 1 L Dpt*	*****		*****	*****	*****	*	319.	360. AG	299.	16.2	0.0	44.0	
14. Rte 1 EB E FCR R Dpt*	*****		*****	*****	*****	*	885.	79. AG	1499.	14.3	0.0	44.0	
15. Rte 1 EB W Bklk R Ap*	*****		*****	*****	*****	*	509.	79. AG	1499.	24.1	0.0	44.0	
16. Rte 1 EB @Bklk R Int*	*****		*****	*****	*****	*	62.	121. AG	1499.	24.1	0.0	44.0	
17. Rte 1 EB W Bklk L Ap*	*****		*****	*****	*****	*	512.	79. AG	15.	16.2	0.0	32.0	
18. Rte 1 EB @Bklk L In *	*****		*****	*****	*****	*	157.	32. AG	15.	16.2	0.0	32.0	
19. Rte 1 WB E Bklk *	*****		*****	*****	*****	*	639.	271. AG	1806.	15.1	0.0	56.0	
20. Rte 1 WB E Bklk Thru*	*****		*****	*****	*****	*	388.	265. AG	1668.	15.1	0.0	56.0	
21. Rte 1 WB @Bklk Int *	*****		*****	*****	*****	*	171.	259. AG	1668.	15.1	0.0	56.0	
22. Rte 1 WB W Bklk Dptr*	*****		*****	*****	*****	*	389.	260. AG	1809.	15.1	0.0	56.0	
23. Rte 1 WB E FCP Thru *	*****		*****	*****	*****	*	788.	259. AG	978.	15.1	0.0	56.0	
24. Rte 1 WB @FCP Thru *	*****		*****	*****	*****	*	237.	260. AG	978.	15.5	0.0	56.0	
25. Rte 1 WB FCP-Br All *	*****		*****	*****	*****	*	1158.	266. AG	997.	15.5	0.0	56.0	
26. Rte 1 WB @Br All *	*****		*****	*****	*****	*	151.	265. BR	997.	15.5	7.5	56.0	
27. Rte 1 WB W Br All *	*****		*****	*****	*****	*	1590.	266. AG	997.	15.5	0.0	56.0	
28. Rte 1 WB E Bklk L Ap*	*****		*****	*****	*****	*	380.	265. AG	118.	24.1	0.0	32.0	

29.	Rte 1 WB @Bklk L Int*	*****	*****	*****	*****	*	183.	213.	AG	118.	24.1	0.0	32.0
30.	Rte 1 WB E FCP R Apr*	*****	*****	*****	*****	*	795.	259.	AG	831.	16.2	0.0	44.0
31.	Rte 1 WB @FCP R Int *	*****	*****	*****	*****	*	71.	296.	AG	831.	16.2	0.0	44.0
32.	FCP NB N Rte 1 Mrg *	*****	*****	*****	*****	*	302.	359.	AG	831.	16.2	0.0	44.0
33.	FCP SB N Rte 1 All *	*****	*****	*****	*****	*	1897.	179.	AG	1011.	15.5	0.0	44.0
34.	FCP SB N Rte 1 L Apr*	*****	*****	*****	*****	*	422.	180.	AG	992.	16.2	0.0	56.0
35.	FCP SB @Rte 1 L Int *	*****	*****	*****	*****	*	227.	123.	AG	992.	16.2	0.0	56.0
36.	FCP N Rte 1 SB R Apr*	*****	*****	*****	*****	*	443.	181.	AG	19.	16.2	0.0	44.0
37.	FCP @Rte 1 SB R Int *	*****	*****	*****	*****	*	93.	214.	AG	19.	16.2	0.0	44.0
38.	FCP NB N Rte 1 All *	*****	*****	*****	*****	*	1996.	360.	AG	1130.	15.5	0.0	44.0
39.	Phck NB S Rte 1 All *	*****	*****	*****	*****	*	890.	316.	AG	105.	14.3	0.0	32.0
40.	Phck NB S Rte 1 T-R *	*****	*****	*****	*****	*	507.	333.	AG	19.	14.3	0.0	32.0
41.	Phck NB S Rte 1 Thru*	*****	*****	*****	*****	*	50.	333.	AG	10.	14.3	0.0	32.0
42.	Bklk NB @Rte 1 Thru *	*****	*****	*****	*****	*	209.	357.	AG	10.	14.3	0.0	32.0
43.	Bklk NB N Rte 1 All*	*****	*****	*****	*****	*	1214.	357.	AG	45.	14.3	0.0	32.0
44.	Rte 1 WB @Bklk R Apr*	*****	*****	*****	*****	*	390.	265.	AG	20.	16.2	0.0	32.0
45.	Rte 1 WB @Bklk R Int*	*****	*****	*****	*****	*	74.	284.	AG	20.	16.2	0.0	32.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: Build: AM

DATE : 5/18/12
 TIME : 15:34:48

LINK VARIABLES

LINK DESCRIPTION	* X1	LINK COORDINATES (FT) Y1	X2	Y2	* LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
46. Phck NB S Rte 1 L Ap*	*****	*****	*****	*****	*	558.	332.	AG	86.	16.2	0.0	32.0	
47. Phck NB @Rte 1 L Int*	*****	*****	*****	*****	*	164.	327.	AG	86.	16.2	0.0	32.0	
48. Phck NB @Rte 1 R Int*	*****	*****	*****	*****	*	149.	29.	AG	9.	16.2	0.0	32.0	
49. Bklk N Rte 1 SB All *	*****	*****	*****	*****	*	1192.	178.	AG	219.	18.2	0.0	32.0	
50. Bklk N Rte 1 SB Thru*	*****	*****	*****	*****	*	37.	176.	AG	56.	18.2	0.0	32.0	
51. Bklk @Rte 1 SB Thru *	*****	*****	*****	*****	*	200.	177.	AG	56.	18.2	0.0	32.0	
52. Bklk SB S Rte 1 All1*	*****	*****	*****	*****	*	561.	151.	AG	1673.	18.2	0.0	32.0	
53. Bklk SB S Rte 1 All2*	*****	*****	*****	*****	*	891.	137.	AG	1673.	18.2	0.0	32.0	
54. Bklk SB N Rte 1 R Ap*	*****	*****	*****	*****	*	39.	178.	AG	55.	18.2	0.0	32.0	
55. Bklk SB N Rte 1 R In*	*****	*****	*****	*****	*	73.	223.	AG	55.	18.2	0.0	32.0	
56. Bklk SB N Rte 1 L Ap*	*****	*****	*****	*****	*	36.	177.	AG	108.	18.2	0.0	32.0	
57. Bklk SB N Rte 1 L In*	*****	*****	*****	*****	*	162.	130.	AG	108.	18.2	0.0	32.0	
58. Q Rte 1 EB W FCP Thr*	*****	*****	*****	*****	*	289.	267.	AG	247.	100.0	0.0	36.0	0.83 14.7
59. Q Rte 1 EB W FCP L *	*****	*****	*****	*****	*	430.	267.	AG	419.	100.0	0.0	24.0	1.21 21.9
60. Q Rte 1 WB E FCP Thr*	*****	*****	*****	*****	*	162.	79.	AG	362.	100.0	0.0	36.0	0.43 8.2
61. Q FCP SB N Rte 1 L *	*****	*****	*****	*****	*	246.	360.	AG	521.	100.0	0.0	36.0	0.89 12.5
62. Q FCP SB N Rte 1 R *	*****	*****	*****	*****	*	5.	360.	AG	289.	100.0	0.0	24.0	0.02 0.3
63. Q Rte 1 WB E FCP R *	*****	*****	*****	*****	*	79.	79.	AG	93.	100.0	0.0	24.0	0.38 4.0
64. Q Rte 1 EB W Bklk R *	*****	*****	*****	*****	*	466.	259.	AG	199.	100.0	0.0	24.0	1.01 23.7
65. Q Rte 1 EB W Bklk T *	*****	*****	*****	*****	*	278.	259.	AG	298.	100.0	0.0	36.0	0.75 14.1
66. Rte 1 EB W Bklk L Ap*	*****	*****	*****	*****	*	16.	256.	AG	232.	100.0	0.0	12.0	-.94 0.8
67. Q Rte 1 WB E Bklk Th*	*****	*****	*****	*****	*	188.	85.	AG	247.	100.0	0.0	36.0	0.54 9.6
68. Q Rte 1 WB E Bklk L *	*****	*****	*****	*****	*	292.	84.	AG	213.	100.0	0.0	12.0	1.15 14.8
69. Q Phck NB S Rte 1 TR*	*****	*****	*****	*****	*	17.	152.	AG	223.	100.0	0.0	12.0	0.50 0.9
70. Q Phck NB S Rte 1 L *	*****	*****	*****	*****	*	115.	152.	AG	445.	100.0	0.0	24.0	1.13 5.8
71. Q Bklk SB N Rte 1 L *	*****	*****	*****	*****	*	241.	357.	AG	212.	100.0	0.0	12.0	1.11 12.2
72. Q Bklk SB N Rte 1 T *	*****	*****	*****	*****	*	49.	356.	AG	212.	100.0	0.0	12.0	0.55 2.5
73. Q Bklk SB N Rte 1 R *	*****	*****	*****	*****	*	48.	358.	AG	212.	100.0	0.0	12.0	0.61 2.4

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: Build: AM

DATE : 5/18/12
 TIME : 15:34:48

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* * * *	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
58. Q Rte 1 EB W FCP Thr*		180	62	6.5	2561	1695	88.96	2	3
59. Q Rte 1 EB W FCP L *		180	158	7.0	299	1716	88.96	2	3
60. Q Rte 1 WB E FCP Thr*		180	91	6.5	978	1695	88.96	2	3
61. Q FCP SB N Rte 1 L *		180	131	7.0	992	1663	88.96	2	3
62. Q FCP SB N Rte 1 R *		180	109	7.0	19	1393	88.96	2	3
63. Q Rte 1 WB E FCP R *		180	35	0.0	831	1393	88.96	2	3
64. Q Rte 1 EB W Bklk R *		180	75	7.0	1499	1393	88.96	2	3
65. Q Rte 1 EB W Bklk T *		180	75	7.0	2039	1695	88.96	2	3
66. Rte 1 EB W Bklk L Ap*		180	175	4.7	15	1770	88.96	2	3
67. Q Rte 1 WB E Bklk Th*		180	62	7.0	1668	1695	88.96	2	3
68. Q Rte 1 WB E Bklk L *		180	161	6.5	118	1770	88.96	2	3
69. Q Phck NB S Rte 1 TR*		180	168	6.0	19	1730	88.96	2	3
70. Q Phck NB S Rte 1 L *		180	168	6.0	86	1716	88.96	2	3
71. Q Bklk SB N Rte 1 L *		180	160	7.0	108	1593	88.96	2	3
72. Q Bklk SB N Rte 1 T *		180	160	7.0	56	1676	88.96	2	3
73. Q Bklk SB N Rte 1 R *		180	160	7.0	55	1478	88.96	2	3

RECEPTOR LOCATIONS

RECEPTOR	* * *	COORDINATES (FT)			* *
		X	Y	Z	
1. 1: 9140 Richmond Hwy	*	*****	*****	5.0	*
2. 2: 9136 Backlick Rd.	*	*****	*****	5.0	*
3. 3: 9135 Anderson Ln.	*	*****	*****	5.0	*
4. 4: Bus Stop @Rte. 1	*	*****	*****	5.0	*
5. 5: E.K. HmlsShelter	*	*****	*****	5.0	*
6. 6: Accotink Creek	*	*****	*****	5.0	*
7. 7: Path @Creek	*	*****	*****	12.5	*
8. 8: Sidewalk @Creek	*	*****	*****	12.5	*

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: Build: AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-****

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)							
	1	2	3	4	5	6	7	8
0.	1.9	3.2	1.9	5.4	3.3	3.2	1.9	2.9
5.	1.9	3.5	1.9	5.5	3.5	3.1	1.9	2.9
10.	1.9	3.5	1.9	5.5	3.5	3.1	1.9	2.9
15.	1.9	3.4	1.9	5.6	3.5	3.2	1.9	2.9
20.	1.9	3.2	1.9	5.9	3.1	3.2	1.9	2.9
25.	1.9	3.1	1.9	5.9	2.8	3.2	1.9	2.9
30.	1.9	3.0	1.9	6.0	3.1	3.6	2.0	3.3
35.	1.9	2.9	1.9	6.1	3.2	3.5	2.1	3.2
40.	1.9	2.9	1.9	6.3	3.3	3.6	2.1	3.4
45.	1.9	2.9	1.9	6.8	3.2	3.8	2.1	3.4
50.	1.9	2.7	2.0	7.0	3.4	3.9	2.1	3.6
55.	1.9	2.7	2.0	7.3	3.4	4.1	2.1	3.8
60.	1.9	2.7	2.0	7.8	3.2	4.2	2.0	3.8
65.	1.9	2.7	2.0	7.9	3.0	4.5	2.0	4.2
70.	1.9	2.6	2.0	7.6	2.8	5.0	2.0	4.7
75.	1.9	2.6	2.0	6.4	2.6	5.6	2.2	5.3
80.	1.9	2.6	2.4	4.9	2.3	6.5	2.7	6.2
85.	1.9	2.9	3.1	3.6	2.2	5.5	4.0	5.3
90.	2.0	3.4	3.9	2.8	2.2	3.9	4.5	3.8
95.	2.3	4.1	4.0	2.6	2.2	2.7	4.6	2.6
100.	2.8	4.7	3.8	2.5	2.3	2.2	4.1	2.1
105.	3.0	5.0	3.1	2.4	2.3	1.9	3.7	1.9
110.	3.1	5.1	2.9	2.3	2.3	1.9	3.4	1.9
115.	3.0	4.9	3.2	2.3	2.3	1.9	3.4	1.9
120.	3.0	4.6	3.7	2.4	2.3	1.9	3.2	1.9
125.	3.1	4.3	4.2	2.5	2.5	1.9	3.2	1.9
130.	3.2	4.5	4.4	2.5	2.6	1.9	3.0	1.9
135.	3.1	4.4	4.6	2.3	2.4	1.9	2.9	1.9
140.	3.2	4.6	4.5	2.1	2.1	1.9	2.8	1.9
145.	3.1	5.0	4.2	1.9	1.9	1.9	2.8	1.9

150.	*	3.1	5.4	3.8	1.9	1.9	1.9	2.9	1.9
155.	*	3.2	5.7	3.7	1.9	1.9	1.9	2.8	1.9
160.	*	3.3	6.0	3.7	1.9	1.9	1.9	2.8	1.9
165.	*	3.4	6.3	3.7	1.9	1.9	1.9	2.8	1.9
170.	*	3.3	6.5	3.7	1.9	1.9	1.9	2.8	1.9
175.	*	3.3	6.1	3.7	1.9	1.9	1.9	2.8	1.9
180.	*	3.3	5.5	3.7	1.9	1.9	1.9	2.8	1.9
185.	*	3.1	5.8	3.7	1.9	1.9	1.9	2.8	1.9
190.	*	3.0	5.5	3.6	1.9	1.9	1.9	2.8	1.9
195.	*	2.8	5.3	3.5	1.9	1.9	1.9	2.8	1.9
200.	*	2.9	5.2	3.4	1.9	1.9	1.9	2.8	1.9
205.	*	3.2	4.9	3.4	1.9	1.9	1.9	2.8	1.9

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: Build: AM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)								
	1	2	3	4	5	6	7	8	
210.	*	3.5	4.8	3.4	2.0	1.9	1.9	2.8	1.9
215.	*	4.1	4.6	3.5	2.0	1.9	1.9	3.0	1.9
220.	*	4.2	4.6	3.4	2.0	1.9	1.9	3.0	1.9
225.	*	4.3	4.7	3.4	2.0	1.9	1.9	3.1	1.9
230.	*	4.1	4.5	3.2	2.0	1.9	1.9	3.2	1.9
235.	*	4.1	4.5	3.3	2.0	1.9	1.9	3.2	1.9
240.	*	3.7	4.2	3.3	2.0	1.9	1.9	3.4	1.9
245.	*	3.8	3.9	3.8	2.0	1.9	1.9	3.6	1.9
250.	*	3.7	3.8	4.0	2.6	1.9	1.9	3.9	1.9
255.	*	3.6	3.6	4.2	3.9	1.9	2.2	4.1	2.1
260.	*	3.3	3.2	3.1	6.2	2.2	2.7	4.1	2.7
265.	*	2.5	2.5	2.6	8.4	3.1	4.0	3.5	3.9
270.	*	2.3	2.1	2.1	8.3	3.4	5.2	2.7	5.0
275.	*	2.4	2.0	2.0	7.6	3.6	5.5	2.1	5.2
280.	*	2.4	2.1	2.0	6.9	3.1	5.2	1.9	4.8
285.	*	2.5	2.2	2.0	6.4	3.4	4.7	1.9	4.3
290.	*	2.5	2.2	2.1	5.9	3.4	4.4	1.9	4.0
295.	*	2.5	2.2	2.1	6.1	3.2	4.0	1.9	3.7
300.	*	2.5	2.2	2.1	5.8	3.3	3.8	1.9	3.5
305.	*	2.5	2.2	2.1	5.9	3.5	3.7	1.9	3.4
310.	*	2.5	2.2	2.1	6.0	3.5	3.6	1.9	3.3
315.	*	2.5	2.2	2.1	5.9	3.4	3.3	1.9	3.0
320.	*	2.3	2.2	2.1	5.8	3.4	3.4	1.9	3.1
325.	*	2.1	2.1	2.1	5.7	3.6	3.2	1.9	3.0
330.	*	2.0	2.0	2.1	5.7	3.5	3.3	1.9	3.0
335.	*	2.0	2.0	1.9	5.5	3.3	3.2	1.9	2.9
340.	*	2.0	2.1	1.9	5.4	3.3	3.1	1.9	2.9
345.	*	2.0	2.2	1.9	5.4	3.3	3.1	1.9	2.9
350.	*	2.0	2.4	1.9	5.4	3.3	3.2	1.9	2.9
355.	*	2.0	2.8	1.9	5.4	3.3	3.2	1.9	2.9
360.	*	1.9	3.2	1.9	5.4	3.3	3.2	1.9	2.9
5.	*	1.9	3.5	1.9	5.5	3.5	3.1	1.9	2.9
10.	*	1.9	3.5	1.9	5.5	3.5	3.1	1.9	2.9
15.	*	1.9	3.4	1.9	5.6	3.5	3.2	1.9	2.9
20.	*	1.9	3.2	1.9	5.9	3.1	3.2	1.9	2.9
25.	*	1.9	3.1	1.9	5.9	2.8	3.2	1.9	2.9
30.	*	1.9	3.0	1.9	6.0	3.1	3.6	2.0	3.3
35.	*	1.9	2.9	1.9	6.1	3.2	3.5	2.1	3.2
40.	*	1.9	2.9	1.9	6.3	3.3	3.6	2.1	3.4
45.	*	1.9	2.9	1.9	6.8	3.2	3.8	2.1	3.4

50.	*	1.9	2.7	2.0	7.0	3.4	3.9	2.1	3.6
55.	*	1.9	2.7	2.0	7.3	3.4	4.1	2.1	3.8
60.	*	1.9	2.7	2.0	7.8	3.2	4.2	2.0	3.8
65.	*	1.9	2.7	2.0	7.9	3.0	4.5	2.0	4.2
70.	*	1.9	2.6	2.0	7.6	2.8	5.0	2.0	4.7
75.	*	1.9	2.6	2.0	6.4	2.6	5.6	2.2	5.3
80.	*	1.9	2.6	2.4	4.9	2.3	6.5	2.7	6.2
85.	*	1.9	2.9	3.1	3.6	2.2	5.5	4.0	5.3
90.	*	2.0	3.4	3.9	2.8	2.2	3.9	4.5	3.8
95.	*	2.3	4.1	4.0	2.6	2.2	2.7	4.6	2.6
100.	*	2.8	4.7	3.8	2.5	2.3	2.2	4.1	2.1
105.	*	3.0	5.0	3.1	2.4	2.3	1.9	3.7	1.9

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: Build: AM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)								
	1	2	3	4	5	6	7	8	
110.	*	3.1	5.1	2.9	2.3	2.3	1.9	3.4	1.9
115.	*	3.0	4.9	3.2	2.3	2.3	1.9	3.4	1.9
120.	*	3.0	4.6	3.7	2.4	2.3	1.9	3.2	1.9
125.	*	3.1	4.3	4.2	2.5	2.5	1.9	3.2	1.9
130.	*	3.2	4.5	4.4	2.5	2.6	1.9	3.0	1.9
135.	*	3.1	4.4	4.6	2.3	2.4	1.9	2.9	1.9
140.	*	3.2	4.6	4.5	2.1	2.1	1.9	2.8	1.9
145.	*	3.1	5.0	4.2	1.9	1.9	1.9	2.8	1.9
150.	*	3.1	5.4	3.8	1.9	1.9	1.9	2.9	1.9
155.	*	3.2	5.7	3.7	1.9	1.9	1.9	2.8	1.9
160.	*	3.3	6.0	3.7	1.9	1.9	1.9	2.8	1.9
165.	*	3.4	6.3	3.7	1.9	1.9	1.9	2.8	1.9
170.	*	3.3	6.5	3.7	1.9	1.9	1.9	2.8	1.9
175.	*	3.3	6.1	3.7	1.9	1.9	1.9	2.8	1.9
180.	*	3.3	5.5	3.7	1.9	1.9	1.9	2.8	1.9
185.	*	3.1	5.8	3.7	1.9	1.9	1.9	2.8	1.9
190.	*	3.0	5.5	3.6	1.9	1.9	1.9	2.8	1.9
195.	*	2.8	5.3	3.5	1.9	1.9	1.9	2.8	1.9
200.	*	2.9	5.2	3.4	1.9	1.9	1.9	2.8	1.9
205.	*	3.2	4.9	3.4	1.9	1.9	1.9	2.8	1.9
210.	*	3.5	4.8	3.4	2.0	1.9	1.9	2.8	1.9
215.	*	4.1	4.6	3.5	2.0	1.9	1.9	3.0	1.9
220.	*	4.2	4.6	3.4	2.0	1.9	1.9	3.0	1.9
225.	*	4.3	4.7	3.4	2.0	1.9	1.9	3.1	1.9
230.	*	4.1	4.5	3.2	2.0	1.9	1.9	3.2	1.9
235.	*	4.1	4.5	3.3	2.0	1.9	1.9	3.2	1.9
240.	*	3.7	4.2	3.3	2.0	1.9	1.9	3.4	1.9
245.	*	3.8	3.9	3.8	2.0	1.9	1.9	3.6	1.9
250.	*	3.7	3.8	4.0	2.6	1.9	1.9	3.9	1.9
255.	*	3.6	3.6	4.2	3.9	1.9	2.2	4.1	2.1
260.	*	3.3	3.2	3.1	6.2	2.2	2.7	4.1	2.7
265.	*	2.5	2.5	2.6	8.4	3.1	4.0	3.5	3.9
270.	*	2.3	2.1	2.1	8.3	3.4	5.2	2.7	5.0
275.	*	2.4	2.0	2.0	7.6	3.6	5.5	2.1	5.2
280.	*	2.4	2.1	2.0	6.9	3.1	5.2	1.9	4.8
285.	*	2.5	2.2	2.0	6.4	3.4	4.7	1.9	4.3
290.	*	2.5	2.2	2.1	5.9	3.4	4.4	1.9	4.0
295.	*	2.5	2.2	2.1	6.1	3.2	4.0	1.9	3.7
300.	*	2.5	2.2	2.1	5.8	3.3	3.8	1.9	3.5
305.	*	2.5	2.2	2.1	5.9	3.5	3.7	1.9	3.4

310.	*	2.5	2.2	2.1	6.0	3.5	3.6	1.9	3.3
315.	*	2.5	2.2	2.1	5.9	3.4	3.3	1.9	3.0
320.	*	2.3	2.2	2.1	5.8	3.4	3.4	1.9	3.1
325.	*	2.1	2.1	2.1	5.7	3.6	3.2	1.9	3.0
330.	*	2.0	2.0	2.1	5.7	3.5	3.3	1.9	3.0
335.	*	2.0	2.0	1.9	5.5	3.3	3.2	1.9	2.9
340.	*	2.0	2.1	1.9	5.4	3.3	3.1	1.9	2.9
345.	*	2.0	2.2	1.9	5.4	3.3	3.1	1.9	2.9
350.	*	2.0	2.4	1.9	5.4	3.3	3.2	1.9	2.9
355.	*	2.0	2.8	1.9	5.4	3.3	3.2	1.9	2.9
360.	*	1.9	3.2	1.9	5.4	3.3	3.2	1.9	2.9
365.	*	1.9	3.5	1.9	5.5	3.5	3.1	1.9	2.9

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: Build: AM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)								
	1	2	3	4	5	6	7	8	
370.	*	1.9	3.5	1.9	5.5	3.5	3.1	1.9	2.9
375.	*	1.9	3.4	1.9	5.6	3.5	3.2	1.9	2.9
380.	*	1.9	3.2	1.9	5.9	3.1	3.2	1.9	2.9
385.	*	1.9	3.1	1.9	5.9	2.8	3.2	1.9	2.9
390.	*	1.9	3.0	1.9	6.0	3.1	3.6	2.0	3.3
395.	*	1.9	2.9	1.9	6.1	3.2	3.5	2.1	3.2
400.	*	1.9	2.9	1.9	6.3	3.3	3.6	2.1	3.4
405.	*	1.9	2.9	1.9	6.8	3.2	3.8	2.1	3.4
410.	*	1.9	2.7	2.0	7.0	3.4	3.9	2.1	3.6
415.	*	1.9	2.7	2.0	7.3	3.4	4.1	2.1	3.8
420.	*	1.9	2.7	2.0	7.8	3.2	4.2	2.0	3.8
425.	*	1.9	2.7	2.0	7.9	3.0	4.5	2.0	4.2
430.	*	1.9	2.6	2.0	7.6	2.8	5.0	2.0	4.7
435.	*	1.9	2.6	2.0	6.4	2.6	5.6	2.2	5.3
440.	*	1.9	2.6	2.4	4.9	2.3	6.5	2.7	6.2
445.	*	1.9	2.9	3.1	3.6	2.2	5.5	4.0	5.3
450.	*	2.0	3.4	3.9	2.8	2.2	3.9	4.5	3.8
455.	*	2.3	4.1	4.0	2.6	2.2	2.7	4.6	2.6
460.	*	2.8	4.7	3.8	2.5	2.3	2.2	4.1	2.1
465.	*	3.0	5.0	3.1	2.4	2.3	1.9	3.7	1.9
470.	*	3.1	5.1	2.9	2.3	2.3	1.9	3.4	1.9
475.	*	3.0	4.9	3.2	2.3	2.3	1.9	3.4	1.9
480.	*	3.0	4.6	3.7	2.4	2.3	1.9	3.2	1.9
485.	*	3.1	4.3	4.2	2.5	2.5	1.9	3.2	1.9
490.	*	3.2	4.5	4.4	2.5	2.6	1.9	3.0	1.9
495.	*	3.1	4.4	4.6	2.3	2.4	1.9	2.9	1.9
500.	*	3.2	4.6	4.5	2.1	2.1	1.9	2.8	1.9
505.	*	3.1	5.0	4.2	1.9	1.9	1.9	2.8	1.9
510.	*	3.1	5.4	3.8	1.9	1.9	1.9	2.9	1.9
515.	*	3.2	5.7	3.7	1.9	1.9	1.9	2.8	1.9
520.	*	3.3	6.0	3.7	1.9	1.9	1.9	2.8	1.9
525.	*	3.4	6.3	3.7	1.9	1.9	1.9	2.8	1.9
530.	*	3.3	6.5	3.7	1.9	1.9	1.9	2.8	1.9
535.	*	3.3	6.1	3.7	1.9	1.9	1.9	2.8	1.9
540.	*	3.3	5.5	3.7	1.9	1.9	1.9	2.8	1.9
545.	*	3.1	5.8	3.7	1.9	1.9	1.9	2.8	1.9
550.	*	3.0	5.5	3.6	1.9	1.9	1.9	2.8	1.9
555.	*	2.8	5.3	3.5	1.9	1.9	1.9	2.8	1.9
560.	*	2.9	5.2	3.4	1.9	1.9	1.9	2.8	1.9
565.	*	3.2	4.9	3.4	1.9	1.9	1.9	2.8	1.9

570.	*	3.5	4.8	3.4	2.0	1.9	1.9	2.8	1.9
575.	*	4.1	4.6	3.5	2.0	1.9	1.9	3.0	1.9
580.	*	4.2	4.6	3.4	2.0	1.9	1.9	3.0	1.9
585.	*	4.3	4.7	3.4	2.0	1.9	1.9	3.1	1.9
590.	*	4.1	4.5	3.2	2.0	1.9	1.9	3.2	1.9
595.	*	4.1	4.5	3.3	2.0	1.9	1.9	3.2	1.9
600.	*	3.7	4.2	3.3	2.0	1.9	1.9	3.4	1.9
605.	*	3.8	3.9	3.8	2.0	1.9	1.9	3.6	1.9
610.	*	3.7	3.8	4.0	2.6	1.9	1.9	3.9	1.9
615.	*	3.6	3.6	4.2	3.9	1.9	2.2	4.1	2.1
620.	*	3.3	3.2	3.1	6.2	2.2	2.7	4.1	2.7
625.	*	2.5	2.5	2.6	8.4	3.1	4.0	3.5	3.9

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: Build: AM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)								
	1	2	3	4	5	6	7	8	
630.	*	2.3	2.1	2.1	8.3	3.4	5.2	2.7	5.0
635.	*	2.4	2.0	2.0	7.6	3.6	5.5	2.1	5.2
640.	*	2.4	2.1	2.0	6.9	3.1	5.2	1.9	4.8
645.	*	2.5	2.2	2.0	6.4	3.4	4.7	1.9	4.3
650.	*	2.5	2.2	2.1	5.9	3.4	4.4	1.9	4.0
655.	*	2.5	2.2	2.1	6.1	3.2	4.0	1.9	3.7
660.	*	2.5	2.2	2.1	5.8	3.3	3.8	1.9	3.5
665.	*	2.5	2.2	2.1	5.9	3.5	3.7	1.9	3.4
670.	*	2.5	2.2	2.1	6.0	3.5	3.6	1.9	3.3
675.	*	2.5	2.2	2.1	5.9	3.4	3.3	1.9	3.0
680.	*	2.3	2.2	2.1	5.8	3.4	3.4	1.9	3.1
685.	*	2.1	2.1	2.1	5.7	3.6	3.2	1.9	3.0
690.	*	2.0	2.0	2.1	5.7	3.5	3.3	1.9	3.0
695.	*	2.0	2.0	1.9	5.5	3.3	3.2	1.9	2.9
700.	*	2.0	2.1	1.9	5.4	3.3	3.1	1.9	2.9
705.	*	2.0	2.2	1.9	5.4	3.3	3.1	1.9	2.9
710.	*	2.0	2.4	1.9	5.4	3.3	3.2	1.9	2.9
715.	*	2.0	2.8	1.9	5.4	3.3	3.2	1.9	2.9
720.	*	1.9	3.2	1.9	5.4	3.3	3.2	1.9	2.9
725.	*	1.9	3.5	1.9	5.5	3.5	3.2	1.9	2.9
730.	*	1.9	3.5	1.9	5.5	3.4	3.2	1.9	2.9
735.	*	1.9	3.4	1.9	5.6	3.6	3.3	1.9	2.9
740.	*	1.9	3.2	1.9	5.7	3.3	3.2	1.9	2.9
745.	*	1.9	3.1	1.9	5.7	3.1	3.2	1.9	2.9
750.	*	1.9	3.0	1.9	5.7	3.4	3.5	2.0	3.2
755.	*	1.9	2.9	1.9	5.8	3.4	3.4	2.1	3.1
760.	*	1.9	2.9	1.9	5.9	3.6	3.5	2.1	3.2
765.	*	1.9	2.9	1.9	6.2	3.7	3.5	2.1	3.1
770.	*	1.9	2.7	2.0	6.2	3.8	3.5	2.1	3.2
775.	*	1.9	2.7	2.0	6.1	3.9	3.5	2.1	3.2
780.	*	1.9	2.7	2.0	6.0	3.8	3.4	2.0	3.1
785.	*	1.9	2.7	2.0	5.8	3.7	3.5	2.0	3.2
790.	*	1.9	2.6	2.0	5.4	3.7	3.6	2.0	3.3
795.	*	1.9	2.6	2.0	4.9	3.6	3.7	2.2	3.4
800.	*	2.1	3.0	3.2	2.5	2.8	3.9	2.6	3.6
805.	*	2.3	3.3	3.6	2.1	2.8	3.5	3.2	3.2
810.	*	2.5	3.6	3.9	1.9	2.8	2.2	4.1	2.2
815.	*	2.7	3.9	3.6	1.9	2.8	2.0	3.9	2.0
820.	*	3.0	3.9	3.6	1.9	2.8	1.9	3.5	1.9
825.	*	3.0	3.9	3.3	1.9	2.8	1.9	3.2	1.9

830.	*	3.0	4.0	3.3	1.9	2.8	1.9	3.1	1.9
835.	*	2.9	4.0	3.4	1.9	2.8	1.9	3.1	1.9
840.	*	2.8	3.9	3.6	1.9	2.8	1.9	3.0	1.9
845.	*	2.8	3.9	3.7	1.9	2.5	1.9	3.0	1.9
850.	*	2.8	4.2	3.7	1.9	2.5	1.9	2.9	1.9
855.	*	2.8	4.3	3.7	1.9	2.5	1.9	2.9	1.9
860.	*	2.8	4.4	3.8	1.9	2.5	1.9	2.8	1.9
865.	*	2.7	4.6	3.8	1.9	2.5	1.9	2.8	1.9
870.	*	2.7	4.8	3.7	1.9	2.5	1.9	2.8	1.9
875.	*	2.7	4.8	3.7	1.9	1.9	1.9	2.8	1.9
880.	*	2.7	5.0	3.7	1.9	1.9	1.9	2.8	1.9
885.	*	2.7	5.1	3.7	1.9	1.9	1.9	2.8	1.9

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: Build: AM

WIND ANGLE (DEGR) *	* CONCENTRATION (PPM)							
	1	2	3	4	5	6	7	8
890. *	2.7	5.3	3.7	1.9	1.9	1.9	2.8	1.9
895. *	2.6	5.2	3.7	1.9	1.9	1.9	2.8	1.9
900. *	2.7	5.0	3.8	1.9	1.9	1.9	2.8	1.9
905. *	2.7	5.2	3.8	1.9	1.9	1.9	2.8	1.9
910. *	2.7	4.9	3.8	1.9	1.9	1.9	2.8	1.9
915. *	2.7	4.6	3.8	1.9	1.9	1.9	2.8	1.9
920. *	2.7	4.2	3.8	1.9	1.9	1.9	2.8	1.9
925. *	2.8	3.9	3.8	1.9	1.9	1.9	2.8	1.9
930. *	2.9	3.7	3.8	1.9	1.9	1.9	2.8	1.9
935. *	3.2	3.5	3.8	1.9	1.9	1.9	2.8	1.9
940. *	3.4	3.4	3.8	1.9	1.9	1.9	2.8	1.9
945. *	3.4	3.3	3.8	1.9	1.9	1.9	2.8	1.9
950. *	3.2	3.2	3.8	1.9	1.9	1.9	2.8	1.9
955. *	3.2	3.1	3.8	1.9	1.9	1.9	2.8	1.9
960. *	3.0	3.0	3.8	1.9	1.9	1.9	2.8	1.9
965. *	3.0	2.9	3.8	1.9	1.9	1.9	2.8	1.9
970. *	3.0	2.8	3.8	1.9	1.9	1.9	2.8	1.9
975. *	3.1	2.8	3.9	1.9	1.9	1.9	2.8	1.9
980. *	2.8	2.1	2.1	5.4	3.3	1.9	2.8	1.9
985. *	2.4	2.1	2.1	5.4	3.3	1.9	2.8	1.9
990. *	2.3	2.1	2.1	5.5	3.3	3.2	1.9	2.9
995. *	2.3	2.1	2.1	5.5	3.3	3.2	1.9	2.9
**** *	2.3	2.1	2.1	5.5	3.3	3.2	1.9	2.9
**** *	2.3	2.1	2.1	5.5	3.3	3.2	1.9	2.9
**** *	2.3	2.1	2.1	5.5	3.3	3.2	1.9	2.9
**** *	2.3	2.1	2.1	5.5	3.3	3.2	1.9	2.9
**** *	2.3	2.1	2.1	5.5	3.6	3.2	1.9	2.9
**** *	2.3	2.1	2.1	5.5	3.6	3.2	1.9	2.9
**** *	2.3	2.1	2.1	5.5	3.6	3.2	1.9	2.9
**** *	2.3	2.1	2.1	5.5	3.6	3.2	1.9	2.9
**** *	2.3	2.1	2.1	5.5	3.6	3.2	1.9	2.9
**** *	2.3	2.1	2.1	5.5	3.6	3.2	1.9	2.9
**** *	2.3	2.1	2.1	5.5	3.6	3.2	1.9	2.9
**** *	2.3	2.1	2.1	5.5	4.2	3.2	1.9	2.9
**** *	2.3	2.1	2.1	5.5	4.2	3.2	1.9	2.9
**** *	2.3	2.1	2.1	5.5	4.2	3.2	1.9	2.9
**** *	2.3	2.1	2.1	5.5	4.2	3.2	1.9	2.9
**** *	2.3	2.1	2.1	5.5	4.2	3.2	1.9	2.9
**** *	1.9	2.6	2.2	5.4	4.2	3.2	1.9	2.9
**** *	1.9	2.6	2.2	5.4	4.2	3.2	1.9	2.9

****	*	1.9	2.6	2.2	5.4	4.2	3.2	1.9	2.9
****	*	1.9	2.6	2.2	5.4	4.2	3.2	1.9	2.9
****	*	1.9	2.6	2.2	5.4	4.2	3.2	1.9	2.9
****	*	1.9	2.6	2.2	5.4	4.2	3.2	1.9	2.9
****	*	1.9	2.6	2.2	5.4	4.2	3.2	1.9	2.9
****	*	1.9	2.6	2.2	5.4	4.2	3.2	1.9	2.9
****	*	1.9	2.6	2.2	5.4	4.2	3.2	1.9	2.9
****	*	1.9	2.6	2.2	5.4	4.2	3.2	1.9	2.9
****	*	1.9	2.6	2.2	5.4	4.2	3.2	1.9	2.9
****	*	1.9	2.6	2.2	5.4	4.2	3.2	1.9	2.9
****	*	1.9	2.6	2.2	5.4	4.2	3.2	1.9	2.9

****	*	2.3	2.1	2.1	5.5	3.3	3.2	1.9	2.9
****	*	2.3	2.1	2.1	5.5	3.3	3.2	1.9	2.9
****	*	2.3	2.1	2.1	5.5	3.3	3.2	1.9	2.9
****	*	2.3	2.1	2.1	5.5	3.3	3.2	1.9	2.9
****	*	2.3	2.1	2.1	5.5	3.3	3.2	1.9	2.9
****	*	2.3	2.1	2.1	5.5	3.3	3.2	1.9	2.9
****	*	2.3	2.1	2.1	5.5	3.3	3.2	1.9	2.9
****	*	2.3	2.1	2.1	5.5	3.6	3.2	1.9	2.9
****	*	2.3	2.1	2.1	5.5	3.6	3.2	1.9	2.9
****	*	2.3	2.1	2.1	5.5	3.6	3.2	1.9	2.9
****	*	2.3	2.1	2.1	5.5	3.6	3.2	1.9	2.9
****	*	2.3	2.1	2.1	5.5	3.6	3.2	1.9	2.9

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: Build: AM

WIND ANGLE (DEGR) *	CONCENTRATION (PPM)							
	1	2	3	4	5	6	7	8
**** *	2.3	2.1	2.1	5.5	3.6	3.2	1.9	2.9
**** *	2.3	2.1	2.1	5.5	4.2	3.2	1.9	2.9
MAX *	4.3	6.5	4.6	8.4	4.2	6.5	4.6	6.2
DEGR. *	225	170	135	265	1055	80	95	80

THE HIGHEST CONCENTRATION OF 8.40 PPM OCCURRED AT RECEPTOR 4.

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: Build: AM

DATE : 5/18/12
 TIME : 15:34:48

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
 THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

		* CO/LINK (PPM)							
		* ANGLE (DEGREES)							
		1	2	3	4	5	6	7	8
LINK #	*	225	170	135	265	***	80	95	80
1	*	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
2	*	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.5
3	*	0.0	0.0	0.0	0.2	0.0	2.2	0.7	2.1
4	*	0.0	0.0	0.0	0.2	0.0	0.2	0.3	0.2
5	*	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1
6	*	0.0	0.0	0.0	0.7	0.0	0.1	0.1	0.1
7	*	0.4	0.0	0.4	0.4	0.3	0.1	0.0	0.1
8	*	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
9	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
11	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	*	0.0	0.0	0.0	0.5	0.0	0.1	0.1	0.1
15	*	0.4	0.0	0.4	2.4	0.4	0.1	0.0	0.1
16	*	0.0	0.1	0.1	0.0	0.3	0.0	0.0	0.0
17	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	*	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0
22	*	0.3	0.0	0.5	0.0	0.2	0.0	0.0	0.0
23	*	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1
24	*	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
25	*	0.0	0.0	0.0	0.1	0.0	0.3	0.8	0.3
26	*	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
27	*	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
28	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	*	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1
31	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

33	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35	*	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
36	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: Build: AM

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	CO/LINK (PPM)								
	ANGLE (DEGREES)								
	1	2	3	4	5	6	7	8	
LINK #	*	225	170	135	265	***	80	95	80
46	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	*	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
50	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52	*	0.0	0.6	0.5	0.0	0.3	0.0	0.0	0.0
53	*	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
54	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56	*	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
57	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58	*	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1
59	*	0.0	0.0	0.0	0.2	0.0	0.2	0.2	0.2
60	*	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
61	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
62	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
63	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64	*	0.2	0.0	0.2	0.8	0.2	0.0	0.0	0.0
65	*	0.3	0.0	0.3	0.0	0.3	0.0	0.0	0.0
66	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
68	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
69	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	*	0.0	0.4	0.1	0.0	0.3	0.0	0.0	0.0
71	*	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
72	*	0.2	1.7	0.0	0.0	0.0	0.0	0.0	0.0
73	*	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: Build: PM

DATE : 5/18/12
 TIME : 15:35:12

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
 U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 1.9 PPM

LINK VARIABLES

LINK DESCRIPTION	* X1	LINK COORDINATES (FT) Y1	X2	Y2	* LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)	W (FT)	V/C QUEUE (VEH)
1. Rte 1 EB W of Bridge*	*****	*****	*****	*****	1577.	87. AG	1449.	15.1	0.0	56.0	
2. Rte 1 EB Accotink Br*	*****	*****	*****	*****	151.	87. BR	1449.	15.1	7.5	56.0	
3. Rte 1 EB E of Bridge*	*****	*****	*****	*****	700.	86. AG	1449.	15.1	0.0	56.0	
4. Rte 1 EB FCP ApprThru*	*****	*****	*****	*****	502.	86. AG	1317.	15.1	0.0	56.0	
5. Rte 1 EB FCP IntThru*	*****	*****	*****	*****	229.	79. AG	1317.	15.1	0.0	56.0	
6. Rte 1 EB FCP Dptr TL*	*****	*****	*****	*****	649.	79. AG	1614.	15.1	0.0	56.0	
7. Rte 1 EB W Bklk Thru*	*****	*****	*****	*****	512.	79. AG	1529.	15.1	0.0	56.0	
8. Rte 1 EB W Bklk IntT*	*****	*****	*****	*****	185.	80. AG	1529.	14.7	0.0	56.0	
9. Rte 1 EB E Bklk Dprt*	*****	*****	*****	*****	259.	83. AG	1594.	14.7	0.0	56.0	
10. Rte 1 EB E Bklk Dpt2*	*****	*****	*****	*****	741.	90. AG	1594.	14.7	0.0	56.0	
11. Rte 1 EB W FCP L AD1*	*****	*****	*****	*****	477.	86. AG	132.	16.2	0.0	44.0	
12. Rte 1 EB W FCP L AD2*	*****	*****	*****	*****	198.	42. AG	132.	16.2	0.0	44.0	
13. FCP NB N Rte 1 L Dpt*	*****	*****	*****	*****	319.	360. AG	132.	16.2	0.0	44.0	
14. Rte 1 EB E FCR R Dpt*	*****	*****	*****	*****	885.	79. AG	289.	15.1	0.0	44.0	
15. Rte 1 EB W Bklk R Ap*	*****	*****	*****	*****	509.	79. AG	289.	16.2	0.0	44.0	
16. Rte 1 EB @Bklk R Int*	*****	*****	*****	*****	62.	121. AG	289.	16.2	0.0	44.0	
17. Rte 1 EB W Bklk L Ap*	*****	*****	*****	*****	512.	79. AG	85.	16.2	0.0	32.0	
18. Rte 1 EB @Bklk L In *	*****	*****	*****	*****	157.	32. AG	85.	16.2	0.0	32.0	
19. Rte 1 WB E Bklk *	*****	*****	*****	*****	639.	271. AG	2320.	14.7	0.0	56.0	
20. Rte 1 WB E Bklk Thru*	*****	*****	*****	*****	388.	265. AG	2149.	14.7	0.0	56.0	
21. Rte 1 WB @Bklk Int *	*****	*****	*****	*****	171.	259. AG	2149.	14.3	0.0	56.0	
22. Rte 1 WB W Bklk Dptr*	*****	*****	*****	*****	389.	260. AG	2884.	14.3	0.0	56.0	
23. Rte 1 WB E FCP Thru *	*****	*****	*****	*****	788.	259. AG	2267.	14.3	0.0	56.0	
24. Rte 1 WB @FCP Thru *	*****	*****	*****	*****	237.	260. AG	2267.	15.1	0.0	56.0	
25. Rte 1 WB FCP-Br All *	*****	*****	*****	*****	1158.	266. AG	3332.	15.1	0.0	56.0	
26. Rte 1 WB @Br All *	*****	*****	*****	*****	151.	265. BR	3332.	15.1	7.5	56.0	
27. Rte 1 WB W Br All *	*****	*****	*****	*****	1590.	266. AG	3332.	15.1	0.0	56.0	
28. Rte 1 WB E Bklk L Ap*	*****	*****	*****	*****	380.	265. AG	9.	16.2	0.0	32.0	

29.	Rte 1 WB @Bklk L Int*	*****	*****	*****	*****	*	183.	213.	AG	9.	16.2	0.0	32.0
30.	Rte 1 WB E FCP R Apr*	*****	*****	*****	*****	*	795.	259.	AG	617.	16.2	0.0	44.0
31.	Rte 1 WB @FCP R Int *	*****	*****	*****	*****	*	71.	296.	AG	617.	16.2	0.0	44.0
32.	FCP NB N Rte 1 Mrg *	*****	*****	*****	*****	*	302.	359.	AG	617.	16.2	0.0	44.0
33.	FCP SB N Rte 1 All *	*****	*****	*****	*****	*	1897.	179.	AG	1651.	15.1	0.0	44.0
34.	FCP SB N Rte 1 L Apr*	*****	*****	*****	*****	*	422.	180.	AG	586.	16.2	0.0	56.0
35.	FCP SB @Rte 1 L Int *	*****	*****	*****	*****	*	227.	123.	AG	586.	16.2	0.0	56.0
36.	FCP N Rte 1 SB R Apr*	*****	*****	*****	*****	*	443.	181.	AG	1065.	16.2	0.0	44.0
37.	FCP @Rte 1 SB R Int *	*****	*****	*****	*****	*	93.	214.	AG	1065.	16.2	0.0	44.0
38.	FCP NB N Rte 1 All *	*****	*****	*****	*****	*	1996.	360.	AG	749.	15.5	0.0	44.0
39.	Phck NB S Rte 1 All *	*****	*****	*****	*****	*	890.	316.	AG	781.	15.1	0.0	32.0
40.	Phck NB S Rte 1 T-R *	*****	*****	*****	*****	*	507.	333.	AG	61.	15.1	0.0	32.0
41.	Phck NB S Rte 1 Thru*	*****	*****	*****	*****	*	50.	333.	AG	47.	15.1	0.0	32.0
42.	Bklk NB @Rte 1 Thru *	*****	*****	*****	*****	*	209.	357.	AG	47.	15.1	0.0	32.0
43.	Bklk NB N Rte 1 All*	*****	*****	*****	*****	*	1214.	357.	AG	294.	15.1	0.0	32.0
44.	Rte 1 WB @Bklk R Apr*	*****	*****	*****	*****	*	390.	265.	AG	162.	16.2	0.0	32.0
45.	Rte 1 WB @Bklk R Int*	*****	*****	*****	*****	*	74.	284.	AG	162.	16.2	0.0	32.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: Build: PM

DATE : 5/18/12

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LINK VARIABLES

LINK DESCRIPTION	* X1	LINK COORDINATES (FT) Y1	X2	Y2	* LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
46. Phck NB S Rte 1 L Ap*	*****	*****	*****	*****	*	558.	332.	AG	720.	16.2	0.0	32.0	
47. Phck NB @Rte 1 L Int*	*****	*****	*****	*****	*	164.	327.	AG	720.	16.2	0.0	32.0	
48. Phck NB @Rte 1 R Int*	*****	*****	*****	*****	*	149.	29.	AG	14.	16.2	0.0	32.0	
49. Bklk N Rte 1 SB All *	*****	*****	*****	*****	*	1192.	178.	AG	77.	14.3	0.0	32.0	
50. Bklk N Rte 1 SB Thru*	*****	*****	*****	*****	*	37.	176.	AG	11.	14.3	0.0	32.0	
51. Bklk @Rte 1 SB Thru *	*****	*****	*****	*****	*	200.	177.	AG	11.	14.3	0.0	32.0	
52. Bklk SB S Rte 1 All1*	*****	*****	*****	*****	*	561.	151.	AG	309.	14.3	0.0	32.0	
53. Bklk SB S Rte 1 All2*	*****	*****	*****	*****	*	891.	137.	AG	309.	14.3	0.0	32.0	
54. Bklk SB N Rte 1 R Ap*	*****	*****	*****	*****	*	39.	178.	AG	15.	16.2	0.0	32.0	
55. Bklk SB N Rte 1 R In*	*****	*****	*****	*****	*	73.	223.	AG	15.	16.2	0.0	32.0	
56. Bklk SB N Rte 1 L Ap*	*****	*****	*****	*****	*	36.	177.	AG	51.	16.2	0.0	32.0	
57. Bklk SB N Rte 1 L In*	*****	*****	*****	*****	*	162.	130.	AG	51.	16.2	0.0	32.0	
58. Q Rte 1 EB W FCP Thr*	*****	*****	*****	*****	*	175.	266.	AG	290.	100.0	0.0	36.0	0.47 8.9
59. Q Rte 1 EB W FCP L *	*****	*****	*****	*****	*	2827.	266.	AG	456.	100.0	0.0	24.0	**** 143.6
60. Q Rte 1 WB E FCP Thr*	*****	*****	*****	*****	*	421.	79.	AG	354.	100.0	0.0	36.0	0.97 21.4
61. Q FCP SB N Rte 1 L *	*****	*****	*****	*****	*	128.	360.	AG	477.	100.0	0.0	36.0	0.41 6.5
62. Q FCP SB N Rte 1 R *	*****	*****	*****	*****	*	1070.	1.	AG	294.	100.0	0.0	24.0	1.15 54.3
63. Q Rte 1 WB E FCP R *	*****	*****	*****	*****	*	39.	77.	AG	61.	100.0	0.0	24.0	0.26 2.0
64. Q Rte 1 EB W Bklk R *	*****	*****	*****	*****	*	76.	258.	AG	257.	100.0	0.0	24.0	0.25 3.9
65. Q Rte 1 EB W Bklk T *	*****	*****	*****	*****	*	270.	259.	AG	386.	100.0	0.0	36.0	0.73 13.7
66. Rte 1 EB W Bklk L Ap*	*****	*****	*****	*****	*	866.	259.	AG	225.	100.0	0.0	12.0	6.07 44.0
67. Q Rte 1 WB E Bklk Th*	*****	*****	*****	*****	*	1340.	85.	AG	414.	100.0	0.0	36.0	1.14 68.1
68. Q Rte 1 WB E Bklk L *	*****	*****	*****	*****	*	9.	90.	AG	236.	100.0	0.0	12.0	-.47 0.4
69. Q Phck NB S Rte 1 TR*	*****	*****	*****	*****	*	48.	153.	AG	191.	100.0	0.0	12.0	0.23 2.4
70. Q Phck NB S Rte 1 L *	*****	*****	*****	*****	*	1278.	152.	AG	382.	100.0	0.0	24.0	1.35 64.9
71. Q Bklk SB N Rte 1 L *	*****	*****	*****	*****	*	41.	358.	AG	195.	100.0	0.0	12.0	0.24 2.1
72. Q Bklk SB N Rte 1 T *	*****	*****	*****	*****	*	9.	355.	AG	195.	100.0	0.0	12.0	0.05 0.4
73. Q Bklk SB N Rte 1 R *	*****	*****	*****	*****	*	12.	356.	AG	195.	100.0	0.0	12.0	0.08 0.6

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: Build: PM

DATE : 5/18/12
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 ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* * * *	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
58. Q Rte 1 EB W FCP Thr*		180	73	6.5	1317	1695	88.96	2	3
59. Q Rte 1 EB W FCP L *		180	172	7.0	132	1716	88.96	2	3
60. Q Rte 1 WB E FCP Thr*		180	89	6.5	2267	1695	88.96	2	3
61. Q FCP SB N Rte 1 L *		180	120	7.0	586	1663	88.96	2	3
62. Q FCP SB N Rte 1 R *		180	111	7.0	1065	1393	88.96	2	3
63. Q Rte 1 WB E FCP R *		180	23	0.0	617	1393	88.96	2	3
64. Q Rte 1 EB W Bklk R *		180	97	7.0	289	1393	88.96	2	3
65. Q Rte 1 EB W Bklk T *		180	97	7.0	1529	1695	88.96	2	3
66. Rte 1 EB W Bklk L Ap*		180	170	6.5	85	1770	88.96	2	3
67. Q Rte 1 WB E Bklk Th*		180	104	7.0	2149	1695	88.96	2	3
68. Q Rte 1 WB E Bklk L *		180	178	2.0	9	1770	88.96	2	3
69. Q Phck NB S Rte 1 TR*		180	144	6.0	61	1730	88.96	2	3
70. Q Phck NB S Rte 1 L *		180	144	6.0	720	1716	88.96	2	3
71. Q Bklk SB N Rte 1 L *		180	147	7.0	51	1593	88.96	2	3
72. Q Bklk SB N Rte 1 T *		180	147	7.0	11	1676	88.96	2	3
73. Q Bklk SB N Rte 1 R *		180	147	7.0	15	1478	88.96	2	3

 RECEPTOR LOCATIONS

RECEPTOR	* * * *	COORDINATES (FT)			* * * *
		X	Y	Z	
1. 1: 9140 Richmond Hwy	*	*****	*****	5.0	*
2. 2: 9136 Backlick Rd.	*	*****	*****	5.0	*
3. 3: 9135 Anderson Ln.	*	*****	*****	5.0	*
4. 4: Bus Stop @Rte. 1	*	*****	*****	5.0	*
5. 5: E.K. HmlsShelter	*	*****	*****	5.0	*
6. 6: Accotink Creek	*	*****	*****	5.0	*
7. 7: Path @Creek	*	*****	*****	12.5	*
8. 8: Sidewalk @Creek	*	*****	*****	12.5	*

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-****

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)							
	1	2	3	4	5	6	7	8
0.	1.9	2.2	1.9	4.2	3.2	4.3	1.9	3.8
5.	1.9	2.3	1.9	4.2	3.4	4.3	1.9	3.8
10.	1.9	2.2	1.9	4.4	3.2	4.3	1.9	3.8
15.	1.9	2.2	1.9	4.6	3.1	4.3	1.9	3.8
20.	1.9	2.2	1.9	4.6	2.7	4.3	1.9	3.8
25.	1.9	2.2	1.9	4.5	2.5	4.4	1.9	4.0
30.	1.9	2.2	1.9	4.6	2.6	4.5	2.0	4.1
35.	1.9	2.1	1.9	4.6	2.8	4.5	2.1	4.2
40.	1.9	2.0	1.9	4.9	3.1	4.7	2.1	4.3
45.	1.9	2.0	1.9	5.0	3.3	5.0	2.1	4.6
50.	1.9	2.0	1.9	5.0	3.3	5.0	2.2	4.7
55.	1.9	2.0	1.9	5.4	3.4	5.3	2.2	5.0
60.	1.9	2.0	1.9	5.5	3.4	5.6	2.2	5.3
65.	1.9	2.0	1.9	5.5	3.4	6.1	2.2	5.8
70.	1.9	2.0	1.9	5.3	3.3	6.7	2.2	6.2
75.	1.9	2.0	2.0	4.5	2.8	7.3	2.5	7.1
80.	1.9	2.3	2.5	3.9	2.6	7.5	4.0	7.3
85.	2.1	2.9	3.5	2.9	2.4	5.8	6.3	5.7
90.	2.6	3.8	4.4	2.4	2.4	3.5	7.6	3.5
95.	3.1	4.8	4.3	2.4	2.4	2.3	7.6	2.3
100.	3.6	5.0	3.8	2.3	2.5	2.0	6.9	2.0
105.	3.8	4.7	3.6	2.4	2.5	1.9	6.0	1.9
110.	3.7	4.5	3.5	2.4	2.5	1.9	5.5	1.9
115.	3.5	4.1	3.6	2.4	2.5	1.9	5.1	1.9
120.	3.3	4.0	4.2	2.4	2.6	1.9	4.7	1.9
125.	3.3	3.8	4.3	2.5	2.6	1.9	4.5	1.9
130.	3.3	3.8	4.6	2.5	2.7	1.9	4.4	1.9
135.	3.3	3.5	4.9	2.4	2.6	1.9	4.1	1.9
140.	3.2	3.5	4.8	2.3	2.3	1.9	4.1	1.9
145.	3.2	3.7	4.3	2.0	2.1	1.9	4.0	1.9

150.	*	3.2	4.1	3.8	1.9	2.0	1.9	3.9	1.9
155.	*	3.3	4.5	3.5	1.9	1.9	1.9	3.9	1.9
160.	*	3.5	4.8	3.5	1.9	1.9	1.9	3.8	1.9
165.	*	3.9	4.8	3.5	1.9	1.9	1.9	3.8	1.9
170.	*	3.5	4.3	3.5	1.9	1.9	1.9	3.8	1.9
175.	*	3.5	3.8	3.5	1.9	1.9	1.9	3.8	1.9
180.	*	3.4	3.4	3.5	1.9	1.9	1.9	3.8	1.9
185.	*	3.0	3.2	3.5	1.9	1.9	1.9	3.8	1.9
190.	*	2.9	3.5	3.5	1.9	1.9	1.9	3.8	1.9
195.	*	2.7	3.6	3.4	1.9	1.9	1.9	3.8	1.9
200.	*	2.8	3.7	3.3	1.9	1.9	1.9	3.8	1.9
205.	*	3.1	3.7	3.3	1.9	1.9	1.9	4.0	1.9

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: Build: PM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)								
	1	2	3	4	5	6	7	8	
210.	*	3.5	3.9	3.3	1.9	1.9	1.9	4.1	1.9
215.	*	3.8	3.8	3.3	1.9	1.9	1.9	4.1	1.9
220.	*	3.8	4.0	3.4	1.9	1.9	1.9	4.1	1.9
225.	*	3.7	4.1	3.5	1.9	1.9	1.9	4.5	1.9
230.	*	3.6	4.0	3.6	1.9	1.9	1.9	4.7	1.9
235.	*	3.7	4.0	3.7	1.9	1.9	1.9	5.0	1.9
240.	*	3.6	3.9	4.0	1.9	1.9	1.9	5.3	1.9
245.	*	3.6	4.1	4.2	1.9	1.9	1.9	5.8	1.9
250.	*	3.8	4.3	4.5	1.9	1.9	1.9	6.5	1.9
255.	*	4.0	4.4	4.6	2.6	1.9	2.1	7.3	2.1
260.	*	3.4	3.9	4.1	4.3	2.2	2.9	7.6	2.8
265.	*	2.5	2.9	3.1	5.7	3.1	4.4	6.2	4.4
270.	*	2.1	2.2	2.3	5.9	4.0	6.3	4.1	6.1
275.	*	2.2	2.0	2.1	5.6	3.6	7.0	2.7	6.7
280.	*	2.2	2.1	2.1	4.8	3.6	6.7	2.1	6.4
285.	*	2.2	2.1	2.1	4.3	3.3	6.1	2.0	5.8
290.	*	2.2	2.1	2.1	4.1	3.4	5.6	2.0	5.3
295.	*	2.2	2.1	2.2	4.2	3.1	5.3	2.0	5.0
300.	*	2.1	2.0	2.2	4.4	3.1	5.1	2.0	4.7
305.	*	2.1	2.0	2.1	4.2	3.1	4.9	2.0	4.6
310.	*	2.1	2.0	2.1	4.5	3.2	4.6	2.0	4.3
315.	*	2.1	2.0	2.1	4.5	3.4	4.6	2.0	4.1
320.	*	2.1	2.0	2.1	4.6	3.4	4.3	2.0	4.0
325.	*	2.0	2.0	2.1	4.6	3.5	4.3	1.9	4.0
330.	*	2.0	1.9	2.0	4.5	3.2	4.4	1.9	3.8
335.	*	2.0	1.9	1.9	4.3	3.2	4.3	1.9	3.9
340.	*	2.0	2.0	1.9	4.3	3.2	4.3	1.9	3.8
345.	*	2.1	2.0	1.9	4.3	3.2	4.3	1.9	3.8
350.	*	2.0	2.0	1.9	4.3	3.2	4.3	1.9	3.8
355.	*	2.0	2.1	1.9	4.3	3.3	4.3	1.9	3.8
360.	*	1.9	2.2	1.9	4.2	3.2	4.3	1.9	3.8
5.	*	1.9	2.3	1.9	4.2	3.4	4.3	1.9	3.8
10.	*	1.9	2.2	1.9	4.4	3.2	4.3	1.9	3.8
15.	*	1.9	2.2	1.9	4.6	3.1	4.3	1.9	3.8
20.	*	1.9	2.2	1.9	4.6	2.7	4.3	1.9	3.8
25.	*	1.9	2.2	1.9	4.5	2.5	4.4	1.9	4.0
30.	*	1.9	2.2	1.9	4.6	2.6	4.5	2.0	4.1
35.	*	1.9	2.1	1.9	4.6	2.8	4.5	2.1	4.2
40.	*	1.9	2.0	1.9	4.9	3.1	4.7	2.1	4.3
45.	*	1.9	2.0	1.9	5.0	3.3	5.0	2.1	4.6

50.	*	1.9	2.0	1.9	5.0	3.3	5.0	2.2	4.7
55.	*	1.9	2.0	1.9	5.4	3.4	5.3	2.2	5.0
60.	*	1.9	2.0	1.9	5.5	3.4	5.6	2.2	5.3
65.	*	1.9	2.0	1.9	5.5	3.4	6.1	2.2	5.8
70.	*	1.9	2.0	1.9	5.3	3.3	6.7	2.2	6.2
75.	*	1.9	2.0	2.0	4.5	2.8	7.3	2.5	7.1
80.	*	1.9	2.3	2.5	3.9	2.6	7.5	4.0	7.3
85.	*	2.1	2.9	3.5	2.9	2.4	5.8	6.3	5.7
90.	*	2.6	3.8	4.4	2.4	2.4	3.5	7.6	3.5
95.	*	3.1	4.8	4.3	2.4	2.4	2.3	7.6	2.3
100.	*	3.6	5.0	3.8	2.3	2.5	2.0	6.9	2.0
105.	*	3.8	4.7	3.6	2.4	2.5	1.9	6.0	1.9

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: Build: PM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)								
	1	2	3	4	5	6	7	8	
110.	*	3.7	4.5	3.5	2.4	2.5	1.9	5.5	1.9
115.	*	3.5	4.1	3.6	2.4	2.5	1.9	5.1	1.9
120.	*	3.3	4.0	4.2	2.4	2.6	1.9	4.7	1.9
125.	*	3.3	3.8	4.3	2.5	2.6	1.9	4.5	1.9
130.	*	3.3	3.8	4.6	2.5	2.7	1.9	4.4	1.9
135.	*	3.3	3.5	4.9	2.4	2.6	1.9	4.1	1.9
140.	*	3.2	3.5	4.8	2.3	2.3	1.9	4.1	1.9
145.	*	3.2	3.7	4.3	2.0	2.1	1.9	4.0	1.9
150.	*	3.2	4.1	3.8	1.9	2.0	1.9	3.9	1.9
155.	*	3.3	4.5	3.5	1.9	1.9	1.9	3.9	1.9
160.	*	3.5	4.8	3.5	1.9	1.9	1.9	3.8	1.9
165.	*	3.9	4.8	3.5	1.9	1.9	1.9	3.8	1.9
170.	*	3.5	4.3	3.5	1.9	1.9	1.9	3.8	1.9
175.	*	3.5	3.8	3.5	1.9	1.9	1.9	3.8	1.9
180.	*	3.4	3.4	3.5	1.9	1.9	1.9	3.8	1.9
185.	*	3.0	3.2	3.5	1.9	1.9	1.9	3.8	1.9
190.	*	2.9	3.5	3.5	1.9	1.9	1.9	3.8	1.9
195.	*	2.7	3.6	3.4	1.9	1.9	1.9	3.8	1.9
200.	*	2.8	3.7	3.3	1.9	1.9	1.9	3.8	1.9
205.	*	3.1	3.7	3.3	1.9	1.9	1.9	4.0	1.9
210.	*	3.5	3.9	3.3	1.9	1.9	1.9	4.1	1.9
215.	*	3.8	3.8	3.3	1.9	1.9	1.9	4.1	1.9
220.	*	3.8	4.0	3.4	1.9	1.9	1.9	4.1	1.9
225.	*	3.7	4.1	3.5	1.9	1.9	1.9	4.5	1.9
230.	*	3.6	4.0	3.6	1.9	1.9	1.9	4.7	1.9
235.	*	3.7	4.0	3.7	1.9	1.9	1.9	5.0	1.9
240.	*	3.6	3.9	4.0	1.9	1.9	1.9	5.3	1.9
245.	*	3.6	4.1	4.2	1.9	1.9	1.9	5.8	1.9
250.	*	3.8	4.3	4.5	1.9	1.9	1.9	6.5	1.9
255.	*	4.0	4.4	4.6	2.6	1.9	2.1	7.3	2.1
260.	*	3.4	3.9	4.1	4.3	2.2	2.9	7.6	2.8
265.	*	2.5	2.9	3.1	5.7	3.1	4.4	6.2	4.4
270.	*	2.1	2.2	2.3	5.9	4.0	6.3	4.1	6.1
275.	*	2.2	2.0	2.1	5.6	3.6	7.0	2.7	6.7
280.	*	2.2	2.1	2.1	4.8	3.6	6.7	2.1	6.4
285.	*	2.2	2.1	2.1	4.3	3.3	6.1	2.0	5.8
290.	*	2.2	2.1	2.1	4.1	3.4	5.6	2.0	5.3
295.	*	2.2	2.1	2.2	4.2	3.1	5.3	2.0	5.0
300.	*	2.1	2.0	2.2	4.4	3.1	5.1	2.0	4.7
305.	*	2.1	2.0	2.1	4.2	3.1	4.9	2.0	4.6

310.	*	2.1	2.0	2.1	4.5	3.2	4.6	2.0	4.3
315.	*	2.1	2.0	2.1	4.5	3.4	4.6	2.0	4.1
320.	*	2.1	2.0	2.1	4.6	3.4	4.3	2.0	4.0
325.	*	2.0	2.0	2.1	4.6	3.5	4.3	1.9	4.0
330.	*	2.0	1.9	2.0	4.5	3.2	4.4	1.9	3.8
335.	*	2.0	1.9	1.9	4.3	3.2	4.3	1.9	3.9
340.	*	2.0	2.0	1.9	4.3	3.2	4.3	1.9	3.8
345.	*	2.1	2.0	1.9	4.3	3.2	4.3	1.9	3.8
350.	*	2.0	2.0	1.9	4.3	3.2	4.3	1.9	3.8
355.	*	2.0	2.1	1.9	4.3	3.3	4.3	1.9	3.8
360.	*	1.9	2.2	1.9	4.2	3.2	4.3	1.9	3.8
365.	*	1.9	2.3	1.9	4.2	3.4	4.3	1.9	3.8

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: Build: PM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)								
	1	2	3	4	5	6	7	8	
370.	*	1.9	2.2	1.9	4.4	3.2	4.3	1.9	3.8
375.	*	1.9	2.2	1.9	4.6	3.1	4.3	1.9	3.8
380.	*	1.9	2.2	1.9	4.6	2.7	4.3	1.9	3.8
385.	*	1.9	2.2	1.9	4.5	2.5	4.4	1.9	4.0
390.	*	1.9	2.2	1.9	4.6	2.6	4.5	2.0	4.1
395.	*	1.9	2.1	1.9	4.6	2.8	4.5	2.1	4.2
400.	*	1.9	2.0	1.9	4.9	3.1	4.7	2.1	4.3
405.	*	1.9	2.0	1.9	5.0	3.3	5.0	2.1	4.6
410.	*	1.9	2.0	1.9	5.0	3.3	5.0	2.2	4.7
415.	*	1.9	2.0	1.9	5.4	3.4	5.3	2.2	5.0
420.	*	1.9	2.0	1.9	5.5	3.4	5.6	2.2	5.3
425.	*	1.9	2.0	1.9	5.5	3.4	6.1	2.2	5.8
430.	*	1.9	2.0	1.9	5.3	3.3	6.7	2.2	6.2
435.	*	1.9	2.0	2.0	4.5	2.8	7.3	2.5	7.1
440.	*	1.9	2.3	2.5	3.9	2.6	7.5	4.0	7.3
445.	*	2.1	2.9	3.5	2.9	2.4	5.8	6.3	5.7
450.	*	2.6	3.8	4.4	2.4	2.4	3.5	7.6	3.5
455.	*	3.1	4.8	4.3	2.4	2.4	2.3	7.6	2.3
460.	*	3.6	5.0	3.8	2.3	2.5	2.0	6.9	2.0
465.	*	3.8	4.7	3.6	2.4	2.5	1.9	6.0	1.9
470.	*	3.7	4.5	3.5	2.4	2.5	1.9	5.5	1.9
475.	*	3.5	4.1	3.6	2.4	2.5	1.9	5.1	1.9
480.	*	3.3	4.0	4.2	2.4	2.6	1.9	4.7	1.9
485.	*	3.3	3.8	4.3	2.5	2.6	1.9	4.5	1.9
490.	*	3.3	3.8	4.6	2.5	2.7	1.9	4.4	1.9
495.	*	3.3	3.5	4.9	2.4	2.6	1.9	4.1	1.9
500.	*	3.2	3.5	4.8	2.3	2.3	1.9	4.1	1.9
505.	*	3.2	3.7	4.3	2.0	2.1	1.9	4.0	1.9
510.	*	3.2	4.1	3.8	1.9	2.0	1.9	3.9	1.9
515.	*	3.3	4.5	3.5	1.9	1.9	1.9	3.9	1.9
520.	*	3.5	4.8	3.5	1.9	1.9	1.9	3.8	1.9
525.	*	3.9	4.8	3.5	1.9	1.9	1.9	3.8	1.9
530.	*	3.5	4.3	3.5	1.9	1.9	1.9	3.8	1.9
535.	*	3.5	3.8	3.5	1.9	1.9	1.9	3.8	1.9
540.	*	3.4	3.4	3.5	1.9	1.9	1.9	3.8	1.9
545.	*	3.0	3.2	3.5	1.9	1.9	1.9	3.8	1.9
550.	*	2.9	3.5	3.5	1.9	1.9	1.9	3.8	1.9
555.	*	2.7	3.6	3.4	1.9	1.9	1.9	3.8	1.9
560.	*	2.8	3.7	3.3	1.9	1.9	1.9	3.8	1.9
565.	*	3.1	3.7	3.3	1.9	1.9	1.9	4.0	1.9

570.	*	3.5	3.9	3.3	1.9	1.9	1.9	4.1	1.9
575.	*	3.8	3.8	3.3	1.9	1.9	1.9	4.1	1.9
580.	*	3.8	4.0	3.4	1.9	1.9	1.9	4.1	1.9
585.	*	3.7	4.1	3.5	1.9	1.9	1.9	4.5	1.9
590.	*	3.6	4.0	3.6	1.9	1.9	1.9	4.7	1.9
595.	*	3.7	4.0	3.7	1.9	1.9	1.9	5.0	1.9
600.	*	3.6	3.9	4.0	1.9	1.9	1.9	5.3	1.9
605.	*	3.6	4.1	4.2	1.9	1.9	1.9	5.8	1.9
610.	*	3.8	4.3	4.5	1.9	1.9	1.9	6.5	1.9
615.	*	4.0	4.4	4.6	2.6	1.9	2.1	7.3	2.1
620.	*	3.4	3.9	4.1	4.3	2.2	2.9	7.6	2.8
625.	*	2.5	2.9	3.1	5.7	3.1	4.4	6.2	4.4

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: Build: PM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)								
	1	2	3	4	5	6	7	8	
630.	*	2.1	2.2	2.3	5.9	4.0	6.3	4.1	6.1
635.	*	2.2	2.0	2.1	5.6	3.6	7.0	2.7	6.7
640.	*	2.2	2.1	2.1	4.8	3.5	6.7	2.1	6.4
645.	*	2.2	2.1	2.1	4.3	3.2	6.1	2.0	5.8
650.	*	2.2	2.1	2.1	4.1	3.3	5.6	2.0	5.3
655.	*	2.2	2.1	2.2	4.2	3.0	5.3	2.0	5.0
660.	*	2.2	2.1	2.2	4.4	3.0	5.1	2.0	4.7
665.	*	2.2	2.1	2.1	4.2	3.0	4.9	2.0	4.6
670.	*	2.2	2.1	2.2	4.5	3.1	4.6	2.0	4.3
675.	*	2.2	2.1	2.2	4.6	3.3	4.6	2.0	4.1
680.	*	2.2	2.1	2.2	4.7	3.4	4.3	2.0	4.0
685.	*	2.1	2.1	2.2	4.7	3.5	4.3	1.9	4.0
690.	*	2.1	2.0	2.1	4.6	3.2	4.4	1.9	3.8
695.	*	2.1	2.0	2.0	4.4	3.2	4.3	1.9	3.9
700.	*	2.1	2.1	2.0	4.4	3.2	4.3	1.9	3.8
705.	*	2.2	2.1	2.0	4.4	3.2	4.3	1.9	3.8
710.	*	2.1	2.1	2.0	4.4	3.2	4.3	1.9	3.8
715.	*	2.1	2.2	2.0	4.4	3.3	4.3	1.9	3.8
720.	*	2.0	2.3	2.0	4.4	3.2	4.3	1.9	3.8
725.	*	1.9	2.3	1.9	4.3	3.4	4.3	1.9	3.8
730.	*	1.9	2.2	1.9	4.4	3.3	4.3	1.9	3.8
735.	*	1.9	2.2	1.9	4.5	3.2	4.3	1.9	3.8
740.	*	1.9	2.2	1.9	4.5	2.7	4.3	1.9	3.8
745.	*	1.9	2.2	1.9	4.4	2.6	4.4	1.9	4.0
750.	*	1.9	2.2	1.9	4.5	2.6	4.5	2.0	4.0
755.	*	1.9	2.1	1.9	4.5	2.7	4.5	2.1	4.1
760.	*	1.9	2.0	1.9	4.7	2.8	4.6	2.1	4.2
765.	*	1.9	2.0	1.9	4.8	2.9	4.7	2.1	4.3
770.	*	1.9	2.0	1.9	4.8	3.0	4.7	2.1	4.4
775.	*	1.9	2.0	1.9	4.8	3.0	4.9	2.1	4.6
780.	*	1.9	2.0	1.9	4.7	3.0	5.1	2.1	4.8
785.	*	1.9	2.0	1.9	4.5	3.0	5.4	2.1	5.1
790.	*	1.9	2.0	1.9	4.1	3.0	5.8	2.1	5.4
795.	*	1.9	2.0	1.9	3.5	2.8	6.0	2.4	5.8
800.	*	2.0	2.4	2.4	2.6	2.4	6.1	3.7	5.9
805.	*	2.1	2.6	2.9	2.1	2.4	4.6	5.7	4.4
810.	*	2.5	3.0	3.4	2.0	2.4	2.6	7.2	2.6
815.	*	2.7	3.5	3.4	2.0	2.4	2.0	7.2	2.0
820.	*	3.0	3.5	3.3	2.0	2.4	1.9	6.5	1.9
825.	*	3.1	3.3	3.3	2.0	2.4	1.9	5.7	1.9

830.	*	3.0	3.3	3.4	2.0	2.4	1.9	5.3	1.9
835.	*	2.9	3.2	3.5	2.0	2.4	1.9	4.9	1.9
840.	*	2.8	3.3	3.9	2.0	2.5	1.9	4.6	1.9
845.	*	2.8	3.4	3.9	2.1	2.5	1.9	4.4	1.9
850.	*	2.8	3.5	4.0	2.1	2.5	1.9	4.3	1.9
855.	*	2.8	3.4	4.1	2.0	2.4	1.9	4.1	1.9
860.	*	2.8	3.5	4.0	2.0	2.3	1.9	4.0	1.9
865.	*	2.7	3.6	3.8	1.9	2.3	1.9	4.0	1.9
870.	*	2.8	3.7	3.6	1.9	2.3	1.9	3.9	1.9
875.	*	2.8	3.7	3.5	1.9	1.9	1.9	3.8	1.9
880.	*	2.8	3.7	3.5	1.9	1.9	1.9	3.8	1.9
885.	*	3.0	3.7	3.5	1.9	1.9	1.9	3.8	1.9

****	*	1.9	2.0	2.0	4.4	3.7	4.3	1.9	3.8
****	*	1.9	2.0	2.0	4.4	3.7	4.3	1.9	3.8
****	*	1.9	2.0	2.0	4.4	3.7	4.3	1.9	3.8
****	*	1.9	2.0	2.0	4.4	3.7	4.3	1.9	3.8
****	*	1.9	2.0	2.0	4.4	3.7	4.3	1.9	3.8
****	*	1.9	2.0	2.0	4.4	3.7	4.3	1.9	3.8
****	*	1.9	2.0	2.0	4.4	3.7	4.3	1.9	3.8
****	*	1.9	2.0	2.0	4.4	3.7	4.3	1.9	3.8
****	*	1.9	2.0	2.0	4.4	3.7	4.3	1.9	3.8
****	*	1.9	2.0	2.0	4.4	3.7	4.3	1.9	3.8
****	*	1.9	2.0	2.0	4.4	3.7	4.3	1.9	3.8

****	*	2.1	2.0	2.1	4.5	3.2	4.3	1.9	3.8
****	*	2.1	2.0	2.1	4.5	3.2	4.3	1.9	3.8
****	*	2.1	2.0	2.1	4.5	3.2	4.3	1.9	3.8
****	*	2.1	2.0	2.1	4.5	3.2	4.3	1.9	3.8
****	*	2.1	2.0	2.1	4.5	3.2	4.3	1.9	3.8
****	*	2.1	2.0	2.1	4.5	3.2	4.3	1.9	3.8
****	*	2.1	2.0	2.1	4.5	3.2	4.3	1.9	3.8
****	*	2.1	2.0	2.1	4.5	3.2	4.3	1.9	3.8
****	*	2.1	2.0	2.1	4.5	3.2	4.3	1.9	3.8
****	*	2.1	2.0	2.1	4.5	3.2	4.3	1.9	3.8
****	*	2.1	2.0	2.1	4.5	3.2	4.3	1.9	3.8

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: Build: PM

WIND ANGLE (DEGR)	* CONCENTRATION (PPM)							
	1	2	3	4	5	6	7	8
****	2.1	2.0	2.1	4.6	3.2	4.3	1.9	3.8
****	2.1	2.0	2.1	4.6	3.7	4.3	1.9	3.8
MAX	4.0	5.0	4.9	5.9	4.0	7.5	7.6	7.3
DEGR.	255	100	135	270	270	80	95	80

THE HIGHEST CONCENTRATION OF 7.60 PPM OCCURRED AT RECEPTOR 7.

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: Build: PM

DATE : 5/18/12

TIME : 15:35:12

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

		* CO/LINK (PPM)							
		* ANGLE (DEGREES)							
		1	2	3	4	5	6	7	8
LINK #	*	255	100	135	270	270	80	95	80
1	*	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0
2	*	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.3
3	*	0.1	0.0	0.0	0.0	0.1	1.2	0.4	1.1
4	*	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.1
5	*	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
6	*	0.1	0.0	0.0	0.5	0.2	0.1	0.0	0.1
7	*	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0
8	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	*	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
10	*	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
11	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	*	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
15	*	0.0	0.0	0.1	0.3	0.0	0.0	0.0	0.0
16	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	*	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.1
20	*	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
21	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	*	0.1	0.0	0.8	0.0	0.0	0.1	0.0	0.1
23	*	0.3	0.0	0.0	0.5	0.1	0.2	0.0	0.2
24	*	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1
25	*	0.3	0.0	0.0	0.4	0.4	1.0	2.8	1.0
26	*	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0
27	*	0.1	0.0	0.0	0.2	0.2	0.0	0.0	0.0
28	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	*	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.1
31	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

33	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	*	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
40	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	*	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
44	*	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
45	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2020: Build: PM

LINK #	CO/LINK (PPM)							
	1	2	3	4	5	6	7	8
	255	100	135	270	270	80	95	80
46	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
47	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
53	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
59	0.4	0.0	0.0	0.3	0.5	1.8	1.2	1.8
60	0.2	0.0	0.0	0.3	0.1	0.1	0.0	0.1
61	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
62	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
63	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
65	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
66	0.0	0.0	0.2	0.4	0.0	0.1	0.0	0.1
67	0.0	1.3	0.0	0.0	0.0	0.1	0.0	0.1
68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
69	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.6	0.0	0.0	0.0	0.1	0.0
71	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
73	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: Build: AM

DATE : 5/18/12
 TIME : 15:35:34

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

 VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
 U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 1.9 PPM

LINK VARIABLES

LINK DESCRIPTION	* *	X1	LINK COORDINATES (FT) Y1	X2	Y2	* *	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)	W (FT)	V/C (VEH)	QUEUE (VEH)
1. Rte 1 EB W of Bridge*	*****		*****	*****	*****	*	1577.	87. AG	3076.	13.6	0.0	56.0		
2. Rte 1 EB Accotink Br*	*****		*****	*****	*****	*	151.	87. BR	3076.	13.6	7.5	56.0		
3. Rte 1 EB E of Bridge*	*****		*****	*****	*****	*	700.	86. AG	3076.	13.6	0.0	56.0		
4. Rte 1 EB FCP ApprThru*	*****		*****	*****	*****	*	502.	86. AG	2860.	13.6	0.0	56.0		
5. Rte 1 EB FCP IntThru*	*****		*****	*****	*****	*	229.	79. AG	2860.	13.4	0.0	56.0		
6. Rte 1 EB FCP Dptr TL*	*****		*****	*****	*****	*	649.	79. AG	2087.	13.4	0.0	56.0		
7. Rte 1 EB E Bklk Thru*	*****		*****	*****	*****	*	512.	79. AG	2072.	13.4	0.0	56.0		
8. Rte 1 EB E Bklk IntT*	*****		*****	*****	*****	*	185.	80. AG	2072.	13.7	0.0	56.0		
9. Rte 1 EB E Bklk Dprt*	*****		*****	*****	*****	*	259.	83. AG	2186.	13.7	0.0	56.0		
10. Rte 1 EB E Bklk Dpt2*	*****		*****	*****	*****	*	741.	90. AG	2186.	13.7	0.0	56.0		
11. Rte 1 EB W FCP L AD1*	*****		*****	*****	*****	*	477.	86. AG	216.	15.1	0.0	44.0		
12. Rte 1 EB W FCP L AD2*	*****		*****	*****	*****	*	198.	42. AG	216.	15.1	0.0	44.0		
13. FCP NB N Rte 1 L Dpt*	*****		*****	*****	*****	*	319.	360. AG	216.	15.1	0.0	44.0		
14. Rte 1 EB E FCR R Dpt*	*****		*****	*****	*****	*	885.	79. AG	1575.	13.4	0.0	44.0		
15. Rte 1 EB W Bklk R Ap*	*****		*****	*****	*****	*	509.	79. AG	1575.	22.5	0.0	44.0		
16. Rte 1 EB @Bklk R Int*	*****		*****	*****	*****	*	62.	121. AG	1575.	22.5	0.0	44.0		
17. Rte 1 EB W Bklk L Ap*	*****		*****	*****	*****	*	512.	79. AG	15.	15.1	0.0	32.0		
18. Rte 1 EB @Bklk L In *	*****		*****	*****	*****	*	157.	32. AG	15.	15.1	0.0	32.0		
19. Rte 1 WB E Bklk *	*****		*****	*****	*****	*	639.	271. AG	1839.	14.1	0.0	56.0		
20. Rte 1 WB E Bklk Thru*	*****		*****	*****	*****	*	388.	265. AG	1688.	14.1	0.0	56.0		
21. Rte 1 WB @Bklk Int *	*****		*****	*****	*****	*	171.	259. AG	1688.	14.1	0.0	56.0		
22. Rte 1 WB W Bklk Dptr*	*****		*****	*****	*****	*	389.	260. AG	1834.	14.1	0.0	56.0		
23. Rte 1 WB E FCP Thru *	*****		*****	*****	*****	*	788.	259. AG	1092.	14.1	0.0	56.0		
24. Rte 1 WB @FCP Thru *	*****		*****	*****	*****	*	237.	260. AG	1092.	14.5	0.0	56.0		
25. Rte 1 WB FCP-Br All *	*****		*****	*****	*****	*	1158.	266. AG	1105.	14.5	0.0	56.0		
26. Rte 1 WB @Br All *	*****		*****	*****	*****	*	151.	265. BR	1105.	14.5	7.5	56.0		
27. Rte 1 WB W Br All *	*****		*****	*****	*****	*	1590.	266. AG	1105.	14.5	0.0	56.0		
28. Rte 1 WB E Bklk L Ap*	*****		*****	*****	*****	*	380.	265. AG	131.	22.5	0.0	32.0		

29.	Rte 1 WB @Bklk L Int*	*****	*****	*****	*****	*	183.	213.	AG	131.	22.5	0.0	32.0
30.	Rte 1 WB E FCP R Apr*	*****	*****	*****	*****	*	795.	259.	AG	742.	15.1	0.0	44.0
31.	Rte 1 WB @FCP R Int *	*****	*****	*****	*****	*	71.	296.	AG	742.	15.1	0.0	44.0
32.	FCP NB N Rte 1 Mrg *	*****	*****	*****	*****	*	302.	359.	AG	742.	15.1	0.0	44.0
33.	FCP SB N Rte 1 All *	*****	*****	*****	*****	*	1897.	179.	AG	815.	14.5	0.0	44.0
34.	FCP SB N Rte 1 L Apr*	*****	*****	*****	*****	*	422.	180.	AG	802.	15.1	0.0	56.0
35.	FCP SB @Rte 1 L Int *	*****	*****	*****	*****	*	227.	123.	AG	802.	15.1	0.0	56.0
36.	FCP N Rte 1 SB R Apr*	*****	*****	*****	*****	*	443.	181.	AG	13.	15.1	0.0	44.0
37.	FCP @Rte 1 SB R Int *	*****	*****	*****	*****	*	93.	214.	AG	13.	15.1	0.0	44.0
38.	FCP NB N Rte 1 All *	*****	*****	*****	*****	*	1996.	360.	AG	958.	14.5	0.0	44.0
39.	Phck NB S Rte 1 All *	*****	*****	*****	*****	*	890.	316.	AG	111.	13.4	0.0	32.0
40.	Phck NB S Rte 1 T-R *	*****	*****	*****	*****	*	507.	333.	AG	20.	13.4	0.0	32.0
41.	Phck NB S Rte 1 Thru*	*****	*****	*****	*****	*	50.	333.	AG	10.	13.4	0.0	32.0
42.	Bklk NB @Rte 1 Thru *	*****	*****	*****	*****	*	209.	357.	AG	10.	13.4	0.0	32.0
43.	Bklk NB N Rte 1 All*	*****	*****	*****	*****	*	1214.	357.	AG	45.	13.4	0.0	32.0
44.	Rte 1 WB @Bklk R Apr*	*****	*****	*****	*****	*	390.	265.	AG	20.	15.1	0.0	32.0
45.	Rte 1 WB @Bklk R Int*	*****	*****	*****	*****	*	74.	284.	AG	20.	15.1	0.0	32.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: Build: AM

DATE : 5/18/12
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LINK VARIABLES

LINK DESCRIPTION	* X1	LINK COORDINATES (FT) Y1	X2	Y2	* LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
46. Phck NB S Rte 1 L Ap*	*****	*****	*****	*****	*	558.	332.	AG	91.	15.1	0.0	32.0	
47. Phck NB @Rte 1 L Int*	*****	*****	*****	*****	*	164.	327.	AG	91.	15.1	0.0	32.0	
48. Phck NB @Rte 1 R Int*	*****	*****	*****	*****	*	149.	29.	AG	10.	15.1	0.0	32.0	
49. Bklk N Rte 1 SB All *	*****	*****	*****	*****	*	1192.	178.	AG	215.	17.0	0.0	32.0	
50. Bklk N Rte 1 SB Thru*	*****	*****	*****	*****	*	37.	176.	AG	56.	17.0	0.0	32.0	
51. Bklk @Rte 1 SB Thru *	*****	*****	*****	*****	*	200.	177.	AG	56.	17.0	0.0	32.0	
52. Bklk SB S Rte 1 All1*	*****	*****	*****	*****	*	561.	151.	AG	1762.	17.0	0.0	32.0	
53. Bklk SB S Rte 1 All2*	*****	*****	*****	*****	*	891.	137.	AG	1762.	17.0	0.0	32.0	
54. Bklk SB N Rte 1 R Ap*	*****	*****	*****	*****	*	39.	178.	AG	55.	17.0	0.0	32.0	
55. Bklk SB N Rte 1 R In*	*****	*****	*****	*****	*	73.	223.	AG	55.	17.0	0.0	32.0	
56. Bklk SB N Rte 1 L Ap*	*****	*****	*****	*****	*	36.	177.	AG	104.	17.0	0.0	32.0	
57. Bklk SB N Rte 1 L In*	*****	*****	*****	*****	*	162.	130.	AG	104.	17.0	0.0	32.0	
58. Q Rte 1 EB W FCP Thr*	*****	*****	*****	*****	*	271.	267.	AG	193.	100.0	0.0	36.0	0.85 13.8
59. Q Rte 1 EB W FCP L *	*****	*****	*****	*****	*	455.	266.	AG	404.	100.0	0.0	24.0	1.42 23.1
60. Q Rte 1 WB E FCP Thr*	*****	*****	*****	*****	*	151.	79.	AG	283.	100.0	0.0	36.0	0.40 7.7
61. Q FCP SB N Rte 1 L *	*****	*****	*****	*****	*	241.	360.	AG	525.	100.0	0.0	36.0	0.96 12.2
62. Q FCP SB N Rte 1 R *	*****	*****	*****	*****	*	4.	360.	AG	308.	100.0	0.0	24.0	0.02 0.2
63. Q Rte 1 WB E FCP R *	*****	*****	*****	*****	*	61.	80.	AG	74.	100.0	0.0	24.0	0.32 3.1
64. Q Rte 1 EB W Bklk R *	*****	*****	*****	*****	*	934.	259.	AG	188.	100.0	0.0	24.0	1.07 47.4
65. Q Rte 1 EB W Bklk T *	*****	*****	*****	*****	*	287.	259.	AG	283.	100.0	0.0	36.0	0.77 14.6
66. Rte 1 EB W Bklk L Ap*	*****	*****	*****	*****	*	17.	257.	AG	217.	100.0	0.0	12.0	**** 0.9
67. Q Rte 1 WB E Bklk Th*	*****	*****	*****	*****	*	191.	84.	AG	231.	100.0	0.0	36.0	0.55 9.7
68. Q Rte 1 WB E Bklk L *	*****	*****	*****	*****	*	334.	85.	AG	198.	100.0	0.0	12.0	1.16 17.0
69. Q Phck NB S Rte 1 TR*	*****	*****	*****	*****	*	18.	153.	AG	208.	100.0	0.0	12.0	0.53 0.9
70. Q Phck NB S Rte 1 L *	*****	*****	*****	*****	*	137.	152.	AG	417.	100.0	0.0	24.0	1.18 7.0
71. Q Bklk SB N Rte 1 L *	*****	*****	*****	*****	*	197.	357.	AG	198.	100.0	0.0	12.0	1.07 10.0
72. Q Bklk SB N Rte 1 T *	*****	*****	*****	*****	*	49.	356.	AG	198.	100.0	0.0	12.0	0.55 2.5
73. Q Bklk SB N Rte 1 R *	*****	*****	*****	*****	*	48.	358.	AG	198.	100.0	0.0	12.0	0.61 2.4

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: Build: AM

DATE : 5/18/12
 TIME : 15:35:34

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* * * *	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
58. Q Rte 1 EB W FCP Thr*		180	52	6.5	2860	1695	83.22	2	3
59. Q Rte 1 EB W FCP L *		180	163	7.0	216	1716	83.22	2	3
60. Q Rte 1 WB E FCP Thr*		180	76	6.5	1092	1695	83.22	2	3
61. Q FCP SB N Rte 1 L *		180	141	7.0	802	1663	83.22	2	3
62. Q FCP SB N Rte 1 R *		180	124	7.0	13	1393	83.22	2	3
63. Q Rte 1 WB E FCP R *		180	30	0.0	742	1393	83.22	2	3
64. Q Rte 1 EB W Bklk R *		180	76	7.0	1575	1393	83.22	2	3
65. Q Rte 1 EB W Bklk T *		180	76	7.0	2072	1695	83.22	2	3
66. Rte 1 EB W Bklk L Ap*		180	175	4.6	15	1770	83.22	2	3
67. Q Rte 1 WB E Bklk Th*		180	62	7.0	1688	1695	83.22	2	3
68. Q Rte 1 WB E Bklk L *		180	160	6.5	131	1770	83.22	2	3
69. Q Phck NB S Rte 1 TR*		180	168	6.0	20	1723	83.22	2	3
70. Q Phck NB S Rte 1 L *		180	168	6.0	91	1716	83.22	2	3
71. Q Bklk SB N Rte 1 L *		180	160	7.0	104	1593	83.22	2	3
72. Q Bklk SB N Rte 1 T *		180	160	7.0	56	1676	83.22	2	3
73. Q Bklk SB N Rte 1 R *		180	160	7.0	55	1478	83.22	2	3

RECEPTOR LOCATIONS

RECEPTOR	* * *	COORDINATES (FT)			* *
		X	Y	Z	
1. 1: 9140 Richmond Hwy	*	*****	*****	5.0	*
2. 2: 9136 Backlick Rd.	*	*****	*****	5.0	*
3. 3: 9135 Anderson Ln.	*	*****	*****	5.0	*
4. 4: Bus Stop @Rte. 1	*	*****	*****	5.0	*
5. 5: E.K. HmlsShelter	*	*****	*****	5.0	*
6. 6: Accotink Creek	*	*****	*****	5.0	*
7. 7: Path @Creek	*	*****	*****	12.5	*
8. 8: Sidewalk @Creek	*	*****	*****	12.5	*

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: Build: AM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-****

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)							
	1	2	3	4	5	6	7	8
0.	1.9	3.0	1.9	5.1	3.3	3.2	1.9	2.9
5.	1.9	3.2	1.9	5.1	3.4	3.2	1.9	2.9
10.	1.9	3.3	1.9	5.2	3.4	3.3	1.9	2.9
15.	1.9	3.3	1.9	5.5	3.3	3.3	1.9	2.9
20.	1.9	3.1	1.9	5.4	3.1	3.3	1.9	2.9
25.	1.9	3.0	1.9	5.5	2.8	3.2	1.9	3.0
30.	1.9	2.9	1.9	5.9	3.0	3.4	1.9	3.1
35.	1.9	2.8	1.9	5.9	3.2	3.5	2.0	3.3
40.	1.9	2.7	1.9	6.2	3.2	3.6	2.0	3.3
45.	1.9	2.7	1.9	6.6	3.2	3.7	2.0	3.3
50.	1.9	2.7	1.9	6.7	3.4	3.8	2.0	3.5
55.	1.9	2.7	2.0	7.1	3.4	4.0	2.0	3.7
60.	1.9	2.7	2.0	7.5	3.4	4.2	1.9	3.8
65.	1.9	2.6	2.0	7.6	3.1	4.7	1.9	4.3
70.	1.9	2.6	2.0	7.4	2.9	5.1	1.9	4.6
75.	1.9	2.6	2.0	6.2	2.6	5.7	2.1	5.3
80.	1.9	2.6	2.4	4.8	2.3	6.6	2.6	6.3
85.	1.9	2.9	3.0	3.6	2.2	5.8	4.1	5.5
90.	2.0	3.4	3.8	2.8	2.2	3.9	4.8	3.8
95.	2.3	4.1	3.9	2.6	2.2	2.6	4.7	2.5
100.	2.7	4.5	3.5	2.5	2.2	2.2	4.3	2.1
105.	2.9	4.8	3.2	2.4	2.2	1.9	3.8	1.9
110.	3.0	4.8	2.9	2.4	2.3	1.9	3.4	1.9
115.	3.0	4.8	3.2	2.3	2.3	1.9	3.4	1.9
120.	3.0	4.5	3.6	2.4	2.3	1.9	3.2	1.9
125.	3.1	4.3	4.2	2.5	2.5	1.9	3.2	1.9
130.	3.2	4.2	4.4	2.5	2.6	1.9	3.0	1.9
135.	3.1	4.2	4.6	2.3	2.4	1.9	3.0	1.9
140.	3.1	4.5	4.2	2.1	2.1	1.9	2.9	1.9
145.	3.0	4.9	4.0	1.9	1.9	1.9	2.8	1.9

150.	*	3.1	5.0	3.7	1.9	1.9	1.9	2.9	1.9
155.	*	3.2	5.6	3.6	1.9	1.9	1.9	2.9	1.9
160.	*	3.3	5.8	3.6	1.9	1.9	1.9	2.9	1.9
165.	*	3.3	6.2	3.6	1.9	1.9	1.9	2.8	1.9
170.	*	3.2	6.2	3.6	1.9	1.9	1.9	2.8	1.9
175.	*	3.2	5.9	3.6	1.9	1.9	1.9	2.8	1.9
180.	*	3.3	5.3	3.6	1.9	1.9	1.9	2.8	1.9
185.	*	3.1	5.5	3.6	1.9	1.9	1.9	2.8	1.9
190.	*	3.0	5.3	3.5	1.9	1.9	1.9	2.8	1.9
195.	*	2.8	5.2	3.4	1.9	1.9	1.9	2.8	1.9
200.	*	2.9	5.1	3.5	1.9	1.9	1.9	2.8	1.9
205.	*	3.1	4.8	3.4	1.9	1.9	1.9	2.8	1.9

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: Build: AM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)								
	1	2	3	4	5	6	7	8	
210.	*	3.4	4.8	3.4	2.0	1.9	1.9	2.9	1.9
215.	*	4.0	4.6	3.4	2.0	1.9	1.9	3.0	1.9
220.	*	4.1	4.6	3.4	2.0	1.9	1.9	3.0	1.9
225.	*	4.3	4.5	3.4	2.0	1.9	1.9	3.1	1.9
230.	*	4.0	4.3	3.3	2.0	1.9	1.9	3.2	1.9
235.	*	4.0	4.3	3.5	2.0	1.9	1.9	3.2	1.9
240.	*	3.9	4.2	3.6	2.0	1.9	1.9	3.4	1.9
245.	*	3.9	4.0	3.7	2.0	1.9	1.9	3.6	1.9
250.	*	3.6	3.9	3.9	2.6	1.9	1.9	3.9	1.9
255.	*	3.3	3.6	4.0	4.0	1.9	2.2	4.1	2.1
260.	*	3.2	3.0	3.1	6.3	2.2	2.8	4.2	2.7
265.	*	2.4	2.6	2.5	8.3	2.9	4.1	3.6	3.9
270.	*	2.2	2.1	2.0	8.5	3.5	5.3	2.7	5.1
275.	*	2.2	2.0	1.9	7.3	3.6	5.6	2.1	5.3
280.	*	2.2	2.0	1.9	6.5	3.4	5.3	1.9	5.0
285.	*	2.2	2.0	2.0	6.2	3.5	4.8	1.9	4.4
290.	*	2.3	2.1	2.0	5.8	3.4	4.4	1.9	4.0
295.	*	2.2	2.1	2.1	5.8	3.2	4.2	1.9	3.7
300.	*	2.2	2.1	2.0	5.8	3.0	3.8	1.9	3.5
305.	*	2.3	2.1	2.0	5.8	3.3	3.8	1.9	3.5
310.	*	2.2	2.1	2.1	5.7	3.3	3.6	1.9	3.3
315.	*	2.2	2.1	2.1	5.7	3.4	3.5	1.9	3.1
320.	*	2.0	2.1	2.1	5.7	3.4	3.4	1.9	3.1
325.	*	2.0	2.0	2.1	5.6	3.5	3.3	1.9	3.0
330.	*	2.0	2.0	2.0	5.3	3.4	3.3	1.9	3.0
335.	*	2.0	2.0	1.9	5.1	3.3	3.2	1.9	2.9
340.	*	2.0	2.1	1.9	5.1	3.3	3.2	1.9	2.9
345.	*	2.0	2.1	1.9	5.2	3.3	3.2	1.9	2.9
350.	*	2.0	2.4	1.9	5.3	3.3	3.2	1.9	2.9
355.	*	1.9	2.7	1.9	5.2	3.3	3.2	1.9	2.9
360.	*	1.9	3.0	1.9	5.1	3.3	3.2	1.9	2.9
5.	*	1.9	3.2	1.9	5.1	3.4	3.2	1.9	2.9
10.	*	1.9	3.3	1.9	5.2	3.4	3.3	1.9	2.9
15.	*	1.9	3.3	1.9	5.5	3.3	3.3	1.9	2.9
20.	*	1.9	3.1	1.9	5.4	3.1	3.3	1.9	2.9
25.	*	1.9	3.0	1.9	5.5	2.8	3.2	1.9	3.0
30.	*	1.9	2.9	1.9	5.9	3.0	3.4	1.9	3.1
35.	*	1.9	2.8	1.9	5.9	3.2	3.5	2.0	3.3
40.	*	1.9	2.7	1.9	6.2	3.2	3.6	2.0	3.3
45.	*	1.9	2.7	1.9	6.6	3.2	3.7	2.0	3.3

50.	*	1.9	2.7	1.9	6.7	3.4	3.8	2.0	3.5
55.	*	1.9	2.7	2.0	7.1	3.4	4.0	2.0	3.7
60.	*	1.9	2.7	2.0	7.5	3.4	4.2	1.9	3.8
65.	*	1.9	2.6	2.0	7.6	3.1	4.7	1.9	4.3
70.	*	1.9	2.6	2.0	7.4	2.9	5.1	1.9	4.6
75.	*	1.9	2.6	2.0	6.2	2.6	5.7	2.1	5.3
80.	*	1.9	2.6	2.4	4.8	2.3	6.6	2.6	6.3
85.	*	1.9	2.9	3.0	3.6	2.2	5.8	4.1	5.5
90.	*	2.0	3.4	3.8	2.8	2.2	3.9	4.8	3.8
95.	*	2.3	4.1	3.9	2.6	2.2	2.6	4.7	2.5
100.	*	2.7	4.5	3.5	2.5	2.2	2.2	4.3	2.1
105.	*	2.9	4.8	3.2	2.4	2.2	1.9	3.8	1.9

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: Build: AM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)								
	1	2	3	4	5	6	7	8	
110.	*	3.0	4.8	2.9	2.4	2.3	1.9	3.4	1.9
115.	*	3.0	4.8	3.2	2.3	2.3	1.9	3.4	1.9
120.	*	3.0	4.5	3.6	2.4	2.3	1.9	3.2	1.9
125.	*	3.1	4.3	4.2	2.5	2.5	1.9	3.2	1.9
130.	*	3.2	4.2	4.4	2.5	2.6	1.9	3.0	1.9
135.	*	3.1	4.2	4.6	2.3	2.4	1.9	3.0	1.9
140.	*	3.1	4.5	4.2	2.1	2.1	1.9	2.9	1.9
145.	*	3.0	4.9	4.0	1.9	1.9	1.9	2.8	1.9
150.	*	3.1	5.0	3.7	1.9	1.9	1.9	2.9	1.9
155.	*	3.2	5.6	3.6	1.9	1.9	1.9	2.9	1.9
160.	*	3.3	5.8	3.6	1.9	1.9	1.9	2.9	1.9
165.	*	3.3	6.2	3.6	1.9	1.9	1.9	2.8	1.9
170.	*	3.2	6.2	3.6	1.9	1.9	1.9	2.8	1.9
175.	*	3.2	5.9	3.6	1.9	1.9	1.9	2.8	1.9
180.	*	3.3	5.3	3.6	1.9	1.9	1.9	2.8	1.9
185.	*	3.1	5.5	3.6	1.9	1.9	1.9	2.8	1.9
190.	*	3.0	5.3	3.5	1.9	1.9	1.9	2.8	1.9
195.	*	2.8	5.2	3.4	1.9	1.9	1.9	2.8	1.9
200.	*	2.9	5.1	3.5	1.9	1.9	1.9	2.8	1.9
205.	*	3.1	4.8	3.4	1.9	1.9	1.9	2.8	1.9
210.	*	3.4	4.8	3.4	2.0	1.9	1.9	2.9	1.9
215.	*	4.0	4.6	3.4	2.0	1.9	1.9	3.0	1.9
220.	*	4.1	4.6	3.4	2.0	1.9	1.9	3.0	1.9
225.	*	4.3	4.5	3.4	2.0	1.9	1.9	3.1	1.9
230.	*	4.0	4.3	3.3	2.0	1.9	1.9	3.2	1.9
235.	*	4.0	4.3	3.5	2.0	1.9	1.9	3.2	1.9
240.	*	3.9	4.2	3.6	2.0	1.9	1.9	3.4	1.9
245.	*	3.9	4.0	3.7	2.0	1.9	1.9	3.6	1.9
250.	*	3.6	3.9	3.9	2.6	1.9	1.9	3.9	1.9
255.	*	3.3	3.6	4.0	4.0	1.9	2.2	4.1	2.1
260.	*	3.2	3.0	3.1	6.3	2.2	2.8	4.2	2.7
265.	*	2.4	2.6	2.5	8.3	2.9	4.1	3.6	3.9
270.	*	2.2	2.1	2.0	8.5	3.5	5.3	2.7	5.1
275.	*	2.2	2.0	1.9	7.3	3.6	5.6	2.1	5.3
280.	*	2.2	2.0	1.9	6.5	3.4	5.3	1.9	5.0
285.	*	2.2	2.0	2.0	6.2	3.5	4.8	1.9	4.4
290.	*	2.3	2.1	2.0	5.8	3.4	4.4	1.9	4.0
295.	*	2.2	2.1	2.1	5.8	3.2	4.2	1.9	3.7
300.	*	2.2	2.1	2.0	5.8	3.0	3.8	1.9	3.5
305.	*	2.3	2.1	2.0	5.8	3.3	3.8	1.9	3.5

310.	*	2.2	2.1	2.1	5.7	3.3	3.6	1.9	3.3
315.	*	2.2	2.1	2.1	5.7	3.4	3.5	1.9	3.1
320.	*	2.0	2.1	2.1	5.7	3.4	3.4	1.9	3.1
325.	*	2.0	2.0	2.1	5.6	3.5	3.3	1.9	3.0
330.	*	2.0	2.0	2.0	5.3	3.4	3.3	1.9	3.0
335.	*	2.0	2.0	1.9	5.1	3.3	3.2	1.9	2.9
340.	*	2.0	2.1	1.9	5.1	3.3	3.2	1.9	2.9
345.	*	2.0	2.1	1.9	5.2	3.3	3.2	1.9	2.9
350.	*	2.0	2.4	1.9	5.3	3.3	3.2	1.9	2.9
355.	*	1.9	2.7	1.9	5.2	3.3	3.2	1.9	2.9
360.	*	1.9	3.0	1.9	5.1	3.3	3.2	1.9	2.9
365.	*	1.9	3.2	1.9	5.1	3.4	3.2	1.9	2.9

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)								
	1	2	3	4	5	6	7	8	
370.	*	1.9	3.3	1.9	5.2	3.4	3.3	1.9	2.9
375.	*	1.9	3.3	1.9	5.5	3.3	3.3	1.9	2.9
380.	*	1.9	3.1	1.9	5.4	3.1	3.3	1.9	2.9
385.	*	1.9	3.0	1.9	5.5	2.8	3.2	1.9	3.0
390.	*	1.9	2.9	1.9	5.9	3.0	3.4	1.9	3.1
395.	*	1.9	2.8	1.9	5.9	3.2	3.5	2.0	3.3
400.	*	1.9	2.7	1.9	6.2	3.2	3.6	2.0	3.3
405.	*	1.9	2.7	1.9	6.6	3.2	3.7	2.0	3.3
410.	*	1.9	2.7	1.9	6.7	3.4	3.8	2.0	3.5
415.	*	1.9	2.7	2.0	7.1	3.4	4.0	2.0	3.7
420.	*	1.9	2.7	2.0	7.5	3.4	4.2	1.9	3.8
425.	*	1.9	2.6	2.0	7.6	3.1	4.7	1.9	4.3
430.	*	1.9	2.6	2.0	7.4	2.9	5.1	1.9	4.6
435.	*	1.9	2.6	2.0	6.2	2.6	5.7	2.1	5.3
440.	*	1.9	2.6	2.4	4.8	2.3	6.6	2.6	6.3
445.	*	1.9	2.9	3.0	3.6	2.2	5.8	4.1	5.5
450.	*	2.0	3.4	3.8	2.8	2.2	3.9	4.8	3.8
455.	*	2.3	4.1	3.9	2.6	2.2	2.6	4.7	2.5
460.	*	2.7	4.5	3.5	2.5	2.2	2.2	4.3	2.1
465.	*	2.9	4.8	3.2	2.4	2.2	1.9	3.8	1.9
470.	*	3.0	4.8	2.9	2.4	2.3	1.9	3.4	1.9
475.	*	3.0	4.8	3.2	2.3	2.3	1.9	3.4	1.9
480.	*	3.0	4.5	3.6	2.4	2.3	1.9	3.2	1.9
485.	*	3.1	4.3	4.2	2.5	2.5	1.9	3.2	1.9
490.	*	3.2	4.2	4.4	2.5	2.6	1.9	3.0	1.9
495.	*	3.1	4.2	4.6	2.3	2.4	1.9	3.0	1.9
500.	*	3.1	4.5	4.2	2.1	2.1	1.9	2.9	1.9
505.	*	3.0	4.9	4.0	1.9	1.9	1.9	2.8	1.9
510.	*	3.1	5.0	3.7	1.9	1.9	1.9	2.9	1.9
515.	*	3.2	5.6	3.6	1.9	1.9	1.9	2.9	1.9
520.	*	3.3	5.8	3.6	1.9	1.9	1.9	2.9	1.9
525.	*	3.3	6.2	3.6	1.9	1.9	1.9	2.8	1.9
530.	*	3.2	6.2	3.6	1.9	1.9	1.9	2.8	1.9
535.	*	3.2	5.9	3.6	1.9	1.9	1.9	2.8	1.9
540.	*	3.3	5.3	3.6	1.9	1.9	1.9	2.8	1.9
545.	*	3.1	5.5	3.6	1.9	1.9	1.9	2.8	1.9
550.	*	3.0	5.3	3.5	1.9	1.9	1.9	2.8	1.9
555.	*	2.8	5.2	3.4	1.9	1.9	1.9	2.8	1.9
560.	*	2.9	5.1	3.5	1.9	1.9	1.9	2.8	1.9
565.	*	3.1	4.8	3.4	1.9	1.9	1.9	2.8	1.9

570.	*	3.4	4.8	3.4	2.0	1.9	1.9	2.9	1.9
575.	*	4.0	4.6	3.4	2.0	1.9	1.9	3.0	1.9
580.	*	4.1	4.6	3.4	2.0	1.9	1.9	3.0	1.9
585.	*	4.3	4.5	3.4	2.0	1.9	1.9	3.1	1.9
590.	*	4.0	4.3	3.3	2.0	1.9	1.9	3.2	1.9
595.	*	4.0	4.3	3.5	2.0	1.9	1.9	3.2	1.9
600.	*	3.9	4.2	3.6	2.0	1.9	1.9	3.4	1.9
605.	*	3.9	4.0	3.7	2.0	1.9	1.9	3.6	1.9
610.	*	3.6	3.9	3.9	2.6	1.9	1.9	3.9	1.9
615.	*	3.3	3.6	4.0	4.0	1.9	2.2	4.1	2.1
620.	*	3.2	3.0	3.1	6.3	2.2	2.8	4.2	2.7
625.	*	2.4	2.6	2.5	8.3	2.9	4.1	3.6	3.9

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: Build: AM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)								
	1	2	3	4	5	6	7	8	
630.	*	2.2	2.1	2.0	8.5	3.5	5.3	2.7	5.1
635.	*	2.2	2.0	1.9	7.3	3.6	5.6	2.1	5.3
640.	*	2.2	2.0	1.9	6.5	3.4	5.3	1.9	5.0
645.	*	2.2	2.0	2.0	6.2	3.5	4.8	1.9	4.4
650.	*	2.3	2.1	2.0	5.8	3.4	4.4	1.9	4.0
655.	*	2.2	2.1	2.1	5.8	3.2	4.2	1.9	3.7
660.	*	2.2	2.1	2.0	5.8	3.0	3.8	1.9	3.5
665.	*	2.3	2.1	2.0	5.8	3.3	3.8	1.9	3.5
670.	*	2.2	2.1	2.1	5.7	3.3	3.6	1.9	3.3
675.	*	2.2	2.1	2.1	5.7	3.4	3.5	1.9	3.1
680.	*	2.0	2.1	2.1	5.7	3.4	3.4	1.9	3.1
685.	*	2.0	2.0	2.1	5.6	3.5	3.3	1.9	3.0
690.	*	2.0	2.0	2.0	5.3	3.4	3.3	1.9	3.0
695.	*	2.0	2.0	1.9	5.1	3.3	3.2	1.9	2.9
700.	*	2.0	2.1	1.9	5.1	3.3	3.2	1.9	2.9
705.	*	2.0	2.1	1.9	5.2	3.3	3.2	1.9	2.9
710.	*	2.0	2.4	1.9	5.3	3.3	3.2	1.9	2.9
715.	*	1.9	2.7	1.9	5.3	3.3	3.2	1.9	2.9
720.	*	1.9	3.0	1.9	5.3	3.3	3.2	1.9	2.9
725.	*	1.9	3.2	1.9	5.3	3.4	3.2	1.9	2.9
730.	*	1.9	3.3	1.9	5.3	3.4	3.3	1.9	2.9
735.	*	1.9	3.3	1.9	5.5	3.4	3.3	1.9	2.9
740.	*	1.9	3.1	1.9	5.4	3.3	3.3	1.9	2.9
745.	*	1.9	3.0	1.9	5.4	3.1	3.2	1.9	2.9
750.	*	1.9	2.9	1.9	5.6	3.3	3.3	1.9	3.0
755.	*	1.9	2.8	1.9	5.6	3.3	3.4	2.0	3.1
760.	*	1.9	2.7	1.9	5.8	3.4	3.4	2.0	3.1
765.	*	1.9	2.7	1.9	6.1	3.6	3.4	2.0	3.0
770.	*	1.9	2.7	1.9	5.9	3.7	3.4	2.0	3.1
775.	*	1.9	2.7	2.0	5.9	3.8	3.4	2.0	3.1
780.	*	1.9	2.7	2.0	5.8	3.8	3.4	1.9	3.0
785.	*	1.9	2.6	2.0	5.6	3.6	3.5	1.9	3.2
790.	*	1.9	2.6	2.0	5.3	3.6	3.5	1.9	3.2
795.	*	1.9	2.6	2.0	4.8	3.5	3.7	2.1	3.4
800.	*	2.1	3.0	3.1	2.4	2.7	3.9	2.6	3.6
805.	*	2.4	3.3	3.4	2.1	2.7	3.7	3.3	3.3
810.	*	2.5	3.5	3.7	1.9	2.7	2.2	4.3	2.2
815.	*	2.7	3.8	3.5	1.9	2.7	1.9	4.0	1.9
820.	*	2.9	3.8	3.3	1.9	2.7	1.9	3.6	1.9
825.	*	3.0	3.8	3.2	1.9	2.7	1.9	3.3	1.9

830.	*	2.9	3.8	3.2	1.9	2.7	1.9	3.1	1.9
835.	*	2.9	4.0	3.3	1.9	2.7	1.9	3.1	1.9
840.	*	2.8	3.8	3.4	1.9	2.7	1.9	3.0	1.9
845.	*	2.8	3.9	3.5	1.9	2.5	1.9	3.0	1.9
850.	*	2.8	4.0	3.6	1.9	2.5	1.9	2.9	1.9
855.	*	2.8	4.1	3.6	1.9	2.5	1.9	2.9	1.9
860.	*	2.8	4.3	3.6	1.9	2.5	1.9	2.9	1.9
865.	*	2.7	4.5	3.6	1.9	2.5	1.9	2.8	1.9
870.	*	2.7	4.5	3.6	1.9	2.5	1.9	2.8	1.9
875.	*	2.7	4.7	3.6	1.9	1.9	1.9	2.8	1.9
880.	*	2.7	4.9	3.6	1.9	1.9	1.9	2.8	1.9
885.	*	2.7	5.0	3.6	1.9	1.9	1.9	2.8	1.9

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: Build: AM

WIND ANGLE (DEGR) *	* CONCENTRATION (PPM)							
	1	2	3	4	5	6	7	8
890. *	2.7	5.1	3.6	1.9	1.9	1.9	2.8	1.9
895. *	2.6	5.1	3.6	1.9	1.9	1.9	2.8	1.9
900. *	2.7	4.9	3.6	1.9	1.9	1.9	2.8	1.9
905. *	2.7	5.0	3.6	1.9	1.9	1.9	2.8	1.9
910. *	2.7	4.8	3.6	1.9	1.9	1.9	2.8	1.9
915. *	2.7	4.5	3.6	1.9	1.9	1.9	2.8	1.9
920. *	2.7	4.1	3.6	1.9	1.9	1.9	2.8	1.9
925. *	2.8	3.8	3.6	1.9	1.9	1.9	2.8	1.9
930. *	2.9	3.7	3.6	1.9	1.9	1.9	2.8	1.9
935. *	3.1	3.5	3.6	1.9	1.9	1.9	2.8	1.9
940. *	3.3	3.4	3.6	1.9	1.9	1.9	2.8	1.9
945. *	3.4	3.3	3.6	1.9	1.9	1.9	2.8	1.9
950. *	3.2	3.1	3.6	1.9	1.9	1.9	2.8	1.9
955. *	3.2	3.0	3.6	1.9	1.9	1.9	2.8	1.9
960. *	3.0	2.9	3.6	1.9	1.9	1.9	2.8	1.9
965. *	3.0	2.9	3.6	1.9	1.9	1.9	2.8	1.9
970. *	2.9	2.8	3.6	1.9	1.9	1.9	2.8	1.9
975. *	3.0	2.9	3.7	1.9	1.9	1.9	2.8	1.9
980. *	2.7	2.1	2.0	5.3	3.3	1.9	2.8	1.9
985. *	2.3	2.1	2.0	5.3	3.3	1.9	2.8	1.9
990. *	2.2	2.1	2.0	5.4	3.3	3.2	1.9	2.9
995. *	2.2	2.1	2.0	5.4	3.3	3.2	1.9	2.9
**** *	2.2	2.1	2.0	5.4	3.3	3.2	1.9	2.9
**** *	2.2	2.1	2.0	5.4	3.3	3.2	1.9	2.9
**** *	2.2	2.1	2.0	5.4	3.3	3.2	1.9	2.9
**** *	2.2	2.1	2.0	5.4	3.3	3.2	1.9	2.9
**** *	2.2	2.1	2.0	5.4	3.5	3.2	1.9	2.9
**** *	2.2	2.1	2.0	5.4	3.5	3.2	1.9	2.9
**** *	2.2	2.1	2.0	5.4	3.5	3.2	1.9	2.9
**** *	2.2	2.1	2.0	5.4	3.5	3.2	1.9	2.9
**** *	2.2	2.1	2.0	5.4	3.5	3.2	1.9	2.9
**** *	2.2	2.1	2.0	5.4	3.5	3.2	1.9	2.9
**** *	2.2	2.1	2.0	5.4	4.1	3.2	1.9	2.9
**** *	2.2	2.1	2.0	5.4	4.1	3.2	1.9	2.9
**** *	2.2	2.1	2.0	5.4	4.1	3.2	1.9	2.9
**** *	2.2	2.1	2.0	5.4	4.1	3.2	1.9	2.9
**** *	2.2	2.1	2.0	5.4	4.1	3.2	1.9	2.9
**** *	1.9	2.6	2.2	5.3	4.1	3.2	1.9	2.9
**** *	1.9	2.6	2.2	5.3	4.1	3.2	1.9	2.9

****	*	1.9	2.6	2.2	5.3	4.1	3.2	1.9	2.9
****	*	1.9	2.6	2.2	5.3	4.1	3.2	1.9	2.9
****	*	1.9	2.6	2.2	5.3	4.1	3.2	1.9	2.9
****	*	1.9	2.6	2.2	5.3	4.1	3.2	1.9	2.9
****	*	1.9	2.6	2.2	5.3	4.1	3.2	1.9	2.9
****	*	1.9	2.6	2.2	5.3	4.1	3.2	1.9	2.9
****	*	1.9	2.6	2.2	5.3	4.1	3.2	1.9	2.9
****	*	1.9	2.6	2.2	5.3	4.1	3.2	1.9	2.9
****	*	1.9	2.6	2.2	5.3	4.1	3.2	1.9	2.9
****	*	1.9	2.6	2.2	5.3	4.1	3.2	1.9	2.9
****	*	1.9	2.6	2.2	5.3	4.1	3.2	1.9	2.9

****	*	2.2	2.1	2.0	5.4	3.3	3.2	1.9	2.9
****	*	2.2	2.1	2.0	5.4	3.3	3.2	1.9	2.9
****	*	2.2	2.1	2.0	5.4	3.3	3.2	1.9	2.9
****	*	2.2	2.1	2.0	5.4	3.3	3.2	1.9	2.9
****	*	2.2	2.1	2.0	5.4	3.3	3.2	1.9	2.9
****	*	2.2	2.1	2.0	5.4	3.3	3.2	1.9	2.9
****	*	2.2	2.1	2.0	5.4	3.3	3.2	1.9	2.9
****	*	2.2	2.1	2.0	5.4	3.5	3.2	1.9	2.9
****	*	2.2	2.1	2.0	5.4	3.5	3.2	1.9	2.9
****	*	2.2	2.1	2.0	5.4	3.5	3.2	1.9	2.9
****	*	2.2	2.1	2.0	5.4	3.5	3.2	1.9	2.9
****	*	2.2	2.1	2.0	5.4	3.5	3.2	1.9	2.9

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: Build: AM

WIND ANGLE (DEGR) *	CONCENTRATION (PPM)							
	1	2	3	4	5	6	7	8
**** *	2.2	2.1	2.0	5.4	3.5	3.2	1.9	2.9
**** *	2.2	2.1	2.0	5.4	4.1	3.2	1.9	2.9
MAX *	4.3	6.2	4.6	8.5	4.1	6.6	4.8	6.3
DEGR. *	225	165	135	270	1055	80	90	80

THE HIGHEST CONCENTRATION OF 8.50 PPM OCCURRED AT RECEPTOR 4.

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: Build: AM

DATE : 5/18/12

TIME : 15:35:34

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

		* CO/LINK (PPM)							
		* ANGLE (DEGREES)							
		1	2	3	4	5	6	7	8
LINK #	*	225	165	135	270	***	80	90	80
1	*	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
2	*	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.5
3	*	0.0	0.0	0.0	0.1	0.0	2.3	0.4	2.2
4	*	0.0	0.0	0.0	0.1	0.0	0.2	0.3	0.2
5	*	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1
6	*	0.0	0.0	0.0	0.6	0.0	0.1	0.1	0.1
7	*	0.4	0.0	0.4	0.7	0.3	0.1	0.0	0.1
8	*	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
9	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
11	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	*	0.0	0.0	0.0	0.3	0.0	0.1	0.1	0.1
15	*	0.4	0.0	0.4	2.6	0.4	0.1	0.1	0.1
16	*	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0
17	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	*	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0
22	*	0.3	0.0	0.5	0.0	0.2	0.0	0.0	0.0
23	*	0.0	0.0	0.0	0.3	0.0	0.1	0.1	0.1
24	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	*	0.0	0.0	0.0	0.1	0.0	0.3	1.0	0.3
26	*	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
27	*	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
28	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	*	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1
31	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

33	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: Build: AM

LINK #	CO/LINK (PPM)							
	1	2	3	4	5	6	7	8
	225	165	135	270	***	80	90	80
46	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52	0.0	0.6	0.5	0.0	0.3	0.0	0.0	0.0
53	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0
54	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
59	0.0	0.0	0.0	0.1	0.0	0.2	0.3	0.2
60	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
61	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1
62	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
63	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64	0.2	0.0	0.2	1.1	0.2	0.1	0.1	0.1
65	0.3	0.0	0.3	0.0	0.3	0.0	0.0	0.0
66	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
69	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.4	0.1	0.0	0.3	0.0	0.0	0.0
71	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0
72	0.2	1.5	0.0	0.0	0.0	0.0	0.0	0.0
73	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: Build: PM

DATE : 5/18/12
 TIME : 15:35:58

The MODE flag has been set for calculating concentrations for POLLUTANT: CO

SITE & METEOROLOGICAL VARIABLES

 VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 11. CM
 U = 1.0 M/S CLAS = 5 (E) ATIM = 60. MINUTES MIXH = 1000. M AMB = 1.9 PPM

LINK VARIABLES

LINK DESCRIPTION	* *	X1	LINK COORDINATES (FT) Y1	X2	Y2	* *	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)	W (FT)	V/C (VEH)	QUEUE (VEH)
1. Rte 1 EB W of Bridge*	*****		*****	*****	*****	*	1577.	87. AG	1648.	14.1	0.0	56.0		
2. Rte 1 EB Accotink Br*	*****		*****	*****	*****	*	151.	87. BR	1648.	14.1	7.5	56.0		
3. Rte 1 EB E of Bridge*	*****		*****	*****	*****	*	700.	86. AG	1648.	14.1	0.0	56.0		
4. Rte 1 EB FCP ApprThru*	*****		*****	*****	*****	*	502.	86. AG	1517.	14.1	0.0	56.0		
5. Rte 1 EB FCP IntThru*	*****		*****	*****	*****	*	229.	79. AG	1517.	14.1	0.0	56.0		
6. Rte 1 EB FCP Dptr TL*	*****		*****	*****	*****	*	649.	79. AG	1643.	14.1	0.0	56.0		
7. Rte 1 EB E Bklk Thru*	*****		*****	*****	*****	*	512.	79. AG	1558.	14.1	0.0	56.0		
8. Rte 1 EB E Bklk IntT*	*****		*****	*****	*****	*	185.	80. AG	1558.	14.1	0.0	56.0		
9. Rte 1 EB E Bklk Dprt*	*****		*****	*****	*****	*	259.	83. AG	1621.	14.1	0.0	56.0		
10. Rte 1 EB E Bklk Dpt2*	*****		*****	*****	*****	*	741.	90. AG	1621.	14.1	0.0	56.0		
11. Rte 1 EB W FCP L AD1*	*****		*****	*****	*****	*	477.	86. AG	131.	15.1	0.0	44.0		
12. Rte 1 EB W FCP L AD2*	*****		*****	*****	*****	*	198.	42. AG	131.	15.1	0.0	44.0		
13. FCP NB N Rte 1 L Dpt*	*****		*****	*****	*****	*	319.	360. AG	131.	15.1	0.0	44.0		
14. Rte 1 EB E FCR R Dpt*	*****		*****	*****	*****	*	885.	79. AG	305.	14.1	0.0	44.0		
15. Rte 1 EB W Bklk R Ap*	*****		*****	*****	*****	*	509.	79. AG	305.	15.1	0.0	44.0		
16. Rte 1 EB @Bklk R Int*	*****		*****	*****	*****	*	62.	121. AG	305.	15.1	0.0	44.0		
17. Rte 1 EB W Bklk L Ap*	*****		*****	*****	*****	*	512.	79. AG	85.	15.1	0.0	32.0		
18. Rte 1 EB @Bklk L In *	*****		*****	*****	*****	*	157.	32. AG	85.	15.1	0.0	32.0		
19. Rte 1 WB E Bklk *	*****		*****	*****	*****	*	639.	271. AG	2437.	13.7	0.0	56.0		
20. Rte 1 WB E Bklk Thru*	*****		*****	*****	*****	*	388.	265. AG	2266.	13.7	0.0	56.0		
21. Rte 1 WB @Bklk Int *	*****		*****	*****	*****	*	171.	259. AG	2266.	13.4	0.0	56.0		
22. Rte 1 WB W Bklk Dptr*	*****		*****	*****	*****	*	389.	260. AG	3073.	13.4	0.0	56.0		
23. Rte 1 WB E FCP Thru *	*****		*****	*****	*****	*	788.	259. AG	2598.	13.4	0.0	56.0		
24. Rte 1 WB @FCP Thru *	*****		*****	*****	*****	*	237.	260. AG	2598.	14.2	0.0	56.0		
25. Rte 1 WB FCP-Br All *	*****		*****	*****	*****	*	1158.	266. AG	3573.	14.2	0.0	56.0		
26. Rte 1 WB @Br All *	*****		*****	*****	*****	*	151.	265. BR	3573.	14.2	7.5	56.0		
27. Rte 1 WB W Br All *	*****		*****	*****	*****	*	1590.	266. AG	3573.	14.2	0.0	56.0		
28. Rte 1 WB E Bklk L Ap*	*****		*****	*****	*****	*	380.	265. AG	10.	15.1	0.0	32.0		

29.	Rte 1 WB @Bklk L Int*	*****	*****	*****	*****	*	183.	213.	AG	10.	15.1	0.0	32.0
30.	Rte 1 WB E FCP R Apr*	*****	*****	*****	*****	*	795.	259.	AG	475.	15.1	0.0	44.0
31.	Rte 1 WB @FCP R Int *	*****	*****	*****	*****	*	71.	296.	AG	475.	15.1	0.0	44.0
32.	FCP NB N Rte 1 Mrg *	*****	*****	*****	*****	*	302.	359.	AG	475.	15.1	0.0	44.0
33.	FCP SB N Rte 1 All *	*****	*****	*****	*****	*	1897.	179.	AG	1406.	14.1	0.0	44.0
34.	FCP SB N Rte 1 L Apr*	*****	*****	*****	*****	*	422.	180.	AG	431.	15.1	0.0	56.0
35.	FCP SB @Rte 1 L Int *	*****	*****	*****	*****	*	227.	123.	AG	431.	15.1	0.0	56.0
36.	FCP N Rte 1 SB R Apr*	*****	*****	*****	*****	*	443.	181.	AG	975.	15.1	0.0	44.0
37.	FCP @Rte 1 SB R Int *	*****	*****	*****	*****	*	93.	214.	AG	975.	15.1	0.0	44.0
38.	FCP NB N Rte 1 All *	*****	*****	*****	*****	*	1996.	360.	AG	606.	14.2	0.0	44.0
39.	Phck NB S Rte 1 All *	*****	*****	*****	*****	*	890.	316.	AG	855.	14.2	0.0	32.0
40.	Phck NB S Rte 1 T-R *	*****	*****	*****	*****	*	507.	333.	AG	63.	14.2	0.0	32.0
41.	Phck NB S Rte 1 Thru*	*****	*****	*****	*****	*	50.	333.	AG	48.	14.2	0.0	32.0
42.	Bklk NB @Rte 1 Thru *	*****	*****	*****	*****	*	209.	357.	AG	48.	14.2	0.0	32.0
43.	Bklk NB N Rte 1 All*	*****	*****	*****	*****	*	1214.	357.	AG	294.	14.2	0.0	32.0
44.	Rte 1 WB @Bklk R Apr*	*****	*****	*****	*****	*	390.	265.	AG	161.	15.1	0.0	32.0
45.	Rte 1 WB @Bklk R Int*	*****	*****	*****	*****	*	74.	284.	AG	161.	15.1	0.0	32.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: Build: PM

DATE : 5/18/12
 TIME : 15:35:58

LINK VARIABLES

LINK DESCRIPTION	* X1	LINK COORDINATES (FT) Y1	X2	Y2	* LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
46. Phck NB S Rte 1 L Ap*	*****	*****	*****	*****	*	558.	332. AG	792.	15.1	0.0	32.0	
47. Phck NB @Rte 1 L Int*	*****	*****	*****	*****	*	164.	327. AG	792.	15.1	0.0	32.0	
48. Phck NB @Rte 1 R Int*	*****	*****	*****	*****	*	149.	29. AG	15.	15.1	0.0	32.0	
49. Bklk N Rte 1 SB All *	*****	*****	*****	*****	*	1192.	178. AG	73.	13.4	0.0	32.0	
50. Bklk N Rte 1 SB Thru*	*****	*****	*****	*****	*	37.	176. AG	10.	13.4	0.0	32.0	
51. Bklk @Rte 1 SB Thru *	*****	*****	*****	*****	*	200.	177. AG	10.	13.4	0.0	32.0	
52. Bklk SB S Rte 1 All1*	*****	*****	*****	*****	*	561.	151. AG	325.	13.4	0.0	32.0	
53. Bklk SB S Rte 1 All2*	*****	*****	*****	*****	*	891.	137. AG	325.	13.4	0.0	32.0	
54. Bklk SB N Rte 1 R Ap*	*****	*****	*****	*****	*	39.	178. AG	15.	15.1	0.0	32.0	
55. Bklk SB N Rte 1 R In*	*****	*****	*****	*****	*	73.	223. AG	15.	15.1	0.0	32.0	
56. Bklk SB N Rte 1 L Ap*	*****	*****	*****	*****	*	36.	177. AG	48.	15.1	0.0	32.0	
57. Bklk SB N Rte 1 L In*	*****	*****	*****	*****	*	162.	130. AG	48.	15.1	0.0	32.0	
58. Q Rte 1 EB W FCP Thr*	*****	*****	*****	*****	*	177.	266. AG	238.	100.0	0.0	36.0	0.50 9.0
59. Q Rte 1 EB W FCP L *	*****	*****	*****	*****	*	2696.	266. AG	427.	100.0	0.0	24.0	**** 137.0
60. Q Rte 1 WB E FCP Thr*	*****	*****	*****	*****	*	521.	80. AG	298.	100.0	0.0	36.0	1.01 26.5
61. Q FCP SB N Rte 1 L *	*****	*****	*****	*****	*	101.	360. AG	480.	100.0	0.0	36.0	0.37 5.1
62. Q FCP SB N Rte 1 R *	*****	*****	*****	*****	*	1312.	1. AG	298.	100.0	0.0	24.0	1.24 66.6
63. Q Rte 1 WB E FCP R *	*****	*****	*****	*****	*	30.	82. AG	57.	100.0	0.0	24.0	0.20 1.5
64. Q Rte 1 EB W Bklk R *	*****	*****	*****	*****	*	82.	258. AG	246.	100.0	0.0	24.0	0.27 4.2
65. Q Rte 1 EB W Bklk T *	*****	*****	*****	*****	*	281.	259. AG	368.	100.0	0.0	36.0	0.77 14.3
66. Rte 1 EB W Bklk L Ap*	*****	*****	*****	*****	*	1048.	259. AG	212.	100.0	0.0	12.0	**** 53.2
67. Q Rte 1 WB E Bklk Th*	*****	*****	*****	*****	*	1938.	85. AG	394.	100.0	0.0	36.0	1.23 98.4
68. Q Rte 1 WB E Bklk L *	*****	*****	*****	*****	*	13.	78. AG	219.	100.0	0.0	12.0	**** 0.6
69. Q Phck NB S Rte 1 TR*	*****	*****	*****	*****	*	49.	153. AG	176.	100.0	0.0	12.0	0.22 2.5
70. Q Phck NB S Rte 1 L *	*****	*****	*****	*****	*	1463.	152. AG	352.	100.0	0.0	24.0	1.38 74.3
71. Q Bklk SB N Rte 1 L *	*****	*****	*****	*****	*	39.	358. AG	182.	100.0	0.0	12.0	0.23 2.0
72. Q Bklk SB N Rte 1 T *	*****	*****	*****	*****	*	8.	354. AG	182.	100.0	0.0	12.0	0.04 0.4
73. Q Bklk SB N Rte 1 R *	*****	*****	*****	*****	*	12.	356. AG	182.	100.0	0.0	12.0	0.08 0.6

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: Build: PM

DATE : 5/18/12
 TIME : 15:35:58

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	* * * *	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
58. Q Rte 1 EB W FCP Thr*		180	64	6.5	1517	1695	83.22	2	3
59. Q Rte 1 EB W FCP L *		180	172	7.0	131	1716	83.22	2	3
60. Q Rte 1 WB E FCP Thr*		180	80	6.5	2598	1695	83.22	2	3
61. Q FCP SB N Rte 1 L *		180	129	7.0	431	1663	83.22	2	3
62. Q FCP SB N Rte 1 R *		180	120	7.0	975	1393	83.22	2	3
63. Q Rte 1 WB E FCP R *		180	23	0.0	475	1393	83.22	2	3
64. Q Rte 1 EB W Bklk R *		180	99	7.0	305	1393	83.22	2	3
65. Q Rte 1 EB W Bklk T *		180	99	7.0	1558	1695	83.22	2	3
66. Rte 1 EB W Bklk L Ap*		180	171	6.5	85	1770	83.22	2	3
67. Q Rte 1 WB E Bklk Th*		180	106	7.0	2266	1695	83.22	2	3
68. Q Rte 1 WB E Bklk L *		180	177	2.1	10	1770	83.22	2	3
69. Q Phck NB S Rte 1 TR*		180	142	6.0	63	1723	83.22	2	3
70. Q Phck NB S Rte 1 L *		180	142	6.0	792	1716	83.22	2	3
71. Q Bklk SB N Rte 1 L *		180	147	7.0	48	1593	83.22	2	3
72. Q Bklk SB N Rte 1 T *		180	147	7.0	10	1676	83.22	2	3
73. Q Bklk SB N Rte 1 R *		180	147	7.0	15	1478	83.22	2	3

RECEPTOR LOCATIONS

RECEPTOR	* * *	COORDINATES (FT)			* * *
		X	Y	Z	
1. 1: 9140 Richmond Hwy	*	*****	*****	5.0	*
2. 2: 9136 Backlick Rd.	*	*****	*****	5.0	*
3. 3: 9135 Anderson Ln.	*	*****	*****	5.0	*
4. 4: Bus Stop @Rte. 1	*	*****	*****	5.0	*
5. 5: E.K. HmlsShelter	*	*****	*****	5.0	*
6. 6: Accotink Creek	*	*****	*****	5.0	*
7. 7: Path @Creek	*	*****	*****	12.5	*
8. 8: Sidewalk @Creek	*	*****	*****	12.5	*

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: Build: PM

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-****

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)							
	1	2	3	4	5	6	7	8
0.	1.9	2.2	1.9	4.2	3.1	4.1	1.9	3.8
5.	1.9	2.2	1.9	4.2	3.3	4.1	1.9	3.7
10.	1.9	2.2	1.9	4.2	3.2	4.2	1.9	3.7
15.	1.9	2.2	1.9	4.5	3.1	4.2	1.9	3.7
20.	1.9	2.2	1.9	4.4	2.7	4.2	1.9	3.8
25.	1.9	2.2	1.9	4.4	2.4	4.1	1.9	3.9
30.	1.9	2.1	1.9	4.6	2.6	4.5	2.0	4.1
35.	1.9	2.0	1.9	4.5	2.8	4.5	2.1	4.1
40.	1.9	2.0	1.9	4.7	3.1	4.7	2.1	4.3
45.	1.9	2.0	1.9	4.8	3.3	4.8	2.2	4.6
50.	1.9	2.0	1.9	4.9	3.3	4.9	2.2	4.7
55.	1.9	2.0	1.9	5.3	3.4	5.1	2.2	4.9
60.	1.9	2.0	1.9	5.3	3.4	5.4	2.2	5.1
65.	1.9	2.0	1.9	5.6	3.4	5.8	2.1	5.5
70.	1.9	2.0	1.9	5.2	3.3	6.4	2.2	6.1
75.	1.9	2.0	2.0	4.6	2.9	7.1	2.4	6.9
80.	2.0	2.3	2.5	4.0	2.6	7.2	4.0	7.0
85.	2.2	3.0	3.5	2.9	2.3	5.6	6.2	5.6
90.	2.7	4.0	4.5	2.5	2.3	3.4	7.6	3.3
95.	3.2	4.8	4.3	2.3	2.3	2.4	7.4	2.3
100.	3.6	4.9	3.8	2.3	2.4	2.0	6.8	2.0
105.	3.8	4.6	3.6	2.3	2.5	2.0	6.0	2.0
110.	3.7	4.4	3.4	2.3	2.5	1.9	5.4	1.9
115.	3.5	3.9	3.6	2.3	2.5	1.9	5.0	1.9
120.	3.3	3.8	4.2	2.4	2.5	1.9	4.8	1.9
125.	3.3	3.6	4.2	2.5	2.6	1.9	4.4	1.9
130.	3.3	3.5	4.6	2.5	2.7	1.9	4.3	1.9
135.	3.2	3.4	4.8	2.4	2.6	1.9	4.2	1.9
140.	3.2	3.3	4.7	2.3	2.4	1.9	4.1	1.9
145.	3.1	3.6	4.3	2.1	2.1	1.9	3.9	1.9

150.	*	3.2	4.1	3.8	2.0	2.0	1.9	3.9	1.9
155.	*	3.3	4.4	3.6	1.9	1.9	1.9	3.9	1.9
160.	*	3.5	4.7	3.5	1.9	1.9	1.9	3.8	1.9
165.	*	3.8	4.8	3.5	1.9	1.9	1.9	3.8	1.9
170.	*	3.4	4.2	3.5	1.9	1.9	1.9	3.8	1.9
175.	*	3.5	3.8	3.5	1.9	1.9	1.9	3.8	1.9
180.	*	3.3	3.3	3.5	1.9	1.9	1.9	3.8	1.9
185.	*	2.9	3.2	3.5	1.9	1.9	1.9	3.8	1.9
190.	*	2.9	3.4	3.6	1.9	1.9	1.9	3.8	1.9
195.	*	2.7	3.6	3.5	1.9	1.9	1.9	3.8	1.9
200.	*	2.8	3.7	3.4	1.9	1.9	1.9	3.8	1.9
205.	*	2.9	3.7	3.2	1.9	1.9	1.9	3.9	1.9

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: Build: PM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)								
	1	2	3	4	5	6	7	8	
210.	*	3.5	3.9	3.3	1.9	1.9	1.9	4.1	1.9
215.	*	3.6	3.7	3.3	1.9	1.9	1.9	4.0	1.9
220.	*	3.7	3.9	3.3	1.9	1.9	1.9	4.2	1.9
225.	*	3.7	4.0	3.6	1.9	1.9	1.9	4.4	1.9
230.	*	3.5	3.9	3.6	1.9	1.9	1.9	4.7	1.9
235.	*	3.6	3.9	3.7	1.9	1.9	1.9	4.9	1.9
240.	*	3.6	3.9	3.9	1.9	1.9	1.9	5.2	1.9
245.	*	3.6	4.0	4.4	1.9	1.9	1.9	5.8	1.9
250.	*	4.0	4.3	4.5	1.9	1.9	1.9	6.4	1.9
255.	*	4.0	4.2	4.6	2.5	1.9	2.0	7.3	2.0
260.	*	3.3	3.9	4.1	4.3	2.2	2.8	7.4	2.7
265.	*	2.5	2.9	2.9	5.6	3.1	4.2	6.2	4.2
270.	*	2.1	2.1	2.3	6.3	4.1	6.0	4.1	5.9
275.	*	2.1	2.0	2.0	5.5	3.6	6.9	2.7	6.6
280.	*	2.2	2.1	2.0	4.6	3.7	6.7	2.1	6.2
285.	*	2.2	2.1	2.1	4.3	3.2	6.0	2.0	5.8
290.	*	2.2	2.1	2.1	4.2	3.3	5.6	2.0	5.3
295.	*	2.2	2.1	2.1	4.3	3.2	5.2	2.0	5.0
300.	*	2.2	2.1	2.1	4.4	3.1	4.9	2.0	4.7
305.	*	2.1	2.1	2.1	4.5	3.1	4.8	2.0	4.4
310.	*	2.1	2.0	2.1	4.6	3.0	4.5	2.0	4.3
315.	*	2.1	2.0	2.1	4.6	3.3	4.5	2.0	4.1
320.	*	2.1	2.0	2.0	4.6	3.4	4.3	2.0	4.0
325.	*	2.0	1.9	2.0	4.4	3.3	4.1	1.9	3.9
330.	*	2.0	1.9	2.0	4.3	3.1	4.3	1.9	3.8
335.	*	2.0	1.9	1.9	4.2	3.0	4.2	1.9	3.9
340.	*	2.0	1.9	1.9	4.2	3.2	4.2	1.9	3.7
345.	*	2.0	2.0	1.9	4.3	3.2	4.2	1.9	3.7
350.	*	2.0	2.0	1.9	4.3	3.2	4.1	1.9	3.7
355.	*	2.0	2.1	1.9	4.3	3.2	4.1	1.9	3.8
360.	*	1.9	2.2	1.9	4.2	3.1	4.1	1.9	3.8
5.	*	1.9	2.2	1.9	4.2	3.3	4.1	1.9	3.7
10.	*	1.9	2.2	1.9	4.2	3.2	4.2	1.9	3.7
15.	*	1.9	2.2	1.9	4.5	3.1	4.2	1.9	3.7
20.	*	1.9	2.2	1.9	4.4	2.7	4.2	1.9	3.8
25.	*	1.9	2.2	1.9	4.4	2.4	4.1	1.9	3.9
30.	*	1.9	2.1	1.9	4.6	2.6	4.5	2.0	4.1
35.	*	1.9	2.0	1.9	4.5	2.8	4.5	2.1	4.1
40.	*	1.9	2.0	1.9	4.7	3.1	4.7	2.1	4.3
45.	*	1.9	2.0	1.9	4.8	3.3	4.8	2.2	4.6

50.	*	1.9	2.0	1.9	4.9	3.3	4.9	2.2	4.7
55.	*	1.9	2.0	1.9	5.3	3.4	5.1	2.2	4.9
60.	*	1.9	2.0	1.9	5.3	3.4	5.4	2.2	5.1
65.	*	1.9	2.0	1.9	5.6	3.4	5.8	2.1	5.5
70.	*	1.9	2.0	1.9	5.2	3.3	6.4	2.2	6.1
75.	*	1.9	2.0	2.0	4.6	2.9	7.1	2.4	6.9
80.	*	2.0	2.3	2.5	4.0	2.6	7.2	4.0	7.0
85.	*	2.2	3.0	3.5	2.9	2.3	5.6	6.2	5.6
90.	*	2.7	4.0	4.5	2.5	2.3	3.4	7.6	3.3
95.	*	3.2	4.8	4.3	2.3	2.3	2.4	7.4	2.3
100.	*	3.6	4.9	3.8	2.3	2.4	2.0	6.8	2.0
105.	*	3.8	4.6	3.6	2.3	2.5	2.0	6.0	2.0

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)								
	1	2	3	4	5	6	7	8	
110.	*	3.7	4.4	3.4	2.3	2.5	1.9	5.4	1.9
115.	*	3.5	3.9	3.6	2.3	2.5	1.9	5.0	1.9
120.	*	3.3	3.8	4.2	2.4	2.5	1.9	4.8	1.9
125.	*	3.3	3.6	4.2	2.5	2.6	1.9	4.4	1.9
130.	*	3.3	3.5	4.6	2.5	2.7	1.9	4.3	1.9
135.	*	3.2	3.4	4.8	2.4	2.6	1.9	4.2	1.9
140.	*	3.2	3.3	4.7	2.3	2.4	1.9	4.1	1.9
145.	*	3.1	3.6	4.3	2.1	2.1	1.9	3.9	1.9
150.	*	3.2	4.1	3.8	2.0	2.0	1.9	3.9	1.9
155.	*	3.3	4.4	3.6	1.9	1.9	1.9	3.9	1.9
160.	*	3.5	4.7	3.5	1.9	1.9	1.9	3.8	1.9
165.	*	3.8	4.8	3.5	1.9	1.9	1.9	3.8	1.9
170.	*	3.4	4.2	3.5	1.9	1.9	1.9	3.8	1.9
175.	*	3.5	3.8	3.5	1.9	1.9	1.9	3.8	1.9
180.	*	3.3	3.3	3.5	1.9	1.9	1.9	3.8	1.9
185.	*	2.9	3.2	3.5	1.9	1.9	1.9	3.8	1.9
190.	*	2.9	3.4	3.6	1.9	1.9	1.9	3.8	1.9
195.	*	2.7	3.6	3.5	1.9	1.9	1.9	3.8	1.9
200.	*	2.8	3.7	3.4	1.9	1.9	1.9	3.8	1.9
205.	*	2.9	3.7	3.2	1.9	1.9	1.9	3.9	1.9
210.	*	3.5	3.9	3.3	1.9	1.9	1.9	4.1	1.9
215.	*	3.6	3.7	3.3	1.9	1.9	1.9	4.0	1.9
220.	*	3.7	3.9	3.3	1.9	1.9	1.9	4.2	1.9
225.	*	3.7	4.0	3.6	1.9	1.9	1.9	4.4	1.9
230.	*	3.5	3.9	3.6	1.9	1.9	1.9	4.7	1.9
235.	*	3.6	3.9	3.7	1.9	1.9	1.9	4.9	1.9
240.	*	3.6	3.9	3.9	1.9	1.9	1.9	5.2	1.9
245.	*	3.6	4.0	4.4	1.9	1.9	1.9	5.8	1.9
250.	*	4.0	4.3	4.5	1.9	1.9	1.9	6.4	1.9
255.	*	4.0	4.2	4.6	2.5	1.9	2.0	7.3	2.0
260.	*	3.3	3.9	4.1	4.3	2.2	2.8	7.4	2.7
265.	*	2.5	2.9	2.9	5.6	3.1	4.2	6.2	4.2
270.	*	2.1	2.1	2.3	6.3	4.1	6.0	4.1	5.9
275.	*	2.1	2.0	2.0	5.5	3.6	6.9	2.7	6.6
280.	*	2.2	2.1	2.0	4.6	3.7	6.7	2.1	6.2
285.	*	2.2	2.1	2.1	4.3	3.2	6.0	2.0	5.8
290.	*	2.2	2.1	2.1	4.2	3.3	5.6	2.0	5.3
295.	*	2.2	2.1	2.1	4.3	3.2	5.2	2.0	5.0
300.	*	2.2	2.1	2.1	4.4	3.1	4.9	2.0	4.7
305.	*	2.1	2.1	2.1	4.5	3.1	4.8	2.0	4.4

310.	*	2.1	2.0	2.1	4.6	3.0	4.5	2.0	4.3
315.	*	2.1	2.0	2.1	4.6	3.3	4.5	2.0	4.1
320.	*	2.1	2.0	2.0	4.6	3.4	4.3	2.0	4.0
325.	*	2.0	1.9	2.0	4.4	3.3	4.1	1.9	3.9
330.	*	2.0	1.9	2.0	4.3	3.1	4.3	1.9	3.8
335.	*	2.0	1.9	1.9	4.2	3.0	4.2	1.9	3.9
340.	*	2.0	1.9	1.9	4.2	3.2	4.2	1.9	3.7
345.	*	2.0	2.0	1.9	4.3	3.2	4.2	1.9	3.7
350.	*	2.0	2.0	1.9	4.3	3.2	4.1	1.9	3.7
355.	*	2.0	2.1	1.9	4.3	3.2	4.1	1.9	3.8
360.	*	1.9	2.2	1.9	4.2	3.1	4.1	1.9	3.8
365.	*	1.9	2.2	1.9	4.2	3.3	4.1	1.9	3.7

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: Build: PM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)								
	1	2	3	4	5	6	7	8	
370.	*	1.9	2.2	1.9	4.2	3.2	4.2	1.9	3.7
375.	*	1.9	2.2	1.9	4.5	3.1	4.2	1.9	3.7
380.	*	1.9	2.2	1.9	4.4	2.7	4.2	1.9	3.8
385.	*	1.9	2.2	1.9	4.4	2.4	4.1	1.9	3.9
390.	*	1.9	2.1	1.9	4.6	2.6	4.5	2.0	4.1
395.	*	1.9	2.0	1.9	4.5	2.8	4.5	2.1	4.1
400.	*	1.9	2.0	1.9	4.7	3.1	4.7	2.1	4.3
405.	*	1.9	2.0	1.9	4.8	3.3	4.8	2.2	4.6
410.	*	1.9	2.0	1.9	4.9	3.3	4.9	2.2	4.7
415.	*	1.9	2.0	1.9	5.3	3.4	5.1	2.2	4.9
420.	*	1.9	2.0	1.9	5.3	3.4	5.4	2.2	5.1
425.	*	1.9	2.0	1.9	5.6	3.4	5.8	2.1	5.5
430.	*	1.9	2.0	1.9	5.2	3.3	6.4	2.2	6.1
435.	*	1.9	2.0	2.0	4.6	2.9	7.1	2.4	6.9
440.	*	2.0	2.3	2.5	4.0	2.6	7.2	4.0	7.0
445.	*	2.2	3.0	3.5	2.9	2.3	5.6	6.2	5.6
450.	*	2.7	4.0	4.5	2.5	2.3	3.4	7.6	3.3
455.	*	3.2	4.8	4.3	2.3	2.3	2.4	7.4	2.3
460.	*	3.6	4.9	3.8	2.3	2.4	2.0	6.8	2.0
465.	*	3.8	4.6	3.6	2.3	2.5	2.0	6.0	2.0
470.	*	3.7	4.4	3.4	2.3	2.5	1.9	5.4	1.9
475.	*	3.5	3.9	3.6	2.3	2.5	1.9	5.0	1.9
480.	*	3.3	3.8	4.2	2.4	2.5	1.9	4.8	1.9
485.	*	3.3	3.6	4.2	2.5	2.6	1.9	4.4	1.9
490.	*	3.3	3.5	4.6	2.5	2.7	1.9	4.3	1.9
495.	*	3.2	3.4	4.8	2.4	2.6	1.9	4.2	1.9
500.	*	3.2	3.3	4.7	2.3	2.4	1.9	4.1	1.9
505.	*	3.1	3.6	4.3	2.1	2.1	1.9	3.9	1.9
510.	*	3.2	4.1	3.8	2.0	2.0	1.9	3.9	1.9
515.	*	3.3	4.4	3.6	1.9	1.9	1.9	3.9	1.9
520.	*	3.5	4.7	3.5	1.9	1.9	1.9	3.8	1.9
525.	*	3.8	4.8	3.5	1.9	1.9	1.9	3.8	1.9
530.	*	3.4	4.2	3.5	1.9	1.9	1.9	3.8	1.9
535.	*	3.5	3.8	3.5	1.9	1.9	1.9	3.8	1.9
540.	*	3.3	3.3	3.5	1.9	1.9	1.9	3.8	1.9
545.	*	2.9	3.2	3.5	1.9	1.9	1.9	3.8	1.9
550.	*	2.9	3.4	3.6	1.9	1.9	1.9	3.8	1.9
555.	*	2.7	3.6	3.5	1.9	1.9	1.9	3.8	1.9
560.	*	2.8	3.7	3.4	1.9	1.9	1.9	3.8	1.9
565.	*	2.9	3.7	3.2	1.9	1.9	1.9	3.9	1.9

570.	*	3.5	3.9	3.3	1.9	1.9	1.9	4.1	1.9
575.	*	3.6	3.7	3.3	1.9	1.9	1.9	4.0	1.9
580.	*	3.7	3.9	3.3	1.9	1.9	1.9	4.2	1.9
585.	*	3.7	4.0	3.6	1.9	1.9	1.9	4.4	1.9
590.	*	3.5	3.9	3.6	1.9	1.9	1.9	4.7	1.9
595.	*	3.6	3.9	3.7	1.9	1.9	1.9	4.9	1.9
600.	*	3.6	3.9	3.9	1.9	1.9	1.9	5.2	1.9
605.	*	3.6	4.0	4.4	1.9	1.9	1.9	5.8	1.9
610.	*	4.0	4.3	4.5	1.9	1.9	1.9	6.4	1.9
615.	*	4.0	4.2	4.6	2.5	1.9	2.0	7.3	2.0
620.	*	3.3	3.9	4.1	4.3	2.2	2.8	7.4	2.7
625.	*	2.5	2.9	2.9	5.6	3.1	4.2	6.2	4.2

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: Build: PM

WIND ANGLE (DEGR)*	* CONCENTRATION (PPM)								
	1	2	3	4	5	6	7	8	
630.	*	2.1	2.1	2.3	6.3	4.1	6.0	4.1	5.9
635.	*	2.1	2.0	2.0	5.5	3.6	6.9	2.7	6.6
640.	*	2.2	2.1	2.0	4.6	3.6	6.7	2.1	6.2
645.	*	2.2	2.1	2.1	4.3	3.1	6.0	2.0	5.8
650.	*	2.2	2.1	2.1	4.2	3.2	5.6	2.0	5.3
655.	*	2.2	2.1	2.1	4.3	3.1	5.2	2.0	5.0
660.	*	2.2	2.1	2.1	4.4	3.0	4.9	2.0	4.7
665.	*	2.2	2.1	2.1	4.5	3.0	4.8	2.0	4.4
670.	*	2.2	2.1	2.1	4.6	2.9	4.5	2.0	4.3
675.	*	2.2	2.1	2.1	4.6	3.2	4.5	2.0	4.1
680.	*	2.2	2.1	2.1	4.6	3.3	4.3	2.0	4.0
685.	*	2.1	2.0	2.1	4.5	3.3	4.1	1.9	3.9
690.	*	2.1	2.0	2.1	4.4	3.1	4.3	1.9	3.8
695.	*	2.1	2.0	2.0	4.3	3.0	4.2	1.9	3.9
700.	*	2.1	2.0	2.0	4.3	3.2	4.2	1.9	3.7
705.	*	2.1	2.1	2.0	4.4	3.2	4.2	1.9	3.7
710.	*	2.1	2.1	2.0	4.4	3.2	4.1	1.9	3.7
715.	*	2.1	2.2	2.0	4.4	3.2	4.1	1.9	3.8
720.	*	2.0	2.3	2.0	4.4	3.1	4.1	1.9	3.8
725.	*	1.9	2.2	1.9	4.3	3.3	4.1	1.9	3.8
730.	*	1.9	2.2	1.9	4.3	3.3	4.2	1.9	3.8
735.	*	1.9	2.2	1.9	4.4	3.2	4.2	1.9	3.8
740.	*	1.9	2.2	1.9	4.3	2.7	4.2	1.9	3.8
745.	*	1.9	2.2	1.9	4.3	2.5	4.1	1.9	3.9
750.	*	1.9	2.1	1.9	4.5	2.6	4.4	2.0	4.1
755.	*	1.9	2.0	1.9	4.4	2.7	4.4	2.1	4.1
760.	*	1.9	2.0	1.9	4.6	2.8	4.5	2.1	4.2
765.	*	1.9	2.0	1.9	4.6	2.9	4.5	2.1	4.3
770.	*	1.9	2.0	1.9	4.7	3.0	4.6	2.1	4.4
775.	*	1.9	2.0	1.9	4.7	3.0	4.7	2.1	4.5
780.	*	1.9	2.0	1.9	4.6	3.0	4.8	2.1	4.6
785.	*	1.9	2.0	1.9	4.5	3.0	5.1	2.0	4.9
790.	*	1.9	2.0	1.9	4.0	3.0	5.4	2.1	5.2
795.	*	1.9	2.0	1.9	3.5	2.8	5.7	2.3	5.5
800.	*	2.0	2.4	2.4	2.6	2.4	5.6	3.7	5.5
805.	*	2.3	2.6	2.8	2.1	2.4	4.4	5.5	4.3
810.	*	2.5	3.0	3.4	2.0	2.4	2.4	7.0	2.4
815.	*	2.7	3.5	3.4	2.0	2.4	2.0	7.0	2.0
820.	*	3.0	3.5	3.3	2.0	2.4	1.9	6.4	1.9
825.	*	3.1	3.3	3.3	2.0	2.4	1.9	5.6	1.9

830.	*	3.0	3.3	3.3	2.0	2.4	1.9	5.2	1.9
835.	*	2.9	3.1	3.5	2.0	2.4	1.9	4.8	1.9
840.	*	2.8	3.2	3.9	2.0	2.5	1.9	4.6	1.9
845.	*	2.8	3.3	3.9	2.1	2.6	1.9	4.3	1.9
850.	*	2.8	3.3	4.0	2.1	2.5	1.9	4.2	1.9
855.	*	2.8	3.3	4.1	2.0	2.4	1.9	4.1	1.9
860.	*	2.8	3.3	3.9	2.0	2.4	1.9	4.0	1.9
865.	*	2.7	3.5	3.8	1.9	2.3	1.9	3.9	1.9
870.	*	2.8	3.7	3.6	1.9	2.3	1.9	3.8	1.9
875.	*	2.8	3.6	3.5	1.9	1.9	1.9	3.8	1.9
880.	*	2.8	3.6	3.5	1.9	1.9	1.9	3.8	1.9
885.	*	3.0	3.7	3.5	1.9	1.9	1.9	3.8	1.9

****	*	1.9	2.0	1.9	4.4	3.7	4.1	1.9	3.8
****	*	1.9	2.0	1.9	4.4	3.7	4.1	1.9	3.8
****	*	1.9	2.0	1.9	4.4	3.7	4.1	1.9	3.8
****	*	1.9	2.0	1.9	4.4	3.7	4.1	1.9	3.8
****	*	1.9	2.0	1.9	4.4	3.7	4.1	1.9	3.8
****	*	1.9	2.0	1.9	4.4	3.7	4.1	1.9	3.8
****	*	1.9	2.0	1.9	4.4	3.7	4.1	1.9	3.8
****	*	1.9	2.0	1.9	4.4	3.7	4.1	1.9	3.8
****	*	1.9	2.0	1.9	4.4	3.7	4.1	1.9	3.8
****	*	1.9	2.0	1.9	4.4	3.7	4.1	1.9	3.8
****	*	1.9	2.0	1.9	4.4	3.7	4.1	1.9	3.8
****	*	1.9	2.0	1.9	4.4	3.7	4.1	1.9	3.8

****	*	2.1	2.0	2.1	4.5	3.2	4.1	1.9	3.8
****	*	2.1	2.0	2.1	4.5	3.2	4.1	1.9	3.8
****	*	2.1	2.0	2.1	4.5	3.2	4.1	1.9	3.8
****	*	2.1	2.0	2.1	4.5	3.2	4.1	1.9	3.8
****	*	2.1	2.0	2.1	4.5	3.2	4.1	1.9	3.8
****	*	2.1	2.0	2.1	4.5	3.2	4.1	1.9	3.8
****	*	2.1	2.0	2.1	4.5	3.2	4.1	1.9	3.8
****	*	2.1	2.0	2.1	4.5	3.2	4.1	1.9	3.8
****	*	2.1	2.0	2.1	4.5	3.2	4.1	1.9	3.8
****	*	2.1	2.0	2.1	4.5	3.2	4.1	1.9	3.8
****	*	2.1	2.0	2.1	4.5	3.2	4.1	1.9	3.8

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: Build: PM

WIND ANGLE (DEGR) *	* CONCENTRATION (PPM)							
	1	2	3	4	5	6	7	8
**** *	2.1	2.0	2.1	4.6	3.2	4.1	1.9	3.8
**** *	2.1	2.0	2.1	4.6	3.7	4.1	1.9	3.8
MAX *	4.0	4.9	4.8	6.3	4.1	7.2	7.6	7.0
DEGR. *	250	100	135	270	270	80	90	80

THE HIGHEST CONCENTRATION OF 7.60 PPM OCCURRED AT RECEPTOR 7.

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: Build: PM

DATE : 5/18/12
 TIME : 15:35:58

RECEPTOR - LINK MATRIX FOR THE ANGLE PRODUCING
 THE MAXIMUM CONCENTRATION FOR EACH RECEPTOR

		* CO/LINK (PPM)							
		* ANGLE (DEGREES)							
		1	2	3	4	5	6	7	8
LINK #	*	250	100	135	270	270	80	90	80
1	*	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
2	*	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.3
3	*	0.0	0.0	0.0	0.1	0.1	1.3	0.2	1.2
4	*	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.1
5	*	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0
6	*	0.2	0.0	0.0	0.5	0.2	0.1	0.1	0.1
7	*	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0
8	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	*	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
10	*	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
11	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	*	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
15	*	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
16	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	*	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.1
20	*	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
21	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	*	0.2	0.0	0.8	0.0	0.0	0.1	0.0	0.1
23	*	0.5	0.0	0.0	0.6	0.1	0.2	0.1	0.2
24	*	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1
25	*	0.2	0.0	0.0	0.4	0.4	1.0	3.0	1.0
26	*	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0
27	*	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0
28	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	*	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0
31	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

33	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	*	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
40	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	*	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
44	*	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
45	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

JOB: Rte. 1 Ft. Belvoir

RUN: FCP to Backlick: 2040: Build: PM

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LINK #	CO/LINK (PPM)							
	1	2	3	4	5	6	7	8
46	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
47	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
53	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59	0.2	0.0	0.0	0.3	0.5	1.5	0.8	1.5
60	0.2	0.0	0.0	0.4	0.1	0.1	0.1	0.1
61	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
62	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
63	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
64	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
65	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
66	0.2	0.0	0.2	0.5	0.1	0.1	0.1	0.1
67	0.0	1.2	0.0	0.0	0.0	0.2	0.1	0.2
68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
69	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.6	0.0	0.0	0.0	0.1	0.0
71	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
73	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0